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THE FARMER'S ADVOCATE & HOME MAGAZINE

WM. WELD, PROPRIETOR.

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

The FARMER'S ADVOCATE is published on or about the first of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

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The Dominion Dairy and Horticultural Associations.

As announced in a previous issue, the annual meetings of these associations were held in Ottawa, Feb. 17th to 21st. The report of the proceedings reached our office too late to be published in our March issue. This number is again overcrowded with seasonable matter, so much so that we have been compelled to again leave several valuable articles over. The meetings before referred to were a great success. Very much credit is deserved by the gentlemen who proposed and carried them to so successful an issue. Influential delegates were present from every Province of the Dominion. The discussions were of national importance and were handled in the most practical manner. These associations are to meet yearly in Ottawa, the Dominion Government wisely furnishing the funds to defray expenses. The establishment and carrying on of these national associations is a wise measure, and will do more to promote and benefit agriculture than any act of the present or preceding government. The Hon. John Carling and His Excellency Lord Stanley, the Governor-General of Canada, addressed the meeting at considerable length. It is most gratifying to find gentlemen occupying the highest positions in the land thus lending a helping hand to agricultural progress. Manitoba and Assiniboia were well represented by practical men. Several members of the press were present from the older provinces. The press of the newer sections was represented by Nicholas Flood Davin, M. P. P., of Regina, Assa, and Mr. Thos. Weld, of Winnipeg, Man. In our next issue we will give further details.

Editorial.

The Barley Question.

Barley for many years has been one of our staple productions, and the export of this grain to the United States has added materially to our wealth. The trade has increased from the insignificant output of a value equal to \$5,569, in 1854, for all the Provinces combined, to \$7,175,579, in 1886, for Ontario alone, while the total of all other agricultural products grown on the farm, for the same year, amounted to \$10,477,400, while wheat alone has never exceeded \$6,000,000, except in 1887, for all the Provinces. This shows the importance this industry has been to our Canadian farmers. Our market for barley has heretofore been in the United States, but they have so increased their crops, and are making such strenuous efforts to grow the whole of what they require, and also propose putting an additional duty of ten to twenty per cent. on our barley, it seems as if that market would be closed to us.

The Hon. John Carling, the Minister of Agriculture at Ottawa, in view of the fact that the export is now as rapidly receding as it at one time increased, has sought for another outlet. Great Britain is the only other country that is importing barley, it is therefore necessary to find what she requires in that line. Her imports of barley have increased of late years until nearly fifty million bushels were imported in 1888, but Canada, instead of increasing this trade, is practically losing the little she had, for the reason that we have grown the six-rowed variety, which is only used for feed and distillery purposes, while if we could grow the varieties of barley required by the English maltster, we could find sale for all we could produce. Mr. William Saunders, Director of the Dominion Experimental Farm, Ottawa, sent out samples to the farmers of the different Provinces, and judging by the reports of these tests, some of the varieties have done remarkably well. The tests prove that the Chevalier barley is one that seems to suit our soil and climate. It has been grown in different localities in Ontario for more than 20 years, and has always been known as a heavy grain and good yielder, but the trouble has been it would not suit maltsters in Canada and the United States, for the same reason that six-rowed barley does not suit the English brewers—the two-rowed barley, being heavier, will not malt with the lighter six-rowed variety, as it takes a day or two longer to grow, and by that time the smaller grain begins to rot, which spoils the sample of malt. According to Mr. Wm. Saunders' recent report, there is no question as to our soil and climate growing a sample suitable for the English market. Guided by these facts, the Minister of Agriculture at Ottawa has purchased 10,000

bushels of "Carter's Prize Prolific" barley, from the well-known seed establishment of James Carter & Co., of London, England, which will be distributed among the farmers of the Dominion, on the following conditions:— That they enclose \$4.00 to Prof. Wm. Saunders, Director of the Experimental Farm, Ottawa, for which they will receive, freight paid, two bushels of this seed barley. The catalogue price of this barley, in England, is \$2.52 per bushel, but having been purchased in bulk it will be delivered at the applicant's nearest station at the above rate.

Knowledge that will Come in Time.

In a letter that came to this office, the writer, Mr. T. C. Patterson, well-known as a breeder of Shorthorns, and also an extensive importer and breeder of Shropshire sheep, commenting upon the article from the pen of Mr. John Dryden, M. P. P., in the February issue, in his well-known humorous style, writes as follows:— "Bravo, well done, everything here is sold by the pound, but some are trying to introduce a better and wiser discrimination than *avoir du poids*. In England quality brings more in horses, butcher's cattle and in sheep. And I know two or three firms of butchers in Toronto who pay one cent per pound more for well-bred beef cattle, and their number will increase as their customers are better bred. It takes three generations to know good mutton, and good pork, and how to vote." There is no doubt that in the near future such will be the case all along our breeding lines. Those interested in their departments are fast learning that there are certain requirements without which their products will not meet a ready sale. From the different breeds of beef cattle, along the line of our mutton breeds of sheep, our pigs and poultry, if breeders do not *hew to the line* the rough products will have to take a second or third rate price, which is away off in point of profit, as it is here among these second and third rate productions that the great surplus is produced, which in a measure, bears down all with it. Take our meat markets all over this Province, badly bred, half-fed, and half-starved cattle are slaughtered by wholesale, and they are not only unprofitable to the producer, but the consumer also suffers. And other articles are added to the bill of fare which takes the place of our meat products, thereby injuring our home trade. The case is the same with our cheese for the home market. Grocers are in the habit of buying cheese that is off flavor, and therefore unfit to ship, because they get it at a reduced price, and for this reason cheese has not the consumption that it should have in our own country. And our butter through the negligence in making and carelessness in handling is in a measure neglected, much of it being utterly unfit for table and cooking purposes, while the good article has a ready sale at a paying price."

Editorial Notes.

In this issue Mr. Allen Pringle gives some sound advice concerning the management of dairy stock, with a view of surpassing the output of dairy goods. The advice in itself is simple but is of the utmost importance. This article should be carefully read and promptly acted upon by every man who keeps a cow or other live stock.

The season is now at hand when farmers will select the male animals to be used in their herds and studs. This is a more important question than most farmers consider it. Let every man make his selection with some special end in view. Find just *what type* suits your requirements best, and year after year make such selections as will establish your animals more and more in *this type*.

Canadian and American farmers are altogether to blame for the poor milking qualities of their stock. Breeders of Shorthorns and other breeds have not been encouraged to produce animals of milking types, though many farmers say they want to breed cows that will give larger quantities of rich milk. The majority select bulls of *beefing types*, even when they can buy bulls that have the necessary milking qualities cheaper.

The cow that is destined to pay the ordinary farmer of the present or the future is a producer of milk, calves and beef; not calves, beef and milk.

How shall we get the kind of stock we require but by judicious selection of both male and female, and by persistently breeding with one aim in view.

One of the greatest obstacles in the way of producing first-class stock is cross-breeding and a miscellaneous jumbling up of breeds. A good many farmers will use a Holstein bull this year, a Jersey next year, and to improve the form a Shorthorn next year, or perchance a Hereford or a Poll. As long as farmers do this there will be an abundance of *scrubs* in the country.

If milking Shorthorns suit you best then stick to them, not only to the breed but to animals of a special *type*.

If Holsteins or Jerseys, or whatever breed suits you best or promises to be the most profitable, buy bulls of that breed always, but keep one form and set of qualities in view and breed always to produce animals alike.

Bad feeding and miscellaneous breeding go hand-in-hand, of the two the latter is worse than the former by far, and has done more to lower the quality of Canadian stock than all other conditions combined.

Breeding for a special object, or in other words line breeding, and good feeding are the only means of providing good and reliable stock, either horses, cattle, sheep, swine or poultry.

Line-bred animals will always sell for from twice to one hundred times as much as miscellaneous bred ones.

It was judicious selection and line breeding that the various families of live stock were established.

The man is a fool who expects by miscellaneous breeding to produce good animals that can be depended on to go on improving any good quality from generation to generation. A line-bred animal is not necessarily pure-bred, but one bred for a special purpose. If judicious selections are always made, after a few generations they will produce almost certainly just the kind of beast you want.

The majority of farmers breed their stock on the hit and miss principle, and only by chance produce a good animal of any type; not only have the cattle, sheep and pigs suffered from this, but the horses in every province have been very seriously injured likewise. Even at the ranges on our western prairies we find most lamentable ignorance in this respect.

In selecting a stock animal, first see that it is a good individual possessing the qualities you wish to perpetuate. Having satisfied yourself on this score, see that the dam and grand dam and great grand dam were all good and possessed the desired qualities, and that the sires found in the pedigree are alike good. Do not be satisfied with this alone, but try as far as possible to select line bred animals—carefully bred for the qualities you desire to perpetuate. Such an animal is invaluable and may be used in one herd with good results for twice the length of time generally supposed.

If you have been fortunate enough to obtain a good and impressive sire, producing just the sort of stock you want, and possessing much vigor of constitution, he may be used with good results even on his own offspring. When judiciously followed this class of breeding has on many occasions produced the very best results.

Close inbreeding should never be practised except where animals possess great individual excellence.

We call the attention of our readers to the able and practical article on Iron-clad apples, contributed by Wm. Hamilton, who has long been connected with the well known seed house of William Evans, Montreal. For a number of years Mr. Hamilton has been largely growing and experimenting with these fruits. His hope has been to produce such nursery stock as would succeed in the coldest settled parts of the Dominion. This article (like those of all our contributors,) is founded on long experience and careful study, and will be of great value to the residents in all northern sections.

The winter in Britain, with little exception, has been like our own, exceptionally mild. Stock were in January wintering well, there being an abundance of roots and fodder. Pastures in the south of Scotland and in many parts of England being as green as in May. Store cattle for feeding were quickly picked up at high prices. The demand being greater than the supply. Good, fat stock keep up in price and a slight advance was shown in the large markets. Sheep farmers have had a good season with satisfactory profits. The advance in the price of wool being maintained. Long combing wools which sold a year ago for ninepence and tenpence now bring elevenpence and a shilling per pound. The good winter feed has kept sheep in good order.

Free Corn.

I was surprised and delighted to read the article in the *ADVOCATE* on the "Duty on Corn." I belong to a class of Americans who are perhaps not inappropriately called "Mugwumps." We believe in a "modified" or "reformed" tariff for the United States, because it would be the greatest good to the greatest number, and because it would carry out the sacred injunction of the new commandment, "Love thy neighbor as thyself."

There is no reason why neighbors should not be allowed to trade with each other without fear or favor; without restriction or protection. There is, however, very little chance of free trade, reciprocity, or any other form of untrammelled intercourse between the United States and other countries, if our people are so shortsighted as to persist in restricting commerce.

I am convinced from what I saw during my recent tour in Canada, that the day has gone by when so poor and unprofitable a crop as corn can be raised to advantage on the rich pasturelands of the Dominion. You say:—"From the feeder's standpoint there can be but one conclusion: If we are to produce cheap beef, cheap dairy products, or any other line that goes to build up our stock interests, free corn is a necessity. For, with it will also come cheap offal from our mills. * * * With a clean bill of health on our stock, therefore, free access to all British markets, no monstrous slaughter-house combine, to dictate prices, a name second to none for Canadian cheese, we only ask a free course and no favor. Our lands also demand different management. A vast number of our farms are depleted of their natural fertility; therefore, light crops and poor samples are the prevailing features in grain growing."

It may be said that I am anxious to increase the demand for American corn—nothing of the kind. All the corn that is raised in the Western States is needed on the Atlantic seaboard for dairy cattle, swine, etc., but you have the advantage of us, of say 1000 to 1500 miles in the matter of freight. If we can use western corn to advantage, when our market for beef, pork, and dairy products is chiefly local, and with dressed beef competition, where corn grows naturally and with but little cultivation, surely you can use it to greater advantage with your European markets for both beef and dairy products. I believe that corn is more valuable anyway than the money. At the present selling price of corn in this country it is of vastly greater value to the cattle raiser or the dairyman than its money equivalent. As it would be to our advantage to import wool so it would be to your advantage to import corn while it sells at its present ridiculously low price. I believe it to be good business to buy in the cheapest and sell in the dearest market. If our people are so stupidly shortsighted as not to buy of us when you can get *the best of the bargain*. Take the tariff off corn and we may retaliate by taking some of your excellent mutton or cream cheese, and establish beef as a substitute for our lean, tough, miserable "wool" mutton, skim milk cheese, and "Chicago dressed" beef.

J. H. GRIFFITH, Barrington, R. I.

An old subscriber tells us that a few applications of castor oil will remove warts from either domestic animals or human beings.

Jottings Round the Exhibition.

BY F. GREEN, JR.

It is at exhibition times that any error or mismanagement at shows is apparent. These sometimes bear hard on the directors, and sometimes cause considerable trouble and even injustice to the exhibitor. In the former instance, these little frictions are usually removed before the next exhibition; but, in the latter case, they are often passed over, and the exhibitor, thankful for having passed through the furnace of his tribulations, either hopes that the trouble will be obviated before the next show, or else, perhaps, resolves in silence to stay at home for the future. This should not be so, for the boards of management cannot be expected to be omniscient, and any complaints or alterations that may be desired should be openly brought to their notice. Three things are required to make a successful show: Good buildings, good management, and good crowds. Good buildings, especially stables, are perhaps the most important, and, compared with many of the shows in the States, Canada is sadly behind hand, with the exception of the new horse stables recently erected at Toronto. The horse stabling at all our fairs are mere wooden shanties of no merit whatever, except that they form good places to conceal horses in. Even the new horse stables at Toronto are lacking in certain points; no place is provided for storing feed, and the sleeping places for the attendants are too small; while one side is totally unprotected, and an uneasy dreamer, if he turned over in his sleep, would, in all probability, make a sudden descent and find himself astride of his steed below. Want of flooring is another bad feature, both in cattle and pig pens, especially in the case of white and light colored animals, and is a constant source of annoyance to their owners and attendants. To pigs, indeed, the earthen floor presents an irresistible attraction, and they seem seized with an unconquerable desire to dig their way down to the antipodes. One exhibitor of colored pigs has been known to go to the expense of having his pens floored at his own cost, a fact which reflects somewhat on the liberty of the exhibition. Both at the Provincial and the Industrial, the entries in the calf classes were, as usual, very large. It has always seemed to me that the award of three prizes, and they of very small amount in a class where there is so much competition, is hardly acting liberally to the exhibitors. Often there may be several calves with very little difference in merit between them, and yet only three out of these can obtain a prize. In these sections, and others, where entries are invariably numerous, there should be additional prizes awarded; or, if the funds of the exhibitor will not admit of it, a high commendation, and a commended card might be given. These would not only be valued by the owner, but would also be of assistance to purchasers, many of whom (in the event of the three prize animals not being for sale, or being perhaps too high in price) would be glad to have the opinion of the judges as to the next best animals. Perhaps one of the most trying things to exhibitors, who have more than one breed of stock at the show, is that the judging of all breeds commence on the same day. This entails an unnecessary number of extra hands at considerable expense; while the want of a proper programme strictly adhered to condemns the owner and attendants to a state of perpetual *qui vive*, lest they should miss the call

into the ring. In most, if not all, shows in Canada the duty of calling out the exhibit is performed by an official, who passes hap-hazard by each shed, shouting out the class required, the onus of being on hand lying upon the owner or attendant. In this respect, the management of the recent horse show at Chicago contrasts favorably with the best of our shows. There was no chance there of not having the call; a map of the stalls numbered, and an index to the exhibitors was kept, and attendants were sent round to each stall, who were instructed to see the person in charge. There is one rule which should be strictly enforced at shows, *no one* should be allowed in the judging rings except the judges, the necessary official with the books, and the representatives of the press. The non observance of this rule, even if no wire pulling is going on, looks bad, and is liable to raise the suspicion that some underhand work is going on.

As to the number of judges, there is much difference of opinion. I have always been in favor of a single, *honest, competent judge*; whether he comes from far or near it matters little, provided he possesses the above requirements. Among the many arguments in favor of the one judge system, may be mentioned that it is less expensive, and easier to get a single judge than three; it would have a tendency to prevent incompetent men accepting the office, and it would encourage upright decisions, as one would know on whose shoulders to lay the blame if any unfair awards were made. Two judges and an umpire I consider the worst system of all, and the defects of it has been apparent in many a show ring. Apart from the task of uniformity in the awards, which is often seen where this system is adopted, the decisions often have a delightful uncertainty about them. For example: In Shorthorns there are three strains—Bates, Booth and Scotch—and a judge is usually selected to represent each strain. In the first class perhaps the Bates judge is appointed umpire, the Booth and the Scotch judges will then each, perhaps, select a different animal, which is probably one of their respective favorite strains. The Bates representative is then called in to decide between those two animals, and those only, although there may be another in the ring which he considers superior to either. In the next class, perhaps the Booth judge is arbitrator, and a similar condition may arise, and so on to the end of the chapter. Variety is charming, and certainly such a system is productive of it; but it can hardly be contended that an unposted looker-on is to be educated by the selection, in each class perhaps, of a different type of animal. In conclusion, a word on the straw question, an article which usually becomes beautifully less towards the close of an exhibition. This is a parsimony which is extremely annoying to exhibitors, who intend proceeding to the next show, and are anxious to keep their exhibits clean. If a certain amount of baled straw (for when baled it is much more easily handled and stored) were allowed to each exhibitor, a great cause of complaint would be removed, and the unseemly struggle for straw, which is so often seen in the fair grounds, would be relegated to the past and become an unlamented relic of by-gone days.

The American Southdown Association are considering the expediency of offering special prizes for Southdowns at a number of the leading shows of 1890, including Detroit and Buffalo. It is proposed that these prizes be in medals and cups. There is also a move being made at the present time in England to establish a public record for Southdown sheep, a thing that is much needed.

Our Maritime Letter.

Your readers by the sea are on the *qui vive* to know the ADVOCATE'S views as to the results likely to follow the meeting of our Dominion Dairymen and Fruit Growers at Ottawa. Since the advent of Chicago beef in our markets, and its demoralizing effects on that industry with us, the two interests represented at Ottawa are by far the most important of any we possess, and are therefore awaiting developments with a keenness of interest that is significant of the importance those branches of farming hold in the community. There can be no question but that the Dominion Government are actuated by an earnest desire to aid these industries, and place them on a sure and solid basis. It remains to be seen whether the deliberation of these organizations will result in the good anticipated. From the preponderance of papers read and addresses delivered before the conventions by learned professors, it is evident that we shall not suffer from the want of professional guidance in working out the future of these industries. The fact, however, that there is a large place for the practical dairymen and fruit-grower to fill at these meetings must not be lost sight of. Farmers, as a rule, are intensely practical, and it is a fact that the address of a thoroughly practical and successful farmer carries much more weight with it than is generally supposed. One thing is quite apparent, viz.: That the important purpose for which these conventions have been called into existence will be thwarted if by any possible means an attempt were made to run them into a political *groove*. The feeling is universally entertained that this is not contemplated by the promoters, and possibly with the ADVOCATE on the watch-tower it may never be attempted.

Many of our farmers are just now trying to solve the problem what to do with their surplus hay. Since the beef industry received such a severe check, there has been a great tendency to sell the hay, particularly among those farmers who possess dyke marshes. These marshes have been producing hay for a hundred years or more without any apparent diminution in the yield per acre. For the past two years this system has worked very satisfactorily, on account of short crops of hay in many sections, and the damage done by fall freshets on our rivers and streams. But, with the full average yield this year and the shortage in cattle, the hay trade is demoralized, and the farmers are face to face with the fact that too many eggs are in one basket. The conviction is being brought forcibly home that a return to first principles is the only solution to the situation. The out-look for dairy products is cheering, so far as a ready sale of first-class products is considered. The recent establishment of the West India steamship service from St. John and Yarmouth to the several ports in the West Indies, has opened new markets to our people; while the direct communication with the markets of Britain, without burdensome railway freights, makes our position a most desirable one.

To secure these markets, and hold them, it is absolutely essential that the quality of our goods should be A 1, and the packages in which they are shipped should be strong and neat, and in size suitable to the requirements of the markets on which the goods are placed. The pertinent question is, Will our dairymen make an effort to do this? *Nay, more*, will they succeed in doing this? thereby putting money in their own pockets and adding largely to the general exports of Canada.

Stock.**The Late Stallion Show in Toronto.**

The late show of the Clydesdale Association of Canada has assumed such importance that we thought it wise to give a photographic view of it, as seen by the spectators from the gallery. So renowned has this show become that a number of Americans attended it from far beyond the Mississippi River; and several of our own countrymen from Manitoba and the Territories were there from the west; from the east, Prince Edward Island and the other Maritime Provinces, as well as Quebec, were represented by prominent men. Messrs. Graham Bros., Claremont, Ont., showed nine head; Robert Beith & Co., Bowmanville, Ont., eight; Sorby Bros., Guelph, Ont., four; T. W. Evans, Yelverton

the coming season. This has partly come about through the numberless applications for his services that have poured in from neighbors as well as from a distance. Many parties having good mares are desirous of shipping them to him. We also purpose holding Arbitrator, the colt that won second in the two-year-old class." They also intend to keep Gilroy, a horse of great promise. Messrs. Beith's horses, though not as successful as in some former years, were greatly admired, as they deserved to be—large, massive and finely bred, they were a lot worthy of national pride. These gentlemen have not advised us regarding their sales, but we have learned they have also sold some noted horses, as did the Messrs. Sorby Bros. and others.

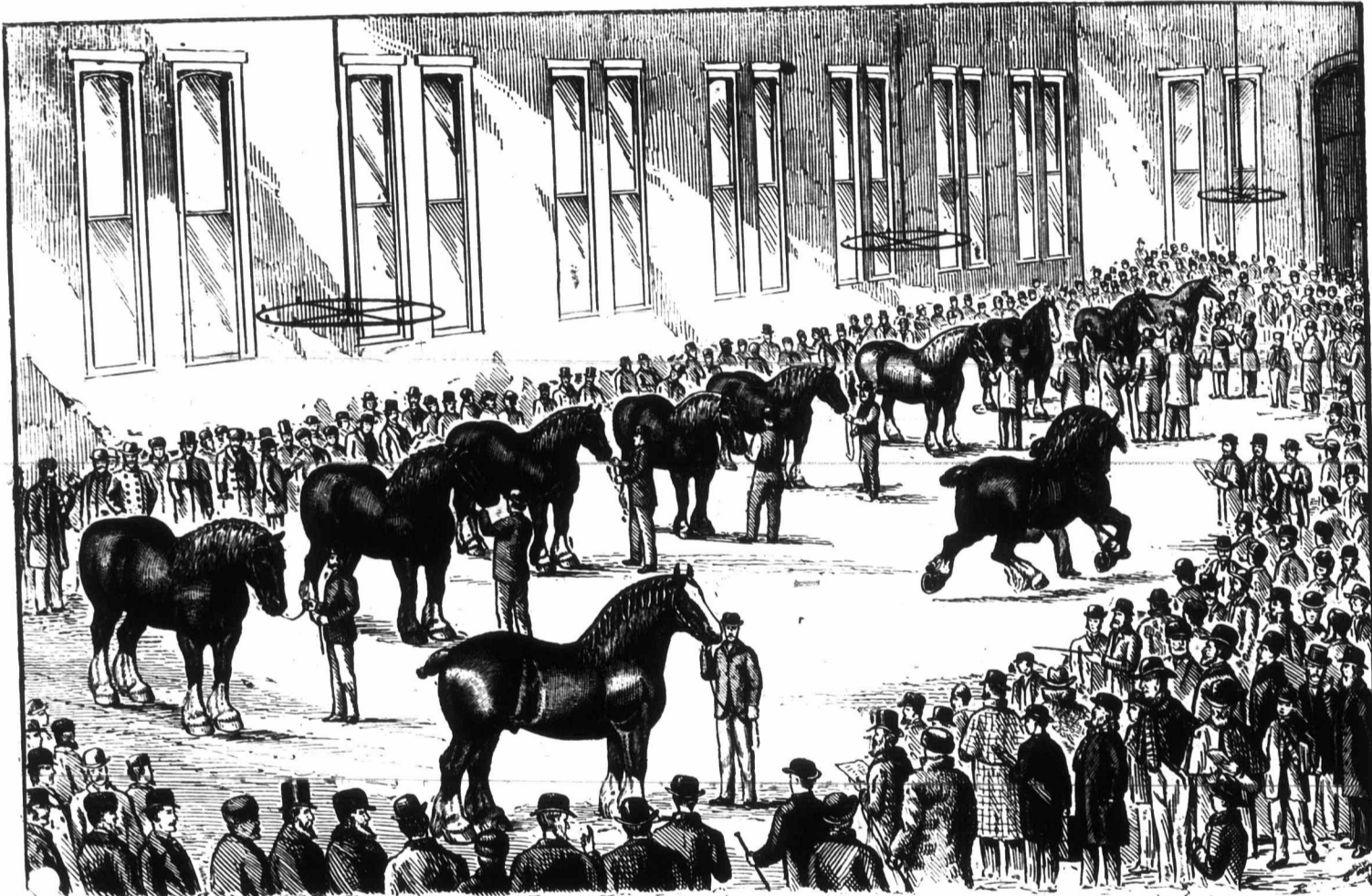
Chatty Letter from the States.

[From our Chicago Correspondent.]—
Prices are mending—best beeves, \$5.25; best hogs, \$4.40; best muttons, \$6; best heavy draft horses, \$250 per head. The late tendency in

good 85 to 90-pound Texas sheep to fatten for a later market.

A month ago the horse market was overstocked and very weak, at very low prices. The prices are still low for ordinary kinds, but there is an improvement in the general horse market, and dealers report business as being much more satisfactory than usual at this season.

Well, another big "cattle convention" has been held. A large number of cattle men, especially those from the range districts, met at Fort Worth, Texas, to discuss ways and means for bettering the present condition of the trade. As might have been expected, the meeting was a success socially, but that was all. The meeting, like many before it, was called by those who cannot see why there should be any reaction from the great crazy boom in ranch property



PHOTOGRAPHIC VIEW OF THE CLYDESDALE STALLION SHOW AT TORONTO.

Ont., three; R. Miller, Brougham, Ont., two. A number of other gentlemen showed one and two each. In the imported class for four years old and upwards, fourteen entered the ring. In the three-year-old class there were eighteen. In the ring for two-year-olds there were but four. Throughout the horses were of greater merit than ever before seen at the Society's Show. The sweepstake horse this year is decidedly more valuable than the winner of last year. It is a great honor to the Messrs. Graham Bros. that they should have imported and fitted both of these horses, nor is it less an honor that this year in each of the classes respectively Macneilage, MacClaskie and Ravenswood headed the prize list, and that others of their horses filled in several places in the line of prize winners. The esteem in which these horses were held by the visitors may be judged from the fact that during the show and two succeeding days the firm sold ten head, seven of which were exhibited. See the stock notes for particulars. In a recent letter to us they say:—"We have decided to keep Macneilage in our stud during

prices for live stock has been toward improvement. The top price on heavy cattle is the same as thirty days ago, but the average price is higher. Hogs lately advanced about thirty cents, and the feeling among dealers has been that with a splendid demand and a great shortage of mature hogs, especially in the east, prices would be "better before they were worse."

Sheep have held their own remarkably well, and are selling fully 75c. per hundredweight better than most of the heavy feeders expected. Choice corn-fed "western" muttons 110 to 130 lbs. are selling at \$5.40 to \$5.70, while some of the best judges predicted last fall that feeders would consider themselves lucky if they got \$5 for the best of their sheep this spring. Indeed, one extensive feeder who took this view of it has marketed most of his stock at \$5.50 and better, and is now paying \$4.75 to \$5.00 for

which attracted millions of foreign capital a few years ago, and sent prices up so high and so rapidly that for two or three years it seemed impossible to pay too much for cattle; some of the dearest purchases soon looking cheap.

Many of those who were interested in calling the meeting together, were also of the opinion that the growth of the dressed meat refrigerator system was the cause of the trouble, but to show that this sentiment is not general it may be stated that a large part of the convention's time was taken up in listening to propositions to the cattlemen of the Southwest to start a huge refrigerator plant in Texas.

Most of the men in the dressed meat business have made good money at it, and there is no reason why others should not follow. It is certainly the correct principle, and while of course large means and great business ability

are now essential to success in getting new concerns started, there ought to be no lack of either. Those who attempt to compete with the institutions already in the field will have a hard time getting started perhaps, but those who try to stop and turn back the wheels of progress by trying to do away entirely with new and improved methods of handling meats are doomed to certain failure.

Messrs. John Miller & Son's Short-horn Bull Vice-Consul = 4132 =.

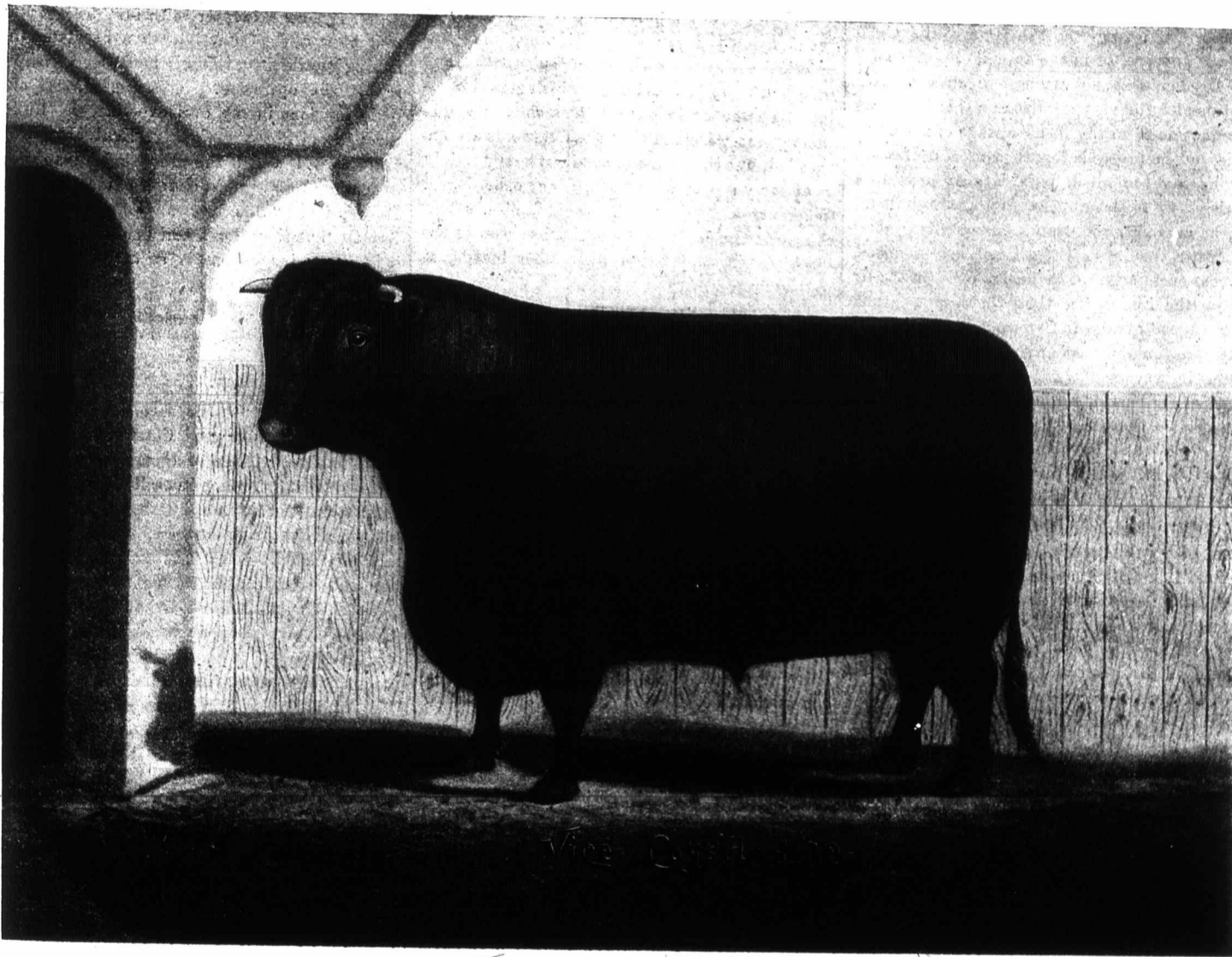
The illustration of Vice-Consul = 4132 = is a very life-like representation of that great show and breeding bull, now at the head of the Thistle Ha' herd, the property of John Miller & Sons, Brougham, Ont. This firm is justly noted

The Flock Prize at the Late Provincial.

As we are the owners of the flock of Cotswold sheep that won the special prize at London for the best flock of sheep of any breed, wool and mutton combined, some of your readers may expect us to reply to some of the statements made in the last number of the *ADVOCATE* by "One Interested in Sheep Raising." We will take the flocks just as they stood at London, leaving out the question which breed of sheep is the best for general purposes. We believe it was the unanimous opinion of the judges, and we might say of all good judges of sheep, that our flock was a better representation of the Cotswold breed than

the other breeds are so superior for crossing on the common sheep of the country, how is it that we see no improvement. There is no special market for their wool and mutton. Then we say on what could the judges base their decision. It has yet to be proven that there is any breed that will put on more flesh for the food consumed than the Cotswolds, or that their mutton is superior. In the wool crop we certainly have the advantage as there is very little, if any, difference in the price per pound, and we have almost twice as much per sheep.

"One Interested in Sheep Breeding" certainly goes out of his way to have a knock at the Cotswolds when he says most of these shown



THE PROPERTY OF JOHN MILLER & SONS, BROUGHAM, ONT.

for keeping at the head of their herd the very best male that can be had for money. The above named bull is a living proof of this fact. He is a Cruickshank-Victoria. His dam is one of the finest cows in the famous Sittyton herd. Vice-Consul = 4132 = has been shown eleven times, and has been awarded that number of first and sweepstake prizes, including first and sweepstakes at Toronto in 1888. He is considered the best breeder his owners have ever had, and his offspring, both male and female, have been shown with unbroken success from Quebec to Assiniboia, and from York State to Oregon. This is to-day undoubtedly the best Shorthorn bull in America, and probably the best alive. As a sire he is wonderfully impressive.

the other flocks were of the breeds they represented. Now, if this was so, why were we not entitled to the prize. Has there yet been brought forward good and sufficient proof to show that the Cotswolds are not the best sheep for general purposes? Until that fact is demonstrated we think the judges could not well do other than they did.

Is it not a fact that for twenty years up to about six or seven years ago the Cotswolds led the race and were popular both here and in the United States. At that time almost every farmer had nice little flocks of good sheep of either Cotswold or Leicester grades. What is the state of affairs to-day? After the other breeds have had a fair trial we find but few in the country, and those of an inferior sort. If

at our large fairs are imported. Does that not also apply to the Down breeds as well? Speaking for ourselves, our reason for crossing the Atlantic for show sheep is that it pays us to do so. If the above writer, or any one else, will come to our farm now we can show a "respectable" flock of Cotswolds (some ninety head), and but two of them imported. We feed a number every year specially for show purposes, but through July and August there is usually a good demand from those wanting such for show purposes, and we sell them because it pays us to do so rather than to hold them over until after the show season. We have shown good flocks of our own breeding before and could do so again if we had not to supply our customers.

J. G. SNELL & BRO., Edmonton, Ont.

Quantity and Quality.

BY J. C. SNELL.

Mr. Dryden, in your issue for February, criticises some remarks of mine recently published in regard to the claims of Cotswold sheep. He alleges that in that article I urge that quality counts for nothing in the markets of America and Great Britain, and that the prudent course for the sheep-breeder would be to produce as many pounds as possible of mutton and wool, regardless altogether of quality. The quotation upon which he bases this charge is this:—"What are the facts in regard to our markets. Are not both mutton and wool bought at so much per pound, and is there any extra price paid for quality in either case that will nearly compensate for the difference in weight in favor of the Cotswolds at any age, or in the annual clip of wool." Mr. Dryden does not attempt to answer these questions for the very good reason that he knows he cannot do so to the disadvantage of the Cotswolds, but he proceeds to unbosom a confession of "having too much public spirit to allow a statement so misleading to go uncontradicted." Yet, he does not, and cannot successfully contradict either the letter or spirit of my premises, but goes on to attempt to mislead the public by leaving the impression that there is no such thing as good quality in Cotswolds. The friends of this breed claim that in no class of sheep has greater improvement been made in the last twenty years than in this, both as regards mutton and wool, but especially the latter. The fact is Mr. Dryden, so far as Cotswolds are concerned, has been in a Rip-Van-Winkle sleep, and blind to the improvement that has been going on.

It may be that I am lacking in the noble sentiment of "public spirit," but I confess it was the condition and circumstances of the great bulk of farmers in the country I was thinking of when I wrote, and of the conditions of the markets we have and are likely to have. I can readily understand the interest of Mr. Dryden and a few other handlers of short-wooled sheep, who have been making a good thing by importing and selling the finished work of other men's hands. But, the question is, what is there in this for the average farmer, and does it settle the question which is the best breed for the farmer to keep? The destiny of all sheep is "the block," and the butcher will only pay for the number of pounds he gets from the farmer. The farmer who has long-wools to sell will have more pounds of mutton, and consequently will receive more money for the carcass of his sheep. He will have more pounds of wool, and, as the wool buyer pays no extra price worth naming for short wool, he will have more money for his wool. This is the actual state of affairs. But, Mr. Dryden is dreaming about a possible time in the dim, distant future, when those millionaires down in New York shall have acquired a taste for the mutton of short-wooled sheep, and he would have the farmers build upon this very uncertain foundation. Judging from the progress that has been made in this line in the past, the probability is that the present generation of farmers will all be in their graves before this dream is realized. In the last fifteen years more thousands of these sheep have been imported than was ever imported of any other breed in the same space of time. Yet, their friends have utterly failed to establish a special market or any extra prices for either their mutton or wool,

or to show that, in the markets of America, any distinction is made in their favor. Indeed, the public have learned to suspect that these boastful claims to superiority of quality are only a myth, and that it is on the same line as the story that is told of a convention of big-headed scientists, who met in solemn conclave to solve the problem: "Why is a fish heavier when dead than when alive." The question puzzled them sorely, till the latest arrival asked the other question: "Is it?" It is well known that the joke has been often repeated of placing a leg of Cotswold mutton before a company of self-constituted epicures, under the impression that it was their favorite "brand," and they have smacked their lips and praised its quality.

"If you have a reputation for rising at five in the morning you can sleep till nine," but this practical age calls for something substantial, and early maturity is a feature to which great importance is attached in our fat stock shows; and in this respect we claim that the Cotswolds are unexcelled, but can be made attain as heavy weight at an early age, or at any age, as any other breed. Wherever a fairly good Cotswold lamb has been shown at the fat stock shows, it has won in the block test in competition with other breeds, as well as on foot.

The consolidated statement of average weights of the different breeds at the Chicago Fat Stock Shows from 1878 to 1887 inclusive, comparing Cotswolds with middle wools, is as follows:—

	Yearling Wethers.	Wethers under 1 year.
Cotswolds.....	138 lbs.	135 lbs.
Southdowns.....	176 lbs.	114 lbs.
Shropshires.....	173 lbs.	117 lbs.
Oxfords.....	201 lbs.	117 lbs.

The latest public evidence of the superiority of Cotswolds, in respect to early maturity, is the report of the Christmas 1889 show of the Smithfield Club, the greatest fat stock show of England, where the champion prize for the best three lambs of any breed was won by the Cotswolds for the third time in the last five years. A comparative statement of the gain per day in ounces places the different breeds in order of merit as follows:—

	Wethers.	Lambs.
Cotswold.....	8.	11.2
Lincoln.....	7.5	9.5
Oxford.....	7.1	10.
Shropshire.....	6.2	9.3
Southdown.....	5.2	8.1

From these figures it will be seen that the boasted superiority of the short-wools cannot be based on early maturity. Mr. Dryden next suggests that a comparative statement of the cost of production might make a very different showing, but he gives no figures and no proofs that the Cotswolds would suffer by such a comparison, and he cannot do so. This is a difficult question to determine, and has not been fairly tested so far as we know; but we can furnish the evidence of the men who have fed the different breeds together under exactly similar treatment and circumstances in preparing them for the fat stock shows, and I can assure my friend this evidence will not be very flattering to his favorites. The adoption by the Shropshire Association of that narrow-gauge rule, prohibiting its members from keeping any other breeds on the same farm, is pretty good evidence that they know they dare not compete on fair terms with the long-wools, either in respect of cost of production or of early maturity.

Mr. Dryden has prudently confined his criticism to the question of mutton, but the question of wool is nearly if not quite as important, and

when a fleece of 14 to 18 lbs. is pitted against one of 6 to 10 lbs. it is not difficult to decide where the advantage lies, and when a comparison is made of the returns per sheep in mutton and wool combined, then it is that the Cotswolds stand out in bold relief as the most profitable sheep for that large constituency, "the average farmer." The quality of Cotswold wool is well known to have been vastly improved in the last ten or twelve years, and in the best flocks the coarse fleeces with hairy thighs have disappeared, and a fine, even fleece throughout has been attained, and the prospect that lustrous and alpacas will soon be in fashion again for ladies' dress goods bespeaks a bright future for the Cotswold men.

Mr. Dryden evidently thinks he deals a stunning blow to the Cotswolds when he states that having grown them himself he has no desire to repeat the operation. This reminds me of a little incident in my own experience. Riding through old Bourbon County, Kentucky, a few years ago, I asked the colored jehu to what denomination a certain church edifice belonged. He replied, "She used to be a Hard Shell Baptist, but they don't run her now." Would it be fair to judge from the failure of the deacons there to "run" a church successfully that the conditions in that State are not favorable to the production of stalwart Baptists? Anyone acquainted with the country knows that the rivers are full of them.

Those who know the facts know that my friend never owned good Cotswolds, and never was a half good judge of them, and that being ambitious and finding himself badly distanced in the race for supremacy among the Cotswold men, with an eye to business, perhaps, as much as from "public spirit," he dropped out of the race and caught on to the next boom. It was not "the lay of the land" that was at fault in his case either, for on an adjoining farm a flock of Cotswolds was built up which made for itself a continental reputation, which was chosen by the Dominion Government to represent Canada at the Centennial Exhibition, and which, at the Indianapolis Exhibition in 1878, won the grand sweepstakes for best flock of any breed, competing with first-class flocks of imported Southdowns and Shropshires, and this has generally been the result when they have come into competition with other breeds. At the Oxfordshire Show in 1888, one of the very best sheep shows in England, a champion prize was offered for the best shearling ram of any breed, and the English judges, who may be supposed to have known something about quality, gave the prize to Mr. Swanwick's Cotswold ram, weighing at twenty months 380 lbs. "How is that for early maturity?" This was his weight here, after the voyage and quarantine, which must have reduced him considerably.

At the Ontario Provincial Exhibition at London, 1889, a champion prize of silver service was offered for the best flock of sheep for general purposes. Most of the breeds were in competition, including an extra good flock of imported Shropshires, which was selected in person by one of the closest judges in this country, and one of the most successful breeders of these. Those who know the judges, Messrs. John Hope, Frank Shore and Thos. Teasdale, will not say they were likely to overlook quality, yet the prize went by unanimous vote to the Cotswolds.

As an offset to Mr. Dryden's intimation that Cotswolds did not do well for him, I may say that I have received at least a score of letters in the last six months from as many men who had been lured away after strange breeds, who have seen the error of their way, have confessed their folly and expressed a desire to return to their first love, the Cotswolds. I place against it also the sad experience of hundreds of farmers in Canada who allowed themselves to be misled in the same way, who once had good sheep but were tempted to drop the substance to grasp at a shadow, who mixed and muddled the breeding of their sheep by the introduction of these cross-breeds till they were disgusted with what they had left and sold off the last one to the local butcher, who now find themselves without sheep just when they are the most desirable stock to have, and who now want Cotswolds but find that so many people are of the same mind that there are not enough to go round. The sale by one firm in Canada of 73 head of Cotswolds in 1889 at an average of \$41 per head is some evidence that they are wanted.

No one who knows my friend will doubt his patriotism and public spirit, but there are those who will believe he is just shrewd enough to see which way the procession is heading, and will understand his anxiety to "head it off."

Galloways—Early Canadian Families.

BY D. M'CRACK, GUELPH.

Though the Galloways are the oldest of the pure breeds of British cattle their herd book records are quite modern. The papers and records which had been collected by the Highland and Agricultural Society of Scotland, relating to the breed, were unfortunately destroyed by fire in 1851. The first published herd book was issued in 1862; it contained pedigrees of Polled Angus, Aberdeen and Galloways, but the breeders of the latter never heartily joined the scheme, and not until the publication was divided, a few years after, did the majority of the Galloway breeders record their cattle. Long before this the Galloways had found their way to Canada. In 1853 Mr. Graham, of Vaughan, in the County of York, brought out ten head from the neighborhood of Dumfries, Scotland. This was near Mr. Graham's native place, and many of his friends and relations were then breeding Galloways. From Mr. Graham, of Shaw-Dryfe, he got two two-year-old heifers, Jet [2] and Venus [3]; from John Carruthers, Kirkhill, he got the two-year-old heifer Bonny [1] and three yearling heifers, Phillis [7], Blacky [8] and Bell [9].—Mr. Carruthers is still a breeder and an exporter of Galloways, and since then quite a number of animals bred by him have come to America—from Robert Brown, Dumfries, he got but one, Chloe [4], and from Mr. Rogerson, Leighton Hall, he got two heifers, two years old, White Bag [5], Black Bess [6], and the bull Jock [10], a yearling. Three years after this, in 1856, another importation was made by Mr. Graham. Of these two-year-old heifers four have been recorded—Beauty [11] and Heather Bell [12] were from Mr. Carruthers, Kirkhill, and Topsy [13] and Sall [14] from Mr. Graham, Shaw-Dryfe. From these two importations of Mr. Graham a large part of the present stock of Galloways in the Western States are directly descended, and while a few years after additional importations were made by Mr. Miller and others, these named formed the basis of the bulk of the stock. The fourth volume of the

American Herd Book has just been issued by the Secretary, Col. L. P. Muir, of Independence, Missouri. Of 1,839 pedigrees which it contains, a very large proportion are animals descended from Canadian families—many from these animals imported by Mr. Graham. In mentioning the descendants of these, this volume is taken as giving the latest information on the subject. Of these fourteen animals perhaps the first place belongs to

CHLOE [4],

from the herd of Mr. Robert Brown, Dumfries. She was one of the short-legged, blocky kind, with good head and ears, deep rib and good hair, very active, and till about eighteen years of age she kept her place as leader of the herd. Her calves came always extra good, and several of them were prize winners. She was a good milker and a very good nurse, which perhaps helped forward her calves. She was a great favorite with Geo. Miller, of Markham, who thought her a grand type of a Galloway. Her daughter Bonny 2nd [74], bred by Mr. Graham, after Jock [10], was a very good cow, and for a long time had a prominent place in the show herd of Mr. Arthur McNeil, of Vaughan. Her son Hardfortune [154], by Dred [15], is a prominent name in many pedigrees. Representatives of this branch of the tribe are now owned by M. R. Platt, Kansas City, Mo.; by the Interstate Galloway Co., of the same place, and by E. N. Bissell, East Shoreham, Vermont. Bess [125] has the largest number and most widely spread representation of any of the Chloe family. She was by Marquis [19], a son of Topsy [13], and was sometime the property of Alex. Mounsey, of Etobicoke, County York, but afterwards came into the herd of Mr. McNeil. Her daughter Susan [157], and g. d. Siss [203], the latter taken to Wisconsin by Mr. Peter Davy, of Monterey, Waukesha County, have helped to spread this part of the tribe. Representatives are owned by J. E. Ground, Abingdon, Ill.; James Hammond, Ontario, Ill.; Wm. Killiam, of Abingdon, Ill.; C. W. Baker, Soldier's Grove, Wis.; Philo Lasher, Coffeysburgh, Mo.; A. A. Bryan, Montezuma, Iowa, and John F. Rhodes, Toulon, Ill. The next heifer calf, Molly [17], was small and rather wild, and did not develop as well as some of the others. Her produce were sold in Canada, and used chiefly for crossing purposes, and some very fine feeding animals were the result. This, while profitable to the feeders, did not tend to perpetuate the race. Lady Isabella [100], by Donald [123], was a very fine animal. She won prizes as a yearling and a two-year-old at the Provincial shows, and was sold by her breeder, Mr. Thos. McCrae, to Wm. Hood, of Guelph. In this herd she was a show cow, and bred some very good animals. The bulls, Johnny Cope [283] and Hardfortune 2nd [255], from her are well known and celebrated. The former was owned by R. G. Hart, of Lapeer, Mich., and the latter was used for several years in Mr. Hood's own herd. Descendants in the female line of Lady Isabella [100] are owned by the Interstate Galloway Co., Kansas City, Mo., and by Thos. Wyckoff, of Davisburg, Oakland Co., Mich. Another heifer calf of Chloe [4], Maggie Lauder [148], was a prize winner, and went when quite young to J. Giles, Boston, Mass. All these animals had a marked likeness to the old cow Chloe, a strong family likeness, and made a distinctive and well marked type. How far the same type is being retained by the modern representatives is a question very interesting, and of which it would be valuable to have accurate information.

Dominion Sheep and Canadian Hog Breeders' Associations.

SHEEP BREEDERS' ASSOCIATION.

The annual meeting of the Dominion Sheep Breeders' Association met in Shaftesbury Hall, Toronto, March 14th. The following Board of Directors were elected:—President, Robert Miller, Brougham; Vice-President, James Russell, Richmond Hill; Secretary, F. W. Hodson, London; Treasurer, F. R. Shore, White Oak. Directors: W. H. Beattie, Wilton Grove; John Jackson, Abingdon; John Kelly, Shakespeare; J. C. Snell, Edmonton; R. Gibson, Delaware; Rock Bailey, Union; Wm. Walker, Ilderton; Wm. Linton, Aurora. Vice-Presidents for distant Provinces: Nova Scotia, A. C. Bell, New Glasgow; P. E. Island, Benj. Wright, Charlottetown; Manitoba, W. Struthers, Russell; British Columbia, Mr. Kirkland, Ladner's Landing; Quebec, E. Casgrain, L'Islet.

The following resolutions were put to the meeting:—

Resolved—That the Industrial Fair Association has the sympathy of the sheep breeders in their efforts to secure additional accommodation, by prevailing upon the Dominion Government to allow a portion of the Military Reserve for that purpose.

Resolved—That this Association is pleased to learn that the management of the Industrial Fair Association have withdrawn the proposal of demanding live stock to remain at exhibition more than one week, as such a course would be disastrous to both the Industrial Exhibition as well as to the breeders of pure bred stock in Ontario.

Mr. James Russell and J. C. Snell were appointed on a committee to confer with the other Breeders' Associations to obtain better railway rates and better accommodations at fairs, and for the general interests of breeders of live stock.

Most interesting papers were read by the following gentlemen: Ald. Frankland, "A Profitable Industry"; John Campbell, Jr., Woodville, on "Errors in Breeding and Feeding"; James Russell, "Sheep a Profitable Stock for the General Farmer"; John Jackson, "Sheep Profitable and not Profitable."

The following gentlemen were recommended as expert judges in the different classes:—Shropshires—J. F. Rundel, Birmingham, Mich.; W. J. Garlock, Howell, Mich.; W. M. Grant, Woodville; John Campbell Jr., Woodville; Richard Gibson, Delaware; W. H. Beattie, Wilton Grove; Frank R. Shore, White Oak; Robert Miller, Brougham; W. S. Hawkshaw, Glanworth. Southdown—James Smith, Mount Vernon; Simon Lemon, Kettleby; H. H. Julian, Colchester; A. R. Kidd, Warsaw; W. D. Miller, North Pelham; Wm. Martin, Binbrook; T. A. Douglas, Galt; R. Rivers, Walkerton; E. J. York, Wardsville. Leicester and Lincoln—Geo. Weeks, Glanworth; Bilton Snarry, Down Mills; G. S. Cresswell, Egmont; W. Cowan, Galt; Mr. Allan, Bowmanville; John Miller, Brougham; Wm. McKay, Elm Bank; Jos. Pearson, Whitby; Jos. Snell, Edmonton; J. C. Snell, Edmonton; W. E. Swain, Valentia; Robt. Miller, Brougham; Andrew Telfer, Paris; John Mason, Princeton. Cotswolds—Thomas Teasdale, Concord; Simon Lemon, Kettleby; Thomas Colley, Castleberg; Arthur Johnston, Greenwood; John Thomson, Uxbridge; Robert Miller, Brougham; Wm. Hodgson, Brooklin.

Merinos—Louis Lapiere, Paris; George Weeks, Glanworth; C. Buchanan, Branchton; Wm. Farr, Aylmer.

The Dog Bill, being introduced by Mr. Dryden, was discussed, and a resolution carried, asking all sheep breeders to bring their influence to bear upon their representatives to try and have this bill passed. This is a very important measure and every one interested should endeavor to forward it.

CANADIAN SWINE BREEDERS' ASSOCIATION.

The first annual meeting of the Canadian Swine Breeders' Association met at Shaftesbury Hall, Toronto, on March 12th, when the following Board of Directors were elected:—President, Joseph Featherston, Springfield-on-the-Credit; Vice-president, J. Y. Ormsby, Springfield-on-the-Credit; Treasurer, E. M. Jarvis, Clarkson; Secretary, F. W. Hodson, London. One director was elected to represent each breed:—Berkshires, R. Snell, Edmonton; Suffolks, R. Dorsey, Burnhamthorpe; Essex, Jas. Main, Boyne; Yorkshires, F. Green, Innerkip; Chester Whites, E. D. George, Putnam; Poland Chinas, W. DeCourcy, Bornholm. Honorary Director, Prof. James Robertson, Ottawa. The following resolutions were carried:—That this Association recommend all the large fair associations demand exhibitors to produce certificates of registration of all pigs that now have an established herd book. And also that two additional classes be added, one for Improved Large Yorkshires and one for Chester Whites. The following gentlemen were recommended to the different fair associations as expert judges in the different classes:—Berkshires—M. McArthur, Lobo, Ont.; John Miller, Brougham; John Roach, Toronto; W. Shields, Milton; John Routledge, Hyde Park; A. Cockworth, White Vale; S. J. Lyons, Norval. Essex and Suffolk—Simson Rennie, Scarborough; S. Butterfield, Amherstburg; Samuel Mason, Hornby; Malcolm McArthur, Lobo; John Fothergil, Burlington; Wm. McClure, Elder's Mills; Jas. Anderson, Guelph; Wm. Elliott, Milton. Yorkshires and other large breeds—Jos. Emory, Toronto; Wm. Elliott, Milton; Robert Spears, Elm Bank; Samuel McClure, Woodbridge; John Hoard, Parkhill; C. M. Simmons, Ivan. Chester Whites—Frank Green, Jr., Innerkip; J. Featherston, Credit; John Lee, Ingersoll; John Jackson, Glen Allen; George Pierce, Mitchell; William Harris, Toronto.

The meeting also recommended one competent judge in each class. Joseph Featherston and Frank R. Shore were appointed as a committee to confer with other committees appointed by the other associations to obtain better railway rates and accommodation at fairs.

Resolved—That this Association memorialize the Dominion Government, asking that corn be put on the free list.

Resolved—That this meeting is opposed to swine being kept more than one week on exhibition at any exhibition.

Excellent papers were read by Prof. James Robertson, Ottawa, on "The Hog as an Adjunct to the Dairy"; Mr. C. H. McNish on "Hog Raising in Relation to Future Agriculture"; Mr. J. Y. Ormsby on "Railways and Fair Associations in Relation to Stockmen."

As the Poultry Monthly suggests, prohibition is the only proper thing. Poultry will drink from mud-puddles if you let them. Nothing but pure, clean water should ever be given to poultry if you wish to keep them in health.

The Toronto Spring Stallion Show.

The fourth annual Clydesdale Association Spring Stallion Show was held in the Drill Shed, Toronto, on the 13th of March, and as usual Mr. Henry Wade had done his best to make it what it turned out to be, a grand success. The floor of the building is far from suitable, being a square cut block pavement, and although there was a deep layer of sawdust laid down, it was so slippery that it was dangerous to trot heavy horses, and they therefore could not possibly be shown to the advantage that would have been the case if better footing could have been obtained, many of the horses after having once slipped would not again step off with the light carriage that they otherwise would have done.

The class for imported horses foaled prior to 1887 had fourteen capital representatives, in which MacNeillage, twice a winner at the Royal English Agricultural Society, besides many other winnings in Scotland, led off with the coveted red ribbon, he was in admirable form throughout. In Messrs. Graham's hands he has improved wonderfully since landing here last summer. This noted son of the great Macgregor was much admired at this his first appearance in the Canadian show ring. Mr. Robert Beith's Sir Walter, by Bold Magee, made a capital second. This horse is rising four, and nobly held his own in this remarkably strong and good class of older horses. He has filled out in form greatly since he won first over all as three-year-old wherever shown at last fall exhibitions, and actually taking the blue from his stable companion, Sir Maurice, also owned by Mr. Beith. This was decidedly an off-day for Sir Maurice, he was neither in as good form as usual nor could he on this slippery floor display the grand action which he possesses, and for which he was so much admired at the last fall exhibitions. The fourth place was won by Henry Hender's, Yelverton, with Erskine's Pride, imported by Arthur Johnston, Greenwood, sire Lord Erskine. This is a massive, showy horse and looked well in this high company. The fifth horse was shown by Jonathan Porter, of Oshawa, and catalogued as Royal Scotchman, imported by Robert Beith & Co. He is a real good one and showed well; has good action and is nicely coupled with lots of good things about him. Eastfield Style and Earl of Lennox, both imported, and owned by Messrs. R. Beith & Co., rising four years, were sixth and seventh respectively. These only require a little more time to develop; each has any amount of quality, size and fine action.

If the class of aged stallions was good, those rising three years were still better, and it is doubtful if ever on this continent there was as strong a ring of Clydesdales shown. With few exceptions they were in the pink of condition; and those that saw the wonderfully good class of two-year-olds at the last Industrial Exhibition, must have had their expectations fully realized in the extraordinary show of the same horses further developed, with hardly an inferior colt in the lot. The eighteen that entered filled the building to the fullest extent; and it was quite apparent, from the outset, that this class would tax the skill of the judges to the utmost; but, fortunately the men who acted were equal to the occasion, and after a thorough examination of every horse in the ring, a short list of no less

than ten showed the crowd of visitors how close was the contest.

Graham Bros.' MacClaskie, from the first, was set aside as the winner; and, although he was eighteenth on the catalogue, he was moved up to the first place on the first drawing, which his beautiful finish, size and quality, as well as his grand, lofty carriage and splendid underpinning, well entitled him. He also has been a royal winner, having taken first at Nottingham as a yearling, thus showing the class of horses that it now requires to satisfy the enterprise of our Canadian importers. Since being in Messrs. Graham's hands, he has wonderfully improved; he was in perfect bloom, but unfortunately with him, as with those behind him in this class, space does not allow us to speak sufficiently in his praise.

Messrs. R. Beith & Co.'s beautiful bay colt, Clyde Admiral, made a very showy second. This was a particularly well turned colt, with capital legs and feet, and heavy muscles, thighs and fore-arms; he showed well among this exceptionally good lot.

Chairman, another of Graham Bros., came next, according to the decision of the judges, and with his great size and capital all-round qualities, he was well entitled to the position.

T. W. Evans, of Yelverton, stood fourth, with "Just-the-Thing" (imported), and as his name denotes, he is of the first water—a really good, blocky colt, with plenty of breadth and depth. He has made great improvement since last fall's Industrial Exhibition, where he was placed second.

R. Beith took fifth, with Eastfield Laddie," (imported), who showed up well in this extraordinary class.

Robert Miller, Jr., Brougham, had a really useful colt in "Sir Edward," imported by himself last August. He was not in as high condition as any of the others, but is a very promising colt.

Thos. Menger, Jr., Doncaster, took seventh place, with "Rose Hill" (imported), a very nice colt.

We might so go on nearly to the end of the string of eighteen shown and speak highly of each individual, but it is sufficient to say all were good, it only being a case of comparison, and to a casual observer there was a wonderful uniformity in the whole lot, there being several that had been placed high up in the prize list of previous exhibition, that hardly were looked at here, which by making a false step lost confidence in their footing, and were at once discarded.

There were four colts in the ring rising two years old, Messrs. Graham's gaining first and second, with Ravenswood and Arbitrator, respectively; two colts, owned by Joseph Vance and James Chandler came next in order.

The sweepstakes, for best horse any age, was tied on MacClaskie, which seemed to meet the approval of most of the spectators, although MacNeillage had many friends in the company. As these two grand horses came into the ring, decked with ribbons from many winnings, they made a sensation long to be remembered by every one of the large crowd present.

Canadian-bred horses were out in greater numbers and of better quality than ever before.

In the class for three-year-olds, Mr. Alex. Doherty won first, with Merry Boy. The second place was won by Edward Barker's Topsman.

In the class foaled in 1888, Robert Miller's Strathmore won first; Wm. Crawford came second, with Pride; Willis Bros. third, with Pride of Peel; and Prouse & Williamson fourth, with Ardie.

The General Purpose Cow.

BY S. NICHOLSON, SYLVAN.

(Read before the Dominion Shorthorn Breeders' Association.)

I consider the cow to be of more importance to the farmer than any other of the domestic animals. On her depends in a great measure the quality of all the cattle kept on the farm. As more cows are kept than any other class of stock, more money comes into the pocket of the farmer from the cow and her product than from all the other farm stock put together. It is then of the utmost importance that she should be the best that can be got. In the first instance we will draw comparisons between the general purpose, namely, the cow adapted for both beef and milk, the cow especially adapted for the dairy, and the cow especially adapted for the production of beef. To take the last first:—It is generally agreed that a cow that will only give enough milk to raise her calf will not pay. Her calf at nine months old to make her pay ought to be worth \$40 or \$45, and to get this is out of the question, and the dairy cow is almost equally unsatisfactory. If dairy cows alone are kept a great deal of the coarse fodders will be wasted, as these require only the best of food; therefore, the stock kept will have to be reduced about one-half, which will materially reduce the receipts. It also leads to that cruel and revolting practice of slaughtering all, or nearly all, the calves at birth. Much is said these days about making home attractive and keeping the boys on the farm. Is it any wonder that a boy of spirit and refinement should want to get away from those yearly scenes of carnage and bloodshed! It clashes with all our preconceived ideas of the perfect laws of the Creator, and that any industry, to make it profitable, that requires such practices is not in harmony with our advanced civilization (but we believe that cheese can be profitably made without resorting to these practices). If a heifer of a purely milking breed proves unprofitable at the pail she is almost a dead loss. She has now been kept three years, and what is the balance against this three years' keeping? Simply whatever her hide will fetch at the tannery, for she will never pay to fatten. It must also be borne in mind that not more than half the cows on an average can be profitably kept after they are nine or ten years old. How many, before that age, lose part or the whole of their udder and are exposed to other diseases and accidents which render them unprofitable as milkers? What of these? They, too, are almost a dead loss, to say nothing of those others whose usefulness last until they are worn out. The mortality is also a great deal higher amongst breeding cows than other horned stock, which must also be taken into account. Taking all these things into consideration we are forced to the conclusion that this is not the most profitable cow.

We will now give a brief description of what we consider the most profitable cow for the average Canadian farmer. She requires four essential requisites, namely, robust constitution, sufficiently hardy to stand our Canadian climate, aptitude to fatten, and to be a fairly good milker. Some may ask, Why only a fairly good milker? For these reasons, the cow that gives an abnormal quantity must have an abnormal appetite and digestion, and in this, as in other abnormal things, it is not to be desired. Heavy milking also debilitates the system, so that it is very difficult to keep such cows in breeding condition. For a cow to be the most profitable she should have a calf every year, it is hard to get an extraordinary milker to do this, it also so reduces the system that they easily become a prey to manifold diseases, which accounts for all or nearly all of the tested cows in the neighboring Republic dying young.

Now, the question is, Which of the many

different breeds fill these four requirements, namely, robust constitution, hardiness to stand our Canadian climate, aptitude to fatten, and fairly good milking qualities. The Jerseys, Holsteins and Ayrshires are out of the race on account of being non-beefers. The Galloways, West Highland and Devons are out by not being adapted for either; therefore the race is between the Shorthorn, Polled Angus and Herefords, and while speaking of the Shorthorn we wish to be understood as meaning the Scotch or Aberdeen Shorthorn. I would here like to say a word on the product of the breeder's skill. This wonderful breed of cattle (for their characteristics are so marked and distinct from the English Shorthorn that they might be called a distinct breed) has been bred in Aberdeen for eight or ten generations. The breeders have, in nearly every instance, been tenant farmers, and make their living by their own efforts, consequently have not been favorable to the opinions in favor of line breeding, or breeding for a showy pedigree on paper. They are simply his stock-in-trade, and his customers were men who used them for the production of milk and beef. If they would not do this they were of no use, regardless of what their pedigree might be. Stock bred for a number of generations under the rigid principles and coupled with the rigors of the climate (Aberdeen being between parallels of latitude 57 and 58, exposed to the damp, cutting winds of the Atlantic), have produced a class of cattle that for hardiness, aptitude to fatten and quality of milk cannot be equalled by any breed on the face of the globe.

Next to the Shorthorn we should place the Polled Angus. This is fully equal to the Shorthorn in hardiness; very little inferior as a beef, fully better as to the quality of beef, but not so good a milker. They make a good second.

The Hereford makes a bad third; they are commonly credited with being fair milkers and very hardy, qualities that they are in no way entitled to. The County of Hereford (their home) lies about 400 miles south of the home of the Aberdeen-Shorthorn, situated so that it gets the benefit of the warmth caused by the Gulf stream. Their coat of hair is certainly very long, but very thin and open, with an almost entire absence of the under or mossy coat which the Aberdeen breeder looks on with so much pride in his favorites. I was told by one in whom I had the utmost confidence, who, for the last seven years, had charge of one of the best herds of Polled Angus, Herefords and Shorthorns, that the gentleman for whom he was manager sent a dozen bulls of each herd to a ranch in the west; the result was that all but two of the Herefords perished, while those of the other breeds came through without a single loss. Just what might have been expected; they were from too warm a climate. We can hardly give them a place in successful Canadian farming. What does the experience of the last fifty years teach? What breed of cows furnishes the supply of milk for the city of London, Eng., with 5,000,000 inhabitants? The Shorthorn grade, and has done so for two or three generations. Have these dairymen been doing this to bolster up the breed? Not by any means; it was their living. They used them simply because they were best adapted for their purpose. They were good milkers, and their calves could be sold to the farmers; and when their usefulness was over as milkers, they could be made into beef at a profit. If the Jerseys would suit them better, why did they not get them? The Island of Jersey is but a stone throw from London. It is true there are a great many Jerseys in England, but they are kept almost solely in gentlemen's parks, where it is considered too vulgar to keep a plebeian cow. Some may say, why did they not try the Holstein? Because they did not suit their purpose. The Duchy of Holstein (their home) is at their very doors. They have been tried in England before their names were ever mentioned in Canada. They did not suit and were discarded; while in the republics of South America, in nearly all the countries of Europe, the cosmopolitan Shorthorn is fast driving the native breeds out of existence. The reason is not far to seek, they are almost indispensable to man; and in any climate where man can exist, they are equally at home.

[TO BE CONTINUED.]

Yorkshires and Berkshires.

Some kind friend has laid me under a great obligation by forwarding to me a copy of the January number of your most instructive and entertaining paper. It must be a source of gratification and profit to the farmers in the Dominion to find that their interests are so well represented in the journalistic world. My only object in penning these few lines was not to pay you a deserved compliment, but also to express an opinion or two on the subject of pig breeding, a subject which has claimed a considerable portion of my time during the last thirty years. The desire to give my views on this subject arose from the reading of two letters in your January issue, the first being from Mr. Wm. Davies and the other from Mr. Francis Green, jr. As I have not seen the previous correspondence, I am laboring under a disadvantage, therefore if I draw wrong deductions or otherwise commit myself, I trust that you and your readers will acquit me of any intentional desire to misrepresent the opinions or views of others. Mr. Davies's letter appears to be chiefly confined to the correction or explanation of some sentences in his former letter, he also essays the needless task of explaining why his opinion on the question should not be influenced by the somewhat sordid motive of trading his few Yorkshires, a motive which Mr. Snell appears to have attributed to him. Mr. Snell also appears to have asserted that the Berkshire is of all others "the lean meat or muscle producing hog." This may be true of Canada (although I doubt it), but I know it is incorrect of Europe, Asia and Africa. It has been proved over and over again that wherever the Improved Yorkshire has been introduced it has been so great a success that the Berkshire has had to take a back seat or has been left behind altogether. I can prove this in five minutes from facts connected with my own herd. Before doing this I will interpolate the statement—which is an admitted fact—that the type and form of pig which is now required by the bacon curers of the world is precisely that form and type of pig which most nearly resembles the pig which fulfills all the wants of the breeder and feeder of pigs. Such being the case, the fact that the Improved Yorkshire pig is the best of all pigs is proved by my having sent for some years large numbers of pigs of this breed to all the chief centres of the bacon-curing industry, including Germany, Holland, Denmark, Sweden, Norway, Russia and Canada, and this week I have an order for some Improved Yorkshires to take the place of the Berkshires in that part of Spain where a considerable industry exists in the breeding of swine, the feeding of them mainly on chestnuts, and the exportation of the manufactured hams, which command the very highest price in all parts of the world. Not only so, but the demand for these Improved Yorkshires is greatly on the increase, owing entirely to their having proved themselves to possess the qualities of early maturity, hardihood, prolificacy, quick growth, quality of meat and fineness of offal. The sales from my herd last year were nearly three times as many as the average of the four preceding years, which also showed a marked increase on the previous years. I am also happy to be able to report a continued growth in the demand, as since January 1st I have sold sixty-nine boars and yelts, some of them are going or are gone to the States, Germany, France, Holland, Sweden,

Spain, Portugal, Scotland and Ireland, and the remainder to the home counties. Besides this I have enquiries from several other countries beyond the seas, including some three or four applications for prices, &c., from Canada. And further, I can truthfully say that in every country where I have sent these Improved Yorkshires they have proved an entire success, and have ousted the Berkshire, the blatantly puffed up Tamworth (in the few countries like Denmark and Sweden where it has been pressed on the curers), and all other breeds and crosses. If we take Denmark for instance, there are some twelve large curing establishments, and the proprietors of eleven, if not of all the twelve, are known to be distributing pigs from my stock, the greater part of which were bought direct from Holywell. The Berkshire is quite thrust to one side, because the curers find these pigs and their crosses to be too heavy in the shoulders, too short in the back, too light in the ham, with too much fat and too little lean. Some two or three years ago I received an order to send five Berkshire boars to Russia. The Russian government was desirous of establishing the bacon curing industry. Almost as soon as these Berkshires were despatched there came a letter countermanding the order, as it was found on enquiry of practical curers in various parts of the world that the present style of Berkshire was totally unsuited for the purpose, and that everyone replied that the Improved Yorkshire as bred at Holywell was the pig best suited to produce and to beget curers' pigs.

Mr. Snell asserts and Mr. Green appears to accept the statement "that the Improved Large White Yorkshire is not recognized as a pure breed at the Royal." For a great number of years pigs bred by me or from my stock have won scores of prizes in the classes for Large Whites at the various Royal Shows, and these pigs are bred from the same strains and even from parents which are the progenitors of these pigs from Holywell which have proved such a tremendous success under the careful and judicious management of Mr. W. Davies and of Messrs. Ormsby & Chapman.

SANDERS SPENCER,
Holywell Manor, St. Ives, Hants, Eng.

Elgin Stock Farm.

Of which Messrs. A. & J. Bell, of Athelstan, P. Q., are the proprietors, is the scene of a well established business of importing and breeding Clydesdale horses. The firm are also breeding Shorthorn and Ayrshire cattle, Cotswold and Shropshire sheep, Berkshire and Chester White swine. Their first purchases for their stud were the two stallions Sir Walter Scott and Prince Royal, bought of James I. Davidson, Balsam, Ont. These horses proved a successful investment to the Messrs. Bell, with a corresponding benefit to their patrons, as the impress they left upon their colts paved the way for extending their business operations by importing from Scotland some superior horses, among which we noticed Endymion (1650), a horse of the compact, blocky type, with extra heavy bone, good set pasterns and feet, with extra well feathered legs, well formed head and good expressive eye; his stable companion, Lockerbie Lick (4509), is a large, strong horse, with the right sort of bone, and has been very successful in the show ring.

General Bell [644] is a Canadian bred horse, sired by Sir Walter Scott; is built on a smaller scale than the two just mentioned, but is a horse of good make up and attractive in form.

Scottish Banker [648], sired by Endymion, is another bred here, of blocky build, showing good Clyde points with plenty of style, good head and neck, and extra good shoulder and underpinning.

General Mite [640] (4402), was purchased from

James Biggar, Dalbéatie, Scotland; sire Sir Michael; good bay, with black mane and tail, two white hind feet. He is very square and full, with underline of good length, denoting easy carriage.

Forward (4376), sire Clydesdale Prince, dam Fanny (1575), is a good bay, very broad chest, short back and well ribbed up. He has proved himself to be a good stock-getter.

Black Warrior (2605) is a horse, when in condition, will weigh between eighteen and nineteen hundred, good breast and barrel, with a good square all round build, and good quality of bone.

Old Times (4604) is very powerfully built, particularly fine neck, bay, white face and hind legs.

Banker of Athelstan [643], sire Prince Royal [543] 242, dam Mona [369] Vol II., 3246 Vol. VII., is a very dark bay, white hind feet and face, good top, with very fine set of legs and neck. He has carried off sweepstakes wherever shown.

In all, the Messrs. Bell have about thirty Clydesdales, seventeen of which are stallions, and the same number of in foal mares.

Horse Breeding in Canada.

In aiming to breed the light harness horse, as a business, speed is the trait too often sought—beauty of form, soundness, attractive action, size, are hardly thought worthy of a place in selecting the stallions to breed to our road mares. The hope of drawing a winning card by breeding something fast is the great aim, while if a horse is only sired by something fast, that can trot in the 30 list, or has a brother or sister a winner, or is bred in the same line as a horse that has just lowered his record, it matters not about the other useful and necessary qualities. They may hobble all over the road, be curly legged, like the \$105,000-Axtel and his sire, or any other blemish that will at once block the sale in a \$75 horse, yet if they have fast blood in their veins they will pass muster as a trotter, with the hope that one in 500 will be fast enough to pay for training. Now against the trotter that America has made a special production of, we have not a word to say, provided size and other qualities have not been overlooked. The gentlemen's driver is one of the luxuries that are most saleable among horse flesh—very few of our business men but indulge in something of this kind. But why not allow some other quality than speed to be the first to look to. There are among our standard bred horses those that have lots of size, any amount of quality, good color, beauty of form enough to please the most fastidious, and some of the knowing ones are just now making a specialty of breeding them. They say they will get a trotter once in a hundred times, you may get one once in fifty, but we have a horse that, if only one in a hundred draws a prize, the other ninety-nine will sell at a good profit; while your fiftieth sells at a good long price, you have forty-nine horses that are next to useless—poor, worthless weeds that are out of place wherever they are placed. It will take two of them to draw a moderately heavy buggy, and then they will lag on anything over an ordinary journey. On the highly finished half-mile track they will do, but on the country road they are entirely out of place, while on the street in the city they are worse. That there is a vast difference between the trotter and the gentleman's driver, it is well known and recognized by breeders of experience. The inexperienced breeder, however, fails to

grasp the importance of the difference. We see labored articles in which the writers have advised farmers to breed their mares to standard stallions, with the purpose of getting trotters; failing to get trotters, they would get roadsters—the next best thing. Many stallions with fast records are inferior on the road, and are even used by drivers themselves. They may get trotters properly mated, but never good roadsters. Let us briefly consider the main point of difference between the two classes of horses. The trotter to be valued as such, that is, for turf purposes, must be a horse with pure trotting action, or easily made to acquire the action by means of weights and scientific shoeing, must have speed 5 to 10 seconds better than his record. But if once out classed by being forced to a record which represents the extreme limit of his speed, or through bad engineering obtain a record they cannot again approach, they have very little show of a share of the profit when started in a race in the class to which they are eligible. What becomes of them? A few are kept on the turf by men who are sanguine enough to hope they will yet acquire speed to win. The mares, if well-bred, may find their way into the breeding ranks, and so, too, the stallions, but what of the geldings? The percentage that will make good roadsters are readily sold to wealthy men at big prices, but unfortunately the percentage is not one in fifty. The rest are often lost sight of, some of them find their way into the hands of unscrupulous owners, who give them new names and make "ringers" of them at some fourth-rate track, or they do to fill up the attractions at our fall exhibitions; the rest eventually wear the work harness, and haul scavenger's wagons on our streets. The roadster, as a success, is a horse with fairly true trotting action, with a gait moderately open, so as to be easy for himself; a strong constitution, good legs and feet, plenty of nerve; good style, carrying his head well; good color; well broken; good mouth, not a puller, yet holding the bit well; ready for a brush on the road, or willing to trot along at a four or five-minute gait: quick to respond to the word or line, and altogether a pleasant animal to drive—in fact a gentleman's horse all over. How many trotters answer this description? It therefore appears that for profit farmers would find it much safer to breed for the points necessary to fill the bill as a good roadster. In the past our horse breeders have sought more for some imaginary ideal, rather than come down to cold, hard facts. The chances of breeding a fast horse that will ever pay the cost of raising and training is a matter of extreme improbability. It may serve as a pastime to men of capital, but to farmers it is a very doubtful means of increasing their yearly profits.

The rich harvest that breeders are now reaping, in some of the lines of horse breeding, is a proof of what close attention to the useful points may attain. For instance, in heavy draught horses the Clydesdale men have now produced a horse weighing up nearly a ton, that can trot, of showing, easy carriage and attractive action, when shown upon the line, that will put to blush many of the light horses. Being extremely practical, they have paid such attention to the form of legs and feet, as well as quality of bone, that their horses are sought after from every country that is on the road to improvement. The present is especially a practical age, and those who produce a horse for a purpose must at the outset breed with a definite purpose.

Fancies and Fallacies versus Experience in Cattle.

Prepared by R. Gibson for the Dominion Short-horn Breeders' Association.

(Continued from March issue.)

The fallacy regarding the heads of bulls is that generally advocated by young and inexperienced judges. Experience says the head of the male must be masculine, approaching coarseness rather than the opposite. It is even so in the human race. Where are the pretty men? when you find them they are generally too indolent to know how to amuse themselves. Whereas, look at the leading men of the day—the Disraelis or Gladstones, the McDonalds or the Mowats, Carlyle or John Stewart Hill, none of them would ever take a prize in a beauty show.

Again, on viewing an animal with an abnormally large brisket, how often do we hear the remark, "What a great brisket." Forgetting that if it is out of proportion to the loin and ribs it is a detriment rather than a point of excellence. All parts should be evenly balanced, and where one unduly predominates it is not an advantage, and when it occurs in one of those parts of the animal where the beef is of the least value, as in the brisket, it is still more objectionable. Experience says a long, prominent brisket adds to the weight of low priced beef, whereas a broad, deep chest indicated a strongly constituted, vigorous animal. The shoulder, though one of the most important parts of the animal, is not often troubled with the fancy peculiarities, though no doubt many of us have heard the remark, "What a great front, as wide as a barn." If we examine this wonder closely, we shall see a wide, prominent, rough shoulder, looking as if it had been stuck on afterwards by a very poor workman. Experience points out that on standing in front of the animal the shoulder points should be completely covered by the neck vein, gradually swelling out like bows of a ship, without any protuberance or hollows until it is sunk or gradually absorbed by the chest, chin and ribs, so that the eye cannot detect where the one ends or the other begins. The shoulder itself should be smooth, equally covered with flesh, not put on in rolls as so often seen. It is true that from the neck and shoulders do not come the choicest cuts, but every butcher knows that there is a lot of difference between the quality of meat in the fore-quarter, the rough, plain shoulder yielding but little except boiling pieces; whereas most can be cut into roasts from a smooth, evenly fleshed one.

Fancy correctly demands a good round rib and strong, well covered loin. Experience says ditto with hips not too prominent, especially in a bull, but the hips to be well covered. Experts rely on the hips upon which to base their judgment of the depth of flesh, as they do upon the purse to show the internal fat.

Fancy says, "Give me a soft handler," picking up the hide between finger and thumb and giving it a pull, being well pleased with a thin, papery hide. Experience, "Give me one with a firm touch," placing the hand flat on the rib, gradually bringing fingers and thumb together, feeling the texture of the flesh under the hide as well as the thickness. Fancy runs crazy on pedigree, and says, "How is he bred? I want to see his pedigree? How does it read? Does it look well on paper?" Experience teaches that pedigree alone is but little value except for

dreaming over, and for a certain school of strictly purists. That pedigree to be of value must not only be something more than a mere jumble of names, it should indicate that it descends through a list of well known and good individuals, celebrated not alone on account of their breeding, but also for what they themselves have done either in the show yard or at the pail, as sires or dams of show yard notoriety. Experience says, "I want to see both pedigree and true shape, neither is of value alone, but must be combined." We honor a man in the present day for what he is himself, not for what his grandmother's grandfather might have done. And it is right that it should be so in this age of competition, where by the aid of railroads India is as near the markets of the world as Canada. Australia and the Islands of the Seas are all in keen competition, to say nothing of the desolate places in our own country, which are now, by the aid of our intelligent young Ontario farmers, blossoming like the rose. It is a race for the survival of the fittest, whether in cattle or the human race. Then let us gird up our loins and prepare for the fray. Neither fancies nor fallacies will be of use, but strong individual merit. Pedigree must be made subservient to utility, and when the crisis comes, as it has done, the weakest must go to the wall. I have such confidence in the sound common sense of the Ontario farmer, that knowing them to be free from the common fancies and fallacies of so many, they will tide over the storm successfully, and by the aid of their good stock ride safe into the haven at last. For it is only by the aid of good, intelligently bred and well fed animals that we hope to farm successfully.

Alberta Cattle.

The MacLeod Gazette says:—There can be no doubt that the greater care which is taken of cattle now than in former years is beginning to show good results in fewer losses during the severe weather. This is accounted for from the fact that cowmen have systematically put up a good supply of hay, and that most owners have their herds more in hand than the old days, when they were allowed to shift for themselves and take chances. It is the opinion of most cattlemen that the mortality among calves has been very much lessened by weaning the youngsters before the bad weather comes in. However this may be, Alberta cattle business was apparently never in a more flourishing condition than it is at the present moment, while the prospects for vastly increased prosperity were never better. Considering the importance of the cattle business in this country, and the very large amount of money invested, its prosperity must be a subject of mutual congratulation throughout the Dominion.

Kindness to animals pays. Kindness to the cows pays very well. The man who is harsh and rough with his cows will find his profits small. It costs a good deal of money to the dairy farmer to have his cows brought home on the run by a vicious dog in the summer. It would pay the farmer who has a harsh, cruel "help" with the cows to pay him his wages to sit in the kitchen-keeping his toes warm at the stove, and pay another with a kindly way double wages to do his work. Allow no cruelty to animals around your place. The milker who mauls a cow with fork or stick should get his dismissal at once. It is a loss of money to keep him on. Be kind to the cows.

The Dairy.

Huntingdon Dairymen's Convention.

A most successful convention was held at Huntingdon, P. Q., on the 11th February. A large number of the leading men of the Province attended, including the Hon. Col. Rhodes, Minister of Agriculture; Prof. Robertson, of the Ottawa Experimental Farm; Robert Ness, President of Dairymen's Association; S. A. Fisher, M. P.; T. Holton, M. P.; J. Scriver, M. P.; Dr. Cameron, M. P. P.; Messrs. Brown, Drummond and Ewing, of Montreal, and many others. The principal speaker was Prof. Robertson, who, at the afternoon session, gave a most interesting address on "Dairy Farming." He said that a great deal of judgment was required in the profitable feeding of animals. A sensible man would laugh at the idea of feeding cows on strawberries, or hogs on timothy hay, and yet very many of our farmers exercise just about as much discretion in their system of feeding. Animals must be made pay for their food or be sent off as soon as possible when they fail to do so. A farmer would hardly care to board a dozen men just for the pleasure of looking at them, and yet we see men doing this every day with their cows. The waste of manure was another subject touched upon, and Prof. Robertson likened the average agriculturalist to a person cutting a hole in his pocket to allow his money to drop out and then running to the bank for more. He spoke in enthusiastic terms of silos and ensilage, stating a number of the advantages of the system, particularly to dairy farmers. Corn for forage purposes he looked upon as one of the most important crops grown. As much as twenty-five to thirty tons could be grown to the acre, and two tons of good ensilage would produce as much milk as three tons of hay. He condemned the use of timothy hay for cows. He spoke highly of the "diligent hog" as a medium for conveying the grain of the farm to the market.

Mr. McPherson gave his experience of silos and ensilage. Of the latter he grew twenty acres last year, and cut five hundred tons. He also spoke at length on the immense loss from badly constructed farm buildings, and advocated the erection of stables on sanitary principles, and with a view to economizing of labor.

At the evening session Mr. G. Sangster read a very sensible and practical paper on "Draught Horse Breeding," touching on the difficulty of obtaining really good stallions and the folly of breeding from an indifferent, unsound or ill-shaped mare. He declared himself in favor of the Clydesdale as a long way ahead of all the draught breeds.

Mr. S. A. Fisher, M. P., said farmers could not look for increased prices, but must try to better themselves by means of lowering the cost of production. A higher system of agricultural education was required to enable farmers to successfully fight the competition which was growing keener every day.

Mr. John Ewing, in speaking of the necessity of scientific agricultural education, said that at present the people of the Eastern Townships were agitating for the establishment of an agricultural college at Richmond, P. Q., which scheme had the concurrence and support of the Provincial Government. A most liberal grant had been promised as soon as the required capital—\$20,000—was subscribed.

Prof. Robertson's address in the evening was on the great advantage which would accrue from the appointment of inspectors and instructors over the various cheese and butter factories throughout the Province of Quebec. The gratifying results which had followed the adoption of this system in Ontario proved the value and discretion of such a course.

The Hon. Minister of Agriculture for Quebec, Col. Rhodes, in returning thanks for a vote of thanks passed to him for his presence at the convention, said he was glad to see such a collection of good faces as he saw before him. He remarked on the great revolution in the quality of butter since improved machinery had begun to be so commonly used.

The Dairymen's Association of Huntingdon comprises the Counties of Huntingdon, Beauharnois and Chateaugay, and is a splendid fertile country, with a progressive and enterprising population.

The attendance at the convention was very large, the large Jubilee Hall being filled at all the sessions.

The Dairy Competition.

When I sent, at your request, the pedigrees of my three Jersey cows that won your silver tea set at London, I did not think it would draw down upon me such a letter as that of Mr. Guy's, in your January issue.

I am very sorry that Mr. Guy shows such bitter feeling after the trial is over. If all the arrangements were as faulty, and the test as unfair as he says, why did he enter the competition at all? He knew the rules and conditions as well, before the test, as he does now; he was free to enter, or not; he was free to feed his cattle as he liked, yet no word of objection or protest was heard till after he was beaten. No sooner does this happen than Prof. Robertson, my foreman, and I are all wrong—all of us are either incompetent or dishonest; the test is a fraud, and no one is fit to run the show but Mr. Guy! (As to the feeding, see letter in March issue of ADVOCATE, from Mr. Browne, my foreman.) It is, however, a more serious thing than Mr. Guy is aware of, to cast such a slur upon another man's honesty; and I regret that he has stooped to do so.

It is my duty to say, that any action which would be beneath Mr. Guy would be equally beneath Robert Browne; his honor and integrity are above reproach, not only during the long time he has served with me, but during the years in which he has filled the same position in other places.

So far from having been previously fed up for this competition, it may amuse some of your readers to know that our cattle had not entered for it at all; and, consequently, had been in no way prepared. At the last moment, Mr. Wade and others urged Robert Browne to have me enter the cattle, and he wrote home to me at their request. And, so far from being, at that time, alternating between "hope and fear" as to the result of this test, I was then walking the floor with my daughter's sick baby in my arms, and could only telegraph Browne authority to do as he thought best. So much for my anxiety on the subject, and so much for the preparation of the cows! In fact, one of them had not had one ounce of grain, nothing but grass and bran all summer, till ten days before she went to London. As to the number of times I have entered for the milk test, and been beaten, Mr. Guy is sadly in error. I have very seldom entered; and have been simply satisfied with my success when I did enter, and when I did not secure a victory for the Jerseys. Mr. Fuller and

Mr. Reburn did so very often, and very effectually, as all will remember. It is not always easy (as your other and more courteous correspondents remark) to get two or three cows that have calved at the prescribed time, or that are then in their very best shape to sustain the reputation of their breed. I think all breeders have felt this. In as small a herd of milking cows as mine (usually eighteen to twenty), and they, too, calving at all months of the year, to keep a uniform dairy supply, this selection is difficult. Still, mine is the difficulty increased, if one confines themselves strictly to their own herd to choose from, instead of making up the entry from a friend's herd as well, as I hear Mr. Guy did at London. At Ottawa, in 1887, I entered the milk test under protest, as my cows were not in shape to do themselves justice. As a result, I was second, and was satisfied, under the circumstances, I did not disparage Mr. Youill, or his beautiful Ayrshire which won the victory, nor, still less, the kindly and courteous gentleman who conducted the trial. As to the relative merits of the breeds, I think an intelligent public will judge for themselves. No one is infallible; but, if we all do what we honestly think best, if we are liberal and fairminded towards our opponent, generous to our adversaries, and courteous in our conduct, we cannot go far wrong. No one obliged me to keep Jerseys; I do so because they are the most profitable for me.

One of the three winning cows in London had made over twelve pounds a week of deep yellow butter, shortly after dropping her calf, and before having had a mouthful of grain, nothing but grass and bran. Another, Miss Satanelle, had made me, in one week, 20 lbs. 6 ozs. hard, sweet, yellow butter; in thirty-one consecutive days she had made me 78 lbs. 3 ozs. of No. 1 butter. Now, it is quite possible Mr. Guy has Ayrshires which can do as well, but I do not know of it. Again, I sell all my butter here in Canada, at thirty-five cents per pound, net price, all the year round, not printed, but simply packed. It is also possible that Mr. Guy could get the same for Ayrshire butter. But, I do not know; I only know that I cannot get as much butter from any cow as I can from a Jersey on the same feed, nor can I get as high a price for any butter as I can for Jersey butter, nor as high a price for any calves as for Jersey calves, especially those calved that have behind them, what Mr. Guy calls, a "Stoke Pogis tirade," and deems superfluous. But, as it almost invariably means lots of milk and butter, buyers do not deem it superfluous.

Mr. Guy speaks of my "petted Jerseys." I hardly know what he means to insinuate, and perhaps he does not know himself, as he has never, in my recollection, been here, nor has he the faintest idea how our cows are taken care of. But if you, Mr. Editor, or any of your friends, will favor us with a visit, you can see and judge for yourselves. And the Ayrshire men will be as heartily welcome, and as cordially treated, as any Jersey man that ever lived. It is only by candid and friendly comparison and criticism that we can arrive at correct conclusions. Ignorance and prejudice bar the way. I cannot devote nearly as much time to my cattle as is supposed, for my domestic and family affairs must always come first, and, for this reason, often find it impossible to exhibit at all. But what I can do in this line I try to do well; and, if I am ever again as fortunate as I was at London, I shall certainly be then, as I am now, heartily and unaffectionately glad of it.

ELIZA M. JONES,

Feb. 20, 1890. Belvidere, Benhull.

How Shall we Improve the Variety of our Dairy Goods?

BY ALLEN PRINGLE, SELBY, ONT.

The very first and most important step is to instruct the patrons of the factories how to improve the quality of the milk, for a majority of them are quite unenlightened on the subject. The next step is to induce them to act upon and carry out the newly acquired knowledge.

To improve the quality of the milk the first thing to be done is to improve the stock. Supersede the "scrub" cows and the "scrub" bulls by well-bred stock, either thorough or grade. To begin with, cross the best native heifers with the thorough-bred Durham bull. This cross is now practicable with the common farmer in almost every county and township in the province, and will give excellent results. Those with more means and greater facilities can go on into the thoroughbreds according to taste and practical results. The question as to which breed or cross is best for milk and most profitable for dairying purposes being a disputed one, I shall not discuss it here.

With improved stock the next step to improve the quality of the milk is to properly feed and care for the stock. On this point alone the whole ADVOCATE might be filled. I must therefore deal in principles rather than details. In feeding and caring for milch cows in order to get the best and purest milk, I would specially emphasize the matter of drink. As a general thing the cow is much more abused in her drink than in her food, and from the hygienic if not the financial standpoint the evil results are much more serious. In improving the quality of milk the sanitary consideration of purity must be taken into account as well as the pecuniary matter of more richness. If a well-bred cow be well-fed her milk will be rich, but not necessarily pure and wholesome, unless she gets pure water to drink. Milch cows, therefore, should be supplied at all times with pure water as well as good, wholesome food, in order to get the best quality of milk. I have seen cows and other stock forced to drink from a "water hole" which had become fairly green and stagnant through pollution from the cows themselves standing in it. The farmers need instruction and admonition on this point very urgently. Such an offence ought to be legally indictable under the head of cruelty to animals. Not only are the "water holes" in the fields often impure, but the barn-yard wells for the stock are often but little better—receiving the filthy soakage of their surroundings they become fairly yellow, if not green, with deadly impurity. This matter of supplying stock, especially milch cows, with filthy drinking water is one at once so important an evil in its effects, and far-reaching in its consequences, that special action should be taken to put a stop to it. With a reform of this great and prevalent evil the quality of milk for cheese factories and every other purpose will be greatly improved. In order, then, to improve the quality of our milk to the very best, the well-bred cow must not only be well fed and well watered, but she must be comfortably sheltered from the elements, must be supplied with pure air to breathe by means of thorough ventilation, must be kept clean and regularly curried, and last, though not least, must be treated with uniform kindness.

After getting milk under such conditions, the next matter of importance is how to properly handle it until it is delivered to the cheese-maker. In the first place it ought to be cooled and aerated, which implies evaporation of the animal heat, and purification by the atmosphere. I know of no way to accomplish this so effectively and at the same time conveniently as by putting it through McLeod's Milk Cooler, Erator and Strainer. This machine has been recently invented and patented by Angus McLeod, of Napanee, Ont., and serves the purpose of cooling, aerating, and purifying milk better than anything I know of. The article consists of three parts, viz.: A receiver and strainer on top, a cooler-tank below it to hold ice or cold water over which the milk flows in a circuitous stream of about forty feet, and a pan under both to receive the milk. The milk is poured in at the top and flows through without further attention. After using and testing this "Cooler" I find that milk passed through it will remain sweet many hours longer than the same milk not so treated and set alongside in the same atmosphere and temperature, and will yield more butter and of a better quality than the latter. I shall tell the readers of the *ADVOCATE* more about this useful article at another time.

The milk, after being cooled and purified either by this process or any other, should be placed in a clean can in a cool place (not, however, near the swill-barrel, or hog-pen, or barn-yard), but in a pure atmosphere, until delivered to the "milkman" for the cheese factory.

[TO BE CONTINUED.]

Why Holsteins Did Not Compete.

This question is very easily answered, and should be quite clear to every dairyman who has been watching their progress with unprejudiced eyes. If we take a glance back into their history in this country, we find that, only as late as 1883, the first specimens of the breed were brought before the Ontario dairymen, and then only two or three herds of any importance were established, while single specimens were scattered here and there throughout a great part of Ontario.

When these heifers came to milk, they, in nearly every instance, proved themselves far ahead of anything that had yet come to the notice of our dairymen, and their great superiority was immediately acknowledged; hence, the demand was so strong that, in 1884, a number of herds were established, and yet the demand could not be supplied from their increase, and importation after importation had to be made. This stimulated breeders to pay more attention to the production of as many animals as possible, than to the testing of individual cows. And who will blame them for this? We believe they were fully justified to try and get some recompense for their great outlay. That they did not neglect the quality of their stock, is borne out by the many favorable letters of testimony the breeders are continually receiving from their customers. These statements are borne out by taking a look at the present herds. Taking our own as a case in point, we find that only two animals are left of all the earlier importations; and I think I can, without fear of contradiction, say that we have imported and handled as many as any other breeder in Ontario, but we never owned a cow long enough to really know what her full capacity was before she had to yield to the ever increasing demand, and went into other hands. And, with

but one or two exceptions, this has been the case with all our breeders. Under these circumstances, and with these facts in view, no fair-minded dairyman will wonder why Holsteins did not compete.

Our cows drop their calves and are bred as soon again as they come in; and I, for one, mean to continue this policy for awhile yet, even if a few croakers like Stockman should remain blind to the merits of the Holsteins. But we heartily invite all who are interested to visit our farm at any time and see for themselves what Holsteins are doing under every-day farmers' care. If we take a glance across the lines to our American brethren breeders, we find that they had to go through the same ordeal, and that they and their Holsteins had to take the same abuse as we are getting at present. But how gloriously have they come out of it, routing and defeating all their antagonists. The dairy test, at all the leading State and International fairs, tells the tale in gilded letters, and we feel confident that the time is not very distant when Holsteins will score the same record in our fair Dominion. Holstein breeders have no desire to attack other breeds continually, and pull down their merits; but they believe that, in this great country of ours, there is room for all breeds, and a sphere for them all to fill. But if the show-yard record, the public and private tests, are to be taken as a standard, they certainly have nothing to fear from any of them, and can fearlessly let their favorites fight the battle on their merits. I notice in your February issue that Stockman treats your highly respected readers with a very neat little story. Now, I must admit that I love to hear a good story, especially when it comes from such an intelligent and truth-loving pen as Mr. Stockman's; but a story only half told loses all its value, as is the case in this instance. He just got to tell your esteemed readers about the Holsteins being fed out of a two-bushel basket and then suddenly comes to an abrupt end. Of course, to tell the remainder of the story would not have suited his purpose. Undoubtedly he was so astonished at what he saw that, in his amazement, he forgot all about it. Now, I will endeavor to recall it to his memory. If it is the International Fair at Buffalo he refers to, he saw a cow that gave 73 lbs. 12 ozs. of milk in twenty-four hours; also a cow that, in twenty-four hours, produced 3.12 lbs. of butter. And no wonder he was astonished, for both of these cows were the, by him, so much despised *plebeian* Holsteins, and such doings he undoubtedly had never seen before. If Stockman wishes, we will follow him to all the other leading fairs, and expose what Holsteins have done there.

Stockman seems to have forgotten much of the valuable lessons he was taught by his parents. In my opinion it is impossible to hit the bull's eye if you hide behind the target. A man who so boldly attacks others should also be bold enough to show his colors, and come out under his own signature, and not hide behind the target of "Stockman." As to his chilled shot, he probably had better keep a stock on hand, for undoubtedly after all his eagerness for dairy tests we certainly expect him to come out this fall with his famous family cows, and show the public the best dairy cows in the world; but, in my opinion, the chances that his pet cows will desert him are very great, and he may then need several doses to cool his excitable brain.

H. BOLLERT, Cassel, Ont.

The Farm.

Preparation of Soil for Seed Grain.

I know of no business in Canada where the old adage "Whatever is worth doing at all is worth doing well," is so applicable as to that of the farmer. Yet the season for the accomplishment of our work is so limited, that great hurry is sometimes necessary in order to be on time. This frequently results in negligent and careless operations which always result in loss.

I am a strong believer in thorough tillage of the soil; I have seen land made to produce fully one-third to one-half more for no other reason than extra tillage. Few farmers in this country work the soil sufficiently; the second field seems to be waiting while they are tilling the first, and the time is so short there is always a temptation, before the work is fully completed, to say, "I guess it will do; we have not time for more." The man who succeeds as a gardener does not neglect this part of his work; he does not merely turn the land over, but he is careful to see that it is properly pulverized and put in such a condition that every plant will count in the general product. This ought to be the aim of the farmer in sowing grain in the field. We usually allow a large percentage for waste, that is to say, we expect only a percentage of the grain sown to mature fully and afford an abundant increase. But why should this be? Why should not the farmer aim first to sow seed from which is carefully taken all inferior grains, and then look for an increase from every one sown. This cannot be expected unless greater attention be paid to the preparation of the soil. In this as in other matters pertaining to agriculture, it is not wise for any man to lay down definite rules. The difference in soil requiring different treatment must always be taken into consideration. What would answer admirably on a light sandy soil could scarcely be followed with great success on heavy clay soils. Yet this one general rule may be applicable in every case: Let the soil be so thoroughly prepared, so evenly pulverized, that as nearly as possible every grain may count in the general increase.

Who has not seen fall wheat sown in the autumn upon land so lumpy and full of clods that it was quite out of the question to cover the seed, or if covered, to expect it to force its way from underneath these heavy clods. Would it not be wiser first to put on a heavy roller or crusher, and afterwards complete the tillage with other implements, rolling the second time if necessary. This would consume some time, but it would abundantly pay in the end. It is not enough to turn the soil over; it should be thoroughly mixed, and sufficiently tilled afterwards to give it some solidity. Better results will be attained by frequent harrowing to accomplish this end than by rolling, which gives you a solid surface, while underneath is still more or less porous and loose. Where sod is plowed in the spring for a crop, it will be more necessary to use the roller than in other cases.

A favorite plan which I have adopted is to roll immediately after the plowing. The better the plowing is done the less necessity perhaps for this work; but for the average plowman it will be found an improvement to follow immediately with the roller, which settles the furrows

in their places, affords a more solid surface, and prevents the grass roots from being dragged to the top in preparing for the seed. At the conclusion of the tillage it may be rolled again. It should be packed so solid that when decay takes place the ground will still remain firm, which gives the best results in the crop. When land is properly prepared in the autumn, there will be found little necessity for plowing in the spring, and if the plowing be needed it is best that it should not be at too great a depth. An ordinary gang plow would probably answer the best purposes. Where plowing is not needed I have found excellent results from the use of what is called the chisel tooth harrow, or another common implement called the spring tooth cultivator. The Acme harrow and pulverizer will be found most useful on some soils and under some circumstances.

The difficulty with all these implements being that none will accomplish equally good results at all times. For instance, the chisel tooth harrow while accomplishing splendid results when the soil is dry will be of little service when the land is very wet and full of weeds or grass. The Acme harrow almost invaluable in some cases, when passed over a hard, dry, uneven surface will scarcely accomplish anything. The same is true of the cultivator. It is like pulling teeth, if you always use the same instrument you will need sometimes to do a good deal of unnecessary pulling.

The object of using any of these tools is to thoroughly pulverize the surface so that the plants when started shall be in the best possible condition for growth. Whatever may be the implements used let no one feel there is danger in any case of too much tillage. It does not do for any of us in the busy season to put all our labor upon one field, yet I seldom go through a season without feeling that the time is too short to put upon the land as much labor as is needed, and as would give promise of good results.

Many farmers plow unevenly, and therefore, unless the ground be afterwards thoroughly tilled, the field presents a very uneven surface, not only forbidding the best return from the seed sown, but preventing the best results from proper harvesting machinery.

All will have seen fields with great variation in the growth of the plants, some short and some of greater length. You will not reap from this field returns equal to that of one of uniform growth, when every plant is up to the proper height, vigorous and healthy. The defect is largely owing to improper cultivation and tillage. If the field had been sufficiently worked to produce an even surface and proper mixing of the soil, every plant if started from a good seed would have an equal chance and equal results would be given.

Let more attention be given to this branch of our work, and there must be large additions to the wealth-producing power of our farming lands.

JOHN DRYDEN, M. P. P.

Does it pay to buy an inferior class of cattle? And does it pay to keep an inferior class of cattle of any breed? In a long run, no! If a breeder has inferior cattle, the better course is to send them to the butcher. If a purchaser finds he has been inveigled into buying such cattle he had better fatten them and begin again. It may seem a great sacrifice. But in breeding cattle there is nothing that pays so well as a good reputation.

What Our Seedsmen Write Us.

Wm. Evans & Co., Seedsmen, Montreal, P. Q., write as follows:—

Wheat.—In answer to your circular letter desiring information concerning the various Spring Wheats sown in our section last season, I may say that all early sown wheat gave good returns of good, sound grain, whilst the late sown was in many instances all but a failure. The later part of the summer was so wet and cold, especially at night, that a great deal of it rusted and did not fill out. All the well-known of it were more or less sown, but the Five Spring White Russian in wider areas than any others, and White Russian, that proved to be a very white from North Russia, that proved to be a very early and productive kind. Sown alongside of the Ladoga, introduced by the Dominion Government and disseminated from the Dominion Farm at Ottawa, there was not a day's difference in their period of ripening the two were alike in season and appearance in all stages of their growth. Only in the grain were they dissimilar. The Ladoga was not unlike good plump rye, and of a clear white, while the other was a plump grain not unlike the Ontario mite was a small quantity of it. He speaks in high terms of it. For this year's trials I have imported from England a small quantity of Carter's new cross-bred wheats. It is claimed for these wheats that they are very early and productive. They are very large in berry, but are quite soft, and to the moist atmosphere of Great Britain there is nothing noteworthy.

Potatoes.—Several trials of a number of varieties have convinced us that Lee's Favorite has no superior. It is early, productive, large and handsome, and is less subject to rot than any other variety with which I am acquainted. In a trial of twenty-one varieties, it was far ahead of all others in most respects, and last season, beside thirteen new varieties, it was still unapproachable. Whilst Early Rose and Beauty of Hebron, in adjoining fields, were last season so badly affected by rot as to be left untouched in the field, Lee's Favorite was scarcely affected.

Carrots.—Chantenay and St. Valery are very fine. They are beautiful in color, and firm and crisp and sweet in flesh, and both yield large crops—but especially the Chantenay. This latter is besides amongst the very earliest. The improved short white Belgian, a sort we have sold for several years, is one of the best for cattle and horses. Turnips the finest in point of quality and sweetness is the Haszard. A lady of Ontario who tried a number of sorts last season, says it is the best table turnip she had ever eaten, and this testimony is corroborated by several others who have tried it. My Clyde Improved is also a very fine kind, that was praised by almost all who tried it for productiveness and quality.

John A. Bruce & Co., Seed Merchants, Hamilton, say:—

Suede Turnips.—In this section the leading varieties grown are:—Bruce's Selected East Lothian (this variety is extensively grown in certain localities for exporting to the United States for cooking purposes), Hall's Westbury, Marquis of Lorne, Laine's Improved, Hartley's Bronze Top, Sutton's Champion, Shamrock, and Carter's Imperial. The preceding varieties are best adapted for rich, loamy soils, and the following varieties for heavy loam soils, and clay soils:—Skirving's Improved, Royal Norfolk, King of Swedes, Sharpe's Improved and Fetter-king of Swedes. Skirving's Improved is a new and very distinct variety, and now offered for the first time in Canada. Last year we obtained a small quantity for trial, and every confidence in its satisfactory that we have confidence in recommending it to our farmer's. In shape it is of the Tankard-shaped type, the crown of the bulb is a beautiful bright purple, and the lower half a deep yellow. The flesh is very solid and nutritious, and there is an almost total absence of fibrous or fangy roots. In Britain, where it has been largely tested, it is claimed to have yielded from 2 to 6 tons more per acre than other well-known sorts. For late sowing the leading white-fleshed varieties are:—White Globe, Grey Stone and Improved Purple Top Shamrock. The well-known Green and Purple Top Yellow Aberdeen are well adapted for late sowing.

Potatoes.—The leading sorts are:—Beauty of Hebron, White Elephant, Early Ohio, White Star, and Dakota Reds are in demand where a very late variety is wanted. During the past few years many trials have been made of new varieties, but we have found none better than those named above.

Cabbages.—Summer varieties:—Express, Etampes, Wakefield, Wunningstadt and Henderson's Summer are still leading sorts.

Cabbages.—Winter:—Fottler's Short Stem Brunswick, Premium Flat Dutch, All Seasons, St. Denis Drumhead, Quintal Drumhead, Large Drumhead Drumhead, Quinal Drumhead, Large Drumhead Drumhead, Red Drumhead Pickling.

Cauliflowers.—Our Selected Early Erfurt is not surpassed by any other variety for sure heading, size and fine cooking or pickling qualities. A grower informs us that last season he sold three hundred dollars' worth from three-fourths of an acre, and if the season had been favorable he would easily have netted *four hundred dollars*. Lenormand's Late Autumn King, Demi Dur and Autumn Giant are all well-known sorts, but the true types of Erfurt are fast superseding other sorts.

Onions.—The leading and most profitable varieties for market are the Large Red Wethersfield, Danvers Yellow Globe, White Globe and Red Globe.

Carrots.—Garden Varieties:—The Guerande Half-Long Stamp-Rooted, French Horn, English Horn, Early Heart-Long Scarlet Nantes and Chantenay Half-Long Scarlet are the best for summer and fall

use, and the Long Orange, Scarlet Altringham and French Scarlet Intermediate are considered the best for winter use.

Celery.—Is one of the luxuries of the garden, and the demand is so great that we have never known the market to be glutted. The favorite varieties are:—Paris Golden Yellow Large Solid, Dwarf Large Ribbed White, Henderson's White Plume, and Carter's Dwarf Crimson. We are this season introducing a new variety from France, named the Giant White Paschal. The originators claim for it great size, and solid, crisp stalks, which are broader than any other. For late winter use it is the ideal celery, as it retains its crispness to the end of the season.

For the May issue of the *ADVOCATE* will, if desired, give a few notes on Sweet Corn, Musk and Water Melons, Cucumbers, Tomatoes, &c., &c.

J. A. Simmers, Toronto, Ont., writes:—

Spring Wheat.—The Scotch Fife, White Russian and Wild Goose are those in most favor, and have produced good samples and large yields about here. The Mars Wheat, which we introduced, did fairly well, but the sample this season is shrivelled, owing to drought before ripening. The Magyar, which is tolerably well known, has given good satisfaction, and we believe with a favorable season will prove a good change to farmers in Ontario.

Seed Oats.—Of white varieties we name Canadian Triumph, American Banner and White Russian as those giving the greatest yield, whilst none other than Black Tartarian is desirable from the reports and samples in store.

Barley.—Two-rowed is being asked for freely, and will very likely be fully reported upon next season. We have no new varieties with us is

Suede Turnips.—The leading variety with us is our Champion Purple Top Swede, and we are pleased to say this has given every satisfaction heretofore. It is a magnificent Swede, the result of judicious selection; it is hardy, most productive and most nutritious. Of other varieties we name Skirving's Improved, Bangholm and Scotch Cham-pion as being of superior merit and thoroughly reliable.

White Turnips.—We have nothing new, being quite content and fully sure that farmers cannot be far astray when sowing White Globe and Greystone for general crop.

Mangels.—Of which we find Mammoth Long Red, New Giant Intermediate Yellow, Yellow Globe, Golden-fleshed Tankard and Red Ova-Shaped the best to select from and most in demand.

Carrots.—The Improved Short White or Large White Turnips, and White Belgian, are the only varieties of White Carrots worthy of cultivation. Of the former variety a customer of ours writes that "I have grown Carrots, from seed supplied by your firm, weighing from 8½ to 8¾ lbs. each." We surely cannot expect more.

Potatoes.—Our list calls for the Thorburn, Crown Jewel and Sunrise as the best yielding and best cooking varieties grown. Reports received verify what we say, therefore we leave a vast list of less important varieties unmentioned. Any planter who selects from those named will have no cause for complaint.

Corn.—Red Cob Ensilage is the leader. We have a pile of testimonials from customers who grew immense crops last season. Undoubtedly it ranks No. 1 for yield as a fodder corn. Every farmer should see he gets a field of this Ensilage Corn sown the coming seed-time.

Steele Bros. & Co., Toronto, Ont., say:—

Potatoes are one of the staple crops of Canada, and there has been and we presume always will be a demand for new kinds to replace those that have run out. We, as usual, always on the watch for really reliable novelties, succeeded last year in securing seed of several of the leading varieties in the United States, and at the head we place the Rural No. 2, introduced by the Rural New Yorker. This potato is the nearest to perfection yet introduced, excelling all other first-class sorts in yield, very large and usually smooth, with a few shallow eyes, medium early, and does not rot easily. This variety with another new one, viz., Summit, did the best at New York Experimental Station in 1889. This potato has a buff skin similar to its parent, Early Rose, but differs from it in growing thicker and shorter, making a more desirable form. Flesh is white and when cooked or baked is very dry and mealy, an enormous yield, free from rust and rot. Badger State.—A large, oblong white potato of excellent shape and appearance. The originator says: "This variety, now four years from the seed ball, has been for the past three years one of the largest yielders among 200 varieties grown by me." The tubers average from large to very large. The vines are very strong. The skin is firmer than most sorts, making it a first-class shipper. Early Puritan.—Far excels the Beauty of Hebron in productiveness and quality. This variety has come to stay, is really excellent and is worthy of a trial. The skin and flesh is very white, it cooks dry and mealy even when half grown. It ripens with the Early Rose and greatly exceeds it in productiveness. We also offer other varieties, viz.:—The Minister, Rough Diamond, Stray Beauty, Crown Jewel and Lady Finger, the latter only useful as a novelty and for baking.

Corn.—What variety of corn will produce the greatest weight per acre was the cry. Many varieties were recommended, some did fairly well, while others failed altogether. We found a white variety of Dent corn, Giant Prolific Sweet Ensilage, to fill the bill and produce enormous crops. So far it seems suited to all sections of the Dominion, though not yielding quite so heavily in the far North as in Ontario. As much as fifty tons per acre

have been raised in this county, but we will say this, that was only done under high cultivation, heavy manuring and proper planting. May we here call attention to the fact that to produce the heaviest crop of corn it should be planted in drills or hills from 2 1/2 to 3 feet apart each way. Our claim for this corn is its having less stalk and more leaf than any other; one acre is worth eight acres of poor pasture. It grows from 12 to 18 feet high, is a great milk producer and is especially adapted to those who have silos.

Swede Turnips.—Our selected Purple-top Swede. No doubt the question has often been asked by your readers, which is the best Swede to grow of all the numerous varieties now offered? Well, we wanted also to know, and years ago when one of our representatives was in England, one of his commissions was to procure the very best strain of Swede turnip it was possible to obtain. Cost was not the object, quality was what he was after, and after considerable search he found what has since proved by years of severe tests to be a strain of Swede not excelled. We have our growers under contract to supply only our house with this Swede, and so highly do we value it that we will not sell a pound to anyone except in sealed packets bearing our trade mark. We are bound no inferior varieties shall be palmed off for it. This Swede produces large, round, perfectly shaped bulbs with a very small top. Flesh rich yellow, firm, free from coarseness and of excellent, fine quality; skin yellow with a deep purple top. A splendid keeping variety. There is no other sort which yields a more uniform sized and handsome crop, or that will produce a greater weight, if as much, to the acre, which has been repeatedly proven on actual trials. It took first prizes at Industrial and Provincial; Aylmer, St. Thomas, Tilsonburg and many other shows. None can beat it. W. Ford, of Quadra, B. C., raised six turnips that weighed 144 pounds. One Ontario grower reports that by test in the same field with five other varieties he grew on eight rows of 80 rods each 60 bushels more crop from our Selected Swede than from any of the others.

In conclusion we may say that we have in our 1890 catalogue handled these various subjects in fuller detail, and must refer your readers to it for all we would like to say here but cannot do so for want of space. We would advise all our readers to send for a catalogue.

Robert Evans & Co., Hamilton, Ont., write:—**Cabbage.**—The earliest variety is the Extra Early Express, which can be grown in frames in the open ground. Next to that is the Etampes, Winnigstadt, Early Jersey Wakefield and Henderson's Early Summer. For fall and winter we strongly recommend Fottler's Improved Drumhead, Premium Flat Dutch and Drumhead Savoy. Considerable attention is being paid to the earlier varieties of cabbage within the last few years, and is increasing yearly.

Cauliflower.—We have Extra Early Selected Dwarf Erfurt. This is without any exception the best variety grown for our market.

Carrot.—For table purposes we would recommend Guerande, Chantenay and Nantes as leading table varieties.

Celery.—We claim that our Paris Golden Yellow has no equal on this continent. It is without any exception the best celery in cultivation, and we can boast of having the best supplied market in Canada, and our growers supply the larger cities—Montreal and Toronto—with this celery.

Corn.—We have Minnesota and Cory for early, then Northern Pedigree and Perry's Hybrid for next early, all very fine table varieties. We are also introducing Livingston's New Golden Coin, which is said to be in every way worthy of cultivation.

Lettuce.—Our Hamilton Market is unrivalled, and has a far-famed reputation for general cultivation. For an early variety the Extra Early Ohio will stand more forcing and is better adapted for extra early.

Melons.—We have many varieties. Among the best and earliest of all is Jenny Lind, next the New Early Hackensack and Princess. We have other varieties which we are introducing this season, and expect they will give a very good account of themselves—one for instance, Delmonico.

Onion.—Large Red Wethersfield is without any exception the largest and heaviest cropper we have. Then Danvers' Yellow Globe, we might make the same remark regarding as the former (Wethersfield grown)—it is worth from 25 to 50 cents a pound more than seed grown in any other locality.

Radishes.—Non Plus Ultra, a new variety, and gaining favor very fast. It matures in about four weeks, and is getting to be a general favorite.

Tomatoes.—We strongly advise Livingston's Favorite, Scoville's Hybrid and Volunteer as best suited for general purposes, canning, etc. The Dwarf Champion is very valuable, but its yield is not equal to any of the former sorts, still it is an excellent table variety.

Turnips.—For table use we recommend Nimble Dick, Strap Leaf and Golden Ball.

Potatoes.—Early Sunrise and Beauty of Hebron are the two recognized varieties here, the farmer for early, the latter for general crop. We are introducing this year the New Minister, which comes very highly recommended, and no doubt will take the foremost rank on the potato list.

Mangels.—Our Improved Saw Log is the largest of all. We have also got the Giant Yellow Intermediate, which we are introducing this season, and is highly spoken of.

Carrots.—White Belgian, Orthe and Vosges being the leading varieties.

Swedish Turnip.—We unhesitatingly pronounce Improved Westbury the best in cultivation. It yields immense crops, and is suitable for table use as well as for cattle. Next comes Bangholm and

Shamrock, both excellent varieties, and in sections do remarkably well.

White Turnips.—Improved Mammoth Purple Top and Greystone are the leading varieties for field culture.

Oats.—We have almost all the varieties in cultivation, and are running this year the Great White Bonanza, which captured the \$500.00 gold prize for the best a-re in cultivation, which was secured by Mr. R. W. Strickland, of Albion, N. Y. We have also gone to considerable expense in securing trial samples of Oats from different parts of the world, which we intend to test this year, and shall be able to report to you next fall the result. We have eight new varieties which we intend to test in this way.

Spring Wheat.—The leading varieties of Spring Wheat are:—Manitoba Five, White Russian and Lost Nation. We are introducing this year in this locality the Triumph, which is very highly recommended, and we think will give pretty general satisfaction. We are also importing, from different parts of the world, thirteen varieties of Spring Wheat, entirely new. We intend to test them this year, and shall report to you the result of our experiment.

Spanish Peanut.—This variety, the pod is small but the pea is very sweet and solid, bears copiously. Hogs can be fattened on them at a nominal cost. Tops make finest of hay for stock.

The Corn-stalk Disease.

The flocks and herds of Canada have, in the past, enjoyed wonderfully good health. They have been quite clear of many diseases too common in the countries of Europe, and others that annoy the stock-breeders and flock-masters of the United States are unknown here. The dreaded pleuro has never obtained a foothold in Canada, and the fatal anthrax has had few victims. We learn that our near neighbors in the corn-growing belt of the west have a new cattle disease—the corn-stalk disease—which already threatens to be a terrible scourge. Though the closely observant have for some time noticed the matter in the enquiry columns of some of the live-stock papers, yet few others have heard anything about it. Only very recently have the American press noticed it, though for some years it has been making its way, and has, since 1886, been under careful investigation by some of the professors of the agricultural colleges.

Prof. Frank S. Billings, of the University of Nebraska, has issued an important bulletin on the matter, from which, as reported by the Breeders' Gazette of Chicago, our information is chiefly gleaned. He says:—"How long this disease has afflicted cattle in the United States it is impossible to determine, nor can we make any estimate whatever as to the amount of loss it annually causes the farmers of the great corn-raising States of the west, though it is by no means limited to them; still, it can be safely said that this malady causes more loss in cattle to the western farmer than all other causes combined, not excepting abortion."

Here is a very serious state of affairs. Already we know that the stock raisers of the west have many diseases of various kinds to trouble them that scarcely annoy us, and here is a new one just come to light which is worse than all the others combined. Already is the disease so wide spread that Prof. Billings has as many as fifty letters per week concerning outbreaks of this disease, and he expresses a fear that already the trouble is so great that it will soon "seriously threaten the entire cattle industry, unless measures are taken to prevent its extension." Such being the case, it is certainly the duty of Canadians to keep a sharp look-out along the frontiers, and, if possible, prevent its introduction into Canada. Fortunately, it is not contagious as between animals, though it does appear as if it was contagious as between stalks of corn. In this, and its effect upon the animal, it seems to resemble "anthrax," and to be a blood poisoning from a microbe taken into

the stomach. The danger will therefore consist with the cattle, but with the man. It can be readily recognized.

Prof. Billings says.—"The disease is a growing one, and is increasing rapidly. It is found in the same manner, frequently after the corn is 'shook'; very often it occurs only in patches in the field. The corn fails to grow in the healthy parts. The lower leaves become withered, green, then yellow, then wither away. The disease is sometimes quite well to one-half, some looking like those spots very to see, they are points to those of several other diseases. It is a disease of the corn-stalk, and is not a disease of the roots. The plant is then easily pulled over, or pulled up from the soil, and it has a brown spot on the leaf sheath to clearly indicate it, there will be seen little collections of gelatinous like exudation. Crush a bit of this under a microscope, and examine with a high power, and the living organisms, to which we ascribe the disease, can be seen in innumerable numbers."

Whenever such a disease has occurred, every stalk and leaf on the field must be burnt, the field ploughed and put to another crop, or, better still, sowed down. Ploughing down the corn will only make matters worse. The disease is communicated to the cattle when diseased leaves, containing these microbes, are eaten. Medical treatment, in a curative sense, is the height of absurdity in any disease of this class, as some say; others recommend purgative doses of Chamber's salts to every member of a herd of which some have become ill. The herd must be carefully quarantined, and all the manure and litter destroyed by fire. It must be borne in mind that, if the disease keep a cattle yard, where animals have had the disease, be put upon a field, ploughed in, and the field planted with corn, it is very liable to become invaded with the germ, and thus spread the disease. All such manure, and all animals which die, must be cremated every particle burnt. No other remedy is known at present but fire, and that must be vigorously used if the infection is to be checked.

A farmer from Salina, Kansas, writes:—"I have lost four head this winter of stalk disease. They die in from twenty-four to forty-eight hours after showing that they are sick. They groan piteously, do not eat, do not rest, but are somewhat laxative. They were killed the day they went on the stalk field and had free access to clean, fresh water. They were in the corn field three or four hours daily. On the fourth and fifth days one died each day. They were put on a fresh field. On the third and fourth mornings two more were down. We cannot afford to let the stalks waste, for heretofore we have nearly wasted the stalks on them. (Others are losing cattle here.)"

Everything possible must be done to keep the corn stalk disease out of Canada. It has spread with wonderful rapidity the past summer in the Western States. It may now be clear that we think better stop our growing for a time entirely than risk the spreading of such a scourge. Nothing yet seems to be known as to its effect in Canada, though it is not likely that the microbe would be affected by the amount of heat generated in a silo. Great vigilance is needed in the preservation of safety, but it is considered that our frontier quarantine regulations for cattle will be useless against this disease, which is carried, not by the cattle, but by the man. There will be danger in seed corn from infected districts. Forwarded in forwarding.

Garden and Orchard.

The Farmer's Fruit Garden.

BY C. G. CASTON.

I find in travelling through the country that very few farmers grow any small fruits. If asked why, they say they have not time; they have too many other things to attend to. But, I propose to show that it does not take very much time, and that it will pay, even if you have to hire help to do it. I will consider the subject under three heads: First, why we should grow small fruits; second, what to plant and how to cultivate it, and third, the profit to be derived therefrom.

First, then, why we should grow small fruits—Because of their economic value as food, and their healthfulness as part of our daily diet. It is acknowledged by the most eminent physicians that the acids of fruits are of the utmost importance for their medical virtues to the human system, and that a diet of fruit and vegetables would go far toward dispensing with the services of the physician. For a feverish, bilious state, there is no better medicine than a dish of ripe strawberries three times a day. They come in at a time when the system is in need of just such a diet. As owing to the extreme cold of winter, we are obliged to use a considerable amount of animal food to keep up the necessary heat; then, the transition from cold weather to warm in the spring is often very sudden. This occasions a feeling of dulness and lassitude—sometimes called spring fever. Nature has provided a remedy, and it is for us to make use of it. If we do not, it is our own fault, viz.: The fruits and vegetables which, with a little care, our gardens will produce in abundance. Let us begin with the rhubarb, and use that till the strawberries are ripe; these will extend three or four weeks, and will be followed by the raspberries and other fruits, so that we may have a constant supply all through the summer and autumn, and well into winter, as some varieties of grapes will keep till midwinter. Grapes are of themselves a perfect food; they contain the hypophosphites which doctors prescribe for waste of tissue. And we have high medical authority for the statement that people fed on pure food, with an abundance of fruit, need never fear cancer, Bright's disease, neuralgia, dropsy, and many other scourges of our race. And we have noticed in the case of the present epidemic, *la grippe*, that those who made a daily use of fruit as part of their diet suffered less from its attacks than others.

I now come to the second part, what to plant and how to cultivate.—In selecting a piece of ground for a garden it should be good soil; a warm sandy loam, well enriched with manure, will answer the best for most of the small fruits, except currants, which succeed best on a rich clay or clay loam. The soil should be in the very best condition, as to cultivation, and in shape long and narrow, say 200 feet long by 50 wide, so that most of the cultivation can be done with a horse. This will effect a great saving in time, compared with the prevalent custom of having the garden in a small square patch, and doing all the cultivating with spade and hoe. There should be four rows of strawberries of the following varieties: Wilson, Crescent, Manchester, Bubach and Sharpless—the two last named a half row of each. This selection will give early, medium and late kinds; and, in or-

inary seasons, will extend the season over four weeks or more. They should be planted twelve inches apart in the rows, and the rows should be 3½ feet apart. They will form matted rows, and the cultivator should be set just wide enough to allow these rows to form about 12 inches wide. By a frequent use of the cultivator, the runners will be kept in check, and the ground between the rows kept clean, so that very little hand weeding will be required if the soil is clean to start with. There should be two rows of raspberries. Varieties—(Red) Marlboro, Turner-Cuthbert; (black) Hillborn and Gregg; (white) Binkle's Orange, and Golden Queen. I would also recommend "Shaffer's Colossal," which is a cross between the red and black, and a splendid berry for canning purposes. The rows should be six feet apart, and the plants three feet apart in the rows. The best plan in cultivating is to nip off the tops when about two and a-half feet high. This makes them grow stocky and throw out side branches, and will, in this way, produce better than if allowed to grow up and spread over between the rows. Very little hoeing will be required if the cultivator is used regularly. The varieties I have named will extend the season over five weeks in a good year. Currants and gooseberries should be four feet apart each way. Two rows of those will grow more than enough for an ordinary family. Varieties—(Red currants) Cherry and Fay's Prolific; (white) the White Grape; (black) Lee's Prolific and Black Naples. Gooseberries—Smith, Downing and Industry. Where the currant bushes make a rank growth of wood, they should be cut back at least one-third early in spring, and the top thinned out a little. The gooseberry will require an annual thinning out of the old wood. The old wood should be pruned out of both currants and gooseberries, as the best fruit is always produced on the new. The greatest insect enemy to the red and white currant and gooseberry is the well known green currant worm; but, by a timely use of hellebore, they are easily destroyed. The garden would not be complete without a row of grapes; they should be planted ten feet apart; one row would contain twenty vines. I would advise any one who intended to grow a few grapes to plant in a row, and use a trellis, as I have found, by experience, that they will do far better that way than if planted on the south side of a house or fence, or in some shady corner of the garden, as is very often done. Varieties—(Black) Worden, Moore's Early, and where the seasons are not too short, the Concord; (red) Delaware, Rodgers's No. 9, and, on account of its early ripening qualities, I would recommend for trial the new red grape, the Moyer; it is a cross between the Delaware and Miller's Burgundy. If it is of as good a quality, and ripens as early as is claimed for it (15th of August), it will prove a valuable variety for northern districts. In white grapes, I would recommend Jessica and Niagara; but neither of these ripen early enough for our northern counties. Among all the grapes, I know of none better than the old reliable Concord as to hardiness and productiveness, but it has one fault of being rather late of ripening its fruit. What we require is a grape of good quality, and that will ripen before the 15th of Sept. As to the pruning and training of the grape, I would refer to a former article in the September number of the *ADVOCATE* in 1888.

And now in the third and last place a few words as to the profits of the garden.—I have made a calculation of the costs of such a fruit garden as I have described, and find that, allowing for manure, preparing the soil, cost of plants and planting, cultivation, pruning, etc., and allowing eight cents per quart for the berries produced, which is about the price usually paid

by those who buy, and four cents per pound for the grapes, when in full bearing, and taking the average one year with another, this piece of ground, less than a quarter of an acre, will realize a net profit of \$45, or at the rate of \$180 per acre, besides the great benefit of having a daily supply of fresh fruit all through the season, and an abundance for canning and other purposes. We find from the Bureau of Industries that, for the last five years, the growing of farm crops in Ontario has not been very profitable. They stand about as follows: On fall wheat there is a deficit of \$2.35 per acre; spring wheat, \$1.89 per acre; barley, a profit of \$3.80 per acre; oats, a profit of \$1.89 per acre; peas, a deficit of \$1.60 per acre; corn, a profit of \$4.10 per acre; potatoes, a profit of \$19.78 per acre; turnips, a profit of \$7.86 per acre. This report is compiled from the reports of 198 correspondents in various parts of the province, and may be taken as a pretty fair average of the crops of Ontario. How does this compare with the profits of the fruit garden? And yet farmers always say that they have not time to attend to a garden; that it won't pay, and they can't be bothered with it. I hope I have proved to the satisfaction of every reader of this journal that it will pay. And, in conclusion, I would urge upon every farmer, who has no fruit garden, to make a start this coming spring, and I can assure them they will never regret it.

Iron-clad Fruit Trees.

BY ROBERT HAMILTON, MONTREAL, P. Q.

I have headed this paper iron-clad, rather than hardy fruit trees, because the latter term is misleading. A farmer residing on the Niagara Peninsula might, in good faith, call the trees that succeed there hardy; and another living a hundred miles to the northward, on the look-out for hardy trees, might say: Ah! That is just what I want, and buy and plant it only to find himself victimized. But the term iron-clad leads no one astray; by it is meant a tree or plant sufficiently hardy enough to withstand the coldest weather to which it might be exposed in the coldest part of Canada, at least the habitable part of it, even in the Northwest, under suitable treatment, such as I shall endeavor to outline in this paper. I may say, too, before going further, that while a tree may be a true iron-clad, it may, under adverse circumstances, very easily be winter-killed. This is no paradox. I have lost five trees of the Duchess of Oldenburg, a variety of apple that is allowed to be one of the hardiest in existence, again and again, through the roots being exposed from the snow being blown off in winter and leaving the ground bare. I have lost young seedling maples, elms and oaks, under similar circumstances. Protection of the roots during the first two or three winters after planting, by mulching, or any other means that gathers and holds the snow, is essential to their preservation. The first two or three years is the critical period in the young orchard; while, as has been stated, a tree hardy in itself may be lost during its earlier years through bad management, its opposite may be inferred, namely, that a tree, not altogether hardy, may, through good care and judicious treatment, be rendered all but hardy. With thoroughly ripened young wood and sufficient winter protection by mulching, there will be no difficulty in wintering young fruit trees.

To secure properly ripened wood, the ground about young trees should be kept cool by mulching, and kept vigorously growing by constant hoeing up to the end of July, and then no more disturbed, and all mulch removed; the young wood will ripen early and be enabled to endure the coldest weather. There is no royal

road to the production of good fruit—at least in the cold north. Yet, constant care and watchfulness will triumph over all difficulties.

But, which are the varieties of fruit trees that may legitimately be called iron-clad? In this paper I will take up apples only; and, taking them in the order of ripening, I mention, first of all, one of the last introduced, the *Yellow Transparent*. This is a new variety from Russia, one that excels in hardiness, fruitfulness and thriftiness; it will endure a great degree of cold without injury. After several years trial in my grounds, when such hardy sorts as *Fameuse* and *Red Astrachan* utterly failed, neither bark nor pith has colored in the least. The bark on trunk, as well as branches, looks as if scrubbed every day. They show the glow of health in every part. This tree begins almost as soon as planted to bear, and in unjudicious hands may be seriously injured by being allowed to over-bear while too young. One or two fruits for the first few years are all they should be allowed to bear.

The fruit is large and of a clear greenish yellow, and when ripe is crisp and soft, but soon becomes over-ripe. It is an annual bearer, taking a rest once in four or five years. The fruit may be used for cooking after the middle of July, and for dessert after the 10th of August, and occasionally earlier. It is not an apple to ship long distances, except when packed with more than ordinary care, but near to a market it has no superior. Packed separately, rolled in tissue paper, it brings high prices. I have found that it pays well to thin the fruit on the tree, both for the fruit and for the tree. As it is of very compact upright growth, it may be planted closely; and, being an early profuse bearer, it grows slowly.

Following it in season is the *Strawberry of Montreal*. This tree resembles the preceding in its compact upright growth, but does not, like it, come early into bearing; but when it does begin it bears well, a beautiful red striped apple of medium size and good quality, either for cooking or dessert. It is also a vigorous grower, one that no one need hesitate to plant; it follows *Yellow Transparent* in season, and carries better.

Next in order of ripening comes the *Duchess of Oldenburg*. Its name is used to indicate the highest degree of hardiness. It is, besides, unsurpassed in fruitfulness, bearing large sized and beautifully colored apples that have a long season for an early apple, and carry well, even to distant markets. It is only a cooking apple, never becoming sufficiently mellow to be called an eating apple.

Arabka, a new Russian apple, would come next in season; but, as two or three kinds have been introduced under this name, it will be necessary to distinguish them by appropriate names ere long. This variety bears a large sized, somewhat conical, well-colored fruit. The tree is hardy, vigorous and productive, and begins to bear soon after having been planted.

Next in order comes the *Wealthy*. Too much cannot be said in praise of this fine variety, whether we speak of the tree or the fruit; it leaves nothing to be desired in hardiness and productiveness. The tree is a vigorous, thrifty and rapid grower, and comes early into bearing, and the fruit is large, and when ripe of a glowing deep red, with tender flesh and a deep aroma; and, when packed early and placed in a cool root-house, keeps till well into March.

In another issue I will name and describe some of the other Russian apples that are worthy of attention.

Vegetable Pathology.

BY JAMES ELLIS HUMPHREY.

Prof. of Vegetable Physiology, Massachusetts State Agricultural Experiment Station.

(Continued from March issue.)

THE POTATO BLIGHT AND ROT.

Phytophthora infestans deBy.

The combined warmth and moisture of the season just closing have been very favorable to the development of fungi, whose attacks have consequently been, in many instances, unusually severe. Probably no one disease has been more generally prevalent or more disastrous in its effects throughout the State than the *blight* or *rot* of potatoes. It may be worth while, though it may seem like guarding the barn door after the horse is stolen, to discuss briefly our knowledge of its cause and to give some hints as to treatment which gives promise of usefulness in aiding to ward off threatened attacks in future years.

The potato rot is caused by the development within the potato plant of a fungus closely related to those which cause the mildewing of grape leaves, of lettuce, etc. The threads of the fungus grow in the tissues of the stems and leaves of the host and send out fruiting threads, through tiny openings or pores which exist in the surface, into the outer air, where they produce the spores. These spores germinate readily in a warm, moist place, and give rise to new threads which, when produced on the surface of a fresh potato leaf, make their way into its interior and quickly spread throughout the plant. A striking feature of this fungus is that it causes the complete breaking down of the infested tissues of the host-plant into a slimy, putrescent, ill-smelling mass. Most fungi weaken or kill by gradually sapping the vitality of their hosts, but here is no half-way work, no uncertainty as to whether fungus or host will win in the struggle. The development of the fungus and accompanying death of the tissues of the host is usually quite rapid, and in very violent cases most astonishingly so, forty-eight, or even possibly twenty-four, hours being sufficient to convert an apparently flourishing field into a putrid mass. This destruction of the "tops" is commonly known as the *blight*. Extreme cases like this can only occur, however, when atmospheric conditions are very favorable, in wet, sultry weather, with a wind which serves to carry the spores freely and in the right direction. At best, however, the rapidity of its development is the one element which makes this fungus very difficult to deal with.

But while the killing of the potato tops while in vigorous growth, and the securing of a much reduced crop would be a sufficiently serious matter, the trouble does not stop there. After killing the tops the fungus penetrates through the stems to the tubers and causes a similar rapid decay in them also. It is to this destruction of the tubers that the name *rot* is commonly applied, and the belief is quite general that the *blight* and the *rot* are due to different causes. This, however, is not the case, and it is as well to designate both by the name *rot*. The only hope of saving the tubers when the tops begin to show the disease, is to dig them at once, which can often be done before the fungus reaches them, when the progress of the disease is not extremely rapid. It should be said, however, that many writers believe that the parasite can

reach the tubers through the medium of the soil, as well as through the stems.

In mild forms of the disease, the tubers often become infected by the threads of the fungus without suffering much decay. If such tubers are stored in a comparatively warm place for the winter, the fungus may continue its destructive development within them and even infect neighboring tubers. Frequent picking-over and a cold place for storage are the chief preventives of loss from this source. Infected tubers, planted in the spring, are very likely to produce diseased plants, from which the whole field may become diseased. Care should, therefore, be exercised in selecting "seed" potatoes, that none of them bear the brown decayed spots which indicate the presence of the rot fungus, though it is true that sound crops have been raised from infected "seed".

This brings us to the least definite feature in our knowledge of this parasite. Since its summer spores cannot live long or endure cold, how does it survive the winter? Doubtless, by the hibernation of its threads in potato-tubers, as just described; but this method alone seems hardly certain enough to constitute the sole reliance of the plant, or sufficient to account for the phenomena of its sudden and abundant appearance. Most of the mildews, the nearest relatives of our plant, produce, in the stems and leaves of their host plants, peculiar resting spores which can live and resist cold or dryness for a long time and finally germinate and reproduce their respective fungi when warmth and moisture return. But, although certain botanists have stoutly claimed that the potato fungus produces such spores, their existence has never been satisfactorily proved.

A preparation which has given remarkable results in the prevention of grape-vine mildew, when sprayed upon the vines, would probably prove equally efficacious in protecting potato plants against the *rot*, if it can be applied in time. This is the so-called *Bordeaux mixture*, prepared as follows:—(a) Dissolve 6 lbs. sulphate of copper in 16 gals. water. (b) Shake 4 lbs. lime with 6 gals. water. (c) When cool, mix a and b, stirring thoroughly.

As the preparation is a mixture and not a solution, some form of spraying apparatus with an attachment for keeping it thoroughly stirred is required for its application. But few attempts at fighting the potato-rot have been made, and it is impossible to say how effectual the above treatment will be; but, as it has proved so valuable in other related diseases, a thorough trial of it is earnestly recommended. The chief difficulty will be in making the application promptly enough. To ensure this, the materials should be kept on hand, and the mixture applied on the first signs of the trouble in any part of the field, or in any field in the neighborhood. To determine the utility of the application, a part of the field should be left untreated as a "control-experiment." A comparison of results on the treated and untreated plants will show the efficacy of the treatment.

The writer wishes to render all possible service to the farmers, horticulturists, and florists of Massachusetts, in dealing with fungus diseases of plants, and will be glad to answer all requests for information and advice as promptly and as fully as possible.

A Bristol (England) poultry fancier recently paid \$100 for a Minorca cockerel, probably the highest ever paid for a cockerel of that breed.

Blackberry Culture.

BY W. W. HILBORN.

The cultivation of this fruit should receive more attention. It can be grown in almost any locality and on nearly any soil, a stiff clay to be most avoided. Twenty-five to fifty plants well cared for will produce a supply for a family of eight to twelve persons. It is one of the most profitable fruits that can be grown for market. The demand for it in our large cities has materially increased during the past few years. The method of cultivation given below is applicable to a city or farmer's garden or growing in quantities for market.

Select a dry piece of land, moderately rich, sandy loam is preferable. If not naturally well drained, it must be well underdrained to ensure success. Planting may be done either in the autumn or early spring. Plant in rows eight feet apart, and two to three feet apart in the row. Early vegetables may be grown between the rows the first season. Thorough cultivation should be given early in the season and discontinued the last of July, in order that the plants may have time to ripen their wood sufficiently to withstand the severe cold during winter.

PRUNING.

When the new growth reaches the height of eighteen inches, cut off four to six inches, which causes them to send out branches or laterals and form a nice stocky bush near the ground. No more pruning is required until spring, when all injured portions should be removed, and the laterals shortened back to twelve or eighteen inches. The second and succeeding seasons the new growth should be allowed to reach the height of two and a-half feet before cutting back, and laterals cut back in early spring to one and a-half to two feet. When thus pruned no stakes are required to support the plants, and finer fruit is produced. It is very important that the cutting back of the new wood is properly done. If too much is taken off the plant receives such a check that it will not make a strong, healthy growth. If on the other hand, too little is taken off, the last bud will push on again instead of sending out laterals. The old or fruiting canes should be cut out as soon as the fruit is gathered. In any locality where the snow falls to a great depth, it is better to leave cutting out the old canes until spring, as they afford considerable support to the new wood, and less injury is done in the way of breaking down the bearing canes. If a sharp sickle or corn hook is used in cutting back the new growth, it can be done nearly as fast as a man can walk along the row.

VARIETIES.

There is quite a number of varieties grown at present, most of which are not hardy enough for the greater portion of Canada. The following varieties are the best among a large number that I have tested.

Snyder—Stands first on the list as a valuable hardy variety. It will succeed more generally throughout Canada than any other sort. It ripens early, is of good quality, no hard core, sweet and melting to the centre, of medium size, plants strong, vigorous and productive, has fewer thorns than most varieties. Sends up but few suckers, and is therefore less trouble to keep in shape. In any locality where the Snyder will not prove hardy there is little use in trying any other sort.

Agarum—Has not been so thoroughly tested as the above, it is nearly as hardy. Fruit above medium size; sweeter than any other blackberry with which I am acquainted. Plants strong, vigorous and productive. Especially valuable for home use on account of its good quality.

Taylor's Prolific—Plants not as strong as Snyder, nearly as hardy, very productive, medium in size, ripens later than the above sorts.

Kittatinny—Fruit very large, fine and sweet. Canes very strong, vigorous and productive where it succeeds. Only moderately hardy. It suffers from rust in many localities.

Gainor—A newer variety of much promise, more hardy than Kittatinny and its equal in other respects.

Eric—Much has been said of this new sort. It is certainly a fine, large, early berry. If the canes were only a little more hardy it would be a great acquisition. Think it will only succeed in the milder portions of Canada.

Minnesota—This variety was the most promising of any of the newer sorts at the Experimental Farm, Ottawa. It is large, of good quality, ripens medium to late. Plants strong, vigorous and productive. Perhaps the most hardy of any of the large varieties. Worthy of general trial.

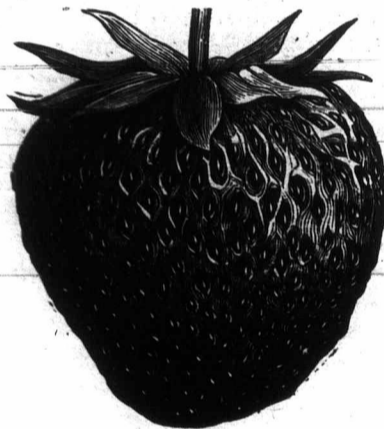
For the colder portions of the Dominion the first three sorts named will give the best satisfaction.

In milder localities the other kinds can be grown profitably.

I have also grown Wilson's Early, Wilson Jr., Early Harvest, Early Cluster, Knox, Dorchester, Bonanza, Stone's Hardy, Western Triumph, Nevada and others. I do not consider any of them equal to those described above.

New Varieties of Fruit.

The Progress raspberry has not yet been tested in Ontario, or any other part of Canada as far as we can learn. This variety is a chance seedling



LADY RUSK STRAWBERRY.

that originated in New Jersey ten years ago, and is now being introduced by the J. T. Lovett Co., Little Silver, N. J., from which establishment emanated the Cuthbert raspberry, Gandy strawberry, and several others. In writing of this berry Mr. Lovett says:—"The Progress is not an untried novelty in the United States, but has been thoroughly tested by practical fruit growers and found to be fully equal in every respect to the popular Souhegan or its parent the old Doolittle's Improved, and to yield double the quantity of fruit per acre. In size, flavor and appearance there is very little difference in the three, but the Progress is much stronger in growth of cane and is of iron-clad hardness, while the fruit is decidedly firmer and begins to ripen a few days in advance of the others. It is therefore not only the most valuable early variety of its class for garden culture, and the most profitable for market growing, but it is also one of the very best for the producer of evaporated fruit."

We would advise our readers to carefully test this variety, if it proves as good as its introducer states it will be a great acquisition. Mr Lovett gives a full description of this fruit in his "Guide to Horticulture," a splendid book of ninety pages, having several colored plates and

lithographed cover, profusely illustrated and beautifully printed. It is mailed for ten cents, or will be sent without plates free to all who apply. Every farmer should have a copy of this book.

The Hilborn raspberry is another new introduction. It belongs to the black cap (*rubus odoratus*) family. It was originated a few years ago by W. W. Hilborn, then of Arkona, late Horticulturist of the Experimental Farm, at Ottawa. It has been winning its way gradually to the front until now it stands very high in the estimation of those who are acquainted with it. For instance, in the report of the Ohio Agricultural Experiment Station for 1887, we read:—"This variety has thus far given entire satisfaction here, the plants being hardy, vigorous and productive, while the fruit is unsurpassed in appearance. It can hardly fail to take rank as one of the best, second early black caps." And at the last meeting of that Society, Mr. Palmer stated that he had found the Hilborn particularly excellent, better than the Ohio, and the best of the black caps, while Mr. Albaugh regarded it as the most promising market sort of the present time.

Wm Stahl, of Quincy, Ill., is this year introducing the Lady Rusk strawberry, which he describes as follows:—"It bids fair to become the leading market variety. I have been fruiting it for four years and find it is a very rank grower; will stand extremes of both heat and drouth to perfection. The fruit is large in size, of bright crimson color and excellent flavor, several days earlier than the Crescent and its superior in every respect, and, above all, the best berry in the market for long distance shipments—a very good point in its favor in case of wet weather during picking season." This fruit has not yet been tested in Canada. Mr. Stahl is said to be the largest grower of berries in the United States. His catalogue, giving full description of Lady Rusk and all leading varieties of berry plants and grape vines, will also be mailed on application.

Trees for Fences.

Two experiences favorable to living fence-posts are reported as follows in the Farmers' Review—the first from Kansas, the other from Nebraska, the author of the latter saying that the trees "will last longer than you and your son, too," while even cedar cut out and set involves a constant expense.

"I think there is nothing better. I use box elder planted eight feet apart; stretch the wires very tight to a well-braced corner post of dead timber. Attach the wire to every third tree by using a piece of smooth wire eight inches long stapled in the middle of the tree, the ends bent together and around the fence wire. The tree will then have to grow three inches before reaching the fence wire. It can then be pulled loose and the act repeated. Have never had a wire broken or a tree injured, yet the fence is built over a hill, in what is generally known as a windy country."

"Ten years ago I built a mile and a-half of barbed wire fence and nailed on each tree a strip of board two and a-half inches wide to staple the wire to. I used narrow strips because the trees were small. It is a success: the fence now is ten years old on trees fifteen years old. Trees were cottonwood and five years old when used for posts. White cedar posts put in the same year are now being replaced, perhaps half of them. If you don't want them to shade too much ground, cut off the tops and keep them low; they won't die. Set trees for posts by all means where land is cheap."

Our New Subscription Prizes.

As is our yearly custom, we are introducing as subscription prizes several new plants not as yet brought into Canada, all of which come to us well recommended:—

New Early Six Weeks Market Potato.

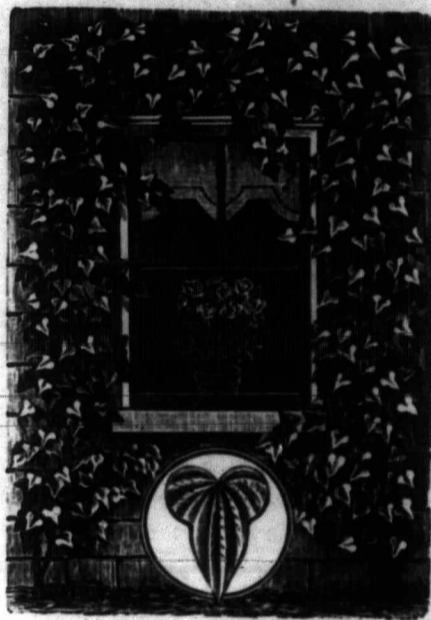
Market gardeners and farmers are continually looking around for the earliest potato, when they find one that makes a crop a week or two ahead of the old sorts and yields heavily, it is worth its weight in gold for the first seed purchased, it enables them to get their crop on the market before other kinds come in and thus secure fancy prices. The Early Six Weeks Market Potato, a quantity of which we have obtained from J. A. Everitt & Co., seedsmen, of Indianapolis, Ind., is claimed to be two weeks earlier than any other known variety. The potatoes begin to form when the vines are only four or five inches high, they increase rapidly, and are of fine marketable size in six weeks from planting, hence their name. In 72 days they mature their crop, and in 1888 yielded 420 bushels per acre, in 1889, 380 bushels per acre. Messrs. Everitt say:— "These yields were obtained on ordinary land without manure, and in each case were fully matured in 72 days from planting. They grow so rapidly and mature so early that the potato bugs have no chance at all, making their crops before the young bugs become numerous. The quality of the potatoes is excellent whether cooked before or after full maturity, shape oblong to round, very smooth, medium size, with very few small, unmerchantable tubers, the best of keepers. Judging from reports we have read of this new potato we believe it will prove a very valuable acquisition to the list of extra early varieties." The originator, who is a successful farmer and stock raiser, says:—"Potatoes have been my favorite crop ever since I was a boy (am now 52 years old), and I always took great pleasure in seeing what good crops and large yields I could get, but never did I see a nicer potato than this. I have now discarded all others, and raise this for early, a main crop and a table potato. I have given it a fair trial and it has proven itself superior to all other varieties. It stands wet weather and resists rot better than any other sort." In 1888 a careful comparative test was made with three other varieties, each of which have been claimed to be the earliest, with the following results:—All were planted May 2; Everitt's Six Weeks Market matured in 72 days; yield, 420 bushels per acre. Stray Beauty matured in 87 days; yield, 189 bushels per acre. Chas. Downing matured in 92 days; yield, 350 bushels per acre. Early Sunrise matured in 100 days; yield, 378 bushels per acre. This test shows this new potato to be 15 days earlier than any of the above. We will send, post-paid, 1 lb. of this potato to any subscriber who will send us one new yearly subscriber, or we will mail 1 lb. to any subscriber who fails to get a new name if he will prepay his own subscription to January, 1892.

The Cinnamon Vine.

This is a beautiful climber which possesses the rare quality of emitting from its flowers the odor of the cinnamon. It is said to be perfectly hardy. The stem dies down every autumn, but grows again so rapidly in the spring as to completely cover any trellis or arbor very early in the season. It has no insect enemies, and is not affected by drought. It is propagated from bulbs, each of which will



make from ten to twenty feet of vine. Its beautiful bright green heart-shaped leaves, and clusters of delicate white, highly scented, flowers renders it one of the most desirable climbers in cultivation. Mr. S. Wilson, a resident of Pennsylvania, writing of it says:—"I think it one of the most desirable house plants for winter. It blooms as freely in the house as out of doors. It can be trained over and



THE CINNAMON VINE.

around a window, and will fill the room with a delightful fragrance in the cold winter months." We will send, post-paid and securely packed, three roots of this plant to any of our subscribers on the same terms as one pound of the above potato.

Weather Plant.

This is one of the most wonderful plants that has come under our notice. An article in the English Pall Mall Gazette describes it thus:—"This remark-

able specimen of the floral world continues to excite interest here. Men of science, whom on first discovery were unwilling to express an opinion on its prognosticating virtues, now agree, after extensive experiments, that the plant is in truth prophetic. Thirty-two thousand trials made during the past three years tend to prove its infallibility. It is a native of Corsica and Tunis, and is known in botany as *Abrus Pereginus*. Its leaf and twig strongly resemble those of the Acacia. The more delicate leaves of its upper branches foretell the state of the weather forty-eight hours in advance, while its lower and harder leaves indicate all atmospheric changes three days beforehand." Its discoverer says:—"I have found that in order that the indications may be accurate, such as one can rely upon, the plant should be kept at a uniform temperature, shielded from the sun and be allowed always to stand in the same position. If the leaves stand upward from the twig, making with each other an angle of 45 degrees, the sky will be cloudless and the weather beautiful in all respects. If they stand out straight, changeable weather is indicated. As the leaves droop below the twig the indications range toward rain until, when the leaves hang straight downward, water may be expected to fall almost in torrents. A local storm is indicated by curling together of the leaves, and a fog by a bending of the twigs."

The seed are the size of Sweet Peas, round and hard, and of bright scarlet color and in Tunis are extensively used by the natives for beads and other ornaments, for which purpose they are extremely pretty. They germinate readily and produce a most charming vine with abundance of fern-like foliage and racemes of pink and red flowers. The leaves are to the taste very sweet, like that of licorice root. It is a perennial and can be grown in the window or green house all the year, or in the open ground in summer. It is a rapid and luxuriant grower, attaining a great height when opportunity is offered, and exhibits a most charming mass of wavy vines, foliage and flowers. We will send by post a package of the seeds of this vine to any of our subscribers on the same terms as the potatoes or cinnamon vine is sent.

Let every old subscriber send us new names and obtain some of each of the above prizes. There is not a post office in Canada where a score of new names could not be added.

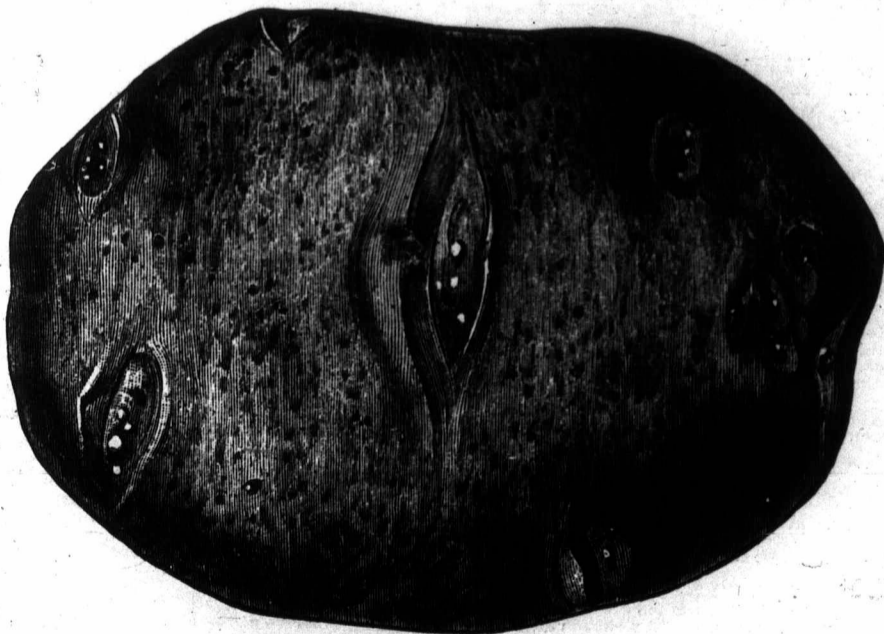
Read What Our Patrons Say.

Mr. W. D. Reesor, the well-known breeder of Jersey cattle, Clydesdale horses and Horned Dorset sheep, in a recent letter says:—"Please find enclosed a check to cover my account. I find that advertising in your paper pays 'big.' I have received a large number of enquiries, and made satisfactory sales, since commencing to advertise with you."

Dear Sir.—Like the FARMER'S ADVOCATE well; never had a paper that tells me more good, honest facts about farming, and would not do without it. R. GALBRAITH, Kerwood.

Dear Sir.—Your card and premiums to hand this morning. I am very much pleased with them and think they are well worth two subscribers. I will try to get some more for you if I can. A. H. WOODBRIDGE, Kingsville, Ont.

Dear Sir.—Having read your last issue of the FARMER'S ADVOCATE, I consider it a very interesting paper to all those who take an interest in farming, and especially to some of our Antigonish farmers, who have to improve their farms, and also their stock, before they can call themselves farmers. Its the only kind of paper that would suit the farmers around here. I will do my utmost to get some more to subscribe for it. I enclose \$1 to pay another year's subscription. WILLIAM FRASER, Harbour, N. S.



NEW EARLY SIX WEEKS MARKET POTATO.

Minnie May's Dep't.

MY DEAR NIECES:—

Who would wish for a yellow canary shut in a cage and bribed to sing with sugar and cake when we can have all the birds we want, free to fly and sing around our home, just by being kind to them. Pet the birds, dear girls, and teach the children to love them. Scatter the crumbs for them, and they will soon look for them and chatter at you if you have forgotten to feed them. Which of us does not remember our first peep into a bird's nest, with its four tiny blue eggs, or maybe the contents were pulpy, gaping mouthed baby birds; and how we were enjoined to hold our breath lest the old bird would forsake them. Or our climb to the forbidden pigeon loft, where we stared at the unshapely pair of occupants, and retreated in deadly fear that the old cock-pigeon would resent our intrusion and fly at us. Cat-birds may be found in any orchard, and can be tamed to eat berries from the outstretched hand, and they will build their nest year after year in the same limb of a low lilac or other thick foliage. It looks as if the occupants were fond of birds when we see a round-eyed robin feeding her brood and hatching them out on the lowest beam under the veranda roof, or a dainty little gray-bird build and bring up her young close to the bedroom window in utter indifference to being stared at. So love the birds, my dear girls, and do all you can to entice them to live close to you. What is more restful than to hear an oriole singing his evening song from the branch of the elm that grows so close to the house. Perhaps father will growl and tell you that turkeys and hens are the best. So they are, in their own way, but do not exclude all sentiment from your lives, and as country life abounds with opportunities for fostering it you would indeed be insensible did you not encourage it by every available means. Because our life is cast in a practical way we should not lose all taste for things fair and sweet, and there is so much prose in life let us secure all the poetry we can. These little memories of birds and flowers are recurred to with fresh delight as we grow older, and may the day never dawn for us when we can contemplate a dancing, warbling blue-jay with the same sort of feeling as we would look at a hen and chickens, or a strutting old turkey gobbler.

With the disappearance of the snow comes the desire to be out of doors in the bright sunshine, and it is a good time to think how we can make our home look just a little prettier and more cosy by planting a climber along the front of the veranda, or one on each side of the porch, or setting a pretty tree just in front of some unsightly building so that as it grows it will obscure the ugliness. The vines best adapted for us are the Wild Grape or Virginia Creeper, which we can procure in any number in the woods close by. The men have leisure now, and will do the digging and planting, while we will do the training and watering. Do the transplanting just as soon as the frost is out of the ground, and before the buds have begun to swell; if left until growth has begun, such a number of buds will be rubbed off the foliage will be thin all summer. A little tying up in the way it should go, and it will soon present a most luxuriant appearance, besides being a

delicious shade from the glaring heat of the noonday sun. When the snow disappears from the side of the fence in your borders is the place to plant sweet peas. For early bloom cover about one inch deep and they will soon be above ground. MINNIE MAY.

Fashion Notes.

This spring there is an evident desire to make flowers the trimming for hats and bonnets—violets in velvet, daffodils, tiny blue forget-me-nots, and primroses, yellow as gold, decorate spring head-gear. Lace in frills, fans or loops is always mixed with the blossoms, and on many bonnets loops of ribbon, wide or narrow, form part of the garniture.

A frill of lace around the neck of your gown is a pretty soft finish for home wear, but no frills are admissible on the street. A fold of ribbon, or lisse, or clear muslin, alone must be worn.

Sleeves continue to be worn large at the top, and will even be seen on jackets and mantles for street wear. They have a tendency to make the waist look small, and are decidedly more comfortable for dresses than the skin tight sleeve that was worn so long.

Little variation is noted in the back draperies of skirts. Straight effects continue to be in good form.

Bodices exhibit fulness in the form of vests and surplises, and the girle and jacket fronts are still favorites.

Tan colored shoes have again appeared, but they are ugly and inharmonious with any toilet.

Beans.

Beans are more nutritious than potatoes, but because they are a little more troublesome to cook are not often used. Now, when all other vegetables are used up, beans can be brought on the table every day in one form or other and will be relished.

BAKED BEANS.

Soak one pint of beans over night, after picking out all small disfigured ones. In the morning boil in plenty of water until soft; strain the water from them; put into your baking dish with slices of salt pork between and some on top. Bake one hour, after pouring one cup of milk over.

SOUP.

Soak one pint of beans over night; in the morning boil until tender; add the pod of a red pepper to flavor; strain from the water and bruise thoroughly until all are soft; have your soup ready boiled the day before, skim it free from grease; add the beans; let it boil for a few minutes; strain, and add one cup of milk in which a tablespoon of flour is mixed. Serve very hot.

BOILED BEANS.

Soak one pint of beans over night; in the morning boil soft; strain, and return to your sauce-pan; when ready to serve, make a sauce of half a pint of water; a tablespoon of butter in which a little flour has been rubbed; let it boil up, and pour very hot over the beans when you have dished them.

BLONDES AND BRUNETTES.—The chances of marriage for blonds appear to be not so great as those of brunettes. Dr. Beddoe, who collected statistics on the subject, discovered that of brunettes seventy-eight per cent. were married, whilst the blondes only sixty-eight were married. Thus it would seem that the brunette has ten chances of getting married in England to a blonde's nine.

PRIZE ESSAY.**The Cultivation of Individual Tastes.**

BY BLANCHE AYLMER, MELBOURNE, P. Q.

A great deal of the world's work is very badly done. The wind whistles through our ill-constructed houses; we pay the tailor and the dress-maker highly for clothes that do not fit; we are condemned to eat adulterated food, and as for finding a good, capable servant,—many of us have ceased to expect such a thing. Why is all this? And is there no remedy? Perhaps we may get a glimmer of light upon the subject if we look back to the days of our childhood and youth, and reflect whether the training of those days has been of much help to us in the furtherance of our occupation of maturer years. Many of us are inclined to cry out against the irksomeness of our allotted task, and in our recreation time we turn to pleasures that betray our preference for things in quite another line. We seem to have been given tastes of a certain kind, and then been told to repress them as much as possible, and finally forced into a career by circumstances over which we did not attempt to exercise any control. And so work is begun in disgust, carried on incapably and dishonestly, and finished in disappointment. Certainly this should not be the case. To accomplish work in the best way we should be interested in it and take a pride in it, and this we cannot do if we have neither taste nor talent in that particular direction.

Now, the highly-favored individual who is gifted with ten talents seldom fails to assert himself and to find his proper vocation in life. He perceives at his first contact with his fellow-creatures that he wields a power that gives them into his control, and eventually, circumstances as well as individuals, have to bow before him. He becomes a successful merchant, a brilliant professional man, a railway king, a prime minister, and we never think of envying him his eminent position, because we are conscious that under no circumstances could we ever have attained to it ourselves. Men such as these are stars of the first magnitude; we leave them to their glory, content ourselves to shine, if we shine at all, within the radius of a much smaller circle.

Few of us, indeed, can boast of the ten talents, yet most of us are endowed with at least one, and that one is so often kept hidden in obscure corners, and carefully laid by in drapings of diffidence, and false pride, and laziness, and even vice, that it may, perhaps, never see the light, and may be lost to the world now and eternally.

Let us look into an ordinary home and see whether the coming generation might not profit by the mistakes of past ones, and be made to grow into the wants and requirements of the age. We see in, say a farmer's household, a group of young people all gifted with more or less of individuality, some with very decided tastes of their own. In one corner of the room we are attracted by a boy whittling away at pieces of wood, and succeeding with the simplest of tools and the roughest of materials, in producing a small fleet of boats. His whole heart is in his work, and he has a plan in his head to sail his fleet some day in the watering trough, when circumstances happen to be, as they rarely are, favorable. And to whom does he apply to have

his sails cut out and made? Not to Kate, although she is the eldest, for Kate is pouring over a novel, and has evidently snatched the time for it out of what ought to have been spent on her toilet. There is a little maid of twelve summers sitting on the floor surrounded by a family of dolls, and stitching away at their wardrobe as hard as she can go. It is she who makes Johnny's sails for him. Meanwhile the table is pretty much monopolized by Tom, who is trying for the prize at school, and (the atmosphere generally not being very intellectual), finds that he must spread himself considerably if he is to accomplish much work with a set of torn school books, a bad pen, an ink bottle replenished with water, and no dictionary. It does not interfere in the least, however, with his occupations for Minnie to experiment on the organ until she thinks she has produced something equivalent to last Sunday's hymn; nor does Charley's persistent questioning affect the student: Why did you buy that cow, father? Which field are you going to plough next? When are you going to put up the new gate? May I have some rabbits to keep? (Don't we all know Charley?)

Now, who does not perceive at once that each of these children could do *one thing* well? It might not be a great thing, but it would contribute a quota to a perfect whole, and the talent it shows forth might be used as a guide to the child's future career. Instead, as likely as not, Tom, being the eldest, will be obliged to stay at home from school and work the farm, while Jenny will leave her dolls and be turned into a school-teacher, and Charley be bundled down to the store as a clerk.

People are very anxious now-a-days to break down class distinctions, but they are not nearly so ready to acknowledge that the one standard ought to be a standard of talent and righteousness, consequently they seek rather to level their superiors down than to level themselves up. Now, if we are all to begin on the same plan we shall find Johnnies and Jennies in every family and condition of life seeking an outlet for their varied capacities. What should we do with all these young people? Give Tom the best education within your means, and watch carefully for the opportunity to place him in the way of a business or profession to which his taste can conform. Apprentice Johnny to a mechanical trade, or put him through the workshops of a large manufactory whence he will step naturally into the round hole that is waiting for the round man. Keep Charley at home to work the farm, but do not make the mistake of supposing that he can be the best kind of a farmer if he never reads anything nor gets a glimpse of the outside world. Procure for him books and papers on practical and improved agriculture, and let him visit or even hire himself for a time on one of the model farms of the district or province. Jenny can be a dress-maker, but not a good one unless she works her way through a good training establishment. If Minnie has a musical ear and is likely to find teaching profitable, she must begin at seven years of age and have a thorough course of instruction. And do not, above all things, try and produce a school teacher out of your family, unless there are ten talents conspicuous instead of one. It is a disgrace to think of the illiterate, ungrammatical, unmannerly people that are sometimes introduced to us as preceptors of youth, and with whom only ignorance could rest content. It may be unnecessary for Jennie and Minnie to earn their living by their talent. The Miss Jane of fashionable society could almost afford to marry for love, so many possibilities of domestic

economy are within reach of her skilful fingers. The late Miss Frances Ridley Havergal dedicated her gift of music and poetry to God entirely. She sang the good tidings of the Gospel and sent them home to the hearts of her hearers with a soul-stirring voice of melody. How lovely an example, and how possible to follow, be it in ever so humble a way!

It will be argued that all this costs too much money for the family of an average farmer or mechanic. Yet there are in most communities inexpensive advantages of one kind or another, and moreover, who can count the opportunities that are allowed to slip by?

Boys and girls, if your parents will not do it for you, rouse up and improve your talents for yourselves, and never be too proud to do the thing you are most fit for. Even domestic service, that bugbear of bugbears, would immediately become inverted with a scientific and artistic character, if art and science were brought to bear upon the work. And all can fulfil duties with that integrity of purpose without which no work is well done, but in the exercise of which

"Who sweeps a room as the Lord
Makes it, and the action, fine."

The King's Daughters.

The King's three little daughters, 'neath the palace windows straying,
Had fallen into earnest talk that put an end to playing,
And the weary King smiled once again to hear what they were saying.

"It is I who love our father best!" the eldest daughter said;
"I am the oldest Princess!" and her pretty face grew red;
"What is there none can do without? I love him more than bread!"

Then said the second Princess, with her bright blue eyes aflame,
"Than bread? A common thing like bread! Thou hast not any shame!
Glad am I it is I, not thou, called by our mother's name."

I love him with a better love than one so tame as thine—
More than—oh, what then shall I say that is both bright and fine,
And is not common? Yes, I know—I love him more than wine!"

Then the youngest little daughter, whose speech would sometimes halt,
For her dreamy way of thinking, said, "You are both in fault,
'Tis I who love our father best—I love him more than salt."

Shrill little shrieks of laughter greeted her latest word,
As the two joined hands, exclaiming, "But this is most absurd."
And the King, no longer smiling, was grieved that he had heard.

For the little youngest daughter, with her eyes of steadfast gray,
Could always move his tenderness, and charm his care away.
"She grows more like her mother dead," he whispered, "day by day."

But she is very little, and I will find no fault
That, while her sisters strive to see who most shall me exalt,
She holds me nothing dearer than a common thing like salt."

The portly cook was standing in the courtyard by the spring;
He winked and nodded to himself, "That little quiet thing
Knows more than both the others, as I will show the King."

That afternoon at dinner there was nothing fit to eat;
The King turned, frowning angrily, from soup, and fish and meat,
And he found a cloying sweetness in the dishes that were sweet.

"And yet," he muttered, musing, "I cannot find the fault;
Not a thing has tasted like itself but this honest cup of malt."
Said the youngest Princess, shyly, "Dear father, they want salt."

A sudden look of tenderness shone on the King's dark face,
As he set his little daughter in the dead Queen's vacant place;
And he thought, "She has her mother's heart—aye, and her mother's grace."

Great love through smallest channels will find its surest way;
It waits not state occasions, which may not come, or may;
It comforts and it blesses, hour by hour and day by day.
—Margaret Vandergrift.

Uncle Tom's Department.

Sad Fate of a Famous Funny Man.

He made a reputation on a noted comic paper
By the weekly contributions of his wit;
Then his friends they all advised him it would be the proper caper
To ascend the lecture rostrum for a flit.

Now, this very funny mortal who could tickle human fancy
By the famous ebullitions of his pen,
Had a vapid sort of dreaming that his sayings would enhance a
Recompense of filthy lucre out of men.

But the tale is quickly uttered: when you hear it
This famous funny fellow once who wrote
Such wonderful evasions for the paper in the city,
Which he tried, alas! upon a rural goat.

Mot and pun they fell as flatly as the batter on the griddle,
For his audience was very chill and glum;
Then this famous funny fellow of the paragraphic riddle
Packed his little collar box and ambled hum.
—H. S. Keller.

MY DEAR NIECES AND NEPHEWS:—

Our poet-laureate, Tennyson, wrote long ago in his Locksley Hall:—

"In the spring a brighter crimson comes upon the robin's breast;
In the spring the wanton lapwing gets himself another crest;
In the spring a livelier iris changes on the burnished dove;
In the spring a young man's fancy lightly turns to thoughts of love."

And spring, which makes all the changes, and many, many more, is here. The words of Mrs. Alexander's simile come to mind:—

"Silently as the spring-time its crown of verdure weaves,
And all the trees on all the hills open their thousand leaves."

We are ready to welcome the beautiful spring in all its freshness; and when these changes all come with it, Uncle Tom is wondering what effect it will have on his nieces and nephews. And, laying poetry aside, we shall come down to hard matter-of-fact: As the boys have got through all the difficulties of getting wood out of the swamp, hauling it home, have sawed, split and piled it, and now it stands *done* for another year, do they not realize the pleasure of having attempted and completed something? There may have been other work you would have preferred to do, but this has earned for you more than a night's repose—that is, satisfaction. Do you know that some of those great speeches, which rouse Old England, and are read over the wide dominions, on which "the sun does not set," are thought out while the thinker's hands are busy chopping the hard old oaks of Hawarden, and the axeman is no less a personage than William Ewart Gladstone. It is a good thing, boys, to be able to do one thing well, if it is only chopping and piling wood. And you boys of the farm have a great advantage in learning to do many things, and practicing them too. In these fast days of ups and downs, men are called to do strange things, and one does not know when the knowledge (not hard to carry round like other things) may come useful. Not that I would have you follow the example of one who, a hat-maker by trade in the Eastern States, made his way west as a cattle drover, acted as cook on the way, tried ranching, and so changing, we find him a moulder and gas-fitter in Australia, a miner in India, again a hat-maker, and now a rancher in the west once more. No, too much changing indicates a fickle character; but, being ready to take one's part in everything, is well. A word to my nieces, too, and just here: There

are too many sad stories of young girls leaving homes on the farms and going off to the city, where they think there is more life. Girls, don't! is Uncle Tom's advice. You see the picture of city life but from one side, and that of the front door in June beauty. There are long hours and tired feet, and lonely days and disappointments. An unknown girl in the city has her character to build up, and her acquaintances to make. And happy, happy ones are those whose home-training has thrown around them a robe of modesty and goodness that bids temptations fly away.

O ye country boys and girls at this April opening of spring time, with health, and home, and peace, and beauty, and fresh air, and exercise, and love in your sheltered farm house, you, yes you, are much to be envied. What do you think of spring without a violet, without a walk in the woods, without the garden, without,—O so much,—and only dusty streets and hot brick walls, and the incessant rattle. Uncle Tom would like to write a letter to your fathers and mothers, but not this time, but will suggest a plan about which you may ask their opinion. It is this of allowing boys and girls to earn money for themselves to spend under their parent's guidance as they see fit. One boy may earn a cent for each mouse he catches, two for a rat, so much a head for his cabbage and cauliflower, or melons, so much for the lambs he cares for, perhaps the prize money on the calves he feeds and waters all summer. Uncle Tom knows it makes boys and girls work, and love their work, and fathers and mothers who have tried it, even investing their little store in the savings bank, have every reason to believe it an excellent plan. Then you can give of your own money for collections, and spend as you see best the remainder.

Just try it this spring, and see what the results will be when the reckoning day comes, and you will find there is no April "fool" about it.
Your loving
UNCLE TOM.

Puzzles.

1—APRIL 1890.

	1	2	3	4	5
6	7	8	9	10	11
13	14	15	16	17	18
20	21	22	23	24	25
27	28	29	30		

ACROSS.—1. Something admitted.
2. Made God (O B S).
3. One who endores.
4. Like a gland.
5. Doctrine.

DOWN.—1. To separate.
2. A scientific prefix.
3. A player at dice.
4. To make amends.
5. A plant of the genus arum.
6. A tribe of North American Indians.
7. Simple.

FAIRBROTHER.

2—NEW PUZZLE.

2	4	3	5	2
5	3	6	4	4
3	6	2	6	3
4	6	6	5	5
2	5	3	4	2

A boy was kept after school by his teacher, and was told he could go home when he had accomplished the following task: The numbers on the diagram below were written on his slate, and he was required to so arrange the figures that the horizontal, vertical & diagonal figures would add up to twenty, with no figure repeated in any one line. How did he arrange them?

A. HOWKINS.

3—ANAGRAM.

"I'm going to get married."
Says Harry to Lou:
"And I'll bet a shilling
You can't guess who to."

"I'll take ye," says Lucy.
"For once, if I lose;
'Tis to Ada, the puzzler;
Pray tell me the news."

"Guess again, my fair cousin,
First time is a miss;
Now, if next time you miss it
I'll give you a kiss."

"Sure, now, but you're joking;
A kiss I'm not after;
But it must be *Drusilla*,"
She said, full of laughter.

"Guess again, you're mistaken,
Another fair trial."
He said as he kissed her,
While crossing the stile.

"Perhaps its to Jennie,
Or else little Bess;
But please now, do tell me,
I'm unable to guess."

"Are you sure you can't tell,
Cousin Lucy, my dove?
Do I fill a poor place
In your heart of love?"

FAIRBROTHER.

4—ILLUSTRATED REBUS.



5—DOUBLE ACROSTIC.

My first "withholds assent" from:
My second says "I'm in debt";
My third a "messenger," who may be
A fourth, or "soldier" yet;
My fifth may be a "medley";
My sixth is "truth" they say;
My seventh is a "notion," say;
My eighth a "southern" way.
Just "ramble" and knock at number nine,
'Twill "resound" at number ten.
Eleven will give you "fourpence."
For twelve, a "race of men."
A fourth may be a "medley";
My thirteenth is a "kind of fruit."
My fourteenth "not the same."
Finals—a title to a lady given.
Initials—that lady's name.

ADA ARMAND.

6—ANAGRAM.

Fairbrother's having too much fun, I think, this little while.
Making puns on all our puzzles, (I think I see him smile).
Though his, of course, are better; 'tis not nice, I do declare.
Should he continue, name or no, I'll say he is not fair.
Perhaps someone may find a pun in these few lines I write.
But sure, to have a PUN SENT HIM, does only serve him right.

ADA ARMAND.

7—NUMERICAL ENIGMA.

My 1, 2, 3 is a metal cup;
It might be made of tin.
My 4, 5, 6 a maiden, who
Can play the violin.

If o'er the sea you journey long,
And home sick you should be,
Back to COMPLETE thy native land,
Most surely thou wouldst flee.

FAIRBROTHER.

8—CHARADE.

For being silent so long, "total" I ask:
But, I find making puzzles a difficult task.
And, though this puzzle is not the best,
I hope, through time, to be "first" with the rest.
So, now, just "second" your wisdom cap,
And I am sure you can answer that.

LUCY CUNNINGHAM.

9—ANAGRAM.

Ada Armand's name stands high,
(To Fairbrother no slur.)
I wish success to all who try,
But none CAN RIVAL her.

10—MUTATION.

Oh! no, Fairbrother, you're mistaken;
I've not prime myself from the ranks,
But will honestly endeavor
To last a place among the prize winners,
Even though my friends all call me "Hank."
HENRY REEVE.

11—METAGRAM.

Complete, I am an animal.
Change my head, I am precious.
Change again, I am to rend.
" " " " a fruit.
" " " " to attend.
" " " " obliterate.
" " " " bring up.
" " " " intimate.
" " " " a harness.
" " " " to dread.
" " " " a period of time.

MATTIE DOLLY WOODWORTH.

Answers to March Puzzles.

1—CALAMAR
ABABILO
RAVENER
ONERATE
BD
2—Influenza—Nellie Bly.
3—Machine.
4—Hand-some.
5—T. I.
HORAM
P
E
ABHOR
D
O
VALEV
O
E
CHASM
A
E
TOKE
E
T
6—M
AS
MANAGER
SATIVS
GIVEN
EVENER
RENEWED
RE
E
D

8—Lowell. Carleton. Bryant. Saxe.
Leland. Tupper. Moore. Cowper.

9—Duty is the path that all may tread.

10—STOLE
TOWER
OWING
LENTO
TRICERGETS
RECARAVEXCEL
ICINGAMESDARE
CANTOVERTERSE
ERGOTESTSLEEF
EXTRA
STEAL
TRAIT
SALTY

11—Dear Friend,—I hope you will not delay in becoming one of us. You bet we have a grand pleasant time with the riddles. We claim our choice for a puzzle paper takes the banner for fair dealing and fairplay. Our prospects for this year are bright. We extend to you a regal welcome. Give your attention to the diamond, etc., and if you have backbone it will surprise you how soon you can bid defiance to puzzles of every quality. Let Exeelsior be your roost. Keep a sharp lookout for all strange or new puzzles and success will shortly come to thee. You can have a tip-top time whether you win a prize or not. There is ample new designs for puzzles, and if you guess the key, and are smart and wide-a-wake you cannot fail to get correct answers. These are facts; then why not be spry and help boom our Uncle Tom's branch of the ADVOCATE.

Names of those who have Sent Correct Answers to March Puzzles.

A. Russell Boss, Mattie Dolly Woodworth, Mary E. Woodworth, A. Howkins, Dorothy Fox, Drusilla A. Fairbrother, Clara Rillance, Ed. A. Fairbrother, Morley T. Boss, L. A. Boss, Mary Morrison, Lucy Cunningham, Henry Reeve, Sarah Moorhouse, Elinor Moore, Harry Attwood.

A PUZZLING QUESTION.—A man walks round a pole, on the top of which is a monkey. As the man moves, the monkey turns round on the top of the pole, so as still to keep face to face with the man. Query, when the man has gone round the pole, has he or has he not gone round the monkey?

Most persons at first sight will be inclined to answer that the man has not gone round the monkey, since he has never been behind it. The correct reply, however, is that the man has gone round the monkey in going round the pole. That the monkey has turned once on its own axis has really nothing to do with the question.

NOTICE.

The demand for back numbers of the "Farmer's Advocate," since the new year, has been so great that it is impossible to furnish them. Hereafter all new subscribers must start from the date names and cash are received by us.

NEW ADVERTISEMENTS.

All Advertisements, to insure insertion, must be in this office by the twentieth of each month. In writing advertisers please say that you saw their advertisement in the Farmer's Advocate.

PERCHERON STALLIONS.

I have been authorized by the Welland County Horse Breeders' Association, to offer by Public Auction, at the Mansion House, Welland, Ont., on Wednesday, April 16th, at 1 p.m., both of their imported Percheron stallions, Endymion (black), and Le Compte (grey). These horses are registered, and first-class in every respect. Sale without reserve. Terms to suit. 202-a-OM E. R. HELLEMS, Auctioneer.

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The Third Annual Stallion and Fat Cattle Show, under the auspices of the Portage and Lakeside Agricultural Society, will be held at the Agricultural Grounds, at Portage la Prairie, Man., on SATURDAY, APRIL 19th, 1890.

PRIZE LIST.

Table with 3 columns: 1st, 2nd, 3rd. Categories include Thoroughbred Horses, Cleveland Bays, Clydesdales, Shire Horses, Agricultural Horses, General Purpose, Roadsters.

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CHOICE 4 FARMS 4

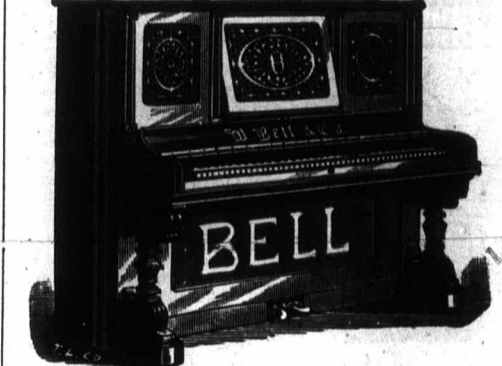
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1840.

1890.



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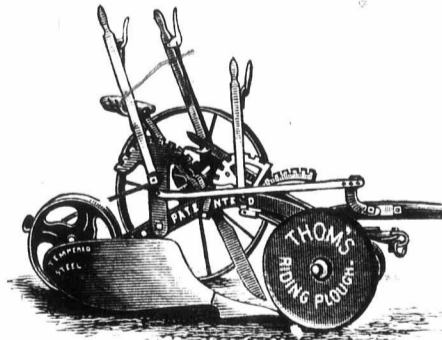
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Increase over 1888	174,314 00
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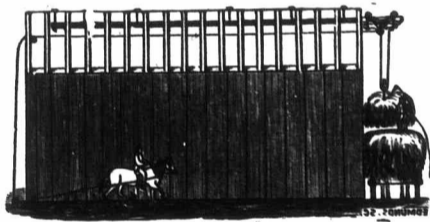
Yours truly,
(Signed) HUGH WATT.

Niagara, Jan. 16th, 1890.
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Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Hooks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



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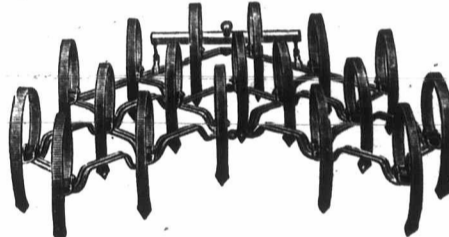


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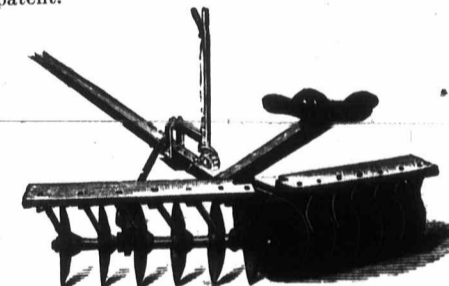
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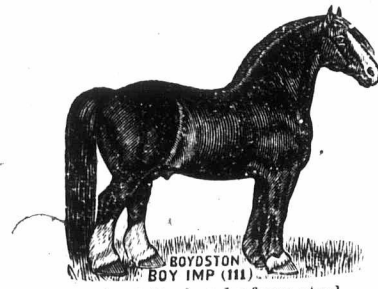
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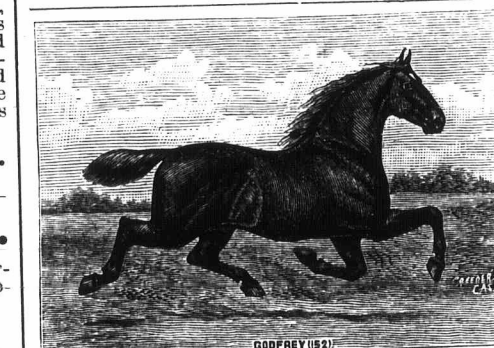
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Comprising my importations for 1889, are now on exhibition at
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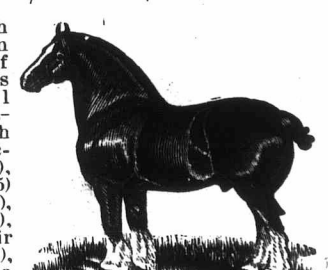
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Offer for sale choice Stallions, Mares and Fillies which are registered in the English and Canadian Shire Stud Books, including prize-winners at the Royal Agricultural in England, and the Industrial at Toronto. Also a Roadster Stallion, two years old, and fillies, the get of General Stanton.

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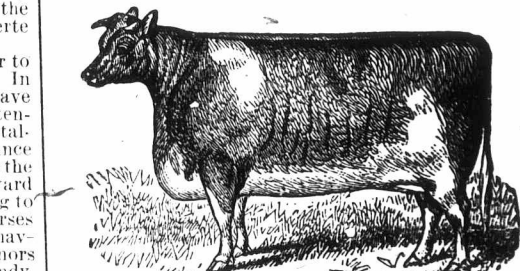
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YOUNG and BREEDING STOCK for sale at prices to suit the times. A call or correspondence solicited. Pickering is my station on the G. T. R., and Claremont on C.P.R.



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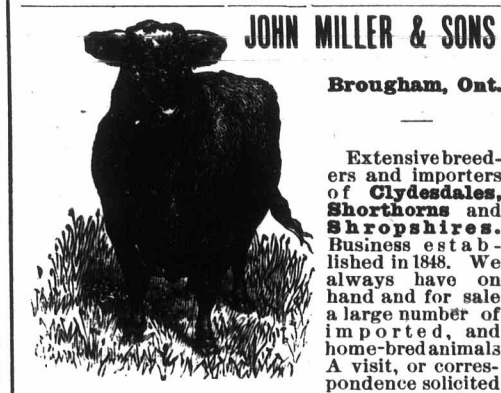
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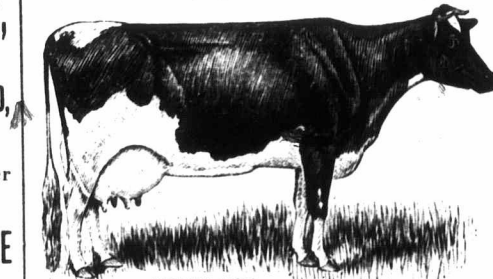
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TWO YOUNG BULLS AND FOUR YOUNG COWS.

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283-y

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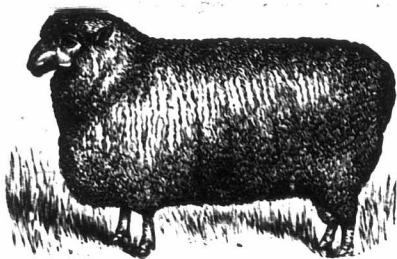
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I have bred fourteen choice Sows for spring trade; have used four imp. boars. Orders booked for spring pigs in pairs not akin. Pedigrees furnished. Prices right. Special rates by express.



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\$1,500.00 WORTH OF STOCK, IMPLEMENTS, ETC GIVEN AWAY!

For Procuring New Subscribers to the FARMER'S ADVOCATE.

CONDITIONS: 1st. Cash must accompany all lists of names. 2nd. In all cases to secure these prizes the names sent in must be new subscribers. Renewals will not count. 3rd. Competitors may send in their lists weekly if they so desire. The party who first sends in the full number of names will secure the prize. 4th. A Cash Commission will be allowed to all who are not prize winners: From 10 to 20 names, 25cts. each; 20 to 50 names, 35cts. each; 50 to 100 names and upwards, 40cts. each.

STOCK. For 150 new names we will give a Hereford Bull (fit for service), valued at \$150, bred by R. J. Macle, Oshawa. For 150 new names, a Shorthorn Bull (fit for service), bred by James Graham, Port Perry, Ont. For 150 new names, an Avshire Bull (fit for service), bred by Thomas Guy, Oshawa, Ont. A Heifer of any of the above breeds will be given for from 100 to 150 names, according to quality of animal. For 35 new names we will give a pair (or single animal for 20) of Improved Large Yorkshires, from 6 to 8 weeks old, bred from imported English stock by Ormsby & Chapman, Springfield-on-the-Credit, Ont. For 30 new names, a Shropshire Ram or Ewe Lamb, bred by John Miller & Sons, Brougham, Ont., or Jno. Dryden, M. P. P., Brooklin, Ont. For 30 new names we will give a Cotswold Ram or Ewe Lamb, bred by Joseph Ward, Marsh Hill, Ont., or David Birrell, Greenwood, Ont. For 30 new names will give a Leicester Ram or Ewe Lamb, bred by Jeffrey Bros., Whitby, Ont. For 25 new names we will give a Berkshire Sow or Boar 6 months old, bred by J. C. Snell, Edmonton, or J. G. Snell & Bro., Edmonton, Ont., or by Wm. Linton, Aurora, Ont. For 10 new names we will give a pair, or for 5 a single bird, of any of the following breeds: Light Brahmas, Dark Brahmas, Langshans, Black Red Games, any variety of Leghorns, Wandottes, Dorkings, Spanish, Bantams, Ducks, etc. Eggs will be given as prizes when desired from the yards of Wm. Hodgson, Brooklin, Ont. We will give as subscription prizes young animals, either male or female, of any of the following breeds: Shorthorns, Herefords, Galloways, Ayrshires, Jerseys, a but or heifer (of fair quality), purely bred, for 100 new subscribers, accompanied by \$100. We can also supply home-bred or imported stock of any desired breed, age or quality. In all cases we will guarantee satisfaction as to the quality, breeding and value of the animal. We will give very liberal terms to agriculturists and other societies, and farmers in new sections, special inducements in sheep and poultry. Write for particulars.

IMPLEMENTS, ETC. For 110 new names a Bain Farm Truck, value \$75, manufactured by Bain Wagon Co., Woodstock, Ont. For 65 new names a Patent Iron Frame Section Spring Tooth Cultivator, value \$38, manufactured by J. O. Wisner & Son, Brantford. For 110 new names we will give a first class wagon, value \$75, manufactured by the Chatham Manufacturing Co., Chatham, Ont. For 75 new names we will give one of the celebrated Westward Ho Sulky Plows, value \$40, manufactured by Copp Bros., Hamilton, Ont. For 125 new names we will give one of Halliday's Standard Wind Mills, value \$75, manufactured by the Ontario Pump Co., Toronto, Ont. For 140 new names we will give a Hay Loader, value \$75, manufactured by Matthew Wilson & Co., Hamilton, Ont. For 100 new names we will give a large Straw Cutter with Carriers attached, value \$55, manufactured by R. Bell & Son, St. George, Ont. For 40 new names we will give a large Agricultural Furnace, value \$22, made by the Gowdy Manufacturing Co., Guelph. For 65 new names we will give a new Fanning Mill, value \$35, manufactured by Manson Campbell, Chatham, Ont. For 90 new names we will give one of Osborne & Co.'s large Stock Scales, value \$50, capacity 4,000 lbs., manufactured by Osborne & Co., Hamilton, Ont. For 40 new names we will give a Winchester Repeating Rifle or a Breech-loading English Shot Gun of latest design and good quality, or 10 new names we will send an imported Breech-loading German Rifle. For 40 new names we will give the Model Harness, valued at \$20, manufactured by the Farmers Supply Co., 176 King St. East, Toronto. All stock or goods shipped free on board the cars.

Business Directory.

Cards up to six line space inserted under this heading at \$3.00 per line per annum (including AD-VO-CATE).

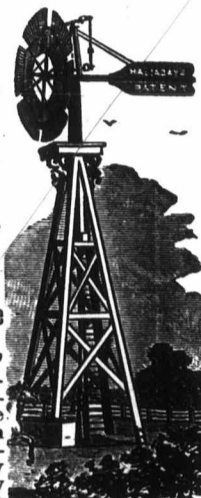
- D. R. W. E. WAUGH, Office, the late Dr. Anderson's, Ridout St., London, Ont.
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WILSON BROS., Grocers and Wine Merchants, 386 Richmond street, London, Ont. 288-y
NEW YORK STORE, London, for the last 25 years has been known as the reliable house for Teas.
A. D. CAMERON & SON, Burwell St., Coal, Wood, Lime, etc., London, Ont.
E. BELTZ, Dundas St., London, Ont., Hatter and Furrier.
THOS. GREEN & CO., Cor. Clarence & Bathurst Sts., London, Ont., Builders and Contractors, Planing Mill, Sash & Door Factory.
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PETHICK & McDONALD, 293 Richmond St., Merchant Tailors and Importers of French, English, Irish & Scotch Cloths, Tweeds & Gents' Furnishings.
GRIGG HOUSE, corner York & Richmond Sts., London, Ont., SAMUEL GRIGG, Prop.
CITY HOTEL, London, Ont., cor. Dundas and Talbot Sts. Board \$1 per day. McMARTIN BROS.
W. STEVELY, 361 Rich. St., manufacturer Dairy Utensils, general Tinsmiths, Stoves, &c.
WINLOW BROS., 112 Dundas St., London, Ont., dealers in Boots, Shoes and Rubbers.
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WILD LANDS. IMPROVED FARMS.

TITLE GUARANTEED.

The **Canada Company** have still a large number of lots to dispose of at reasonable prices, (from \$4 to \$30 per acre, according to quality and location).

In Western Ontario.—In the Counties of Essex, Lambton and Perth; also in the Township of Tilbury East, in the County of Kent; and in the Township of Aldboro, in the County of Elgin.

In Northern Ontario.—In the County of Simcoe; also in the Township of Euohrasia, County of Grey; and in the Township of Amaranth, in the County of Dufferin.

In Central Ontario.—In the Counties of Peterborough and Hastings, and in the Township of Sheffield, in the County of Addington.

In Eastern Ontario.—In the Counties of Lanark, Carleton, Prescott, and Russell, besides many lots scattered through the older sections of the province.

These lots are, generally speaking, within a short distance of a railway, and are easily accessible by good travelled roads from a market town. Many of the farms have from fifteen to twenty-five acres of clearing fenced ready for cultivation.

The Climate of Western Ontario.—The winters being comparatively mild and short, and the summers correspondingly long, is specially adapted to the successful cultivation of corn, grapes, peaches and all kinds of fruit, for which this section is rapidly becoming noted.

To actual settlers the most liberal terms of payment are offered, only a small payment being required down, the balance payable in seven or ten years, with interest chargeable as a rental at the rate of 4 per cent. per annum.

Full particulars, with complete lists of vacant lands, and prices of any lots selected by applicants, will be furnished on application to the

COMMISSIONERS OF THE CANADA COMPANY,
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Offices, 204 King-St. East. 287-f

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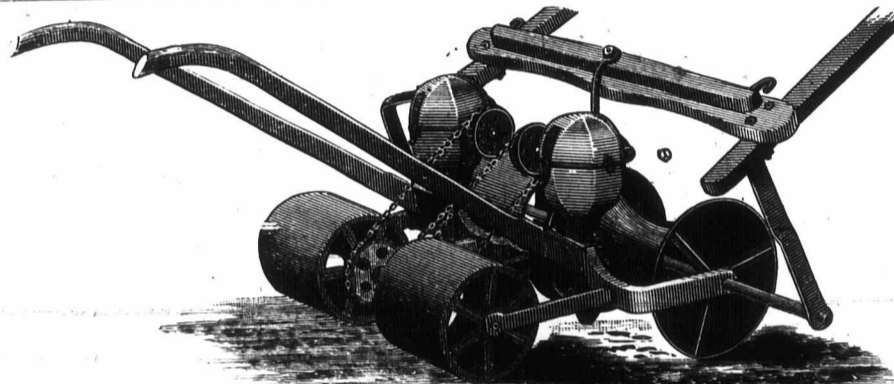
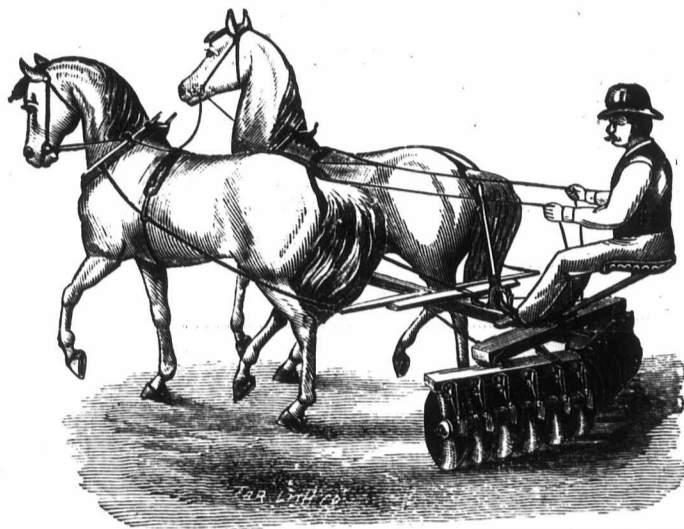
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With its patent adjustable scrapers is the best on the market.

We still keep up our reputation for turning out the latest improvements in Steel Frame Spring-tooth Harrows, One and Two-horse Buckeye Model Mowers, Ithaca Self-dump Horse Rakes, Tiger Horse Rakes and Single Reapers.

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BROCKVILLE, ONT.
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TURNIP SEED DRILLS

Sows two rows at once at any required depth.

LAND ROLLERS

With two large, wooden rollers, having iron ends, and rolling eight feet of land, frame and drums made of seasoned oak.

MOWERS

With all the latest improvements.

PLOWS OF ALL KINDS

ETC., ETC., ETC.

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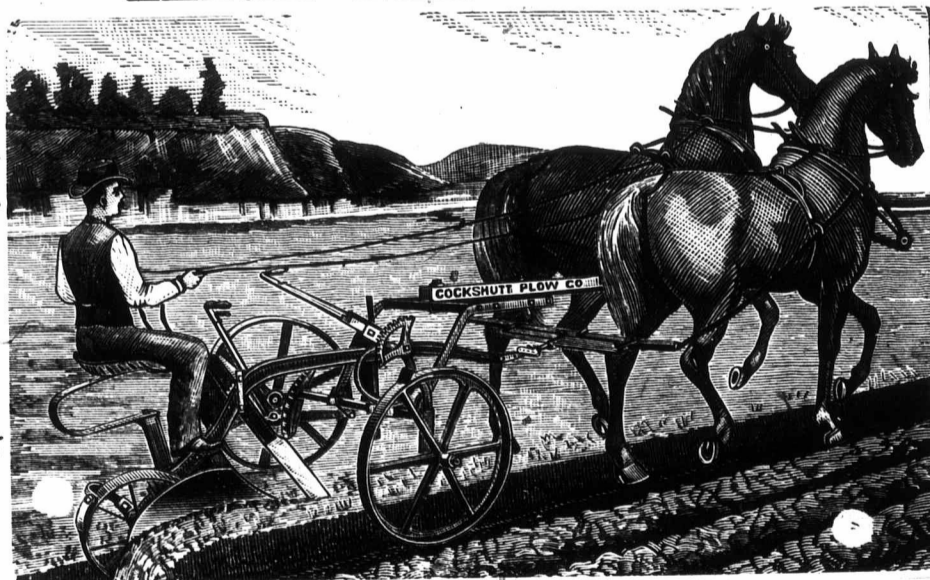
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ARE THE BEST.

We make Double and Single Riding Plows, Walking and Prairie Plows of Every Kind.



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COCKSHUTT PLOW CO

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 long line of expensive freights but right at the door for farmers
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NO SOIL — with — **BEST PAYING MARKETS**
FARM CHEAP, long time, easy payments, and full information, address
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FAY CURRANT GRAPES LARGEST GROWER
 HEADQUARTERS OF GRAPE VINES
 IN AMERICA
 NEW GRAPES, ESTHER (white), and ROCKWOOD (black), originated by E. W. BULL, orig-
 inator of the CONCORD GRAPE. Also EATON, MOYER, and all others, new
 and old. Best and Cheapest. Small Fruits. Free Catalogues. GEO. S. JOSSELYN, Fredonia, N.Y.

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 Will be sent FREE to all who write for it.
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 A CHOICE NIN SEEDS FREE.**
 OUR BUSINESS is to sell seeds. Our sales will greatly increase if
 we can prove to the planters of America that it pays to get new blood in
 their crops by planting new seeds, and that we furnish the best seeds
 that can be produced. To do this we will give with the Agricultural
 Epitomist 25,000 Introductory collections of the choice varieties
 described below. The Agricultural Epitomist is one of the best
 monthly papers published for the farm, garden and home, and we in-
 tend to please every one of its readers so well with our seeds that they will
 buy many dollars' worth in future years. REMEMBER the seeds are a
 FREE GIFT to every one who pays the regular subscription price of 50
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 Lima Bean, the greatest novelty in years; yields enormous crops of de-
 licious Lima Beans without poles. See illustration. 1 pkt. Pease Fe-
 ma's. Rare valuable and novel; looks exactly like a peach; every house-
 keeper is delighted with it. 1 pkt. Ex. Early Barletta Onion. Earliest,
 most beautiful grown. 1 pkt. King Gem Radish. Earliest, superb
 quality. 1 pkt. Blue Beauty Pea. Extra Early, delicious and pro-
 ductive. 1 pkt. Succession Cabbage. Early, large head. This variety
 is suited for the whole year—summer, fall and winter. 1 pkt. Burlington
 Hybrid Sweet Corn. Extra early; ear of great size, and yields as much
 as field corn. 1 pkt. Chicago Mask Melon. Thick salmon flesh. The
 richest flavored melon in America. 1 pkt. Beauty Pop Corn. Boys
 and girls, this is the best and most beautiful variety you ever saw. Wild
 and valuable before you get it. 1 pkt. New Early Six Weeks Market Potato. The
 earliest variety in existence. 1 pkt. Mastodon Field Corn. The talk of farmers wherever known.
 Largest eared early dent corn in the world. Has yielded of shelled corn in New York 210 bus. on 1 acre; in Nebraska, 171 bus. on 1
 acre. Ripens in 90 days. Worth its weight in gold to any corn grower. We grow and sell seeds in immense quantities, and will
 give the 11 pkts. entirely free to introduce our seeds. Send 50 cents for the paper one year, and get all by return mail.
YOURS FREE Get up a club of four at 50c (\$2.00), and
 you may keep the seeds if not entirely satisfied. We will also return the subscription price, 50 cents, for the 1st, 10th,
 20th, and every other 10th subscription received, and send the paper and seeds free. If you mention this paper, if you have
 no garden accept this offer and send seeds to a friend, and you will be amply repaid by a present of the choice products as they ripen.
ORDER AT ONCE Improve your crops. Our beautiful Catalogue free to all who order.
J. A. EVERITT & CO., SEEDMEN, INDIANAPOLIS, IND.
 SPECIAL 30-DAY OFFER. To every one whose order is received within 30 days from date of this
 paper, we will give 2 lb. of the New Early Six Weeks Market Potato, the earliest variety in existence.

STOCK GOSSIP.
 In writing to advertisers please mention the
 Farmer's Advocate.

Messrs. Green Bros. & Brethour, of Innerkip and
 Burford, report the following sales of Improved
 Large Yorkshires since last month:—A boar and
 sow to W. A. Fitch, Rockwood, Ont.; a boar to H.
 Quetton St. George, Oakridge, Ont.; and a boar to
 Sampson King, of Stratford, Ont. They also state
 that, owing to the inconvenience of living so far
 apart and insufficient postal facilities, the partner-
 ship which existed between them has been dissolved
 by mutual consent. Both parties, however, still
 continue breeding Improved Large Yorkshires, as
 will be seen by their respective advertisements in
 our columns.

Mr. Thomas McCrae, of Guelph, has sold to Mr.
 Daniel Steinmetz, of Shoeneck, Pennsylvania, U.S.,
 a small herd of Galloways. They consist of the bull
 Commonwealth (4575), bred by Thomas Biggar &
 Sons, of Dalbeattie, Scotland, and imported by Mr.
 McCrae in 1888, and eight cows and heifers. The
 bull is a very fine one, and one of the best bred
 Galloways in America, belonging to the celebrated
 Hannah (214) tribe. The cows are a fine lot, and
 include several prize animals. Mr. Steinmetz has
 had Galloways before, having purchased a few from
 Mr. McCrae many years ago. They did so well with
 him that he has returned for more of the hardy
 blackskins.

Mr. A. D. Chisholm, of Oakville, in sending us his
 advertisement, writes that his importation of Vic-
 toria hogs are doing well, and have produced sev-
 eral litters. Mr. C.'s attention was first drawn to
 this breed by seeing them at Buffalo Show, and was
 so struck by their merit that he decided to intro-
 duce them into Canada. They are possessed of fine
 bone and quality, with early maturity. They are
 good mothers, and their fecundity is great, gener-
 ally producing from 10 to 12 pigs at a litter. Mr. C.
 is, we believe, the first to import this variety of pigs
 into Canada, and has at the present time some very
 fine young boars and sows for sale in his pens.

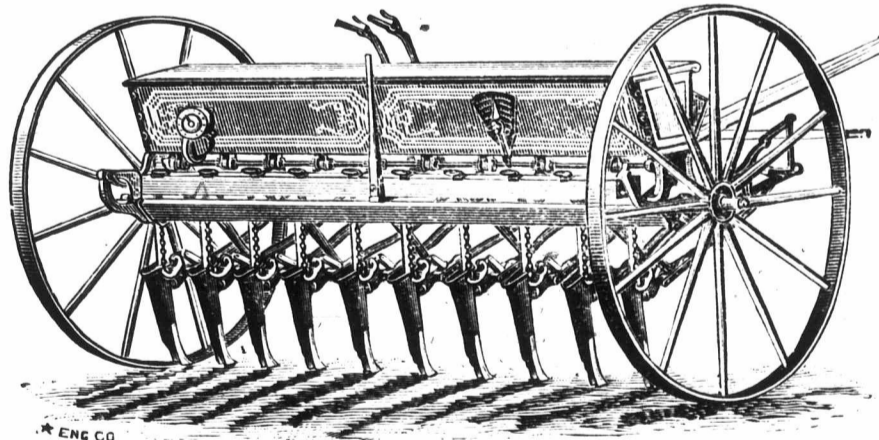
Mr. Arthur Johnston, of Greenwood, Ont., reports
 the following sales in February:—To Messrs. G. &
 W. Gier, of Grand Valley, Ont., the very highly
 bred and excellent young bull, Baron Hugo; to
 Messrs. John Currie & Sons, of Everton, Ont., the
 capital young bull, War Eagle; and to A. W. Wil-
 liams, of Manchester, Ont., the prime Nonpareil
 calf, War Cloud. Besides the above, I have sold
 some younger animals, not yet shipped, of which
 you shall hear next month. Stock in this section
 is wintering exceedingly well. Farmers' store cattle
 selling exceedingly high. Demand for young bulls
 good, with prices a little lower than they were last
 year. I have still a number of extra good ones for
 sale. Send for catalogue.

Mr. J. E. Brameld, of Lakehurst Jersey Farm,
 Oakville, reports the following sales:—Bull Spot
 Cash, sired by One Hundred Per Cent, 16500, A. J.
 C. C.; the heifer Gipsy Countess and the heifer
 Belle Mahone, both sired by Rambler Pogis 18456,
 A. J. C. C.; to H. Moore, London, Ont.; the bull calf
 Mountain Pogis 24054, A. J. C. C.; to A. Kennedy,
 West Winchester; the bull calf Prince Hugo of
 Nixon 24063, A. J. C. C.; to Rev. D. Williams, Nixon,
 Ont. Mr. Brameld's herd, which consists now of 22
 head, is wintering well. The bulls at the head of
 the herd are Rambler Pogis 18456, A. J. C. C., and
 Mighty Dollar 24051, A. J. C. C., winner of first at
 Toronto and first and diploma at Hamilton, and
 both of the famous St. Lambert blood. Among the
 females are Hugo's Beauty 31576, A. J. C. C., winner
 of 1st both at Toronto and Hamilton, and Dolly 2nd
 23883, A. J. C. C., 3rd at Toronto. The latter has a
 fine young bull calf, sired by Canada's John Bull.
 Two of the cows that figured in the 2nd prize herd
 at Toronto have recently dropped fine heifer calves,
 by Rambler Pogis 18456, A. J. C. C.

An Association, formed of the leading citizens of
 St. John, New Brunswick, has been incorporated
 for the purpose of holding exhibitions in that city,
 and are now making good progress in their arrange-
 ments for the first annual Agricultural, Horticultu-
 ral and Industrial Fair. The exhibition will be
 opened on the 24th of September, and continue until
 the 4th of October. The Association have large
 permanent buildings, affording ample space, also
 extensive grounds, including a fine speeding course,
 and every arrangement is being made for the accom-
 modation of a very large number of visitors to the
 city. All the committees have been organized,
 have their work well forward, and from present
 prospects the exhibition will assume large propor-
 tions. As it is probable this will be the only impor-
 tant exhibition held in the Maritime Provinces this
 year, our people should secure space and take
 advantage of this means of cultivating a trade in
 that section. In addition to offering a very hand-
 some list of prizes (competition for which is open to
 the world), a number of attractions of a special
 character are being secured. Several new features
 are also included in the programme, giving this
 exhibition an international character. One of the
 leading novelties will be a large exhibit of the pro-
 ducts of the West India Islands. A collection will
 be made of the products of the mines and forests of
 the Maritime Provinces, as well as the fish, fishing
 appliances, etc. The Maritime section particularly
 is a department which will be of special interest to
 the western people. The delightful summer climate
 of St. John, New Brunswick, is sufficient attraction
 for most people, but with this additional induc-
 ement we have no doubt there will be a good number
 of western visitors, as well as exhibitors. Full par-
 ticulars can be obtained by addressing the Secretary,
 Ira Cornwall, St. John, N. B.

Hoosier Steel Frame Grain Drill

Over 25,000 Hoosier Drills and Seeders with our Positive Force Feed in use in Canada.



GUARANTEED THE BEST IN THE WORLD, and the only drill that can be instantly regulated to
 run the desired depth in hard and soft ground while moving.
THE HOOSIER IS THE ONLY DRILL that sows all kinds of grain and seeds evenly, and at the
 depth desired in all kinds of soil.
THE HOOSIER IS THE ONLY DRILL that commences to sow the instant the horses move.
THE HOOSIER HAS THE ONLY POSITIVE FORCE FEED, and the only drill that deposits the
 grain evenly just the depth you want it in hard or soft soil. **REMEMBER THIS.**
THE HOOSIER COMBINED DRILL with cultivator teeth is the best cultivator made, and is the
 only implement made with the teeth on independent draw bars that can be set for hard and soft land while
 the team is in motion. **THE HOOSIER** is lighter on the horses than any other Drill made. The points of
 excellence in the **HOOSIER** that other Drills do not have are worth more to the farmer than any Drill in
 the world.
THE COMBINED HOOSIER can be changed from drill to seeder or seeder to drill in less time than
 any Drill made. Send for our new illustrated catalogue and testimonial sheet. Beware of purchasing
 Drills that infringe the patents on our Drills.

NOXON BROS. MFG. CO. (Ltd.), Ingersoll, Ont.

289-f-0

Send for our Catalogue which gives full information.

STOCK GOSSIP.

Messrs. Green Bros., of Glen Stock Farm, Innerkip, Ont., write us that their Shorthorns are doing well, especially their young stock, amongst which they have some fine young bull calves and heifers. The demand from the States for Shire horses still continues good, and last week they sold their massive yearling filly, Gipsy, sired by William the Conqueror 570, out of imported Lacey, to go to Polk County, Oregon, U. S.

H. George & Sons, Crampton, Ont., write us:—Since your last issue our imported sow, Daisy, has farrowed eleven fine, long pigs; also our young sow, Jean, has ten nice pigs. This sow is sired by our old stock boar, Royal, No. 1251, imp. We will have several more sows farrow within the next two weeks. We find the sale of good, long Chester boars on the increase, as they make a good cross on common Suffolk or Berkshire sows. We have made several good sales this month; will give them later.

Messrs. Felan & Breckon, of Oakville, write that their herd of Holsteins, now numbering 17 head, are all doing well, and that their advertisement in the *Advocate* has resulted in a large increase of enquiries. Their recent sales have been the two cows, Annie Roberts and Maid of Falkenwood, to James Bannerman, of Calgary, N. W. T.; and the young bull, Annie Roberts' Oakville Chief, to Abraham Rowand, of Walkerton, Ont. Messrs. F. & B. were very successful at the fall shows, winning 11 prizes on 12 head at Toronto.

We are in receipt of the catalogue of the stud of Clydesdale stallions and fillies imported and owned by Messrs. Dundas & Grady, Springville P. O., County of Durham, which contains the pedigrees of six stallions, thirteen mares and fillies. The first of which is the beautiful brown stallion General Wolfe (5800). This horse was much admired at the last Industrial Exhibition, when he carried second position in the very strong class of three-year-olds. He is a very attractive horse, with great style; plenty of size, and capital quality in legs and feet. This firm seem to be making special efforts to bring out good fillies, if Maid of Baldring and Halton Fancy are a sample. These are a pair of good ones, beating those that had gone up high in prize winning in Scotland.

M. Robert Burgess, of Winona, Ill., one of the judges at the late Toronto Spring Stallion Show, ought to have ability in that capacity, if we judge by the success he has made in his business of importing and breeding. Shire horses are his specialty. He and his brother, who is his partner, have imported 160 stallions this season, besides a lot of mares. They now have on hand sixty stallions and the same number of brood mares. They believe that in breeding they will advance the horse interests of their State quite as fast as by importing the class of good ones they usually bring. They claim they are the only firm that has imported a Champion Royal winner or a London winner into the United States. And this firm have bred every American bull winner of any pretensions, of late years. They own 900 acres of land, 600 of which they farm, the balance being let. They have been twelve years in the business, which they have built up from nothing entirely by their own judgment and enterprise. Mr. R. Burgess has selected twenty-one importations in person in the twelve years.

Mr. F. A. Fleming, whose new advertisement will be found in another column of this issue, reports that his herd of white faces, which numbers 55 head, is wintering well. The well-known show cow, Miss Broady, which carried off the diploma at the Provincial, for the best female of any age, three years in succession, is, notwithstanding her show-yard career, still in good condition, as is also her rival, Lily VI., 23833. The sales from the Park Herd in 1889 have given equal satisfaction to both buyers and sellers, and 1890 has not only opened well in the way of sales, but the outlook is also very promising. Since the 1st of January, the 11-month-old bull, Aronos (a brother of the 1886 Industrial silver medal bull, Baron Wilton, also bred by Mr. Fleming), and the yearling heifers, Playful and Azalea, have been sold to Mr. Joseph Cairns, of Camlachie, Ont., while to the Park Herd also belongs the honor of having sold to the Ontario Government, for the Experimental Farm at Guelph, the 3-year-old cow, Annot Lyle, 33482, and her bull calf, Annotist, sired by Conqueror 2nd, Annot Lyle, will be remembered, was bred by Mr. F., from a cow imported in 1880, and by his old stock bull, Corporal.

Smith Bros., of Churchville, Ont., write:—The sales of Holsteins have nicely begun for this year, and the enquiries are greater than ever heretofore. A few weeks ago we sold, to Samuel Flack, a yearling bull, Harmonia's Mercedes Prince, from Harmonia, who gave 51 lbs. of milk in a day as a two-year-old. She has a butter record of 16 3/4 lbs. in a week. The young bull's sire is Mercedes Prince, whose six daughters average 16 lbs. 5 ozs. of butter in a week. His g. d. gave 99 lbs. 6 3/4 ozs. of butter in thirty days and took the Breeder's Gazette Challenge Shield, valued at \$500, open to all breeds and the world. Three head, a bull and two heifers, went to George White. Billy Leake, a very fine young bull, and a prize taker, together with Ailsa, whose ancestors are in the advanced registry, a very promising young heifer, and Credit Valley Maid, whose dam took first prize at Industrial Exhibition 1888, and first at Provincial Exhibition, London, also sweepstakes as best female of any age. We have made a beginning in butter testing, and find that Siepkje 4th (a two-year-old) gave 13 1/4 lbs. of well washed, unsalted butter in a week. Onetta, 14 1/4 lbs. of butter, five months and a week after calving. Cornelia Lensen, the first two days of her test, gave 5 3/4 lbs. of butter.

HAMILTON FERTILIZER & CASING WORKS, HAMILTON, - - ONTARIO.

Fertilizer Pure Bone Meal. Pure Animal Fertilizer Made From Bone, Blood and Meat.

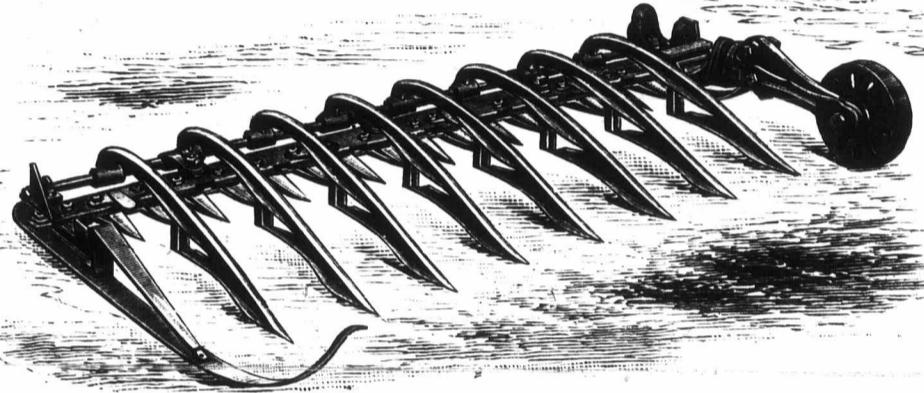
Analysis—Ammonia, 7 to 8; Phosphoric Acid, 10 to 12; Moisture, 4 to 5.	Price, per ton.....	\$25 00
Pure Fine Ground Bone Meal, per ton.....		30 00
Pure Ground Bone, half inch pieces, per ton.....		30 00
Sure Growth, per ton.....		28 00
Grape Food, per ton.....		28 00

I was in no way connected in the fertilizer law suit between W. A. Freeman, of our city, and J. Wilson, of Pelham. I manufacture only Pure Fertilizers. Farmers can supply their own potash in the shape of wood ashes. I use no acids or land plaster. Use 400 to 500 lbs. to an acre for good results.

292-a-0

F. ROWLIN, Proprietor.

THE GENUINE TOLTON PEA HARVESTER.



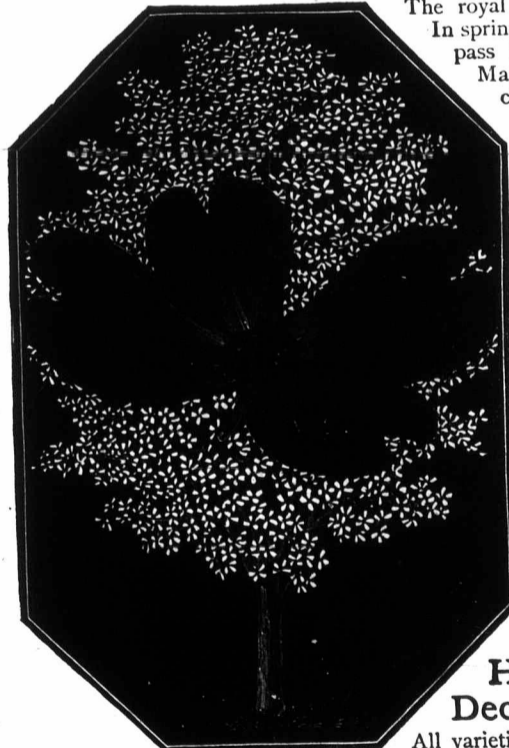
THE MONARCH OF THE PEA FIELD.

The most successful harvester manufactured, and the greatest labor-saving machine in use—harvesting from eight to ten acres per day in the most complete manner. It is endorsed by all first-class farmers who have this Harvester, to be as useful in the pea field as the mower is in the hay field. It can be attached to any mower bar, and has the only Vertically Acting Lifter, having a practically successful movement to suit the unevenness of the land, of which we are the Sole Manufacturers and Patentees.

292-a-0

TOLTON BROS., Guelph, Ont.

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The royal family of deciduous Ornamental Trees.

In spring they equal the finest Magnolias, and surpass in brilliant autumnal foliage the Scarlet Maple. A grand shade tree in summer and cheerful in winter by reason of its bright vermilion berries. Hardy and succeeds everywhere—North, South, East, West—and on all soils. Large enough to be effective upon the largest lawn and not too large for smallest dooryard. **Red Flowering**, each 50c.; doz. \$5.00, by mail; 3 to 4 ft., each \$1.00; doz., \$10.00, by express. **White Flowering**, each 25c.; doz. \$2.50, by mail; 3 to 4 ft., each 50c.; doz. \$5.00, by express. One each, 2 ft., \$1.00; 2 each, \$1.75; 3 each, \$2.50. One each, 3 to 4 ft., \$1.50; 2 each, \$2.50; 3 each, \$3.50, all by express. **Weeping**, by express, each \$1.00. Full description and a chromo-lithograph 10x14 inches, showing flowers of both, autumn foliage and berries, natural sizes and colors, habit of trees, etc., mailed for 5 cts.

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Rhododendrons & Chrysanthemums. including Peonias, Phlox, etc. All the choice varieties known, from every part of the globe.

Hardy Flowering Plants, All are fully described and offered at almost half price, together with instructions for planting, culture and management, in **LOVETT'S GUIDE TO HORTICULTURE**, a book of ninety pages, profusely illustrated and elegantly printed. Mailed free; with colored plates 10c. Also all the good old and valuable new varieties, true to name and strictly first-class, of **ORCHARD AND SMALL FRUITS, NUT TREES, GARDEN ROOTS, etc.**

Trees and Plants to distant points by mail and express a specialty. A copy of *Orchard and Garden* sent free to all who state where they saw this advt. **J. T. LOVETT CO., Little Silver, N. J.**

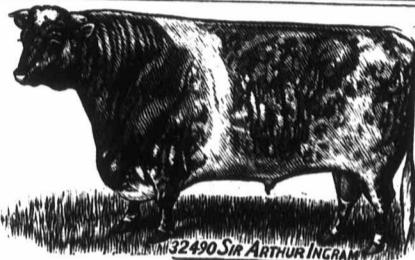
NEW STRAWBERRY "LADY RUSK"
 The best berry for long distance shipments. Will not rot or melt down if packed dry. Headquarters for all leading varieties of Berry Plants and **GRAPE VINES** having 300 acres in cultivation. Catalogue free.
WM. STAHL, Quincy, Ill

GRAPE VINES
 Largest Stock in America. **NIAGARA** and all old and new varieties. *Extra Quality.* Warranted true. Lowest rates. Introducing the new *Black Grape*.
 Also other **SMALL FRUITS**. Descriptive Catalogue Free. Send list for prices.
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Sheriff Hutton Shorthorns.

WM. LINTON, AURORA, ONT.

This well known herd of Shorthorn Cattle, established in 1835, is still bred with the utmost care and purity. Three prime young bulls and a few females for sale. Examination or correspondence always welcome.
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Imported Clydesdale Stallions and Mares for Sale.

Highest Prize Winners in the Leading Shows of Scotland and Canada,

AND THE GET OF FAMOUS SIRES

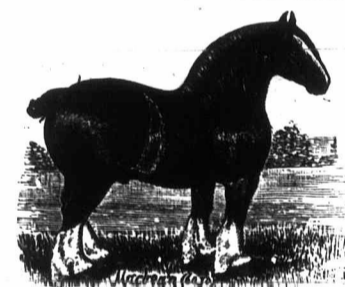
Such as Lord Erskine, Darnley, Old Times, McCammon, Prince Lawrence, Lord Hopton, Bold Magee, Sir Wyndham, Good Hope and Fireaway.

Prices Reasonable. Catalogues Furnished on Application.

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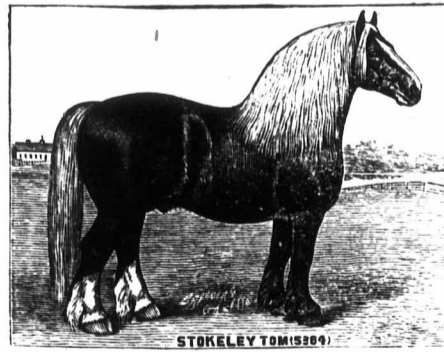
STALLIONS AND MARES

Constantly on hand, and For Sale at Reasonable Terms.

Our last importations comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (672). Also a few choice **SHETLAND PONIES**. Correspondence solicited, and visitors always welcome.

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Twenty-five miles east of Toronto, on the C. P. R. 289-y **CLAREMONT, ONT.**



BLAIR BROS., Aurora, Ill.,

—IMPORTERS OF—

CLYDESDALE, ENGLISH SHIRE, and CLEVELAND BAY HORSES.

NEW IMPORTATION JUST RECEIVED.

The animals now on hand are of large size, good colors; low, wide and blocky; with good heavy bone, good feet, and the best of action. We have winners at many of the greatest shows of England. We offer first-class animals of the choicest breeding at very low prices. Every animal recorded and guaranteed. Visitors welcome. Catalogue on application. Stables in town. Mention this paper. 287-f



T. W. PALMER'S LOG CABIN STOCK FARM!

150 PERCHERONS. 100 JERSEYS.

To be Disposed of this Season.

For catalogues and particulars address

4 MERRILL BLOCK, Detroit, Mich.

STOCK GOSSIP.

Mr. Hugh Thompson, St. Marys, Ont., has sold the imported Clyde stallion Balhaigaray Hero. He shipped recently, to Edward Porter, Morris, Manitoba, a Durham bull calf, also Endymion's Chief to the same person. Imp. Andrew Lammie was also purchased by Messrs. Scott & Bell, Londresboro, Ont.

E. D. George, in a letter dated March 19th, says:—There arrived at my farm last week a choice pair of sows, bred by C. H. Gregr, Akron, Ohio, one of which won the sweepstakes at Buffalo International. For early maturity, quiet disposition, and rapid growth to a marketable weight, the Improved Chester Whites lead.

Mr. Adams, of Drayton, Ont., who last year purchased of R. Beith & Co. the well-known and successful prize-winning horse, St. Gatien, has added another good one, in Sir Maurice, purchased of the same firm. Mr. Adams' patrons will be hard to please, if a choice of either of these two good ones does not satisfy them.

Mr. Stewart, Jr., Menie Stock Yards, Seymour, Ont., reports the sale of the Ayrshire bull, Duke of Menie, to Mr. D. Woods, of Prescott, and the purchase of McDuff, from Mr. A. Knight, of Cataraqui, which is said to be a calf of great promise. The sweepstakes-winning cow, Annie Lawrie, dropped a fine bull calf on Dec. 22nd, which Mr. Stewart is much pleased with.

Mr. Joseph Redmond, Peterborough, writes us that he has had the following additions to his herd by birth during the last ten months:—Heifer calves from Fanny B. 26th, Princess of Wales 7th, Mary Lind 2nd, and May Flower; bull calves from Jenny Lind 10th, Jenny Lind 11th; and pair of twin bulls from Princess of Wales 8th. Some of the above are sired by Imp. Goldfinch, others from Gravesend, and more to come, and he claims to be advertising some remarkably cheap ones just now.

Mr. William Grogan, of Manito, Manitoba, who has been inspecting the studs of many of our Ontario Clydesdale importers, has succeeded in buying from Mr. Robert McEwen, Byron, the well-known prize winning stallion, The Times, 3358. This famous horse, who began his show career in Scotland, where he put to his credit three first prizes, has frequently repeated his victories in this country, amongst some of which may be mentioned:—1st at Lambeth, 1st Mt. Brydges, 1st Strathroy, twice 2nd at Western Fair, London, and this last year 2nd at Detroit, where he was only beaten by the Chicago sweepstakes winner, Holland Major. Although The Times is now 9 years old, he is still the same fresh, active and attractive horse he was 4 years ago, and the stock he is leaving here will secure for him a continuation of the good name he now holds far beyond the one district in which he has always travelled. Mr. Grogan deserves credit for his enterprise and judgment in selecting an animal of such quality and individual merit, whose influence on the stock in his vicinity cannot be otherwise than beneficial.

Graham Bros., Claremont, write us that they have sold ten horses within two days following the Toronto Spring Stallion Show, the most important sale was made to Messrs. Johnson, Rockey & Co., Marshalltown, Iowa, U. S., who take the sweepstakes horse, MacClaskie, and the two-year-old brown filly, Royal Princess, sired by the Darnley horse, Royal Bloom. The same firm also take out the capital Hackney stallion, Dorrington 2nd, one of the best that has been imported into Canada, a winner at London, England. This makes up a trio that should do honor alike to the purchaser, the importers and Ontario. Chairman goes to E. L. Smith, Duart, and is mentioned elsewhere. John Lappan & Co., Stayner, Ont., have bought MacNicol, by the Macgregor horse, MacMaster; and the three-year-old Main Top (7033), sire Mainmast, goes to Mr. Steele, Richmond Hill, Ont. Another three-year-old, Honest John, by the Macgregor horse, MacCorel, is sold to Messrs. Stocer & Hiddle, Almira, Ont.; Prince of Lothian, a brown colt, also rising three, was purchased by James Cherry, Nobleton, Ont.; and Joseph Atwood, Belwood, Ont., is the fortunate purchaser of the first prize two-year-old, Ravenswood, by the Darnley horse, Castlereagh; and Mr. Alex. McTavish, Shakespeare, bought the six-year-old mare, Local Gem.

The Manager of the Beaver Line of Steamships, 4 Custom House Square, Montreal, in a recent letter to us says:—I beg to lay before you the great advantages and benefits that importers and exporters of live stock derive by shipping by the St. Lawrence route, and also by the Beaver Line of Steamships. The sea voyage being shorter, and about 800 miles of the passage over the smooth waters of the Gulf and River St. Lawrence, the animals have an opportunity of recovering from the fatigue of the ocean voyage, and are in a much better condition to ship to their new homes than if they came by Boston or New York, where rough weather is generally encountered the entire passage. The steamers of the Beaver Line have been specially fitted up for the carriage of live stock, the tween decks being 8 feet 6 inches high. Each steamer is supplied with two of Blackman's Patent Ventilating Exhaust Fans, which ensures a continuous current of fresh air through the steamer. During 1888 the steamers of this line carried 1,161 horses and ponies from Liverpool. For six months of 1889 (from 1st May to 1st Oct.) we have carried 750 horses. Of this number all were landed alive, with the exceptional loss of 4. We have carried more horses than any other steamship company to the United States or Canadian ports, and with smaller mortality. Numerous testimonials and letters have been handed the captains of our steamers.

STOCK GOSSIP.

Here is another claim the Cotswolds are putting forward, that of "multiplying and replenishing" in as rapid a manner as any other breed. The Messrs. Snell, of Edmonton, report the birth this spring of 26 lambs from 8 ewes—seven sets of triplets, and a litter of five. Who can beat this? Next!

J. G. Snell, Edmonton, Ont., writes:—Our Berkshires and Cotswolds have done exceedingly well this winter. So far it has been exceptionally fine for young pigs. We have found the demand for sheep and pigs from the United States better than for some years, and we have made good sales of both. The prospects for Cotswolds are very bright. Since August last we have sold 73 head. Three yearling rams sold for \$150.00 each; this looks like getting back to the good old days. We have still a large flock, and have 50 ewes to lamb this spring.

H. Davis, Woodstock, Ont., has recently sold the Shorthorn bull calf Prince Rupert; sired by imp. Roan Prince, and having for his dam Violet's Eclipse; sired by imp. Eclipse, to Mr. Thomas Hart, Innerkip, Ont. He has nine calves already dropped, mostly reds; got by Roan Prince. He has a few heifers and one yearling bull on hand yet. He says orders are coming in for young pigs for spring delivery, of which three litters have been farrowed, all sired by an imp. Berkshire boar, and out of imported and registered sows.

E. L. Smith, Dart, Ont., is the fortunate purchaser of the Clydesdale stallion, Chairman, the third prize winner in the three-year-old class at the late Toronto Spring Stallion Show. He is a most promising beast, and has everything to recommend him. With plenty of size, beautifully moulded, a rich dark bay, with just enough white for effect, he is a right good one individually, and in breeding he is also right. Got by Claymore, a son of McGregor; dam, Lady Salisbury, by Lord Salisbury. With such breeding and appearance he should become popular from the outset in the locality where he is going.

NOTICES.

Mr. Geo. S. Josselyn, whose advertisement will be found in our paper, is first-class in reputation, and does an immense business in grape vines and small fruit plants. He was the introducer of the famous Fay's Prolific Currant, and later of new seedling grapes, Esther and Rockwood, from the originator of the Concord grape.

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FRUIT TREES

and Ornamental; Evergreens, Roses, Shrubs, Grapes, Hardy Plants, Pæonies, Small Fruits,

etc. New illustrated and descriptive priced CATALOGUE containing important information for planters **FREE** **ELLWANGER & BARRY, FREE** Mount Hope Nurseries, ROCHESTER, N.Y.

Largest and Most Complete Stock in the United States.

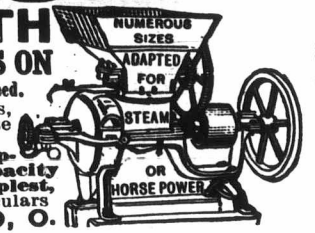
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GRINDS EAR CORN WITH OR WITHOUT SHUCKS ON

and all SMALL GRAIN in fact everything which can possibly be utilized for Feed. SAFETY BOTTOM to prevent breakage, in case iron should accidentally get into the Mill.

GRINDING PLATES Reversible, Self-sharpening. Double the capacity of all others. Sold on trial. All Mills fully guaranteed. Simplest, lightest running, strongest, fastest grinding. Send for circulars **THE FOS MANUFACT'G CO. SPRINGFIELD, O.**



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FOREST CITY MACHINE WORKS, LONDON, ONT

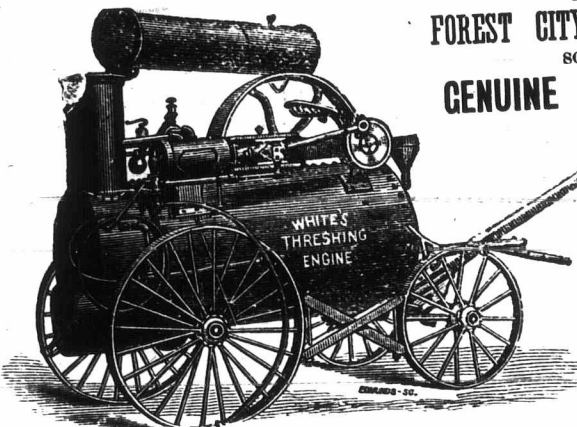
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GENUINE WHITE THRESHING ENGINE,

Special 20-horse power Portable Saw Mill Engine, (same pattern and style), Light and Heavy Traction Engine, and is licensed by all Insurance Co's, and has proved itself to be the most durable. The Engine for the Northwest is made to burn either coal, wood or straw. A thorough warranty given with all Machines and Engines. Call and examine our Machinery, or correspond with us before purchasing elsewhere.

NEW IRON SEPARATOR.

GEO. WHITE, Proprietor and Manager. H. B. WHITE, Head Traveller. HUB. J. WHITE, Sec.-Treas. A. W. WHITE, Asst. Manager. F. J. WHITE, Asst.-Sec.



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FARM TRUCK



THIS cut represents the most convenient Wagon ever put on a farm, because it is suitable for all kind of work, and always ready, no changes being necessary.

THIS WAGON was invented and first introduced in Michigan, U. S., and is now very extensively used by leading farmers in the United States.

AND EVERY WAGON made and sold by us in Canada is giving entire satisfaction. For further particulars and prices.

Address **BAIN WAGON CO., Woodstock, Ont.**

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