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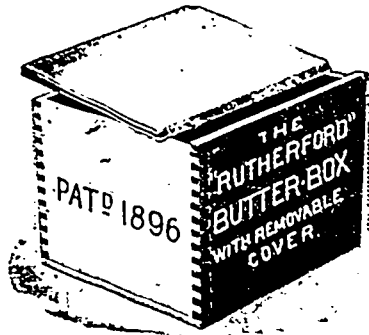
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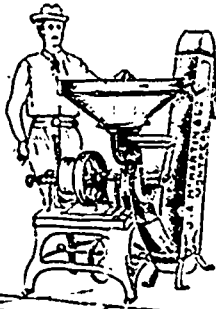
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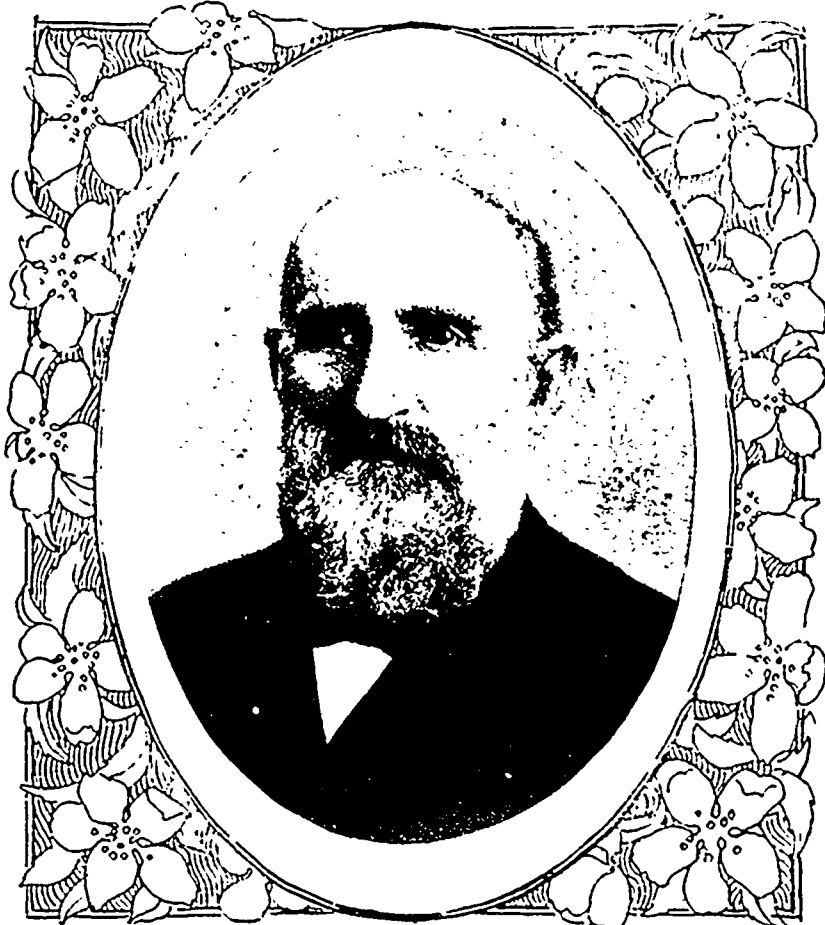


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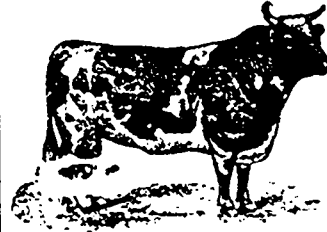
THEODORE LOUIS, LOUISVILLE, WISCONSIN.

### ...LEADING TOPICS FOR THE WEEK...

Wheat and War. The Elevator Grievance. Manitoba's Progress. The Poultry Industry of Canada. Agricultural News and Comments. Why Do Young Men Leave the Farm? Cultivation of Corn. The Comparative Value of Feeding Stuffs. Growing Sunflowers. The Relation of Agriculture to Our School System. Market Review and Forecast, etc., etc.

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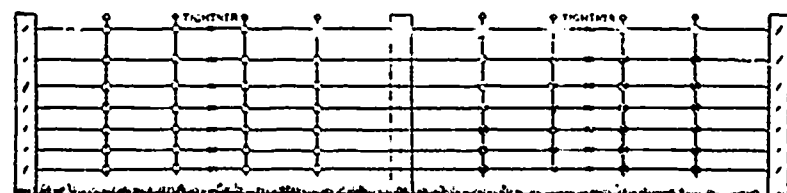
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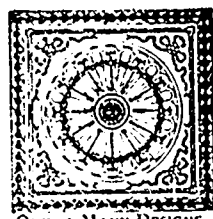
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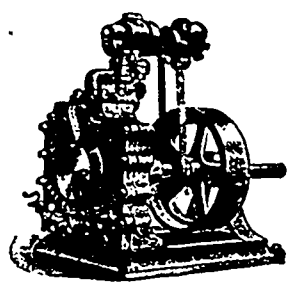
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TELEGRAMS: DEAN, RIPPINGALE.

Lincoln Longwool Sheep Breeders' Association.

Lincoln Ram Sales, '98

The Seventh Annual Sale of Lincoln Longwool Rams will be held in LINCOLN, on

FRIDAY, SEPT. 2ND, '98

STEPHEN UPTON, Secretary.

St. Benedict's Square, Lincoln, 4th February, 1898.

J. E. Casswell

Stock Book No. 46

Laughton, Folkingham, Lincolnshire, Eng. This well-known flock has been established more than 100 years, and the pedigree Lincoln long-wooled rams and ewes have been noted throughout the Colonies and South America for their "size, symmetry, and lustrous wool." Ewes from this flock have always passed from father to son, and have never been offered for sale. Mr. J. E. Casswell's grandfather, Mr. G. Casswell, of Laughton, was the first breeder in the county to let his rams by public auction. At Lincoln Ram Fair, 1895 and 1897, Mr. J. E. Casswell made the highest average for 20 rams. The rams of 1896 were all sold privately for export. During the last two years the following amongst other noted sires have been used: Bakewell Councillor and Baron Ribby, for each of which very high prices have been refused; Laughton Major, Laughton Style, Laughton Choice, No. 5; Ashby George, 60 guineas; Judge, 95 guineas; his son, Laughton Justice Lincoln, 200 guineas; Lincoln, 152 guineas; Welcott, 70 guineas; Lincoln, 72 guineas; and his sire, Laughton Ribby. Shire horses, Short-horn bulls, and Dorking fowls are also bred. Inspection and correspondence invited. N.B.—Laughton Choice won and at the Royal and a pen of 5 thieves by him won 1st at Royal Doncaster. Visitors met by appointment. TELEGRAMS: Casswell, Folkingham, England.

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SHOAL LAKE, MAN., Jan. 26th, 1898. In regard to our experience with your Lump Jaw Cure, we used it on seven lumps last season. It worked all right. Some of the lumps had broken and run several times before using it. Yours truly, FLEMING & SHORT.

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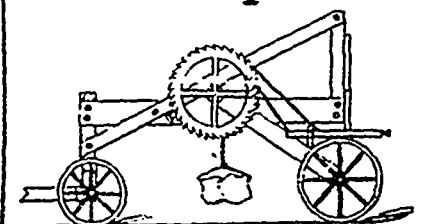
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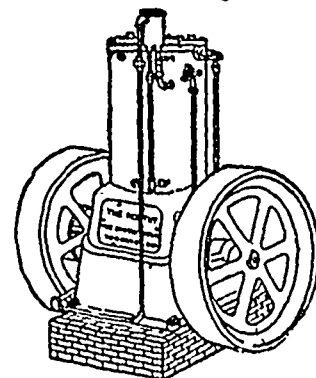
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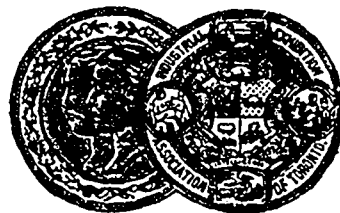
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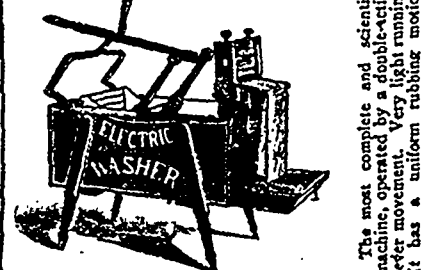
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# FARMING

VOL. XV.

MAY 10th, 1898.

No. 36.

## FARMING

AN ILLUSTRATED WEEKLY JOURNAL DEVOTED TO FARMING AND THE FARMER'S INTERESTS.

Published every Tuesday by

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## TOPICS FOR THE WEEK

### Agricultural News and Comments.

In many quarters it is expected that Canada will have a lively boom in its trade and transportation because of the war between Spain and the United States. The indication so far seems to point that way. At Montreal and St. John there have already been heavier passenger bookings on ocean-going steamers than for some time past. The extra war insurance freight rates at American ports will help Canadian trade. The Danes have been making enquiries at Montreal as to the availability of that port for Danish shipping. A New York commercial paper ridicules the fears of intending shippers in regard to the large American seaports being blockaded and shipping interfered with. However this may be, people will much prefer to do their shipping through neutral channels than run the risk of being detained by an enemy's blockading force.

Reports from the Western States still show a scarcity of cattle. According to the *Kansas City Times*, such states as Wyoming, Utah, and South Dakota, will not market this year within 75 per cent. of as many cattle as they did in 1897. The reason of this is that owners intend to hold over as many cattle as possible so as to bring up their herds to something like their old time proportions. The states east of the Missouri river, owing to their high-priced lands, no longer raise the number of cattle they once did and it is doubtful if the number of herds in these states will ever equal that of former years. The west and southwest, therefore, are the districts which will have to be depended upon in the future for a large share of the beef consumed in the United States and also that which may be needed for export.

There has been quite a noticeable movement in hogs among western packers during the past week or two. The number of killings has greatly increased during the past two months. From March 1st up to the last week of April, the total killings were 2,980,000, against 2,385,000 a year ago, an increase of 585,000, or about 25 per cent. Prices latterly have averaged higher and at the end of the month were fully 10 cents per 100 pounds higher than the week previous. To a certain extent the speculative element is accountable for the increase in values. But the demand is reported good and exports liberal, and unless the present

disordered situation of ocean commerce brings higher rates for transportation to foreign markets present values will likely be maintained for a time.

The demand for Canadian oats in England still continues. Both continental and English buyers are getting anxious about their supplies. Some large sales of Canadian oats have been made recently to European ports at an advance of 1s. 9d. to 2s. per quarter. The short supply of Russian oats, along with the uncertainties of war, has contributed to the appreciation of values. The stock of oats in store at Montreal a week ago was 1,117,723 bushels as compared with 867,740 bushels a year ago, showing an increase of 349,980 bushels. A large share of this stock is, however, engaged for shipment.

In New South Wales, Australia, the Minister of Agriculture has decided to import a number of selected cattle from the best herds in Great Britain with a view to improving the dairy herds of the country. The breeds selected are: Short-horns, Ayrshires, Jerseys, Guernseys, Kerrys, Holsteins, Dexters, Red Polls, and (Irish) Shorthorns. The first selection of 20 purebred Ayrshire cows is now on the way to the colony. Some purebred pigs will also be imported. The imported stock will be placed on the Government Experimental Farm, and arrangements will be made for their progeny to become distributed throughout the colony. This shows enterprise, and that our far-off competitor in the dairy field means business.

Cattle dealers are somewhat in doubt as to the effect the war will have upon the cattle trade. In the United States the effect of the war so far has been anything but pleasing to the cattle feeder. The contraction of credits at the banks and the bad condition of the export markets have afforded an opportunity to local buyers to put down prices. At this season of the year feeders must sell, and are compelled to take current prices. If the situation does not improve shortly, it is expected that many feeders will be put out on the grass by those who can afford to hold. But a large number of the cattle now on feed in the west are carried by the banks, and as the banks are refusing extensions, men who have put out cattle on paper are calling them in.

The authorities of the Omaha Exposition intend to reconsider their decision in regard to giving money prizes for live stock. This is the result of the pressure brought to bear on those in charge by the stockmen and agricultural press of the west. It is likely now that the proposition submitted by the Live Stock Commissioner of the Exhibition, Hon. J. B. Dinsmore, will be adopted and offer the \$35,000 in cash prizes for live stock as recommended. This is a wise move, for had the authorities adhered to their resolution to give medals only, the live stock part of the show would have proven to be a "fizzle."

There were thirty-three cheese factories in operation in Prince Edward Island in 1897, and five creameries. The cheese factories made 2,801,975 pounds of cheese. There were thirty-one cheese factories and creameries in Nova Scotia. Twenty of these made 365,670 pounds of cheese and 192,887 pounds of butter. During the same year there were forty-nine cheese factories in operation in New Brunswick, and seven creameries. The cheese factories made 1,107,281 pounds of cheese and the creameries 41,768 pounds of butter. In the three Maritime Provinces there were in operation last year 111 cheese factories and fourteen

creameries, which made 4,384,256 pounds of cheese and 408,455 pounds of butter.

The province of Manitoba is likely to make a big advance in wealth and population during the present year. Emigrants are going in in larger numbers than since the boom of 1882. The area of wheat sown is fully 20 per cent. more than last year. The seeding has been made under splendid conditions, and the seed is much better than usual because all the wheat last year was good, and the practice of sowing inferior seed, while the best wheat is shipped out, could not be followed. A prominent Winnipeg grain merchant estimates that, if the weather conditions during the summer are favorable, this year's crop of wheat will be nearly 50,000,000 bushels.

### Wheat and War.

That the outbreak of hostilities has had a lively effect upon the wheat markets of the world goes without saying. From nearly every quarter come reports of an excited market and an upward tendency in prices that is in no ways slow. But it is in Great Britain and Europe where there is the greatest excitement. In fact, had it not been for the upward movement in wheat in Europe on the outbreak of war, it is not likely that prices in America would have shown any great advance on that account.

A month or two ago, European buyers began to take things easy and were not very anxious to get in large supplies, as the general outlook regarding the world's supply of wheat in sight was growing more favorable. With the crop prospects good and the acreage sown much larger than last year, the situation greatly improved and the projected scarcity of some months back seemed farther away than ever. So it was that the outbreak of war found European supplies comparatively low and consequently the fear of the American supply being cut off, owing to a probable danger to American shipping by the Spaniards, caused the operators to become excited, and prices to go up by leaps and bounds. After a week or two, when the first flurry is over and the skies begin to clear a little the markets may become quieter and operators settle themselves down to a normal trade, though present values may be maintained for a time.

It is little wonder that the European market world becomes excited at the slightest prospect of a shortage in the food supply. There are millions of people depending upon the outside world for supplies for their very existence. A great many European countries grow large quantities of wheat, but outside of Russia none have a surplus after the home demand is supplied. France alone consumes 700,000 quarters per week for food, so that the amount necessary to supply her needs for the two months before the harvest will run up into the millions. Then the requirements of Great Britain are enormous. If a war takes place, especially a European war, and outside supplies are shut off, it will be easily seen that the inhabitant of the thickly settled European countries has no bright prospect before him.

Though the markets are excited and the war is here there is no great cause for alarm. The supplies in sight a week ago amounted to 64,394,000 bushels as compared with 53,626,000 bushels a year ago, or an increase of 10,768,000 bushels in favor of this year. Therefore, though the war may continue for a time, there is no great fear of a wheat famine before the next crop is harvested and, if the price does remain high, so much the better for the



producer. Though the bulk of the old wheat has left the producers' hands there are some farmers who will profit by the advance. Whether it would be wise to sell at present prices, or to wait for a further rise is hard to say. After several years' low values, \$1 per bushel is a high figure that many would not feel inclined to let pass. The uncertain feeling in regard to the real effect the war will have upon the world's food supply may keep prices up for a time, and may cause values to go higher, but unless it develops into a general European war, the present hostilities will not have the effect upon the wheat markets that many expect.

The crop prospects are generally good and the estimated area sown much larger than usual. No matter how bitter the war is, so long as it is confined to the United States and Spain, the growing and harvesting of this season's crop is not likely to be affected. In Ontario the prospects for fall wheat are on the whole fairly good. In Manitoba, the farmers have been able to get their seeding done much earlier than usual, and in much better shape which, together with the increased acreage sown, means an extra large yield from that quarter. Should the present prices continue long enough for the coming harvest to be marketed, it will mean much to the Canadian farmer. If it were not that we are opposed to the principle of war, we would feel like saying to Uncle Sam and the courageous Don to go ahead and keep up their little quarrel till doomsday so long as it will maintain the price of wheat and give our farmers a chance to get on their feet again.

#### The Elevator Grievance.

The farmers of Manitoba seem to have a real grievance in connection with the elevator monopoly, though whether the grievance is as great as many of their sympathizers would try to make out is hard to say. The difficulty seems to be in the regulations of the Canadian Pacific Railway regarding the building of elevators, and the fact that the elevator companies have too much control of the shipping and grading of wheat. In the regulation referred to anyone wishing to build an elevator on Canadian Pacific Railway property will be granted permission to do so on condition that it have a capacity of 25,000 bushels and that it must accept grain for storage at that point from every farmer offering it. The railway company, when imposing such regulations, agrees not to accept grain at that point from any flat elevator or from farmers' wagons.

If the spirit of the regulations were complied with there does not appear to be very strong ground for complaint on the part of the agricultural classes. But human nature cannot always be relied upon, and when an opportunity looms up for making capital out of existing conditions there are always those who are ready to take advantage of it. To equip elevators of 25,000 bushel capacity requires some capital, and consequently the elevators of this size are under the control of more or less wealthy corporations. The railway regulation prohibits loading on to the cars from flat warehouses or farmers' wagons and it is claimed that this regulation is taken unfair advantage of by the elevator companies. They know that the farmer cannot get rid of his wheat excepting through their medium, and consequently have it within their power to regulate the price and also the grading of his wheat. This they have undertaken to do on a large scale during the past season.

So long as there was no combination of elevator interests the farmers had no grievance, as competition made it possible for the farmer to obtain the highest price and to have his wheat graded for what it was worth. But during the past year it is claimed—and we must confess that there are strong grounds for the claim—that a combine of the elevator companies existed, and that the representatives of these companies met every day in Winnipeg and agreed as to the price that should be paid for No. 1 hard. The price agreed upon was wired to the various elevator companies, who

accordingly paid that price and no more for wheat that day. Another grievance is that frequently a farmer marketing his wheat receives an offer that tells him his wheat is regarded as only No. 2 hard. He claims it is No. 1 hard and will not take the price offered. As an alternative he is told that it will be handled for him and sent to Port Arthur, and if the official inspector grades it as No. 1 hard he will be paid the difference. This seems all right on the face of it, but the farmer knows that his wheat is dumped into a bin with a number of other wheats graded as No. 2 hard, and therefore there is no possibility of his wheat getting to Port Arthur intact. Thus it is that the farmer is largely at the mercy of the elevator companies and is prevented from getting what is justly his due.

At the present session of the Dominion House of Commons legislation is sought for to remedy this condition of things. One of the remedies asked for is a modification of the Railway Act so that the Canadian Pacific Railway will be compelled to load grain on cars from flat warehouses and farmers' wagons. If this were done it would enable the farmer to sell direct to Eastern millers and make him independent of the combine. It is also contended that, if an inspector were appointed who could be called upon to settle any disputes as to the grading of wheat, the grievance would to a large extent be removed. This is the plan followed in Minnesota, where an elevator grievance existed for many years, and seems to work well.

The farmer is the individual in Manitoba on whom the very existence of the country depends, and if he has a grievance it is the duty of the Government to take steps to remedy it at once. As far as we are able to judge, we certainly think the Manitoba wheat grower has good reason to complain. We have no room for monopolies of any kind in Canada. Our motto should be "live and let live." There is lots of scope for everyone's energies, and the existence of a combine or monopoly in the interests of any class should not be tolerated. We trust that the Manitoba farmer's grievance will be removed, and that everything will be done to enable him to make the very most out of the conditions with which he is surrounded.

#### The Canadian Horse Show.

The fourth Canadian Horse Show has come and gone. It took place on May 4th, 5th, 6th and 7th, and was in many respects a brilliant success. With it this year was associated a Military Tournament, or we might better say the Horse Show was associated with a Military Tournament, in so many respects did the latter overshadow the former. So much so was this the case that lovers of a good horse were quite free in their complaints that the horse events were in a measure side-tracked to make way for the military and kindred displays.

From an agricultural and a breeder's standpoint this is very much to be regretted. As a purely agricultural journal, having the best interests of the farmer and the breeder at heart, we may be pardoned for looking largely to the practical side of the show, and not to the esthetical. The latter is all well enough in its place and perhaps the show could not be made a financial success without catering to that element in a large measure, but we do not think the management should give way altogether to it. The Government makes a liberal grant every year to assist the show with a view to encouraging the breeding of a better class of horses by the farmers generally. To do this every effort should be made by the management to bring out as large an exhibit of the various breeds of horses as possible. This cannot be done unless the time for holding the show is arranged to suit breeders and farmers and every encouragement given them to exhibit. It may be said that every effort has been made along this line. If so, the power of the management to enforce its efforts in this direction is not as strong as it was a few years ago, when a larger representation of the various breeds of horses was to be seen at the show, and not only was this so in connec-

tion with the hackney and coach horses, but also with the heavy draughts and purely farmers' breeds. We do not wish to criticise the management unjustly in this regard. We are somewhat of the opinion that the blame is to be attached to bringing so many other features into the show which tend to crowd out the purely practical and utility side of it.

One would expect at a spring horse show to see a large attendance of farmers and breeders, but outside of a few who are especially interested the attendance of these classes was woefully small. Last year it was claimed that the show was held at a time when the farmers were busy seeding, and were not able to get away. This was not the case this year. The spring opened up a good deal earlier this year, and farmers were practically through seeding a week or two before the show began. Another thing in favor of the attendance of farmers from a distance was the cheap railway rates. The rate war has made it possible to reach Toronto on all competing lines at merely nominal rates that impose no great hardship on anyone, and if farmers and breeders were desirous of attending the show they would certainly have taken advantage of the very cheap rates. But they did not attend, and from a practical agricultural point of view the Horse Show of 1898 cannot be considered a great success. Then the breeders themselves, especially in the Hackneys and heavy horse classes, did not appear to evince any great interest in the show. It was a notable fact that in these classes there were very few new horses shown; most of the animals shown were visitors last year. In respect to the stallion classes there is a good reason for this paucity of new animals. All stallions are busy on the road, and their owners do not care to call them in to make a display at a show where not much opportunity is afforded for doing business with the farmers and breeders. The smallness of the exhibits in the other classes must be accounted for in some other way.

However, in connection with such matters it is very easy to criticise, but not so easy to suggest remedies. One arrangement of the management—and we believe the secretary, Mr. Henry Wade, deserves credit for the suggestion, which if it had been properly carried out would have been the means of bringing a larger attendance of farmers and more exhibits of horses—was that of having a special day set apart for the farmers and breeders, and for the features of the show that would be specially interesting to them. If it had been known a month ago that the first day of the show was to be a special farmers' day at which the various classes of horses in which they are especially interested would be shown, we believe there would have been a fair attendance from the country. We would advise the management to make a special effort along this line next year, and if need be devote more than one day for the farmers' special benefit. It might be advisable also on these days to lower the price of seats a little and put them down to a rate that would be more in keeping with the farmer's pocket. Though many farmers may be able to pay seventy five cents and one dollar for a seat at a horse show, as a class they have not been accustomed to pay such prices, and will not do so for even a greater event than the Canadian Horse Show.

#### Manitoba's Progress.

We had the pleasure of a visit last week from Mr. James Stirton, of Morden, Manitoba. Mr. Stirton may be said to be one of the pioneers of that country, having been a resident since 1869. He has great faith in the future of Western Canada and is particularly pleased with the prospects for the coming season. Seeding was finished this year fully three weeks earlier than usual. This is a big advantage in a country so liable to summer frosts as Manitoba is. At Morden the wheat is already above ground and conditions are very favorable for a big crop. Mr. Stirton estimates that the increase in the acreage of wheat sown as compared with last year is from thirty to thirty-

five per cent. This is a large increase, and if the increase in yield of wheat corresponds it will mean the extending of Manitoba's annual output by many millions of bushels.

Mr. Stirton does not think that Manitoba or the west will have any cattle to export this season. Nearly all the stall-fed cattle sold this spring have gone to the Kootenay, the Crow's Nest Pass, and the Yukon district. During the summer these markets will be more largely supplied by the large western ranges, but until the range cattle are fit for slaughter these districts take about all the good beef cattle Manitoba produces. This spring as high as 4cts. per lb. has been paid for good beef cattle. We drew attention a few issues ago to the depletion of young stockers going on in the west. Mr. Stirton says that so great has been this depletion that Manitoba and the west will feel the effects of it for several years. In many ways the farmers are not to blame for disposing of their young stock at good prices, though everyone agrees that it is not the best policy to pursue. During the past fall and winter farmers have been able to get as much money for two-year stockers from the ranchers of the Western States as they formerly could get for them when three and four years old. In fact American buyers have gone through the country picking up young calves a few months old at \$7 to \$8 each. Many farmers consider these prices too good to let pass and consequently have allowed a large share of the stockers to be taken out of the country.

Mr. Stirton believes that pork packing is destined to be an important industry in the west. The Winnipeg packers are paying the farmers from 4½ to 5 cents per lb. As yet not so much attention is being paid to the production of the bacon type of hog as in the eastern provinces. The packers find it somewhat difficult to get a supply, and consequently are not so exact about the quality. In a few years, however, when the industry is more thoroughly established the farmers will have to produce a hog suitable for supplying the bacon trade.

There is a growing demand for heavier horses in Manitoba for work on the farms. As a rule the horses on the average Manitoba farm are not heavy enough for the work. If a heavier horse were used farm work could be done with greater ease and at less cost. As an instance of this Mr. Stirton states that if the horses used were heavier three could be used for plowing instead of four as is now the case.

Though the growing of fruits has not made any great advance in Manitoba Mr. Stirton thinks that in time, if the farmers will give the matter attention, and plant orchards on lands sloping to the south or where the trees would be sheltered by a woods, a fair quality of fruit adapted to cold countries could be grown. He mentions the case of an old settler at Nelson, Manitoba, who has for the past two or three years grown apples, plums, crabapples and cherries very successfully. The apples are a Russian variety and partially acclimatized. This particular orchard is on a side hill facing the south, and its owner takes particular pride in giving it every care and attention. Mr. Stirton is of the opinion that the hot, dry winds of the summer seasons are as injurious to fruit trees, if not more so, than the severe winters. All small fruits, such as berries, currants, etc., can be grown without any great difficulty. Mr. Stirton is a strong believer in mixed farming for Manitoba.

#### Why Do Young Men Leave the Farm?

The following extract is taken from *The Australasian*, of Melbourne, Australia. It shows us two things, viz., that our fellow-colonists on the other side of the world have the same problems to solve in regard to keeping the young men on the farm that we have, and that they have sufficient grasp of the situation to divine to a large extent the cause of the apparent discontent among young men as to remaining on the farm:

Why do so many farmers' sons become discontented with life on the farm, and evince a disposition to earn their living amongst other surroundings? The reason is that in

quite a large number of instances they are treated as servants, but without a servant's pay. They have to do their share—often more than their share—of the farm work, and assume at times a considerable amount of responsibility, while their remuneration very frequently consists of nothing more than the food they eat and the clothes they wear. It is hardly a matter for wonder that young fellows become dissatisfied under the circumstances, and elect to try their fortunes elsewhere. Parents, as a rule, do not place sufficient trust in their families, do not teach them self-reliance, and do not remunerate them for the services they render, and for which others would have to be paid if the young people were not there to do the work. On rare occasions one meets with a farmer who pays his sons and daughters a small weekly wage, proportionate to what he can afford and to the services which they render. The young people provide their own clothing, and pay for their own amusement out of what they earn, and because the money is their own they are economical as regards the spending, while each one gratifies his or her own particular taste. Where the parents adopt this practice it will be invariably found that the young folk are contented with their surroundings, unless it happens that they have decided tastes and talents for some other pursuit, in which case, of course, it is better to let them follow their inclination. The farmer, owning a fair-sized block of land, who cannot afford to pay his family a small sum for the services which they render, must be a bad manager, and it is time for him to give up the business of farming.

#### The Poultry Industry of Canada.

By THOMAS A. DUFF, Toronto, Ont.

(Continued from April 26th.)

##### SHIPPING.

It is certainly a pleasure to note that during 1897 there has been a decided increase over 1895 and 1896 in our shipments of poultry and eggs to Great Britain. Those who have made shipments report themselves as being satisfied with the prices obtained. I feel certain, however, that the present system of cold storage, while perhaps all right for shipping poultry, could be very much improved upon so far as the exporting of eggs is concerned. The objection I have to it is, that after the eggs are taken out of the cold storage they commence to sweat, which does not add to their appearance. I have in mind a system by which this could be entirely obviated, but space will not permit of my going into detail concerning it, but at some future time, should an opportunity present itself, I will be pleased to give my views.

The agricultural returns show that nearly fifteen hundred million eggs come into England from abroad. Four hundred millions are laid in Germany, and a hundred and sixty-four millions in Russia. Notwithstanding this the demand more than exceeds the supply. Why, therefore, when prices are so low in Canada in summer, can we not obtain a share of this trade, and obtain more for our product? As far as I can learn, the prices paid in England during the summer for strictly first-class infertile eggs are from seventeen to twenty-three cents per dozen. If our friends who keep poultry would only take care of their stock, gather the eggs daily, and market none weighing less than seven and a-half to the pound, we could easily obtain a large portion of this trade. We are already promised a fast steamship service, and with proper cold storage facilities, there should be no difficulty in placing on the English market as fine a class of eggs, and in as good condition, as the Russian, German, or French supply. There is an unlimited market for all our summer stock. Of course our home market can far more than use all we produce in winter. What is necessary to obtain this trade is the co-operation of those who sell with those who buy. You do your part and the buyer will do his.

If those engaged in the raising of poultry will bear these few simple facts in mind, and act upon them, they will find their pockets containing more dollars at the end of the year than under the old regime.

NOTE.—This week completes the publication of Mr. Duff's very able and comprehensive treatise on "The Poultry Industry of Canada." The treatise was prepared for and will appear in the next annual report of the Farmers' Institutes of the province. Owing to the kind courtesy of the Superintendent of Institutes we have thus early been permitted to give the readers of FARMING this admirable series of articles covering every phase of poultry farming.—EDITOR.

#### Canadian Butter in Great Britain.

Last week's *Trade Bulletin* gives some interesting figures regarding the exports of Danish and Canadian butter. The amount of butter exported from Denmark in 1897 was 132,090,000 pounds, which was an increase of 11,040,000 pounds as compared with the year previous. During 1897 the total imports of butter into Great Britain were 360,393,000 pounds, about \$78,000,000 in value, and of this Denmark contributed about one third and Canada only about one thirty-sixth. From this it will be seen that there is a wide field open for Canadian butter-makers, which, if they give as much attention to developing as the Danish butter-maker does, affords them a grand opportunity to build up an extensive export trade in butter with Great Britain.

According to reliable reports from Great Britain, Canadian butter is every year attracting more and more attention. A finer quality of butter is being sent forward which is of excellent consistency and durability. One report states that Canadian butter much resembles the Danish in style, and the best of it approaches the Danish in goodness. Then because Canadian is cheaper than the Danish the British tradesman is able to make a larger profit out of handling it. To quote from the same report: "The climates and pastures of Canada are well suited for the production of butter, and it has a population of able English and French farmers. And, finally, the transport from Canada lasts only fourteen days. Canada, therefore, has no doubt better prospects than the much talked of Australia, which lies on the wrong side of the globe, and suffers from always returning periods of drought."

Confirmation of what we know to be the good qualities of Canadian butter, coming from consumers in Great Britain, is very valuable indeed, and should put new life into our butter-makers and encourage them to make still greater efforts to improve the quality of the product and make it a thing even more to be desired than ever by the English consumer.

#### Theodore Louis.

The kind, intelligent and sympathetic face on the front cover of this week's FARMING will be recognized by everyone who attended the annual convention of the Western Ontario Dairymen's Association at Woodstock two years ago. Not only will they remember the face as that of Theodore Louis, but they will remember the sound, practical and common sense addresses on swine husbandry which he delivered on that occasion. In our special swine number of April, 1897, we gave a somewhat extended account of Mr. Louis' life and work, and though we have no intention of repeating what was said then we do not think it out of place to draw attention again to one, who, by his teaching and practice, has done more than anyone else on this continent to make known the value of the hog as an important factor in economic agriculture. In his own state and the adjoining one of Minnesota, Mr. Louis is a familiar figure at all farmers' gatherings. His strong fort is at farmers' institute meetings, where he is a host in himself. The success of an institute meeting may, to a large extent, be measured by the amount and kind of discussions which take place. Mr. Louis is an adept at answering questions, and it is said that he has no equal at a farmers' meeting for imparting good, practical information in response to a question asked by someone in the audience. There was a striking example of this at the Woodstock meeting, and Mr. Louis' good nature was taxed to the utmost to reply to questions, not because he was unable to answer the questions, but because the questions were so numerous as to keep him long after hours. Personally, we would like to have Mr. Louis again visit Canada, and we think in the interest of our important swine industry some of our larger farmers' organizations should make an effort to secure him for their meetings next fall and winter. Perhaps our public-spirited Superintendent of Farmers' Institutes will take the matter up.

### THE COMPARATIVE VALUE OF FEEDING STUFFS.

By A. T. WIANCKO, B.S.A., Sparrow Lake, Ont.

In ordinary feeding the majority of our farmers pay too little attention to the real feeding value of the foods they give to their stock. They simply use whatever they happen to have on hand without much reference to whether that food is the most economical for the object in view or not. From force of habit a certain class of animals will be given a certain food. This I believe to be very often a great mistake, but one that is easily made even by an otherwise careful farmer and stock-feeder. In many cases the foods are well adapted to the use to which they are put; but they are not always the most economical that might be used. Now, whether other feeding stuffs may or may not be profitably substituted is a question that should receive the careful attention of every feeder.

In many cases it may not pay the farmer to haul to market and sell what was grown at home and with the proceeds buy something else. But when he must buy he should know what it will pay him best to buy. To do this he must be able to compare the actual feeding value of one food with another. The market value does not always tell us which is really the cheapest food. To be able to judge what food or foods will be the most economical to use, the feeder should know three things, namely: The feeding value, the fertilizing value, and the market value. Market values may vary a great deal, but the feeding and fertilizing values will always be relatively the same. The feeding value will always depend upon the total amount of digestible organic matter, and the fertilizing value upon the total amount of nitrogen, phosphoric acid and potash. In selecting our feeding stuffs we must, of course, bear in mind what use the animal to be fed can make of a certain food. Thus, the palatability and the proportion of nutrients that a certain animal can take out of a food must be considered. For example, to feed a pound or two of cottonseed meal might be very beneficial but to feed five or six might be both wasteful and injurious.

Apart from its nutritive ratio or suitability for making up feeding rations every feeding stuff has a value based upon its digestible ingredients. This we would call its *real* value, no matter what the market value may be. To estimate this we must know the percentage composition, or rather the percentages of digestible protein, carbohydrates and fat. Of these constituents protein is by far the most valuable. In fact we need pay but little attention to the other two, unless the difference is great, because (combining their values as carbohydrates alone) they are generally present in great abundance. It is the proper amount of protein that we are always at pains to obtain. Generally speaking then, unless the carbohydrates and fat vary greatly, we may safely compare the feeding value of foods according to the amount of digestible protein they contain.

Upon this basis let us now take a few examples, and we will readily see that the market value and the feeding value may be altogether out of proportion. Oats and bran are both feeding stuffs that are extensively used,

and one or the other may often be fed with the same object in view. At present prices, oat chop (as it is generally fed) is worth about \$18 per ton on the market, and bran \$10 per ton. A ton of oat chop contains about 182 pounds of digestible protein, and a ton of bran about 252 pounds. Now, for \$18 spent in oats we get 182 pounds of digestible protein, while for only \$10 spent in bran we get 252 pounds of digestible protein. Or, to make the comparison more simple, for \$1 spent in bran we get about 25 pounds of digestible protein, while for the same amount spent in oats we get only 10 pounds of digestible protein. Bran also has a greater value in balancing a bulky ration because of its narrower nutritive ratio. In this latter respect linseed meal is still more valuable, and we pay only about three cents per pound for protein.

As coarse fodders, timothy hay and red clover hay are both much used. For the purpose of a comparison I will place both at the same market value (\$8 per ton), though clover sells less readily on our markets than timothy. A ton of timothy hay contains about 60 pounds of digestible protein, while a ton of red clover hay contains about 130 pounds. Thus we can see that for \$1 spent in clover hay we get about 163 pounds of digestible protein,

and the more will probably get to the field.

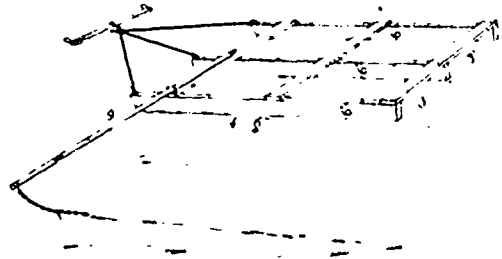
From what has been said we may conclude that it will pay us well, when determining what to feed, to consider carefully the amount of digestible nutrients and manurial constituents in the various foods that might be used for the object in view. There is certainly no doubt that to pay attention to these things will often add greatly to the profits of stock feeding.

### CULTIVATION OF CORN.

To the Editor of FARMING:

In dealing with this subject, I do so from a practical, and not a theoretical, standpoint. As it is now conceded by all up-to-date dairymen that ensilage is indispensable to successful dairying, let us consider for a little space the best way of growing this golden crop so as to secure the best results.

I prefer a good sod, either after pasture, or crop of clover; plow in the fall, about last of October, five inches deep. Then in the winter draw out the manure as convenient, and put in square piles, flat on top, as near to the field intended for corn as possible, or at suitable distances on to the plowed land. Now in the spring as soon as the land is in a fit condition, harrow with whatever kind fancy or judgment



Corn Marker.

It will be seen at a glance how this works. You start on one side of the field and drive straight, say start on the west side of field going south, the pole will be swung to the left hand, and the chain on the end of pole will make mark to come back by, and by keeping the centre runner on that mark will get over the ground rapidly. The runners are 17 in. in plate, 4 1/2 feet long, 7 in. in depth, with board nailed across, so that the runners will be exactly 3 feet apart. There is a staple driven into the end of the pole and another in the centre of it, so that it can be reversed from side to side, at each turn the pole is reversed. A spike is driven into each outside runner to keep the pole from swinging back.

while for the same amount spent in timothy hay we get only about 8 pounds. Other examples might be given where the difference would also be great, but the above fully illustrate the point.

Now, looking at the fertilizing value, we all know that the richer the food the greater is its manurial value. In the case of the oats we get, for \$1, 2.3 pounds of nitrogen, 0.9 pounds of phosphoric acid, and 0.7 pounds of potash, while with the bran we get, for \$1, 5.3, 5.7, and 3.2 pounds respectively. Timothy hay gives us, for \$1, 3.15 pounds of nitrogen, 1.32 pounds of phosphoric acid, and 2.25 pounds of potash, while in red clover hay we get, for the same money, 5.17, 0.95, and 5.5 pounds respectively. The three named substances in commercial fertilizers have each a certain market value, but to place that value upon them in the form of barnyard manure would be too high and rather misleading, for two reasons. First, taken together they are not nearly so readily available; and, secondly, more or less is bound to be lost entirely before the manure is placed upon the field. Nevertheless, the manurial constituents of a food have a considerable value, and, other things being equal, the food richest in these substances should be chosen, as the more the food

may dictate (I prefer the spring tooth) once or twice a week. This will tend to mellow the soil and preserve the moisture, which is very important. Then a few days before putting in the corn harrow well and deep, so as to have three or four inches of fine, loose soil. Then start at the manure, which, if it has been properly handled, can be forked right into the carts or wagon; if not, the heaps should be cut down with a sharp hoe, a fairly light coat will do, but quality and quantity must decide how much to apply, spread evenly, and harrow twice, preferably with a wheel spring tooth. This will mix the manure with the soil. When the top soil is dry roll with a light roller. Then mark off in straight rows three feet apart each way with whatever kind of a marker ingenuity may contrive. I send a rough sketch of a marker I use, that does good work and gets over the ground rapidly.

Procure the seed from a responsible firm and see that it has high germinating power. Then plant—we use the "King of the Field" hand planter. We put six to eight kernels to a hill.

After two or three days we go over the field with a harrow, which I designed myself, and is cheap and effective. It is made V shaped, 2x3 stud-ding halved and bolted together at the corners, and mitred at the front end,

and fastened with nails or bolts; ten feet wide, sides same length; use six-inch wire spikes, drive into side pieces six inches apart, in the cross piece one foot apart; fasten a chain about two feet from forward end to haul by (use one horse—this is one of the best implements on the farm. If all grain was gone over with it, even if up three inches, after a rain, to break up the crust and let the air and sun into the ground, it would be of great benefit to the crops). Harrow the ground about twice a week, until the plants are three or four inches high, then make a smaller edition of the harrow to go between the rows about two feet eight inches wide, and keep it going twice a week as long as you can get a horse through without breaking down the corn; going, say, north and south one time, and east and west next time. Use a short swing. Run this harrow 1 1/2 inches deep, and you will have a fine mulch, which, with the cultivation, will be as good as a coat of manure. Some may think that all this cultivation is unnecessary, but remember that with proper tillage we draw upon the reserves of plant food in the soil, and the labor expended is cheaper than buying fertilizers.

Pownal, P.E.I. A. A. MOORE.

### LET US KNOW HOW YOU DO IT.

We would like a number of our readers, who supply milk to a cheese factory or creamery, to send us answers to the following questions within the next four weeks.

- (1) In what way do you guard against uncleanness when milking?
- (2) Do you strain the milk?
- (3) What plan do you adopt to have the milk properly aerated?
- (4) In what way do you keep the milk over night?

Make the answers as short as possible, and let us have your experience on these points.

### ENSILAGE FOR HENS.

Norman Jameson, a student at the Guelph Dairy School during the term just closed, gives the following method of preparing and feeding ensilage to hens which may be of value to poultrymen.

Take an ordinary coal oil barrel and burn it out, then cut green clover and sweet corn together, and when thoroughly mixed pack in the barrel. When filling the barrel put in a layer of clover and corn, and then sprinkle with charcoal, and continue in this way till the barrel is filled. When filled place the barrel under horse manure for a few days, then put away, covering with cut hay or straw. Feed twenty pounds to 100 hens at one meal with about the same amount of potatoes and ground oats. Boil together before feeding.

### WHAT SOME OF OUR SUBSCRIBERS SAY:

"I appreciate your paper very much. . . It would be to the interest of the farmers in these parts to read your paper, and take a more lively interest in scientific farming." Jas. Luchare, Thompson, Ont.

Fowls thrive best in high and dry localities, with sandy or gravelly soil.



## PHEASANT CULTURE.

By F. SHANNON McGILLIVRAY, M.D.C.M., Hamilton, Ont.

(Continued from last week.)

## Feeding the Young

We come now to by far the most important of all pheasant culture—the feeding of the young. We have before us many methods of feeding young pheasants, but we will give as a sample of one of the old methods the bill of fare laid down by George Horne, an English gentleman of large experience in raising pheasants, who is also the author of a most excellent book on pheasants entitled "Pheasant Keeping for Amateurs."

"Rice well boiled (not sticky), chopped onions and their tops, crushed hemp, a little pepper, baked breadcrumbs, well ground, sprinkle the food with a little iron tonic, and let the whole be mixed till quite dry. Never let it get sour or be left from day to day; only put enough the last thing at night for early breakfast. Do not forget the younger the birds, the more custard."

Another way young pheasants are raised in the Old Country is by hanging sheep's pluck, beef's liver, dead rabbit, or, in fact, flesh of any kind, up in the sun until it becomes full of maggots. The flesh is then shaken, and as the maggots fall to the ground the young birds eat them. This food, combined with ant eggs, onions and lettuce, has proved fairly successful in raising young pheasants. We tried it, but the smell of the decaying meats was so disagreeable that we were forced to abandon it. Being firmly convinced that there is no food for young pheasants equal to the larvæ of flies, we next partly filled some barrels with sawdust and sunk them in the earth. The tops of the barrels were covered with wire mosquito netting, and in the centre we made a quarter-inch hole, putting over the hole a bulbous fly-trap. We got from our butcher some sheep's plucks, liver, etc., as required each day, from the day we commenced to set pheasants' eggs. After first being hung up until well fly-blown, we put a pluck or a liver into a barrel. We arranged it in this way so that a batch of flies would hatch each day as a daily supply for the young pheasants. The flies first turn into small maggots, which in warm weather soon grow full size, and then change into the pupa state, which looks like very small black beans. They remain in this state for some days, and then from the pupa emerges a full sized fly, which sees the light at the top of the barrel and crawls up, passes through the small hole and into the common bulbous fly-trap on top. We have had these fly-traps from one barrel almost filled with flies four or five times a day. We just pass the fly-catcher full of flies over hot steam, which kills them. The fly-catcher is made to part in the middle, and we turn out the flies, and the young birds will have a scramble. They enjoy them very much. There is but very little smell from the barrels, it kept covered with cloth over the fly screen excepting the hole through which the flies get into the trap. In this way we raised every young pheasant except one, which met with an accident. The birds were strong, fat and rapidly feathered, and at six weeks old were just twice the size of some pheasants of the same age that we had raised for us by an Englishman and after the old English plan. Forty per cent. of the

birds raised according to the old way of raising pheasants die. There is one thing that must not be lost sight of. It is the fact that flies lay their eggs and then die; and if their increase is not provided for, the whole neighborhood would become exhausted of them. To keep up a good supply of breeding flies, we let go a trap full alive about every second day.

## Scientific Method.

Our investigations in Ornithology and especially the study of the twenty or more varieties of birds commonly called pheasants, has forced upon us the absolute necessity of further investigating the most natural food for those birds. This leads us to leave Ornithology for a time and wade into Entomology, to study the particular kinds of flies and their culture that produce the larvæ which is so very essential to the lives of young pheasants.

The first we will describe is the most common and is called the Blue Bottle Fly (*Lucilia Caesar*). The females hibernate in sheltered places and emerge with the warm weather to deposit their eggs (fly blows) on animal matter. These soon become maggots, and during a period of only about 15 days in warm weather, from the time the eggs were deposited on the flesh, it will have changed into a maggot, then pupa, from which emerges a full grown fly. Single females of the blue-bottle kind have laid 74,143,223 eggs. Mr. Kirkland, of the Board of Agriculture of Massachusetts, has estimated the product of one female fly for ten generations, and states that, roughly speaking, this product would make a belt of flies two hundred miles wide around the entire globe, so great is the reproductive powers of this insect when not destroyed by its enemies.

The Flesh Fly (*Sarcophaga Carnaria*). The peculiarity of this fly is that the females after being fertilized, retain the eggs until they have hatched. They deposit large numbers of living larvæ on exposed meat. They are not so plentiful as the blue bottle, but they are more desirable for pheasant food, as their maggots are larger. It is therefore advisable to favor the production of the flesh fly. This may be accomplished by allowing occasionally a few quarts of maggots to pupate, and as the pupa of the flesh fly is much larger than that of the blue bottle, they may easily be separated by a sieve that will allow the pupa of the blue bottle to pass through but will retain the other. Allow the flesh flies to hatch out and go at liberty for breeding flies. In this way a fine supply of the most desirable breeding flies can be obtained.

There is another fly which breeds in animal matter and furnishes some food for young pheasants. It is called the Blue-Tailed Fly (*Calliphora Vomitoria*). It is not of sufficient importance to further describe it.

There is a wide-spread belief that maggots are disgusting, stinking things. Our investigations and study of Entomology proves to us that maggots separated from their usual surroundings are just as clean and odorless as young chickens, goslings, &c. Flies do not lay their eggs on tainted meat when fresh meat can be found, and maggots are clean feeders from choice and

thrive best on fresh meat. This being the case barrels full of the flesh fly maggots may be produced without the slightest odor, and not hundreds but thousands of young pheasants may be raised without difficulty or any great mortality on the following plan. Feed the maggots twice a day on very thinly sliced fresh meat. Learn what they will eat up cleanly and feed them no more. The assimilating power of the maggot is so great that it can change every particle of meat to maggot without leaving any residue, consequently there can be no smell. Sheep's plucks, livers, &c., can be purchased at the butcher's for a trifle, and turned into maggots in this way, blood is also a good food for maggots.

To provide for cold and wet weather when flies are not out, place a bushel or two in a refrigerator, at from forty to forty-five degrees. Development is suspended, and they may be kept for weeks. In the case of a scarcity of full grown maggots caused by cold weather, put the undeveloped into an incubator at ninety or ninety-five degrees, and development is hastened.

In breeding maggots care must be taken to keep them covered with woven wire fly netting to protect them from a very large-winged bug, which would otherwise get in and destroy them by the hundreds. After the first thirty days the maggots may be safely withheld, and the wings of the young birds clipped in a way we will later describe, and the birds turned into a field of grass, and fed for a time on scalded grain, then any kind of grain, grass or vegetables, and the danger to life is over. The field should have a fence six or seven feet high—seven feet is better—and care must be taken that no brush or anything else is left so close to it as to enable the birds to jump up, and with a second jump reach the top of the fence, then over. From preference pheasants roost where they can see the sky above them, and if no provision to prevent this were made, they would willingly and very persistently expose themselves to every rain storm. This can easily be avoided by leaving not a vestige of brush or any place to roost, except under sheds covered over on top only with convenient and tempting roosts. The birds when they can find no roosts elsewhere will be forced to go under shelter. They may be left in this field all winter, and their feed after the first few weeks is of little importance. They may be fed a little corn, wheat, etc., until the snow comes, but if they are turned into a good fresh orchard or other field where no pheasants have previously been, they will eat but little grain of any kind until the snow hides the grass from them. Grass is as much the staff of life for the pheasant as bread is for man, and for this reason twelve of them would not eat more grain than one barnyard fowl.

At four months the males and females are better put in separate fields, and if the birds are not pinioned their wings must be attended to every two weeks until they are four and a half months old, at which age they receive the last of their adult pinion feathers, and if well clipped then, will need no more attention until they moult the next fall. In order to clip the wings the bird must be caught, which to a novice is no easy task, be-

sides he is apt to pull their feathers out. We use a common dip net, which was made for catching fish in the rapids. The hoop upon which the net is fastened is about two feet across, and the handle eight feet long. We can pick up any bird we want without the slightest difficulty, and as for young ones, we dip up half a dozen at a time. No pheasantry can afford to be without a net of this kind.

(To be Continued).

## THE CULTIVATION AND GROWING OF CORN.

## The Best Methods of Leading Ontario Farmers.

A couple of months ago we sent out a list of questions to a number of leading farmers in the various districts of the province pertaining to the cultivation of the land for spring crops and the best varieties of grain to sow. A lot of valuable information was received, a large share of which was published some weeks ago, and we trust it has been helpful to many farmers. In this list of questions was one referring to the cultivation of the land for corn. Corn is becoming, if not already so, the most important Canadian fodder crop. In many sections where the climate was considered to be too cold, or too much liable to frosts, to admit of corn being grown successfully, farmers are now growing large crops of corn every year. As they become more familiar with the different varieties of corn and the kind of treatment the plant requires, they do not find much difficulty in securing a good crop. The value of corn as a fodder crop cannot be over-estimated. For furnishing an abundance of good, succulent feed for the winter the corn crop and the silo cannot be beaten.

One of our correspondents says that, in order to insure a good crop, corn requires: 1st, a rich, warm soil; 2nd, a thorough cultivation and preparation of the soil before planting; 3rd, good seed; and 4th, a thorough cultivation when the crop is growing. If these are kept in view there need be no fear about securing a good crop during any ordinary year. There are a great many different varieties of corn, and it is difficult to give advice as to the best variety to plant. For silo purposes and for winter's feeding the kind that will be sufficiently matured before the frosts come, that will give the largest number of ears to the stock and that will give the largest total yield per acre, should be selected. Where the season is sufficiently long to admit of the plant being fully matured, the Mammoth Southern Sweet will give good results. But, outside of Essex County it is only in exceptional cases that this variety has a chance to mature before the frosts come. Some varieties that are recommended are the Mammoth Cuban, Salzer's North Dakota, Wisconsin Earliest White Dent, Crompton's Early, Huron Dent, Pearce's Prolific and Thoroughbred White Flint.

The larger number of our correspondents consider fall plowing the best for corn. Manure well during the winter or early spring with fresh manure. From fifteen to twenty and up as high as twenty-five loads of manure per acre is recommended. In the spring the land should be thoroughly cultivated and the seed bed made as fine as possible before the corn is planted. This last point is very



strongly impressed, and from our own experience in corn-growing a thorough cultivation of the soil is the first essential. To get the land thoroughly pulverized a spring tooth or disc harrow is recommended, or some kind of cultivator that will do the work well. In a great many districts, and in fact it is quite general, it is the practice to plow sod for corn, and if it is a clover sod so much the better. The practice is to plow this sod pretty deeply in the fall, and, if possible, work it some on top before the winter sets in. During the winter or spring apply a liberal coat of manure, and then plow shallow, after which work the land thoroughly before planting. Some adopt the very reverse of this, and plow shallow in the fall and deeper in the spring. In such cases the manure is applied in the fall before the shallow plowing. The plan of plowing down a clover sod is very strongly recommended, and in nearly every case has given good results. Some recommend plowing the clover sod in the fall if the land is heavy clay, and applying the manure in the fall if it is coarse, but if well rotted apply in the spring. If the land is sandy or a sandy loam the sod is plowed in the spring after adding a liberal coat of manure.

The growing of a corn crop is considered by some to be a good way of cleaning a dirty field. Several correspondents mention this being done with very good results. If the corn is planted in hills so arranged that it can be cultivated both ways it may be a good plan to make the growing of a crop of corn a kind of scavenger for weeds, but we are somewhat doubtful about the practice being a good one. The corn will have a much better chance if the land is thoroughly cleaned before it is planted. In preparing the land it is considered to be a good plan to roll the land a couple of times. This would certainly help to pulverize the land and make it in finer condition.

In growing corn for the silo and for fodder a common practice is to plant it with the seeder in drills from three and a half to four feet apart with grains about six inches apart. Where the corn is planted in hills four or five grains to the hill is about right. It is usually planted in the hills by hand or an ordinary corn planter. Where the land is marked both ways, as recommended in Mr. Moore's article, corn can be planted very quickly by dropping the seeds where the markings cross. The time for planting varies somewhat. The time usually followed is from the 15th to the 24th of May. This will largely depend upon the nature of the soil and the season. Unless the ground is well prepared and warm it is not good to plant too early. After planting, one of our correspondents recommends harrowing with a light harrow when the corn is from three to six inches high. Whether it would be safe to do this in all cases it is hard to say. At any rate the corn cannot be cultivated too much from the time it appears above the ground till it is so high that a horse cannot walk through it. The more cultivation it gets the better. The plan of harrowing between the rows, recommended by Mr. Moore, should be a good one. His especially constructed harrow is easy to make.

#### THE RELATION OF AGRICULTURE TO OUR SCHOOL SYSTEM.

By F. C. WALLACE (Wallace & Fraser), St. John, N. B., and Toronto.

Much interest attaches to Prof. James' paper on "The Relation of Agriculture to our School System," and I may be pardoned for making a few suggestions on the subject.

The conclusions he reaches are well and thoughtfully reasoned, and not at all strained. As he truly says, the difficulty is to judge just how to apply them practically to the schools. It has occurred to me that if the teachers of rural schools were themselves thoroughly versed in the science of agriculture and the latest researches, and besides had a practical agricultural training, it would greatly assist in forwarding the plan of education. An afternoon talk on agriculture (or you might call it a lecture), the subjects being chosen to meet the stage of advancement of the pupils, would be of great value. These talks might often be made to fit the season of planting, growing, and harvesting. The peculiarities of the soil of the district might be sometimes dwelt on. Feeding, the care of manures, dairying, forestry etc., would all come in place, and a practical kindergarten plan of referring to the farms on which the pupils lived would furnish object lessons for these talks.

While it is true that an attempt at teaching practical agriculture in the schools would almost surely be a total failure, the benefit to be gained from the general principles of scientific agriculture to the farmers' children must result in great good to the nation.

Another plan, and possibly one more easily introduced quickly, would be the employment of a staff of traveling agricultural teachers, who would go from district to district giving these talks or lectures in the schools. The attendance of the parents of the children at these school talks could be encouraged, and thus much good could be done as they would be thus enabled to assist their children at home in following up the themes in a practical way. In the city schools the pupils get a much better education than in the country schools, and it is noticeable that when a well educated, city bred man takes to farming he brings much more intelligent effort to his work than the country bred man. His brain seems to be better developed and guides his work more intelligently, and with perseverance he soon acquires the practice which makes him a skilled workman. His observation is usually keener, and he more quickly notes phenomena, and seeks the cause which produces various effects. It is noticeable also that a mechanic, or a man with a naturally mechanical bent, usually displays much intelligence in farming. It always seems a hardship that boys are forced to leave their father's farm, and seek a living in the cities. May not the cause of this be partly from the fact that through want of knowledge of the actual requirements of the land and of the plants, the farm is showing evidence of running down. The farmer says the crops are not what they used to be, while the needs seem greater. The boy's education in the country school has not taught him how to remedy the evil.

The farmer, not knowing himself, is unable to enlighten him, and the son dreads to take up as a life task a matter which seems shrouded in mystery.

The true plan of education then must be to open the children's mind to the known facts of agricultural science. Instead of allowing them to grow up with the idea that it is all an unfathomable mystery, teach them to understand clearly the nature and constitution of plants and soils; how plants feed; what they require for proper development and ripening; how the food is to be procured and prepared; how to turn to account the natural forces by which they are surrounded; how to prevent disease of the crops, and how to treat it when it appears. Teach them the difference between the animal which carries its food about with it while it digests and absorbs it, and the plant fixed in the soil which pushes its way through its food in the soil digesting and absorbing it. Let them understand animals and their requirements and the science of feeding, so that from actual knowledge they may develop judgment in disposing of the products of the land on the farm itself. All are not "born feeders"; early acquired knowledge and training may develop a latent faculty. Open their eyes while yet young to the nature and composition of milk and its products, and when the traveling dairy comes along they will quickly and surely understand its practical teachings. In fact prepare the youthful mind on the subjects of its surroundings in life, and as it develops and matures the man himself will complete his education by observation and practice.

But the greatest stumbling block to be encountered is the farmer himself. Usually short-sighted and wedded to false economies and antiquated notions, he resents what he considers innovations. Not realizing the necessity for this higher education and more accustomed to use his brawn than his brain, he doubts (often in a very positive way) the wisdom of introducing what he is pleased to term "new-fangled notions." His way of going has been incessant toil from daybreak till the stars twinkle in the sky, and he starts in early to "bring the boy up in the way he should go." Duped as he frequently is by all sorts of traders, he naturally looks with suspicion on any attempt to interfere with his settled notions of farming; consequently in preparing agricultural education for the farmers' children, we must reckon with the parents as well as with their children, with the teachers as well as the scholars, with settled customs and the conditions of rural society of to-day as well as of the future. The task is no light one, and it is sincerely to be hoped that Prof. James will not turn back from the plow to which he has put his hand, for no greater benefit can be bestowed upon agriculture than that of the education of the agriculturist who stands greatly in need of light.

Young hens are unquestionably the best for egg production.

Filthy houses breed lice, and lice are the cause of most poultry diseases.

#### PREMIUMS EASILY OBTAINED.

The following letter shows how easily premiums may be obtained by those who determine upon making the necessary effort to secure them.

Adelaide, April 19, 1898.

DEAR SIR,—Having seen in last week's *FARMING* the list of valuable premiums offered I determined to make an effort to secure one. The result was that I succeeded in a very short time. Enclosed please find \$1.18 to pay for one year's subscription for Mr. L. T. Miller, Adelaide, Ont., and one bushel of Prussian blue peas. The 18c. is to pay for the bag. Hoping this slight effort to increase the circulation of your indispensable journal on agriculture may meet with your approval, I remain, yours sincerely,

ALFRED CUDDY.

It is needless to say that Mr. Cuddy's effort is not only very highly appreciated, but we are very much obliged to him for the opportunity it gives us of showing how easily the circulation of *FARMING* could be doubled if each of our friends would follow his example. It shows also how profitable the effort is. What Mr. Cuddy got would have cost him 75c. if obtained in any other way, whereas the actual cost to him was only 3c. for postage.

#### Books.

TESTING MILK AND ITS PRODUCTS. By Professors E. H. Farrington and F. W. Woll. 8vo., 236 pages. Price \$1.

This book should be in the hands of every dairyman in Canada. Copies of it may be obtained at this office, or will be sent free to anyone for two new yearly subscribers at \$1 each.

THE TRACTION ENGINE: Its Use and Abuse. By James H. Maggard. Revised and enlarged by an expert engineer. Philadelphia, Pa. Price \$1.

As announced by the author this is not a scientific work on engineering, which would be only valuable to engineers of large stationary engines, but is intended for engineers of farm and traction engines. "Rough-and-tumble engineers," who "have everything in their favor to-day and to-morrow are in mud-holes; who with the same engine do eight horse work one day and sixteen horse work next day; who use well water to-day, creek water to-morrow, and water from some stagnant pool next day." To these who operate farm and traction engines it will furnish a great deal of valuable information in plain everyday language, free from all technicalities so that "he who runs may read."

FIRE AND FROST: Stories, Dialogues, Satires, Essays, Poems, etc. By Ethelbert F. H. Cross.

This little book appeals so strongly to the national sentiment and sympathy we cannot refrain from giving it a good send-off although it does not treat of any subject connected with agricultural journalism. It is, in fact, a collection of short stories, essays and poems, written by a clever young Canadian who is destined at no distant date to make his mark in a much wider field, if first performances can be taken as any indication of future accomplishment. The author, though still a very young man, is by no means unknown to literature. He has been a tolerably prolific writer and a constant contributor for some years to the leading Canadian and American literary journals and magazines and his productions have claimed a large number of admirers on both sides of the line. "Fire and Frost" is the first attempt to collect his works in concrete form and we have no doubt it will be extensively read as it well deserves to be. The stories bear the impress of that indefinable charm which local coloring and familiar scenes and events lend to works of fiction or of history. We should certainly like those of our friends who appreciate a good story, an instructive essay or an interesting poem to procure a copy of this very excellent product of typical Canadian genius. It may be obtained from all booksellers. Price \$1, handsomely bound in cloth.

You can't become practical by books alone; you must combine experience with them.

# The Ontario Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

## THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees.—Cattle Breeders', \$1, Sheep Breeders', \$1, Swine Breeders', \$2.

### BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head, non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 50,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs, that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

F. W. HODSON, Secretary,  
Parliament Buildings Toronto, Ont.

### LIVE STOCK FOR THE WEST.

Another car-load of pure-bred live stock will be shipped to the North-west under the auspices of the Dominion Live Stock Associations, leaving Ontario the last week in June. The following gentlemen have spoken for space: Henry Arkell, Arkell, 6 sheep; W. R. Bowman, Mt. Forest, yearling heifer; A. McArthur, Welwyn, Assa., 2 Ayrshire cows; W. H. & C. H. McNish, Lyn, 2 Guernsey cows and 1 heifer.

There is still space in this car for a number of animals. Parties wishing to send pure-bred live stock to Manitoba or the North-west in this car are respectfully requested to correspond with F. W. Hodson, Parliament Buildings, Toronto.

### Farmers' Institute Department.

#### GROWING SUNFLOWERS.

By Jos. E. GOULD

I have been asked to write a note on my method of growing sunflowers. I attempted some four years ago to put Prof. Robertson's mixture into the silo, viz., Corn, Sunflowers, and Horse Beans. I succeeded with the corn and the sunflowers, but the beans were a total failure. From experience I believe the sunflower adds largely to the value of the silage. The method I adopt is one-quarter acre of sunflowers to two acres of corn. I plant one acre of corn, then a quarter of an acre of sunflowers, two acres of corn and another quarter of an acre of sunflowers. I do not plant the sunflowers in the hills with the corn. I did this once but never after. When we cut the crop for the silo we go across the whole crop, taking the corn and the heads of the sunflowers.

I am a crank on thinking the only sensible way to grow corn is to plant in hills. We mark off our field in squares forty inches each way, and plant the sunflowers in the squares the same as the corn and cultivate the same way and at the same time. It requires about two good stalks to the hill, but sunflower seed is cheap and we plant it with the corn planter and thin out two or three stalks to the hill. About three pounds of seed will plant an acre; enough for

eight acres of corn. Plant Mammoth Russian. Some seed is sold for Mammoth Russian that is not true. Buy from a responsible dealer or you may have a failure.

I do not tell you how you are to get away with the stalks after the heads are in the silo. When you have found out tell your neighbor, but do not tell him until you are satisfied that you have the best plan. I have not got it yet.

Relating to the above subject, Mr. D. M. Macpherson writes as follows:

"I have tried the growing and feeding of corn, sunflowers, and bean mixture for silage purposes, and have found it not sufficiently satisfactory to continue its production, for the following causes: Reduced production per acre of corn, increased expense of securing properly in the silo, and the results of fertility to land for future operations reduced rather than increased. So far as the immediate resultant effects from feeding were concerned, it was found to take less grain to make up a balanced daily ration, but when the reduced amount of corn product per acre is figured, the full fertility results returnable to the land comes far short of a full corn crop. This corn and sunflower mixture takes the same position as corn and grain growing combined for milk or beef production. No farmer can produce all the constituents of a balanced fattening or milk ration on his own farm profitably. The only part a feeder can profitably produce (or purchase) on his own farm is the 'bulk' or carbonaceous, such as corn, and the other main part of a ration can be purchased most cheaply in the open market, such as by-products or grain, peas, beans, oats and barley. By producing the greatest bulk, or carbonaceous part, of feed per acre, and purchasing in the open market that product containing the greatest amount of albuminoids for the least money, we have a combination which acquires a balanced ration at the least money, thereby enabling the farmer to produce 'animal products' at the least cost, and acquire at the same time the greatest amount of outside fertility to return to the soil in the form of stable manure for future uses. This subdivision of a balanced ration of bulk

and nourishment and acquiring each in the cheapest market, fulfils the first principles of success in farming, which is buying animal food and plant food in the cheapest market and to the greatest extent. While acquiring and producing all the elements of a productive animal ration on the individual farm reduces the fertility yearly and limits to a minimum the productive capacity of a farm, this annually becomes less, when, on the contrary, it should be on the increase. For such causes, based on scientific and business calculations and proved by practical demonstrations for the past number of years, I have abandoned the growing and feeding of the mixture of corn, sunflowers, and beans, and even corn and grain."

### Ontario Agricultural College.

#### NOTES FROM THE DAIRY DEPARTMENT.

By PROFESSOR H. H. DLAN.

Cows.

The cows in the department are looking well. Our winter ration of 35 lbs. corn silage, 10 lbs. hay, 20 lbs. mangolds, 3 lbs. bran, 2 lbs. oats, and 3 lbs. pease has maintained the cows in excellent condition and produced a satisfactory flow of milk. We still have a large quantity of silage and will have some for summer feeding if it is needed.

The young calves and heifers are doing nicely. We purpose making an experiment at an early date to ascertain the value of pasteurized and raw skim milk for calves. All calves intended for use in the dairy herd are fed skim milk when three or four weeks old. Meal is added to the milk. This meal consists of bran, oil-cake, and ground oats. They thrive well on this feed. Skim milk is bound to play an important part in the future of Canadian dairying in two ways: rearing the future dairy cows; rearing and fattening the bacon pig. The difference in the profits from milk sent to a cheese factory or creamery will largely depend upon the value of the skim milk vs. the whey. Many are asking the difference in the value of the two by-products.

Dairy Experiments.

Our season for experimental work began April 4th. As usual we are experiencing difficulty in obtaining a regular supply of milk through the season. As Guelph is not a dairy district, the milk supply for school and experimental purposes, at reasonable prices, is a problem not easily solved. The work mapped out for the year will cover the following points:

**Cheesemaking.**—Mottled cheese, causes and remedy, relation of fat in milk to quantity and quality of cheese (5th year); aeration of milk for cheesemaking; best methods of handling over-ripe milk; effect of rennet on time required for coagulation; dipping at different stages of acid on curd; milling at different degrees of curd ripeness; temperature for putting curd to press; effects of temperature and moisture in curing of cheese.

**Buttermaking.**—Pasteurization of whole milk and cream for buttermaking; best temperature for separating; effects of heating and cooling, ripening temperature and percentage of starter when ripening cream; moisture in butter, effect of lactation and gestation periods on quality of butter.

Other questions may be investigated as time permits and circumstances require. During the month of June our time is almost wholly taken up with excursions.

We may add so far as time will permit, the Dairy Department is prepared, assisted by other departments of the college, to investigate any difficulty that may arise in cheese factory or creamery work during 1898. Our dairy interests have now become so important that anything which tends to deteriorate the reputation and quality of Canadian cheese or butter must have the most careful research of our ablest men and best methods.

Different Methods of Creaming.

For three years the Dairy Department of the college has been experimenting as to the best method of creaming milk so as to get the most butter of the best quality from a given quantity of milk. Our plan has been to mix the herd milk well, then divide it into three equal portions and set one-third in the small shallow pan, one-third in deep-setting cans in ice water, and one-third is run through the separator.

The average per cent. of the total fat lost in skim and butter milk during 1893 and 1894 was 2.35 from the separator, 6.1 from deep-setting and 9.05 from shallow pans, or, in other words, for every 100 pounds of butter fat made we lost about 2½ pounds of butter by using the separator, 6 pounds by the use of deep setting cans in ice water, and 9 pounds by using shallow pans. The loss from setting methods is greater in hot weather. The quality of the butter is not so good from shallow pans in hot weather, whereas in cool weather it is fairly good and compares favorably with deep setting and separator butter. In 1895 the results from the three methods during the months of April, May and June were 50 lbs. 6 oz. of butter from the separator; 49 lbs. 11 oz. from deep setting; and 48 lbs. 2 oz. from shallow pan. The loss of fat in the buttermilk was slightly greater from the setting methods.

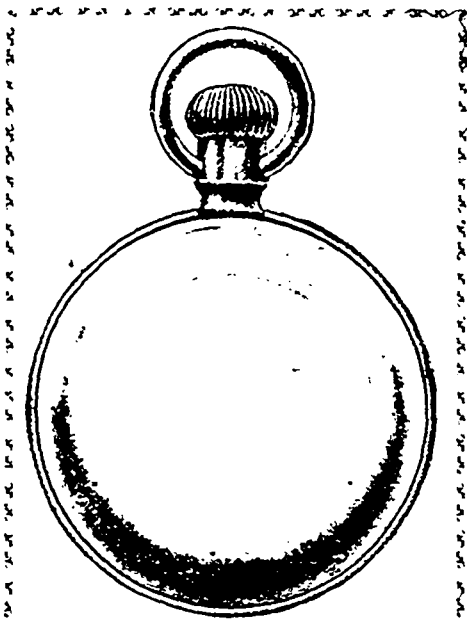
To show how small things affect milk setting in shallow pans I would mention the fact that one day a window was left open so that there was a draught blowing on the milk. This cream was tough and when strained into the churn there was fully one-fourth of a pound of butter in it that would not strain because of the lumps of cream.

**Lesson.**—Milk setting in shallow pans should not be exposed to any draught of air, but should be kept in a cool and comparatively moist place so as to prevent drying of the cream. But dampness and mould usually go together and the latter must be guarded against.

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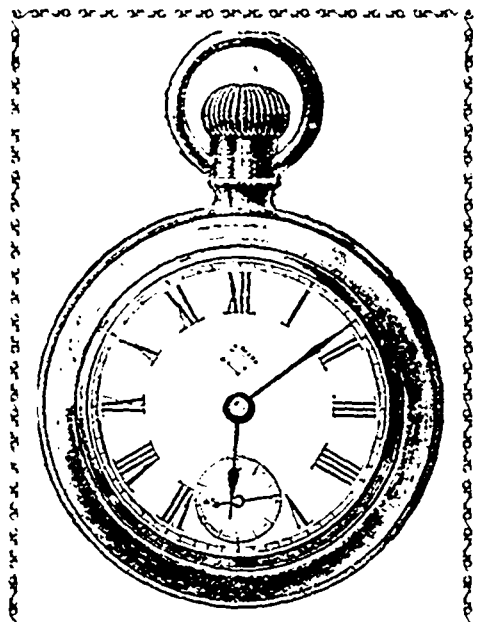
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**THE CANADIAN HORSE SHOW.**

"That the end of the horse is not near" must have been the verdict of all who attended the Canadian Horse Show held in the Armouries, Toronto, on May 4th, 5th, 6th, and 7th. The record of this show has been a series of successes from the beginning, but this year's exhibit was, on the whole, ahead of anything yet seen, while, unless we are very much mistaken, when the returns are all in, we expect that the management will find the receipts ahead of those of any previous year. The attendance was very large, especially in the evenings, Friday and Saturday being bumper evenings, with scarcely any standing room to spare. On Saturday morning children were admitted for ten cents a head, and a large and appreciative audience they were, cheering the ponies and their riders as they essayed to clear the fences erected to test their jumping powers and skill.

This year the breeders and the Toronto Hunt Club united with the military authorities and held the show conjointly with the Military Tournament, which is also held annually. The date fixed was later than the breeders would have liked, but an earlier date was out of the question. The lateness of the date accounted for a decrease in the number of entries in the breeding classes, especially in the heavy breeds, but we think that, if breeders of Clydesdales and Shires had known that their horses would be shown on the first morning and that they could get away at once afterwards, they would have entered in larger numbers.

The total number of entries were about forty more than they were in 1897. The harness and saddle classes were splendidly filled. The class with the largest number of entries, viz., twenty-seven, was the jumping class, No. 43, open to all.

Everything went off smoothly and in only a couple of classes was there any preventable delay. When the exceedingly large number of horses in some of the classes is considered, this was a splendid showing.

Geo. Pepper, as usual, proved an invaluable superintendent, and Sergeant-Major Dingley, who once more acted as ring-master, did so to the satisfaction of every one.

The purely military part of the exhibition proved a very drawing card. Among these the most popular was the exhibition of free gymnastics by the cadets of the Royal Military College, Kingston, a really excellent proof of what can be done by steady training. The musical ride by the Royal Canadian Dragoons and the driving of A Battery of Artillery were also well received.

The show was opened by the Governor-General, Lord Aberdeen, who was accompanied by Lady Aberdeen. Sir Oliver and Miss Mowat were also present.

**CARRIAGE OR COACH STALLIONS.**

All of the three horses entered in this class faced the judge, Mr. R. Gilson, Delaware. The first prize winner was found in Jas. McCartney's German coacher, Gray Bremer, now nine years old, which has on several previous occasions occupied a similar position. W. C. Brown, Meadowvale, was second with Prince George, by Prince Victor, while third was sent to Hannibal, a black, exhibited by Donald Watson, Maple.

**STANDARD BRED ROADSTER STALLIONS.**

There was only one class offered for Standard-bred stallions this year. The awards were made by Mr. C. E. Elliott, St. Catharines. Five horses were forward, and the judge seemed to have considerable difficulty in coming to a decision. Eventually first was sent to a big upstanding bay, Larabie the Great, 30,345, shown by the McLaren Stock Farm, Buckingham, Que., second to Altoner, 17,493, which has previously been a winner at the Spring Show here, and third to the aged horse, Frazier, 22,593, entered by Jas. McCartney, Thamesford.

**HACKNEYS.**

Richard Gibson, Delaware, was the judge on Hackneys. In the aged stallion class were entered five well known horses, all imported but one. They were Royal Standard (imp.) and Courier (imp.), both shown by Graham Bros., Claremont; Fireworks (imp.) and Rosseau Performer (imp.), both owned by H. N. Crossley, Rosseau; and Banquo, Robt. Beith's excellent son of Jubilee Chief. The horses were put through their paces at the walk and trot, and though they did very creditably, yet we have seen them show themselves off to better advantage on former occasions. In fact, Banquo and Royal Standard acted bet-

ter on the succeeding days when shown for the sweepstakes. Royal Standard once more took the head of his class with Banquo second, Courier third, and Rosseau Performer fourth. In the younger stallion class Mr. Crossley's Rosseau Swell, a roan, by Royal Standard, and a very promising colt, took first honors over Mr. Beith's Hortensio, a bay son of Jubilee Chief, and out of Mona's Queen, these two being the only ones entered in this section.

Hackney mares foaled subsequent to January 1st, 1895, were three in number. Robert Beith's Casandra, a good mover and a big one to boot, was placed first. She is full sister to Hortensio. Third went to the same owner's Bianco, by Sea Gull, out of Cherry Ripe. H. N. Crossley's Miss Roberta, a dark bay with a fine head and neck and plenty of quality, came second.

Class to was for high steppers, not under fifteen hands, shown before a suitable conveyance, and sired by a Hackey stallion. Seven horses of line type came before the judge, all of them giving proof of the benefit the use of Hackney sires has been to the country. First went to a nice chestnut gelding, Blucher, a son of Jubilee Chief, shown by T. A. Crow, Toronto; second honors fell to a daughter of Fire Fly, Mildred, owned by E. B. Clancy, Toronto, and third to R. Beith's thoroughbred mare, Mopsa, by Ottawa, out of Lady Aberdeen.

The open sweepstakes for Hackney stallions went to Royal Standard, and that given by the English Hackney Association for stallions by an imported sire and out of an imported dam, both registered in the English Hackney Stud-Book, to Banquo. The open sweepstakes for mares as well as the special given by the English Association was won by Casandra, shown by Robert Beith, Bowmanville.

**SHIRES.**

Out of the three aged Shire stallions entered only one was present, J. M. Gardhouse's Active [269], a chestnut with one white hind foot, to which was awarded first prize in his class and also the diploma for Shire stallions. The same exhibitor had the only entry in the younger class, Fitzsimmons [270], a promising youngster by Duke of Highfield, by King of the Castle, also exhibited by Mr. Gardhouse, was present. She is a big roomy mare, and deserved the first prize given her.

**CLYDESDALES.**

As last year, the Clydesdale class was very slimly filled. In the aged stallion section Graham Bros., Claremont, had made two entries, Young Marnion [2343] and Two in One [2344], neither of which, however, were present. Robert Davies, Toronto, had his well-known home-bred horse, King's Own, on hand, a horse of excellent type, and was successful in winning first with him; Alex. Doherty, Ellesmere, coming second with Macqueen, a son of Queen's Own, out of Miss Fleming.

All four of the Clydesdale stallions foaled in 1895 which were entered faced the judge, Mr. Geo. Moore, Waterloo, who selected Robert Davies' Border Reiver, a nice bodied, dappled brown for first place. This horse was bred by Lord Polwarth, and was imported by his present owner last year. Second place went to John Vipond's The General, by Queen's Own, a good useful horse; Goldfinger second, last year's first prize winner having to be content with third place.

Young Clyde stallions were three in number, all forward. Here again Robert Davies

came to the fore with Tom Macgregor, a son of Macgregor [1487], a colt of good conformation. His second entry, Prince Royal, came third, with Alex. Doherty's Prince of Blantyre, the first prize yearling last year, second.

The sweepstakes for best Clydesdale stallion went to Robert Davies' Border Reiver.

There was a separate class for Canadian-bred Clydesdale stallions foaled previous to January 1st, 1896, but out of the two horses entered only one was present, Bay Wattie, shown by W. J. Howard, Amber, which was second last year, and now carried first.

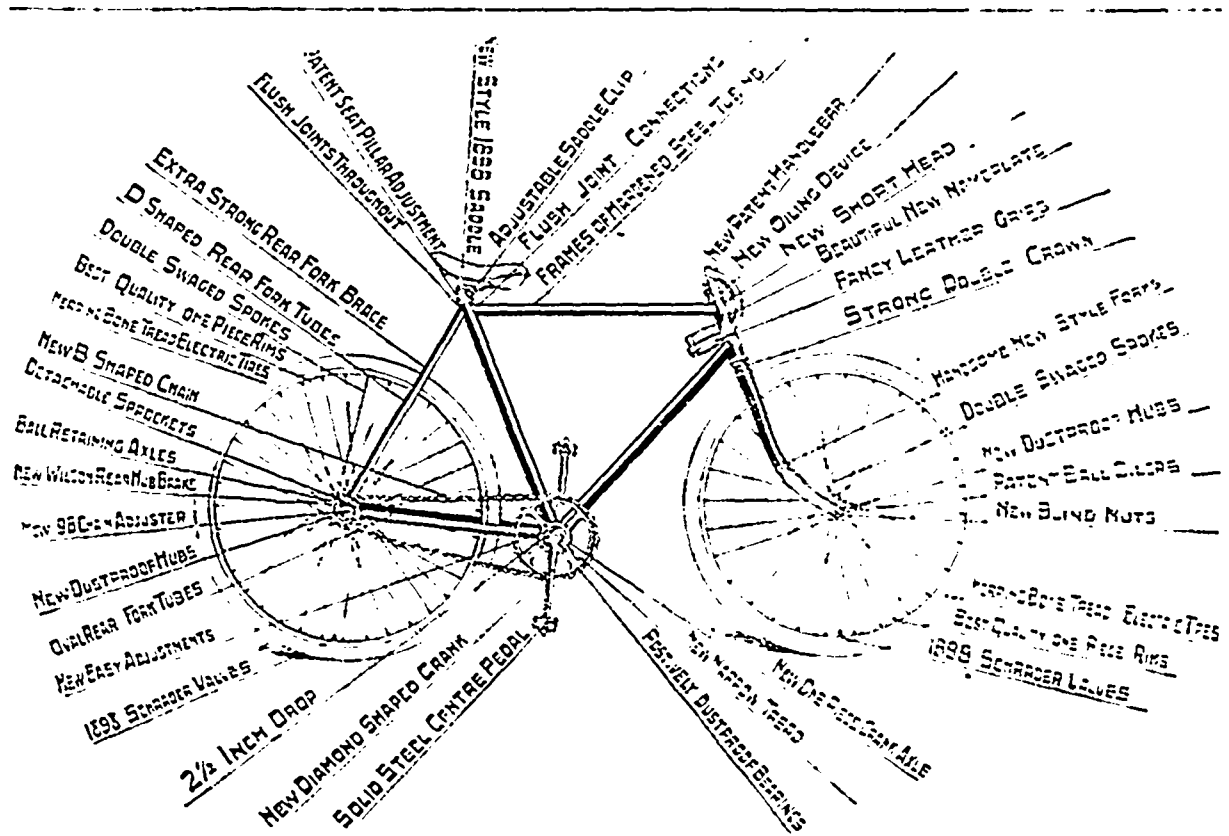
Two capital Clydesdale mares were shown in Class 25. They were Kate Hill 3rd [2221] and Boydston Lars 7th [2285], both owned by Jas. I. Davidson & Son, Balsam, and were well worthy of the first and second prizes respectively which were awarded them. They were also good enough to win first in the class for pairs of mares or geldings, of any breed, shown in harness. In this latter class the four teams entered made a good display. Second honors were taken by a big strong team shown by the Wm. Hendrie Co., Toronto, which were first here last year, and third went to a pair of mixed Clyde and Shire breeding, owned by F. B. Fenwick, Coleraine.

**THOROUGHBRED STALLIONS.**

Four exhibitors had horses entered in the aged Thoroughbred class, of which three were on hand. J. E. Seagram, M.P., Waterloo, had a very handsome son of Wenlock in Morphew, who was full of life and spirit, and had no difficulty in winning the red ribbon. In addition to his style and conformation he is also one of the fastest horses on the turf. Wm. Hendrie's chestnut, Strathelyde, who won premier honors here last year in this

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class, came second, and A. Frank & Son's Terremont third. The latter was a winner at the last Spring Show in the younger class.

In the three-year-old section the Seagram stables again came to the front with another handsome chestnut, Romance, followed by Gates & Elliott's Unnamed, and W. F. Maclean's V. R. Customs, in the order named.

The class for thoroughbred stallions, qualified to improve the breed of saddle horses and hunters, contained nine entries of which eight were present, and a very good lot they were, the class being the best that we have ever seen at this show. Wiley Buckles, the veteran prize winner, was entered, but was not forward. The judge held a preliminary examination of the horses on Friday morning, and they were paraded for final judgment in the afternoon. Wm. Hendrie's Othmar, a good-looking bay, came first, with Robt. Thomson's Trinity, a chestnut, one of a lot brought to Canada a few years ago by W. D. Grand, second, and Graham Bros.' stylish chestnut, Godard, third. This was a complete reversal of the judgment last year, when Godard was placed first and Othmar nowhere. Trinity not having been present on that occasion.

Fillies or geldings sired by a thoroughbred stallion were five in number, and a nice lot. First went to Peacock shown by Geo. Pepper, agent, a lay and a good type of saddle. Third was sent to Queensberry, one of the same exhibitor's string, a promising filly that showed off well in some of the jumping classes. Second honors fell to T. H. Hassard's Prince, a good gelding, but not true enough to the saddle type, it seemed to us, the class being specially for horses suitable for saddlers or hunters.

HORSES IN HARNESS.

The first class for harness horses was for horses not exceeding 15.2 hands to be shown to gig, cart, or phaeton. The judges were Harry Hamlin and Seward Cary, Buffalo, N.Y. Twelve horses were out, and some very good ones among them; in fact, the whole class was a most creditable one. The brown mare, Coronet, shown by George Pepper, Toronto, for her owner, came in for first honor, showing good action and nice conformation. Second and third places went to Robert Beith's Hackney, Mopsa, and the half bred Hackney, Rosalind, both of whom looked and acted well. The reserve horse was Wallace, a half bred Hackney shown by Thos. A. Crow, Toronto.

The class for mares or geldings over 15.2 inches, shown to similar vehicles as those in the last class, was also a good one. Here again twelve horses faced the judges, and once more good Hackney blood came to the front in the shape of Blucher. Thos. A. Crow's chestnut gelding, S. B. Fuller, Woodstock, had a neat thing in Headlight, and E. B. Clancy, Toronto, a nice bay mare, Phyllis.

Pairs of horses not exceeding 15.2 hands were rather a mixed lot, with some very good ones and some culls. The Bowmanville stable carried off the red ribbon with Mopsa and Rosalind, which one of the judges pronounced the best team he had seen at the show. Mr. Beith also won second with Rosalind and Royal Jubilee, two good ones. Thos. A. Crow's Wallace and Bruce came third.

The next class was for pairs over 15.2, and a grand class it was. S. F. McKinnon's well-matched chestnuts could not be denied first honors. Thos. A. Crow was second, and E. B. Clancy third, both teams being above the average.

Class 32 was for horses of a similar height, but shown before a brougham, horses counting 60 per cent. and brougham and appointments 40 per cent. J. Ross Robertson, the well-known M.P. of Toronto, was successful here, winning first with a neat team, P. M. Ther

Toronto, with a fine big pair, getting the blue ribbon, while S. F. McKinnon's chestnuts were placed third.

Harness tandems numbered six. Thos. A. Crow scored successfully with Wellington and Blucher for first, and Gladstone and Skylark for third. G. Pepper showed Coronet and Bruce and came second, the leader showing good action but rather bad manners.

FOUR-IN-HANDS.

Six exhibitors had entered their teams, of which three were present. Only two prizes were offered, first going to Robt. Beith's Hackneys, which went splendid together before a drag. Quin Bros. had their team before an English-made coach, and made a good display. They came in second. The other exhibitor was Thos. A. Crow.

SADDLE HORSES.

The first class for saddle horses was for horses over 14.2 and not exceeding 15.2 hands. Out of the eight which were lined up in the ring after being tested at the walk, trot and canter, the judges selected the handsome Rainbow ridden by young Brock Fuller, Woodstock, for first honors. A. R. Curzon, Guelph, took second place with The Sculptor, while Dr. Campbell, Toronto, was awarded the white ribbon.

Saddle horses over 15.2 hands were fourteen in number, and took some time to judge. Hume Blake's Rufus claimed first honors, beating Gordon Grand's Exclusive, G. A. Stimson being third with Gold Star.

Gordon Grand beat all comers for lady's saddle horses with Exclusive, A. R. Curzon, Guelph, being placed second with his brown mare, Queen B., and Miss M. Hendrie, Hamilton, third with the five-year-old Caledon.

Class 38 was the "combination" one for best saddle and harness horse 15 hands and over to be first shown in harness, then under saddle, quality and manners being specially considered. A splendid lot of horses were entered, of which fifteen were present. The three winners were W. J. Mills' Black Patti and Gordon Grand's Exclusive.

The hustling and jumping classes were very well filled. Lady Roseberry, one of Adam Beck's string, a good jumper and fine conformation, won first in the heavyweight qualified hunters' class, with Wm. Hendrie's Rob Roy second, and Miss Ottaway's My Lady third.

Among the lightweight qualified hunters were found some excellent fences. A. R. Curzon scored first with Victoria, followed closely by Geo. Pepper's Molly Morgan, and W. D. Grand's noted Red Oak.

Eleven heavyweight green hunters competed, and formed a nice class. Geo. Pepper was again victorious with Rainbow, with Brian Bora shown by E. Phillips, Toronto, next, and Dr. Andrew Smith's Kedar third. Some good jumping was done in the lightweight green hunters class. A popular winner was Rainbow, shown and ridden in capital style by Brock Fuller, Woodstock. Geo. Pepper's Queensberry distinguished himself and won second, and the same owner's Klondike was third.

In the jumping class, performances over fences only to count, A. R. Curzon's Victoria again did some clever work, which placed her above W. D. Grand's great jumper, Red Oak, Adam Beck's Huntsman coming third.

Class 44. This class read, "For best performances over six jumps—two at 4 ft., two at 4 ft. 6 in., two at 5 ft.—carrying not less than 140 lbs.," the prizes being awarded entirely for jumping irrespective of conformation. Fourteen horses tried their luck over the fences, some with indifferent success. First was properly sent to Adam Beck, whose gelding Huntsman cleared nearly all the jumps, including the last high one. Second prize went to P. A. Manning's Glencoe, who

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negotiated his leaps very well. Geo. Pepper's Queensberry was not far behind, and got third place.

**CORINTHIAN CLASS.**

The Corinthian class was open to hunters ridden by members of some recognized hunt. In this class conformation and quality only counted 25 per cent., three-quarters of the marks being given for the horse's performance over fences. Some good jumping was shown, but Adam Beck's Lady Roseberry and other cracks did not show off as well as usual, and got no place in the prize list. Dr. Peters' Veto, well ridden by the doctor, came ahead on a very creditable performance. Adam Beck's Huntsman was next, only two prizes being offered in this class.

**ROADSTERS.**

There was a class for single roadsters and one for pairs. The former was well filled, there being eighteen out to face the judge, Dr. Elliott, of St. Catharines, who spent a wearisome time examining them. The decisions when given were not popular. D. T. Lowes, Brampton, secured first with Nora Belmont, second to E. B. Clancy's Domam, and third to R. K. McKellar's Tom.

Six pairs were entered, the judge on this class being Dr. A. Rutherford, M.P.P., Portage la Prairie, who made much speedier work than his predecessor. A pair of blacks, shown by W. R. McBryen, Toronto, were placed first, a chestnut team, owned by Thos. Heron, Windham Centre, carried second, and Thos. Oliphant's bay third.

**PONIES.**

Saturday morning was children's day, and the boxes and seats were occupied by a very large and appreciative audience of youngsters, who came to see the ponies jump.

There was a class for ponies in harness 14 hands and under, which was judged by Major Lessard, Stanley Barracks. R. Keith's Greta was an outstanding winner in this class. The Little Wonder, entered by Ewart Mills, Toronto, came 2nd, and J. C. Anderson's Billy G. third.

The jumping for ponies was divided into a class for those 13-2 and under, and one for those over 13-2 and under 14-3 hands. In the first class the jumping was very fair although nearly all refused their jumps occasionally. C. A. Burns, R. J. Fleming, and Ewart Mills, Toronto, won with their ponies in the order given.

In the second jumping class the jumping was good. G. Pepper had a magnificent jumper in the aged mare Maud, which stood first. Reindeer, shown by S. F. Fuller and ridden splendidly by his son Brock, was a good second, with Capt. Forester's Duty, which jumped well but was badly handled, third.

The prize for the best and best appointed pair of horses in cuts brought out six fine turnouts. P. Maher won 1st, and F. Doane was given the blue ribbon. This class is always closely contested, nor was there an exception to the rule this year.

Single horses in delivery wagons were five in number. The Copland Brewery Co. were first, with Thos. Bartrem, Toronto, a good second.

James Morton, coachman for Geo. Gooderham, was awarded first, and Walter Hudd, coachman for A. E. Gooderham, 2nd in the professional coachman's class.

The prize for best driving by gentlemen was won by Dr. Peters, Toronto.

Class 55 was for a hunting tandem, the leader to be a qualified hunter. The tandem was first shown as such, and then the leader was shown over the jumps. Conformation and quality of tandem counted 50 per cent., and performance of leader over fences 50 per cent. Adam Beck, London, came first with a very good pair, followed closely by Dr. Peters. Miss Hendrie, Hamilton, was 3rd.

Hunt club teams of three hunters from a recognized hunt, ridden in hunt colors by gentlemen, were the last class on the list. Their performance over fences counted 60 per cent., and conformation 50 per cent. The three prizes were awarded as follows: 1st, Toronto Hunt Club; 2nd, London Hunt Club; 3rd, Hamilton Hunt Club.

One of the most useful things around the farm is a pot of paint. A good deal of repair is going on at this season, and the paint pot should always be kept handy.

**Publishers' Desk.**

**Italian Bees.**—We wish to call the attention of those desiring to procure strong colonies of bees to the advertisement of Mr. Alpine McGregor, of Inglewood, Ont. His prices are very low and his bees guaranteed.

**A Beautiful Book.**—The North American Life Assurance Company have made the completion in the improvements of their new home office in Toronto the occasion for issuing a beautiful little book, printed in blue and gold, comprising the annual report as well as other interesting matter in regard to this successful Canadian financial institution. The company have secured for their head office the historic building erected by the United Empire Club, and afterwards occupied by the Canadian Pacific Railway, which is admirably adapted for its purpose. An illustrated descriptive article about the building and its appointments, written by T. Howard Ames, is included in the book.

**Honest Methods Pay.**—There is no question about it. The firm which deals with its customers—rich and poor alike—on the one undeviating principle of fair and courteous treatment to everybody is bound to take the lead no matter what its line may be or where its business may be centered. The facts which point most emphatically to good reputation in a business-house are traceable in the volume of business it can command year after year, and no business can be wholly successful unless honesty and fair dealing are to be found in the manager's office. We have been led into this train of reasoning by a report just to hand regarding the splendid business established by The McLaughlin Carriage Co., in the brisk little town of Oshawa. This firm employs more than 200 skilled hands in the manufacture of high grade vehicles, yet so popular are their manufactures that, even by working overtime, it is almost impossible to keep pace with the requirements of their customers. This year there is greater activity than ever before in every department, but it is, perhaps, most noticeable in the very heavy demand for spring wagons of various kinds. Their manufactures in this line have deservedly become the most popular in Canada.

**Fifty Miles per Day not Slow.**—I have just returned from a carriage drive to and from Connecticut, covering about 700 miles. The first day, in the afternoon, my horse was taken with a lameness. I had him examined, shoes taken off, etc. We finally reached Norwich, where we had recommended to us Gombault's Caustic Balsam. I put it on my horse's fore leg, and gave it a good rubbing. The next morning the leg was badly swollen and very feverish. I followed the printed directions as nearly as I could; gave the leg a good rub, harnessed, and went on. I rubbed my horse morning, noon, and night. He did not limp, after the first day, during the whole trip. We averaged fifty miles per day. So you see that it was not

slow driving that cured him. I left the booklet that came with the Balsam in Connecticut. Kindly send me another, for I cannot be without it as long as I keep a horse. I think the Balsam is the best and most remarkable remedy that I ever heard of.—*J. A. Warden, Syracuse, N. Y., Sept. 13th, 1897.*

**BUY Colman's Salt THE BEST**

**For Dairy or Table Use IT IS UNEQUALLED.**

**Salt on the Farm** for wire worm, joint worm, army worm and all insects that destroy crops. Salt is the best insecticide. It is also a fertilizer.

**TRY IT. R. & J. Ransford CLINTON, ONT**

**LITTLE'S PATENT FLUID (NON-POISONOUS) SHEEP DIP AND CATTLE WASH**

**The Original Non-Poisonous Fluid Dip Still the Favorite Dip, as proved by the testimony of our Minister of Agriculture and other large Breeders.**

**FOR SHEEP** Kills Ticks, Maggots; Cures Scabs, Heals Old Sores, Wounds, etc., and greatly increases and improves growth of Wool.

**CATTLE, HORSES, PIGS, Etc.** Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals Saddle Galls, Sore Shoulders, Ulcers etc. Keeps Animals Free from Infection

**No Danger, Safe, Cheap, and Effective.**

**BEWARE OF IMITATIONS.**

Sold in large tins at 75 Cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to Breeders, Ranchmen, and others requiring large quantities.

Sold by all Druggists. Send for Pamphlet.

**ROBERT WHITMAN, Druggist, Owen Sound, Sole Agent for the Dominion.**

slow driving that cured him. I left the booklet that came with the Balsam in Connecticut. Kindly send me another, for I cannot be without it as long as I keep a horse. I think the Balsam is the best and most remarkable remedy that I ever heard of.—*J. A. Warden, Syracuse, N. Y., Sept. 13th, 1897.*

**Stock Notes**

Mr. John Bell, Amber, Ont., reports his stock as doing exceptionally well. They have come through the winter in fine shape. Mr. Bell has been so busy looking after the shipping of animals sold that he has hardly had time to let folks know how his stock are doing. Tamworth swine are in great demand this spring, and Mr. Bell's sales of this typical bacon hog have been very large. He believes it to be the best bacon hog produced, and is making every effort to keep only the best individuals of the breed on hand. In order to keep the standard up to the highest, Mr. Bell is importing another Tamworth boar this spring. He is preparing for a special sale of Tamworth swine next fall. For this sale he intends to have in readiness 100 young Tamworth sows which will be served by the imported boar now on his way here. Swine breeders would do well to bear this sale specially in mind, as Mr. Bell is making a special effort to make it one of the greatest sales of Tamworths ever held in this country. Mr. Bell's Shropshires are also doing well. He has a number of fine yearling lambs for sale that in tending purchasers would do well to see before buying elsewhere. Mr. Bell reports the horse business as being exceptionally good this season and especially in Clydesdales. His three stallions on the road this spring are doing well. Special mention is made of that noted animal, Granite City. This horse has a remarkable record as a breeder, and parties desirous of raising good heavy horses cannot go amiss in engaging him. He is travelling this spring in the county of Grey. Mr. Bell has sold three stallions this season to Ontario breeders, who are using them in other parts of the province.

**Fruit.**

Trees and Vines become hardier, and their products better colored and better flavored when liberally treated with fertilizers containing at least 10% actual

**Potash.**

**FREE** An illustrated book which tells what Potash is, and how it should be used, is sent free to all applicants. Send your address.

**GERMAN KALI WORKS,** 22 Nassau St., New York.

**SHORTHORN BULLS FOR SALE.**

Two Bates Bulls of Princess-Duchess family. First-class animals in every respect. Apply to **WILLIAM COWAN, V.S.,** Galt, Ontario

**Italian Bees** FOR SALE—Fine strong colonies in the "Devetailed Hive," on Hoffman Frames; also in the Jones Hive. Warranted free from foul brood.

Write for prices. **Alpin McGregor, Inglewood, Ont.**

**WALTER NICHOL, Plattsville, Ont.,** Breeder of Ayrshire Cattle and Leicester Sheep. Choice young stock for sale.

**DONNIE BURN STOCK FARM, Stouffville station and P.O. D. H. Russell, prop.,** Breeder thoroughbred Shorthorn Cattle and Berkshire Swine.

**Woodstock Steel Windmills**

FOR POWER AND PUMPKIN

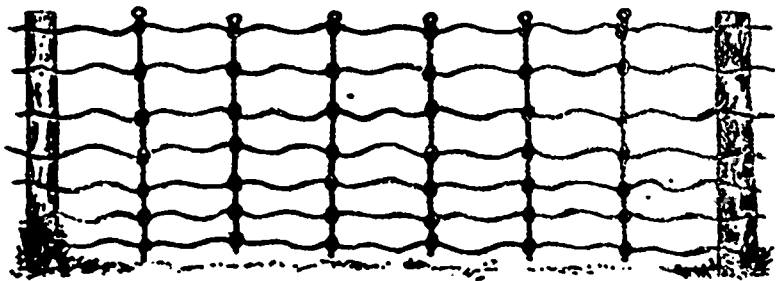
Get a **DANDY** WITH GRAPHITE BEARINGS They Run without Oil.

Steel Towers, Pumps, Tanks, Saw Tables and Watering Troughs, etc.

**WOODSTOCK WINDMOTOR CO. Limited, Woodstock, Ont.**



**The Rankin Coiled Spring Wire Fence..**



Farmers wanting fences will find it to their advantage to write us for particulars of our new fence. Easily built, no heavy tools required. Up-to-date in every particular. Agents wanted, where not already represented. **THE RANKIN FENCE CO., 275 St. Martin St., Montreal.**

**MARKET REVIEW AND FORECAST.**

Office of FARMING,  
44 and 46 Richmond street W., Toronto.  
May 9th, 1898.

General Canadian trade continues good. The cool weather of last week somewhat dampened the ardor of buyers of summer goods; but wholesale houses are looking for better things in this line as soon as the warm weather comes. All lines of trade were in a more or less excited state owing to the remarkable advance in wheat in the west.

**Wheat.**

There is an unprecedented boom in cash wheat in Chicago and the west. The market went up by jumps during the week. On Wednesday cash wheat at Chicago was quoted at from \$1.21 to \$1.30, and the next day it closed at \$1.50. Ontario has felt the influence of the advancing markets, and cash wheat, both Ontario and Manitoba grades, is now at the highest point touched in several years. Holders are now refusing \$1.07 for Ontario red winter wheat, and Manitoba No. 1 hard can scarcely be bought at \$1.40. The remarkable advances both in Europe and on this side seem to illustrate the extreme nervous condition of the buyers occasioned not alone by the Spanish-American war, but the fear that other nations may become entangled. This excitement is not due to a scarcity of wheat as far as the world's supply is concerned. In Europe it is due to a fear in regard to the transport of American wheat, and in Chicago and the west there is every reason to believe that it is due to Leiter's speculations. The visible supply in sight last week was 11,500,000 bushels greater than at this time last year. Since the rise the deliveries of wheat by the farmers in the west have been large. Harvest is now only a couple of months away. At Toronto there has been an active demand during the week, and prices have risen two or three cents during the week. From \$1.05 to \$1.07 and \$1.08 have been the ruling prices. Manitoba is quoted at \$1.38 to \$1.40 for No. 1 hard in transit.

**Barley and Oats.**

The British markets for oats are firmer, higher and advancing; sales of white Canadian being reported at 18s. 6d. to 18s. 9d. Reports indicate a large supply of oats in some parts of the country. Yet farmers are holding them at prices too high for buyers. At Montreal sales have been made at 39c. afloat, which is the ruling price for No. 2. At Toronto prices are firmer and range from 34 1/2c. to 35 1/2c.

Barley is somewhat dull at Toronto, and prices are nominal. At Montreal the barley market is firmer. Sales of feed barley for export have been made at 48c. afloat. Maltng barley is quoted at 52c. to 55c. as to quality.

**Peas and Corn**

Peas are quoted here at 61c. to 62c. At Montreal the market keeps firm under a fairly good enquiry, but supplies are tight. Sales afloat have been made at 69 1/4 to 70c. Cable reports the English market firm and an advance of 1s. 6d. to 2s.

The corn market is steady at 35c. for Canadian and 43c. for American at Toronto. At Montreal receipts are increasing and the market is firm at 39 1/2c. laid down on barge.

**Buckwheat**

The market has been firm during the week at 43c. west. The Montreal market is steady and prices range from 55c. to 57c. afloat.

**Bran and Shorts**

The market for these is reported steady at \$12 to \$13 for shorts and \$10.50 for bran. Very little Ontario bran is going into Montreal, and prices are quoted at \$13.50 to \$14.

**Potatoes.**

The potato market is also feeling the effects of the war, though we are inclined to think holders are trying to make a boom out of it to the disadvantage of consumers. Prices advanced from 60c. to 75c. per bag in cars during the week, and from 70c. to 80c. out of stores, though to buy them at the corner grocery 20c. per peck is asked, and the grocer says it is all owing to the war. At Montreal the market is firmer, and potatoes are quoted on cars at 70c. Sales are reported at some points to American buyers at 60c. to 65c.

**Eggs and Poultry.**

Cable reports indicate a firm market, with an increased consumption owing to the low

prices. Irish eggs are quoted in Liverpool at 5s. 3d. to 6s. 3d. as to quality. At Montreal supplies are falling off and prices are quoted at from 9c. to 10c. At Toronto the demand is good at 10 1/2c. Poultry is slow and the offerings small. Turkeys are quoted from 12c. to 13c., and chickens 60c. to 75c.

**Hay.**

The hay market is practically unchanged and quotations are \$8 to \$8.50 for baled hay on track here. Baled straw in car lots is quoted on track here at \$4.50 to \$5. The Montreal market is quiet; car lots of No. 1 are quoted at \$11.50 to \$12 on track, and No. 2 at \$9 to \$10.

**Cheese.**

The market is reported quiet owing to light offerings. Quotations for new folder goods range from 8c. to 8 1/2c. at Montreal. There is reported to be about 5,000 boxes of April cheese at Ontario points. On the Belleville cheese board on Tuesday 200 boxes were sold for 7 1/2c. to 7 3/4c., or equal to 8c. to 8 1/2c. at Montreal. Considering the unprecedented large make last year, and the condition of the market during the winter, the above prices are good for new goods. Cable despatches report the English market decidedly firmer and higher with a good demand at the advance. Large sales of finest Canadian colored are reported at 46s. on spot, and to arrive at 46s. 6d. Sales of finest Canadian white at 43s. 6d. to 44s. Stocks at Liverpool and London are reported much lighter than this time last year.

**Butter.**

In sharp distinction to cheese the cable reports regarding butter show a characteristic dullness. Holders are anxious to sell at a decline of 3s. from last week's prices. About 85s. is the ruling figure for quality equal to the Canadian creamery of which there is very little on hand. At Montreal prices have receded somewhat. Some choice creamery has been sold at 17c. Quality not of the finest bring from 15 1/2c. to 16c. Western dairy packed is quoted at 14c. to 15c. The Toronto market is somewhat easier. Creamery is described as dull at 15c. for prints and 17c. for tubs. Dairy butter was quoted at 13c. as top price towards the end of the week.

**Cattle.**

Late cable reports show the London market as dull and lower, with liberal supplies from the United States. Prices are down 3d. per stone. At Liverpool the cattle market is reported firmer, with a good demand and an advance in prices of 2d. per stone. In the west the cattle situation has not changed much during the week. The cattle market does not seem to respond to the war feeling like wheat.

**Export Cattle**—There seems to be a little better demand owing to the opening of navigation. At Friday's market prices ruled from 4 1/4 to 4 3/4c., the ruling top figure being \$4.40 per cwt.

**Butcher's Cattle**—There has been a fair demand during the week, though supplies have been liberal. Towards the end of the week there was a much firmer feeling in sympathy with the enlightening of the export trade. Prices for good stuff for immediate killing sold for \$3.75 to \$4 per cwt. Common cattle sold at 3 to 3 1/2c., and medium at 3 1/2.

**Stocks and Feeders.**—At Friday's market these were selling higher, and the demand for stocks for Buffalo brisk. The ruling figures were \$3.60 to \$3.80 per cwt., odd lots touching 4c. On Tuesday's market half-fat feeders were not brisk.

**Bulls.**—There is a good demand for bulls for export at from 3 1/2c. to 3 3/4c. Feeding bulls are dull.

**Milk cows and springers.**—Owing to an improved demand from dairymen these are a little firmer. From \$25 to \$40 are the ruling prices, some choice going as high as \$45 early in the week.

**Calves.**—Have ruled a little weaker, owing to large supplies and poor quality. Tuesday's quotations were from \$4 to \$6 each, and Friday's from \$2 to \$5 each. Better quality of veals are wanted.

**Sheep and Lambs.**

The British markets are reported dull owing to increased supplies from Argentina; and the offerings are much in excess of the demand, which has broken prices from 3 1/2d. to 4d. per stone.

There were not many at Friday's market here, and prices were slightly higher. Good yearlings from 90 to 100 lbs. sold at 6c.

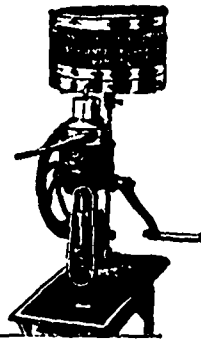
**Unbounded Success**

WITH THE

**American Cream Separator**

**A CLEAN SKIMMER**

MESSES. RICHARDSON & WEBSTER. Jarvis, Ont., July 26th, 1897.  
GENTLEMEN,—In reply to your letter of the 22nd, I would say the American Cream Separator that I purchased from you last September has done all that you claimed for it. I went to Toronto fair last fall with the intention of buying a separator; after looking over the different makes, I concluded to buy the "American," and it has given me entire satisfaction. I find it runs easy, it is no trouble to keep in repair, and it is a clean skimmer. In my opinion it is the most perfect machine on the market.  
They all have something of the same to say.  
Are you building a creamery? If so, get our prices for the complete outfit fit. We manufacture and handle churns, butter workers, engines and boilers cream separators, and everything required for making butter or cheese.



**RICHARDSON & WEBSTER,**

**ST. MARY'S, ONT.**

Sheep brought 3 1/2c. to 4 1/2c. Light ewes sold at 4 1/2c., and heavy ewe at 3 1/2c. to 4c. Bucks are quiet at 3c. to 3 1/2c. Spring lambs are firm at \$3 to \$4.50 each.

**Hogs.**

This market is firm, though supplies have been large. Choice singers are quoted at 5c. weighed off the cars; thick and fat hogs bring 4 1/2c. Other qualities rule about the same as last week. Drovers report a large growing crop of hogs throughout the country. Reports from the western packers indicate increased killings, though prices are a shade higher.

**Horses.**

The London market is firm for desirable animals, and Canadian heavy draught horses are wanted. The offerings of Canadian horses have been light during the week.

The Calgary and Edmonton Land Co.,  
381 Main street, Winnipeg,  
11th April, 1898.

The Bryant Press, Toronto, Ont.  
DEAR SIRS,—We enclose herewith copy of an advertisement and memo regarding same, which please insert in FARMING for the next six months. We are well satisfied with the result of advertising in your paper.—Yours truly, OSKAR, HAMMOND & NANTON.

The deeper the roots of the clovers penetrate into the soil the better will be the effect obtained as a manuring crop. The roots, going into the sub-soil, dissolve by their acid sap and bring to the surface soil much potash from the great store of it below.

**Windmills..**

The Canadian Steel Airmotor has been adopted by the Imperial Government and C. P. R.

Painted or Galvanized.

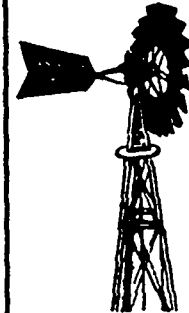
**MERITS:**

Power Strength Durability

Full line of Pumps, Tanks, Grinders Hay Tools

Woodward Watering Basins

No farmer should be without them.



Power and Pumping.

Ont. Wind Engine & Pump Co. Limited

LIBERTY ST. - TORONTO

**CANADIAN OFFICE** School Furniture  
FINE BANK OFFICE CHURCH AND HOME FURNITURE  
BERRY HOUSE & HARDWARE FITTINGS. SEND FOR CATALOGUE

**Secrets of Success**

SECRETS OF SUCCESS contains 368 pp.; cloth bound; indexed; illustrated, and conceded by all purchasers to contain more practical common sense information than any other Farmer's Book ever put in print. Mailed Post Paid on receipt of Price, \$1.25. To any one who cannot derive the special benefit from any one single article we will refund your money.

Our 50-page Pamphlet, entitled "Farming, the Farmer, and Force of Habit"

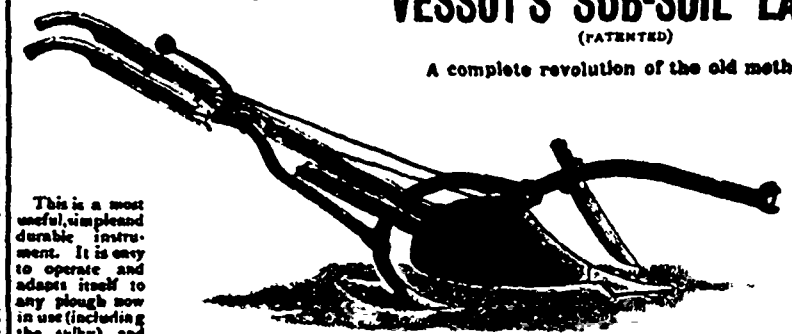
Paper back, mailed Post Paid on receipt of Price, 50c., or the two Post Paid \$1.50. The practical information these two volumes contain turned into practical account will be the means of causing the face of nature to blossom as the rose and to smile in prosperous abundance. Believing that he who does good unto his fellow man does good also unto himself, and awaiting your esteemed favors, I beg to remain, yours for success,

Address—**H. H. DEWESE, The Gilt-Edged Farmer, DAYTON, OHIO.**

Something New in Agriculture is **VESSOT'S SUB-SOIL LANCE**

(PATENTED)

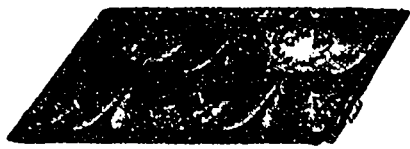
A complete revolution of the old methods.



This is a most useful, simple and durable instrument. It is easy to operate and adapts itself to any plough now in use (including the sulky) and makes it but very little harder to draw. It is sold very cheap.

**THE VESSOT IMPROVED GRAIN GRINDER LEADS S. Vessot & Co., Sole Manufacturers Joliette, Que.**

# New Metal Roofing...



Patent Safe Lock Shingle.



Cut showing Top and Bottom Lock.



Cut showing Side Lock.

Our Patent Safe Lock Shingles are so constructed that they lock or fasten on all four sides, making perfect joints, absolutely proof against the weather.

Buildings covered with our roofing look pretty, are fire and lightning proof, and will last a lifetime.

Samples and Prices sent free upon application.

**Metal Shingle and Siding Company Limited**

PRESTON, ONTARIO

**Churn  
Churn  
Churn**

Does your butter work to a "paste" before the salt you use dissolves?

Poor salt spoils what might be good butter. A sharp-grained salt is practically insoluble.

Windsor Salt dissolves easily—it is "taken up" in the butter with very little working. Progressive grocers sell

**Windsor Salt**

The Windsor Salt Co. Limited, Windsor, Ont.

Ask for  
**Eddy's**

when you order matches. Then you will be sure of having the best.

## Farmers' Binder Twine and Agricultural Implement Manufacturing Co., Limited.

(BRANTFORD, ONTARIO).

WE think it necessary to immediately advise you to refute the treacherous and damnable reports that are being put out and circulated against this co-operative movement of farmers by our enemies. Some are stating that this mill is closed down, others that we are pleading with the Government to reinstate the duty on binder twine; others that raw material has so tremendously advanced, that the present moment is the correct time to buy twine requirements for the harvest of 1898; while still others are claiming that the great American combine must absorb this enterprise, as it will be impossible for us to manufacture twine on a free trade basis. We have simply to say, in answer to all these diabolical statements, that there is not a single word of truth in them; the mill is being run three hundred days in the year to its utmost capacity; we have requested the Government not to reinstate the duty on twine; and we are just now manufacturing a quality of pure Manilla 650 feet long, known as our Sampson brand. It and our splendid Red Star (the farmer's pride) are superior to anything that has ever yet been placed on the Canadian market. As in the past, we will again shortly set prices on binder twine for the coming harvest at a fraction above actual cost of production, that all other manufacturers and dealers will have to follow. All we now ask, after five years of honest and determined endeavor in the interest of agriculturists of Canada to hold this Company as an independent concern, is that they, the farmers, give us their continued loyal support. Order our twine early from our appointed agents, listen to no statements made by the enemy, and remain truly loyal in not purchasing one single pound of American or other twine in opposition to us until they inform themselves positively that every ball of this Company's twine is exhausted. Small samples and prices will be sent you in the near future, or can be had on application.

See copy of a letter enclosed that appeared in *The Farmers Weekly Sun*, February 24th, for your careful perusal. We specially request you, as an intelligent man, to plead with your people to realize the importance of this company getting their undivided individual support instantly, and to understand what our being driven from existence through indifference or scepticism on their part would mean to them in the future. The Salt Act would simply be repeated a hundredfold.

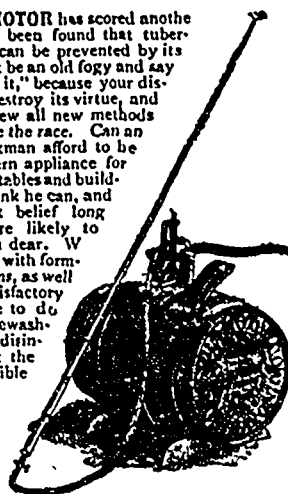
General Manager, Brantford

Faithfully yours,  
**JOSEPH STRATFORD.**



## SPRAMOTOR DISINFECTING APPARATUS

THE SPRAMOTOR has scored another success. It has been found that tuberculosis in cattle can be prevented by its use. Now, don't be an old fogey and say "I don't believe it," because your disbelief will not destroy its virtue, and you should eschew all new methods if you would lose the race. Can an up-to-date stockman afford to be without a modern appliance for disinfecting his stables and buildings? If you think he can, and remain of that belief long enough, you are likely to have it cost you dear. We can supply you with formula and directions, as well as the only satisfactory apparatus made to do painting, whitewashing, spraying, disinfecting, etc., at the lowest possible price.



### CERTIFICATE OF OFFICIAL AWARD:

THIS IS TO CERTIFY that at the contest of Spraying Apparatus held at Grimsby, on April and 3rd, 1896, under the auspices of the Board of Control of the Fruit Experimental Stations of Ontario, in which there were eleven contestants, the SPRAMOTOR, made by the Spramotor Co., London, Ont., was awarded FIRST PLACE.

H. L. HURT, } Judges.  
M. PETTIT, }

## ULRICH'S ENSILAGE Seed Corn

This Celebrated Corn is Sold all over Canada.

Giant Prolific,  
Mammoth White,  
Red Cob  
Yellow Dent,  
Improved Leaming.

Ask your dealer to procure SEED for you and you will be well pleased with results. No fancy prices. Write for Free Samples and Book of Testimonials.

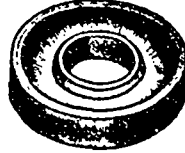
E. R. ULRICH & SONS,  
Springfield, Illinois.

## BRANTFORD



**GALVANIZED STEEL WINDMILLS**

For Power and Pumping  
With Patent Roller and Ball Bearings



Makers of the lightest running and best constructed Galvanized Steel Windmills and Towers made.

Write for Illustrated Circulars.



BRANTFORD CAN.

## CREAM SEPARATORS

**THE ALEXANDRA**  
Hand and Power. Capacity 160 to 2,000 lbs. \$50 to \$350.

**THE MELOTTE**  
Hand Style only. Capacity 330 to 850 lbs. Price \$100 to \$185.

Up-to-date Dairy Machinery and Supplies.

AGENTS WANTED.

**R. A. LISTER & CO., Ltd.,**  
18 St. Maurice Street, MONTREAL.

## All Eyes are on this Invention!



### The Genuine Tolton Pea Harvester with New Pat. Buncher at work

Harvesting in the most complete manner from eight to ten acres per day. Harvesters to suit all kinds of mowers.

EVERY MACHINE WARRANTED.

Our Motto: "Not How Cheap But How Good."

No drilling holes in Mower Bar or Inside Sole. A wrench is all that is required to attach it to any Mower. Give your orders to any of our local agents, or send them direct to

**TOLTON BROS., - - - GUELPH, ONTARIO**



# The Farmer

who buys another Mower without seeing the

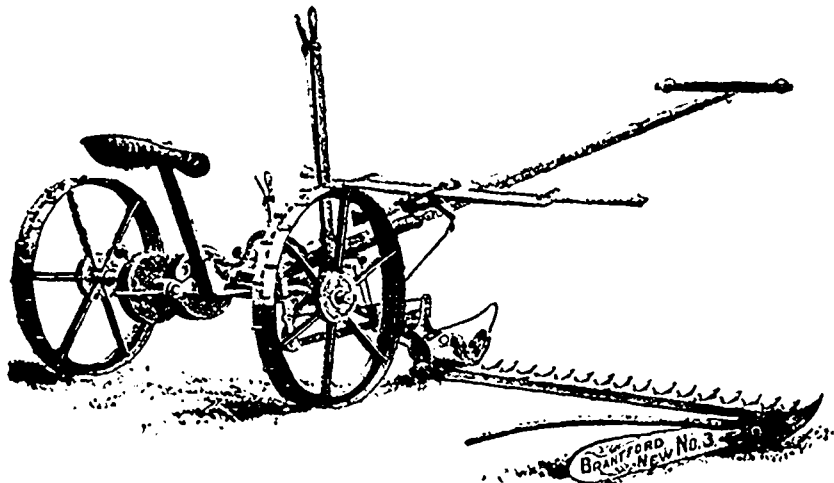
## Massey-Harris

BRANTFORD

### No. 3 Mower



makes an unwise purchase



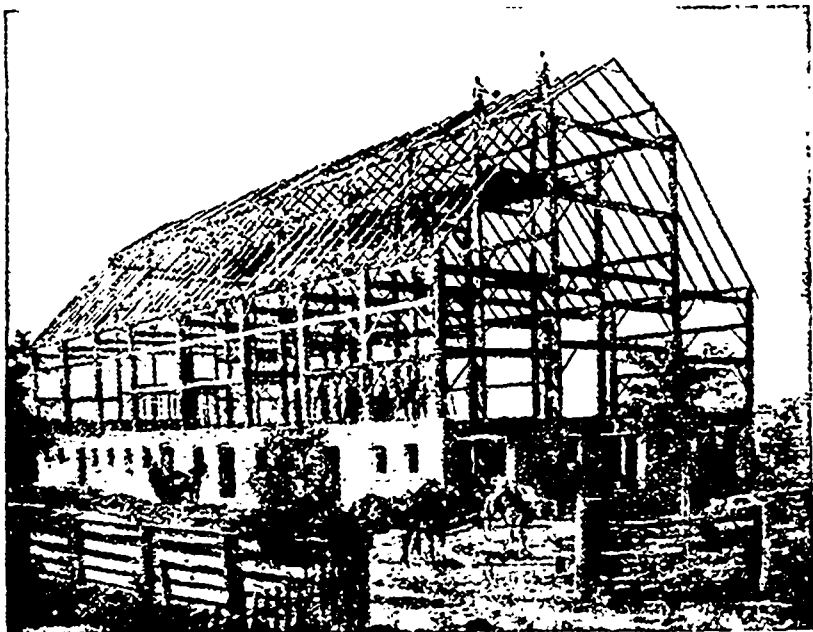
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MASSEY-HARRIS CO., = Toronto Limited.

## THE Thorold Cement

High in Quality 56 Years in use.  
Low in Price

The Leading Cement for Building Bank Barns, Cement Floors in Stables, Silos, Culverts, Pig Pens, etc.

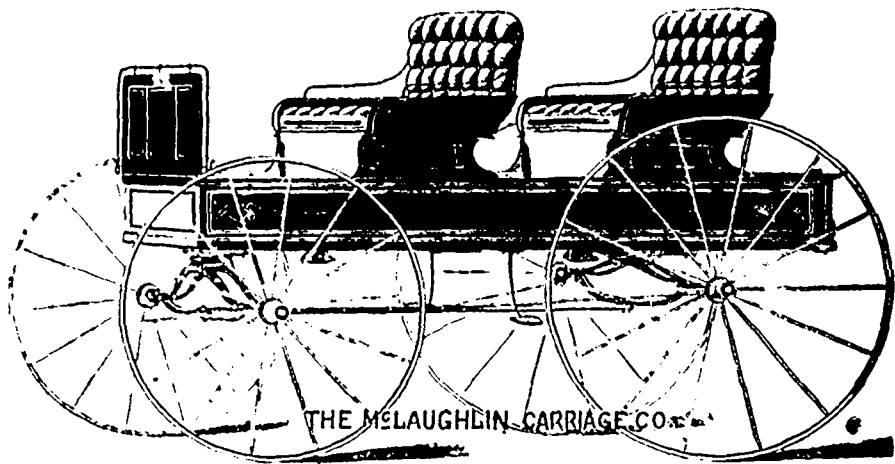


Mammoth Barn of Beswetherick Bros., near Hagarville, Ont. Floors for horses and cattle were put in this barn with BATTLE'S THOROLD CEMENT.

Has been tested in every capacity. Most perfect Cement made. For full particulars address

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83 VARIETIES BUT "ONE GRADE" ONLY AND THAT THE BEST.



**No. 40.** — Duplex Spring Wagon, Low Down, Light Draught, Easy Riding, Handsomely Striped and Finished. Best Leather Trimmings, Spring Cushions, Full Drop Backs, Silver Rail on Dash. Band Iron Strips on top of body, also on bottom. Drop end gate full width of body, extra heavy ash sills. Made as follows: Axles and Wheels, 1 inch, 1 1/2 inches, or 1 3/4 inches. Bodies, 31 1/2, 34 1/2, or 36 inches. Capacities, 800, 1,000, or 1,200 pounds. See Catalogue for full particulars.

15 Styles of Democrats with bodies from 29 to 41 inches wide, any kind of gear with any capacity. See our Agent before you buy and make sure that the name plate reads as follows:—

The McLaughlin Carriage Co., Oshawa, Ont.

The editor of the *English Agricultural Gazette*, referring to

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"Despite the fact that it seems to set some of the teachings of scientific experts at defiance, I am bound to bear testimony to the wonderful results that have followed its use on many farms."

Where it had been used it completely upset his previous theories, and convinced him of its great value, both on plowed and meadow lands.

- Use it on your GRAIN
- Use it on your CORN
- Use it on your ROOTS
- Use it on your PEAS
- Use it on your GRASS LANDS

### IT WILL PAY



- Plow it into your ORCHARDS
- Use it on your HOPS
- Use it on TOBACCO

It is the only safe, perfectly available phosphate known. Guaranteed by manufacturers, Chemical Works, London, Eng.

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