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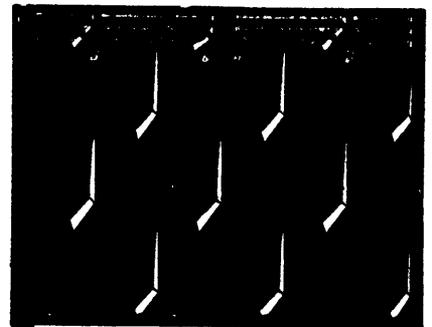
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FARMING

VOL. XVII

FEBRUARY 27th, 1900.

No. 26

The Wheat Situation

For the past week or two the wheat situation has not been without signs of a general tendency towards higher values. Whether these will materialize or not is hard to say. A great deal will depend upon the condition of the growing crop from this on, and we must be prepared for all kinds of rumours regarding it started by speculators with a view to influencing the market in their favor. Though it is early for very definite reports regarding the growing crop, yet those that have arrived tend to show the crop as not being in the most satisfactory condition. Especially is this so in regard to one or two European countries and the crop of the Central Western States. The world's supply of wheat in sight is now estimated at 79,059,000 bushels as against 59,858,000 bushels a year ago, showing an increase of 19,201,000 bushels. Despite this fact, however, there seems to be a pretty general feeling among both legitimate and speculative traders that present prices for wheat are very reasonable and that any radical change in values would be in an upward rather than a downward direction. Some speculators reason that as wheat is the only great staple that has not followed the general advance in other lines, as iron, cotton, etc., higher prices may be looked for. Whether they reason correctly or not we cannot say at the present and can only wait till some of the factors now influencing the wheat situation have had further time to work themselves out.

Cheese Factory Returns

Interesting Comparisons Between Ontario and Prince Edward Island Factories

Though Ontario dairymen are well acquainted in a general way with what has been done in developing the dairy industry in the Maritime Provinces, there are many features of the details of the business, especially as carried on in Prince Edward Island, that may be new to them. Recently, in conversation with Mr. T. J. Dillon, whose splendid work in connection with dairying on the Island is well known, he pointed out that that industry was destined to reach very large proportions in the near future, especially in Prince Edward Island, where the farmers have taken hold of the business in a most systematic and up-to-date manner. Upwards of \$600,000 worth of cheese was produced on the Island last season, and in a very few years it is expected that this amount will be doubled, besides a large increase in the production of butter.

While the business is expanding very fast, dairymen on the Island are evidently not neglecting to keep up the quality of their product, and are seemingly bending their energies towards carrying on the business in the most economical way. We have before us the annual statement of the Hazelbrook Cheese and Butter Factory, one of the leading Island factories, for 1899. This factory opened on May 1st and closed October 31st. During this period 134 patrons supplied 1,722,021 lbs. of milk, showing an average of 3.63 per cent. butter fat. From this was manu-

factured 168,113 lbs. of cheese, an average of 10.24 lbs. of milk to a pound of cheese. The average price realized for cheese was 10.28 cents, and the patrons were paid 84.60 cents per 100 lbs. of milk, or 8.68 cents per lb. of cheese. The milk was paid for according to quality at the following prices per lb. for butter fat: May, 20 cents; June, 18 cents; July, 20 cents; August, 24 cents; September, 28 $\frac{1}{4}$ cents; and October, 25 $\frac{1}{2}$ cents. At another Island factory, known as the Kensington, the lbs. of milk to a lb. of cheese were 10.29, and the average price per lb. of cheese 10.03 cents. The average per cent. of fat in the milk was 3.71, and the average price paid patrons per lb. of fat during the season was 21.286 cents. The average cost of hauling milk at this factory was 5.81 cents per 100 lbs.

These reports are certainly very satisfactory and compare favorably with the best factories of Ontario. We have before us the published reports of six factories in the leading dairy sections of Western Ontario, which do not show as good results as the ones we have mentioned. The pounds of milk to a pound of cheese in these six factories range from 10.65 to 11.04; the average price received per lb. of cheese from 9.70 cts. to 9.97 cts., and the price paid patrons per 100 lbs. of milk from 72.32 to 82 cts.

A comparison of these figures with those quoted from the Island factory reports seems to show that the latter render better service to their patrons than some of our western factories do. It may be asked why this is the case, to which question it might be difficult to give a satisfactory answer. Both the Island factories we name pay for milk according to its quality, which may account for the much better average obtained. That there is some good ground for believing this to be the case we find that the factory that gave the lowest average among the Ontario ones quoted also paid for milk according to its quality. Then there is the much higher prices which the Island factories received for their cheese to be accounted for, which we will not endeavor to explain here.

In the above it may be that the Ontario factories referred to were not the best, and consequently the comparison may be somewhat unfair to the factories of this province. Whether this is the case or not we are not able to say. The reports were taken from one of our local exchanges circulating in the dairy district referred to, and seemed to us to be a fair sample of factory work in Ontario. However, we would be pleased to receive reports from factories showing better results than the Ontario factories mentioned. In any event the comparison to us seems to be most valuable in showing the much better returns obtainable where cheese factories pay for milk according to its quality. It is too true that very few of our Ontario factories adopt this method of paying their patrons, and it is time that something were done to stir up their interest in this matter.

Canada's Great Fair

The annual meeting of the Industrial Exhibition Association was held on Feb. 20th, in the new civic buildings, Toronto. There was a large representation from the various organizations, agricultural and otherwise, which make up the membership of the association. The proceedings were

enlivened more than usual by a determined effort on the part of two or three delegates to criticise the management of the exhibition. Aside from this the meeting was harmonious throughout and the old board of directors were re-elected with the exception of ex-alderman John Hallam, who retired, his place being taken by Alderman McMurrich.

The directors' report for 1899 showed that the exhibition has had a most successful year. While the attendance was not as large as that of 1898, yet with this exception the Industrial Fair of 1899 drew more visitors than any previous year. 1898 was the year of cut rates on the railways, many people taking advantage of these to visit the show. The finances of the association were shown to be in a most satisfactory condition. After providing for a reserve fund of \$10,000, the association had been able to hand over to the city of Toronto, which under the new arrangement assumes all the liabilities of the exhibition, a balance of \$2,315.43. This is satisfactory and will be gratifying to friends of the exhibition throughout the country at large. Special reference was made in the report to the butter-making competition which proved very successful.

An important discussion took place as to the advisability of holding a Dominion Exhibition at Toronto in 1901. It was the unanimous opinion of those present that an effort should be made to hold such an exhibition while the Pan-American Exposition is in progress in order to attract visitors from that quarter. A resolution was passed, moved by John I. Hobson, president of the Dominion Shorthorn Breeders' Association, and seconded by Mr. E. Kidd, director of the Butter and Cheese Association of eastern Ontario, approving of the holding of a Dominion Exhibition, and of putting forth an effort to secure the co-operation of the Dominion and Provincial Governments in the matter.

At a meeting of the new board held later Mr. J. J. Withrow tendered his resignation as President of the Fair, a position he has ably filled for twenty-one years. The Directors reluctantly accepted his resignation and elected Dr. Andrew Smith, Principal of the Ontario Veterinary College, to succeed him. Mr. Withrow was elected to the position of honorary-president.

THE DAIRY BUILDING.

Previous to the annual meeting a strong deputation composed of the representatives from the Eastern and Western Dairy Associations, the Shorthorn, Jersey and Holstein Breeders' Associations and several members of the Industrial Fair Board waited upon the Ontario Cabinet to ask for assistance in erecting a new dairy building. The proposed building is to cost \$20,000, and the deputation asked the Government to make a grant of at least \$5,000 for this purpose. The ministers present promised to give the proposal every consideration.

As is well known to visitors at the Industrial, the dairy exhibit, one of the most important on the grounds, has for several years been shown under the grand stand in quarters totally inadequate to display the exhibits properly. With the new butter-making feature and the large increase in dairy machinery exhibits, it becomes absolutely necessary for more up-to-date and better buildings, and we hope the Government will consider the request favorably. Nothing that the Government could do would give better satisfaction to the dairymen of the province than this. With better accommodation and better buildings the dairy exhibit at the Industrial Fair can be made the great educational feature of the show that it should be. The Industrial Association will do all in its power to aid in this matter and the city of Toronto has promised to co-operate in a handsome way.

At Bury, in Lancashire, they tell of a horse trader who once offered for sale three awful old nags. The three stood close together, as though leaning against one another. An intending buyer looked at them and, turning to the attendant, said, "Trot out the middle one." "What," ejaculated the trader, "and let the other two fall down. Not me!"

Tree Planting and Road-Improvement

Under this heading appears a very interesting letter in this week's correspondence column from T. H. Race, Mitchell, Ont. His reference to the good roads movement, rather discouraging than otherwise the beautifying of our public highways by planting trees, etc., is deserving of special attention. Though we have always strongly advocated good roads, and will do so still, as we firmly believe they are closely identified with the material progress of this or any other civilized country, yet we would not like to see the beautifying of our highways by judicious tree planting discontinued. If the two won't work in harmony with each other more is the pity. Surely there is some way of regulating the planting of trees along the highway so that they will not interfere or become an obstacle to making and maintaining good roads. While it is always a pleasure to drive over a good road, yet the pleasure of such a trip is greatly intensified if beautiful and symmetrical rows of trees gird the highway.

Mr. Race suggests a plan for planting trees along the roadways that is well worth considering. It seems to be one that would meet the requirements necessary for shading or ornamental purposes, and at the same time would not prove injurious to the roadbed. This question is worthy of fuller discussion, and we would be pleased to hear from any of our readers who can give any information as to the effect shade trees have upon the road beds. It certainly adds to the value and appearance of a community if the roadways are beautified by systematic and careful tree planting, and if there is any possibility of combining this feature with the improvement of the roadbed we would very much like to see it brought about.

The Beet Sugar Industry

An important movement was inaugurated last week in reference to the development of the beet sugar industry in Canada. A large and representative convention of gentlemen interested in promoting this industry met last week in Toronto and organized what is to be known as The Ontario Beet Sugar Association. It is hoped by coming together in this way to further the establishing of the industry in this province. A strong board of directors was elected, with Mr. John Parry, Dunnville, as president, and D. H. Price, Aylmer, as secretary treasurer.

A large deputation from those present waited upon the local government and asked for a bounty upon a sliding scale for a few years, to ensure the establishment of the industry in Canada. The Government promised to carefully consider the request.

This new organization will certainly do very much towards accomplishing something definite along the line of beet sugar factories in this province and we wish it every success. There is nothing in our climatic or soil conditions to interfere with the growing of beets for sugar purposes, and the establishment of the industry would no doubt be of immense benefit to the country generally.

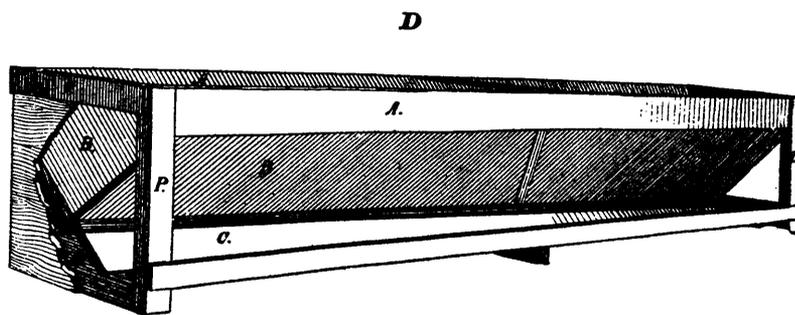
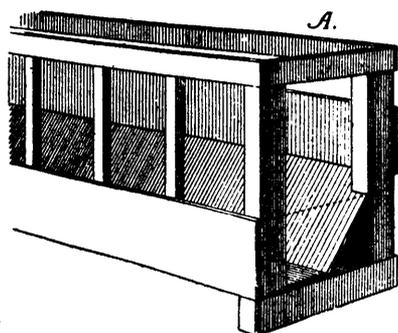
Sheep Racks

By J. S. Woodward, New York.

The best kind will depend upon what is to be done with the sheep. If for fattening sheep, or those being wintered as stores, I have never found a better rack than the one shown at A for a side rack or to stand so that the back side of it will form alley fence, or if to stand out in the pen, so sheep can go all around it. It can be made double as at B. In either case the posts should be 30 inches high. The flat part of each side or bottom should be 10 inches wide. The slanting pieces of double rack should each be 10 inches and put together as shown. In

he single rack, the slanting board should be 14 inches. The bottom strip on both racks should be eight and the top strip four inches wide respectively. This will make the uprights between sheep 14 inches in the clear and they should lap on both bottom and top strip far enough to be nailed firmly with clinch nails. These uprights should be

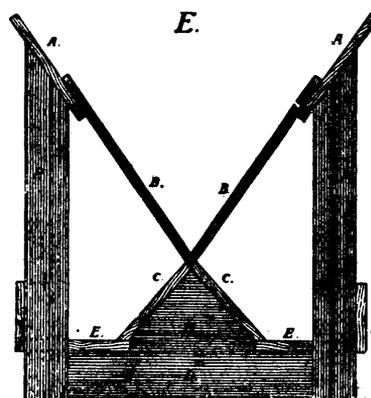
these are nailed two other boards, C, C, each 11 inches wide and with its lower edge chamfered off so as to fit upon the bottom board and with the tops coming together so as to form a crease to receive the lower end of slats. On each side is nailed a board F, F, seven inches wide, which boards should be firmly nailed to the posts and to the edge



three inches wide and planed so as to be smooth, and the distance apart will depend upon size of sheep. Lambs will do well with them one foot from centres, but larger sheep should have them far enough apart so there will be room for sheep to come up and eat without crowding. These strips allow the sheep to come straight up to rack and eat, but prevent one sheep from crowding all others out of rack, which a stout sheep is sure to do without these cross pieces. The slanting boards on bottom have their lower edges slanted off so as to fit tightly upon the bottom board and be well nailed. As will be seen there is a four-inch piece nailed across the rack under the bottom and at top to make rack strong. Another board should also be put across the ends as shown by dotted line to form end. On the back or alley side of single rack should also be nailed a board 10 inches wide, being necessary to hold in the hay. These racks may be of any convenient length, but if no more than 18 feet long will need only three sets of posts or legs. In these racks can be fed hay, silage, roots, and grain by being cleaned of soiled or dirty food, which is very easily done with a wooden shovel made on purpose or by a stiff broom.

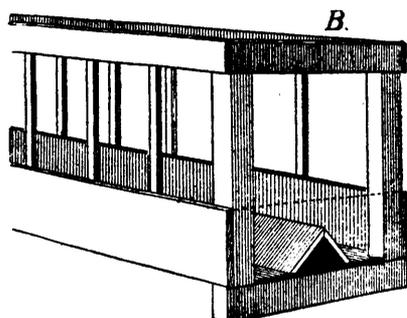
of the bottom board E on each side. The boards C, C, should be firmly nailed to the cross pieces D and D and should also have the bottom boards E firmly nailed to their lower edge. To the top end of the posts should be nailed a board A, A, twelve inches wide, about equal distances above and below top of posts. From these board A, A, down to crease made by nailing boards C, C, together should run and be firmly nailed at each end, using clinch nails for the upper end, strips one inch thick, two and one-half inches wide and twenty-two inches long, being put on alternately so as to form a rack down through which

But while these racks are very satisfactory for feeding old sheep or for fattening yearling lambs, nothing could be more unsatisfactory for raising winter lambs or for ewes and lambs at any time. The little fellows would want no better fun and would certainly make the most of it. While the mothers never move about for exercise, the lambs will never be still and they would run and romp back and forth and through these racks and so foul the food that the ewes would never touch it.



For lamb raising, the rack shown at D, a side view, just

the hay might be pulled by the sheep. Instead of having posts under the centre of the rack a piece of plank can be fitted same as at the ends and a brace run up on each side and have a piece put across the top. This will stiffen the rack and still not be in the way of cleaning it out.



To finish the rack nail boards across the ends so as to close it all up.

All leaves and fine parts of hay will fall into the side troughs and be eaten by the sheep. When grain, roots, or silage is to be fed, the troughs on each side are readily cleaned with a small paddle of the right shape made on purpose.

fills the bill. It holds ample food, is suitable for feeding hay, grain, roots, or silage, and no lamb can get into it.

The end view at E will show the construction very clearly. The posts P are 2x4 and 36 inches long, with the top slanting as shown. Across these posts at the lower end is nailed a piece of plank (D) four inches wide, upon the middle of which is spiked another piece (D) to support the bottom as shown.

The bottom is made of two boards E, E, each 10 inches wide and the corner notched to fit around the post. Upon

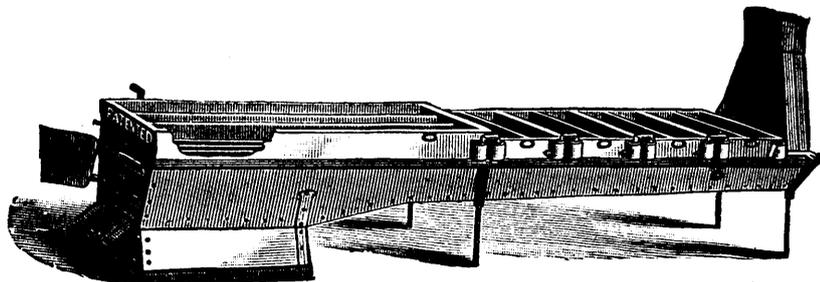
Maple Syrup Evaporators*

By W. H. Barber, Montreal

The production of maple syrup and sugar has in recent years assumed such a profitable phase that there has been a demand for improved apparatus for boiling sap rapidly and economically. It takes about sixteen quarts of sap to produce a pound of sugar, hence rapidity of evaporation is essential to secure economy of fuel and it is also necessary if the best quality of syrup and sugar is to be made. Kettles and pans upon brick or stone arches do not answer the purpose, as they neither secure economy of fuel nor rapid boiling necessary for a fine quality of product.

*This article was intended for our Farm Implement Department in last week's issue, but arrived too late for publication.

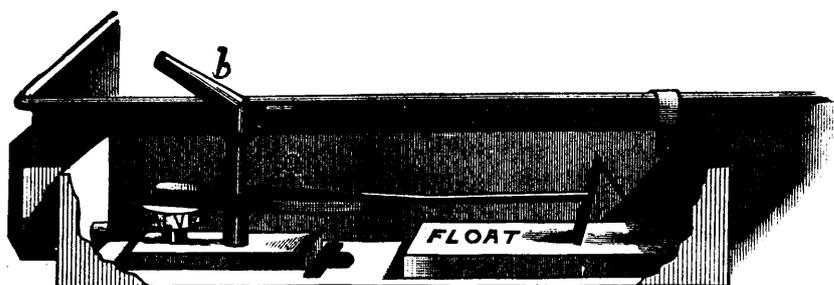
The Champion Evaporator shown in the accompanying cut, meets these requirements. It consists of a corrugated pan on the front of the arch, which increases the heating surface. The corrugations run lengthwise and give nearly twice as much heating surface as though the pan had a flat bottom. Back of this corrugated pan are three small pans, having flat



The Champion Evaporator.

bottoms. They are connected with each other and with the corrugated pans by siphons.

The sap enters the evaporator through a regulator which is placed in a small pan, hung on the outside of the corrugated pan, near the front end. This regulator is automatic, and keeps the sap at the required depth about one and a half to two inches in the corrugated pan. As long as there is sap in the storage tank, which is connected with the regulator by means of a one-inch hose, there is certain to be sap in the evaporator, and once in the evaporator it is carried from pan to pan by the syphons until it reaches the last pan next the chimney, where it is finished into syrup, and drawn off at the proper density, which is 13 pounds to the gallon, imperial measure. The operator is relieved of all dipping of the sap from the time it leaves the tank until it is finished into syrup and if a syrup thermometer is used, he can be absolutely certain that his syrup is the right density, and will neither sour nor crystalize in the bottom of the vessels it is stored in.



The Regulator.



The Siphon.

The siphons after being started the first time, do their work automatically, feeding the pans at the proper rate and keeping the liquid evenly distributed throughout all the pans. They clarify the sap, as they will not take up the scum or the sediment. The scum remains in the first section of the corrugated pan, and is removed with a skimmer, and the sediment remains in the bottom of the pockets in which the syphons rest. Another feature worthy of note is the interchangeability of the small pans. Each evaporator has three or more, which are all the same size. The pan used for syrup one day is placed next to the corrugated pan the following day, and whatever lime has collected upon it is removed by the thinner sap. Every sugar maker is familiar with the lime or nitre which is present in maple sap, and which deposits itself upon the bottom of the pan in which syrup is finished. This often becomes troublesome, by burning on the pans, but with this evaporator the difficulty is removed by changing the syrup pan daily.



"What's the difference between football and war?"
 "Football is war without any humane object in view."
 —Chicago Record.

Managing Brood Mares*

This can hardly be called a veterinary subject in every sense of the term, but as many of the large horse-breeding establishments employ veterinarians as superintendents, it may not be out of place to present a paper on the above subject. On the stock farm where the only revenue derived

from a mare consists in the production of a foal, it is necessary for the owner to use his best effort toward getting every one of his mares in foal each year. Then, after getting them in foal, the risk of accidents tending to produce abortion should be carefully considered and all the seemingly minor details of everyday management and feeding should be attended to with the utmost care and attention. As regards the ordinary causes of abortion (exclusive of contagious abortion and those that are a sequel to debili-

tating diseases, such as influenza, pneumonia, etc.) I have noticed cases that I am sure were produced by the following causes, as the abortion took place in a few hours after the apparent mishap had occurred:

1. Slipping on icy spots and either falling or producing a strain.
2. Fighting with other horses and getting kicked in the abdomen.
3. Getting pinched in box stall doors while entering stall (this is where the doors swing out).
4. Getting into deep snowdrifts or much holes, thereby producing strains.
5. Mares in searching for a place to rub, or as it seems to be with some of them from pure curiosity, will get into all kinds of traps, such as between windmill towers, or try to get through some opening that is about half wide enough, and I have seen them get into a feeding pen for sucking colts where they had to get on their knees to crawl under; of course when they come to get out they

usually get excited and try to jump over the top, get hung up and abortion follows.

6. Another cause is abuse from attendants. Some mares are very stubborn and aggravating about going into the barn at night and have to be driven in from the yard by force; then after getting them into the barn it is still harder to run them into their stall; finally when they do go into the right stall it is a very natural thing to strike them over the rump with a halter, board, or anything that comes handy just as they jump through the door. I saw this done once, causing the mare to fall; this took place while letting them in from the yards at evening and the mare lost her foal that night. Of course there are many other causes that produce abortion, and the foregoing are simply examples of a few of the minor accidents that have come under my notice and might happen at almost any time.

The remedy for this class of accidents is *prevention*; if there is ice in the yard and there is too much of it to be chopped up, ashes or manure may be spread over it and then wet down so that it will adhere and freeze to the ice

*Paper read by Mr. J. P. Foster, at meeting of Veterinary Society, Ontario Veterinary College, Toronto.

underneath. Mares that are mean should not be allowed to run with others, and it may be necessary to let them have a small yard by themselves. Box stall doors should always be fastened open, before the mares are let in for the night and it is wonderful how soon each one will learn her place and seldom make a mistake, or get into the wrong stall. In regard to deep snow-drifts in yards, I remember seeing during the severe winter of 1896-97, snow fences in the yards of the largest horse farm in Iowa. They were built on the plan of snow fences in use on the railways, and were placed around deep drifts to keep the brood mares from getting into the deep snow.

I prefer earth floors in the stalls and alleyways, as the danger of slipping is less than on a plank floor, especially in winter when their feet on very cold days become balled up with snow and ice; sometimes elevating them from the ground three or four inches, and it often seems advisable to knock the balls out of their feet before they are let into the stable. The approaches to the stable door should be arranged so there will be no sill to step over, as a mare will sometimes get just a slight toe hold with one hind foot in going over a sill and slip off just when the most weight comes on the foot, thereby causing her to either knuckle at the fetlock, or causing abnormal extension of the hock and general concussion. As regards diet, we should be careful to see that the food is of the best, and that no smutty corn or rusty oats are fed. It is also rather dangerous to allow pregnant mares free access to straw stacks as is done in the West. Flax straw is particularly harmful, as is any food that acts as a purgative.

It will pay the brood mare owner to try his mares often in the breeding season, and the plan adopted by most breeding farms of any size is to try all of the mares twice a week, for example, say Wednesday and Saturday, which would be known as "trial days," and on these days each mare is caught and tried. This is kept up until it would be too late in the season to breed them again, even if they did come in heat. Most farms keep a "teaser" for this work. This method of trying mares obviates the necessity of figuring out trial days ahead for each individual, as they are all gone over every three days, and if one comes in heat she is sure to be noticed. I have seen mares that were bred in April refuse twice a week from May to July and then come in season. In cases of this kind it is probable that abortion takes place, but owing to the early stage of impregnation the external signs of abortion, such as soiled condition of vulva and tail and tucked up appearance of the abdomen, are not noticed. Sometimes a mare is noticed that it is almost impossible to determine whether she is in heat or not and will allow a horse to tease her and will stand perfectly quiet. The only way to tell is, that if she is not in heat she will object if the horse attempts to cover her; these kind of mares are a source of continual annoyance to all concerned.

In warm weather the best place for a mare to foal is out of doors on a good grass plot, but in the early spring arrangements must be made for foaling inside in a good sized box stall in which there should be plenty of bedding. Mares that foal inside should be watched both night and day, so that in case of non-rupture of the fetal membranes during labor they can be opened by the attendant before the foal suffocates—(this also applies to mares foaling out of doors). Another reason for requiring an attendant is to prevent the mare from lying down with her hind parts against the sides of the stall, thus interfering with the delivery of the foal; also to catch the foal from those mares that persist in foaling in the standing position and in so doing preventing the foal from falling and forcibly striking the floor. These are the principal difficulties met with by the attendant, exclusive of course of the many different phases of difficult parturition. Immediately after foaling, the foal should be carefully placed in one corner of the stall where the bedding is usually comparatively dry, the stall should then be thoroughly cleaned out, removing the after-birth and all of the wet straw and drying off the floor beneath as well as possible. The stall should be bedded with dry straw at once, before the foal attempts to

stand, as it is bad policy to allow a young foal to slip and sprawl about on a slippery floor. This should be done regardless of the time of night, or how sleepy the attendant may be, and it will be found that small attentions of this kind will go a long way toward making the business a success.

CORRESPONDENCE

Profitable Cows

To the Editor of FARMING:

I send you \$1.00 for your paper for 1900.

You have asked for statements as to how cows have paid during the past year, so I will give you mine. I had six cows, but two did not calve until June, so I will reckon five cows only. We made butter until May 1st, and averaged 15 cents per pound. We then sent to the cheese-factory from May to November and then made butter until the close of the year, at 19 cents per pound.

For the whole year we received \$161.89, or an average of \$32.37 per cow. We kept enough butter and milk to supply the family, and raised six calves, giving them new milk for three or four weeks. I fed no grain, but gave the cows plenty of good hay, corn and straw.

Now, I do not claim that these are large results, but I believe there are many farmers who have smaller, and, no doubt, it is your aim to know what the average farmer realizes. I have no doubt that I can do much better this year, by growing green fodder for the dry weather, and seeding grain in the winter.

CHAS. MACKEY.

Kinsale, Ont., Jan. 25th, 1900.

Assistance to Local Poultry Shows

To the Editor of FARMING:

As I wrote your report of the "Ontario" show, held at Peterboro' last month, I would like to say a few words in reply to Mr. Collins' criticism of that report. He says, in the first place, there were 1,339, instead of 1,008 birds shown. There were 1,339, if rabbits, guinea pigs, etc., are birds. There were only 1,008 entries of poultry. Next, he says, I was laboring under a delusion when I said the meeting called by the Peterboro' Association was held on "Tuesday." This is only a clerical error, and may have been the mistake of your proof-reader, or possibly I made the error in transcribing my notes. I might ask Mr. Collins who Mr. Boyne is, to whom he refers in his letter. No such man spoke at the meeting in question. I know the latter is a clerical error, and I would not have called attention to it, only Mr. Collins is a young man, and as he grows older he may learn how easy it is for these unimportant errors to creep into print.

I am very sorry Mr. Collins said anything about the meeting called at Peterboro' to discuss his resolution. Mr. Collins knows when he says that the amount of the grant to be asked for each county show was not mentioned in his resolution he is quibbling. In speaking to his motion he mentioned \$100 as a fair amount for each county to receive, and Mr. Bogue pointed out that that would require an aggregate grant of \$4,000, and suggested that it be made \$100 for each district, which would reduce the aggregate sum to about \$1,000. Mr. Collins refused to accept this, and pressed his motion. Now, Mr. Collins is a good fellow, and the poultrymen assembled did not want to hurt his feelings by sitting too heavily on his hobby, although the big majority of them looked upon it as a waste of time and energy. They pleased Mr. Collins by carrying his resolution (unanimously, I think), and then effectually killed it by refusing to appoint the delegates referred to, to wait upon the Government. When that meeting broke up there were very few there who believed the matter would ever be heard of again. It is as dead as

a door nail as far as the "Ontario" is concerned, at any rate. But with the energy characteristic of the man, Mr. Collins is now endeavoring to get support from the local associations. What success he meets with from that quarter remains to be seen. I know these associations are not unanimously in favor of it.

My own views on the question are these: The Government gives a substantial grant to the electoral district agricultural societies, which is to be applied in developing poultry as well as horses, cows, pigs, sheep, etc. If the poultry does not receive its share of these grants, that is the fault of the poultrymen in the respective districts. In this county (Middlesex) the poultry interest is well looked after by our local agricultural societies at the fall show. To make a winter poultry show a success, it is absolutely necessary to abolish the "gate." When the "Ontario" in 1898 was held here no entrance fee was charged, and the result was that the farmers for miles around, as well as the citizens, flocked to the show-room in thousands to see the chickens. Mr. Gilbert, of the Experimental Farm, estimates that 20,000 visitors were present during the week. A 25-cent entrance fee is a barrier the farmer does not get over easily, and it is the farmer we poultrymen are seeking to interest. A fee was charged at Peterboro' this year, and the result was very few farmers visited the show, and the main object the Government has in view in making the grant to this association was defeated. Now, no poultry show can be run on \$100, and even if the Government could spare this amount for each county annually, I doubt its utility. There is not room in Ontario for more than two winter poultry shows, and under careful management they could be made of untold advantage to the Province. Every inducement should be made to get the farmers to attend them, and ample provision should be made for their instruction as to the best breeds, methods of feeding, housing, preparing for market, etc. In this way, the country would get value for the grants it makes and Canadian poultry would soon take a long slide forward. I am happy to say that steps looking to this end are being taken by the "Ontario" Executive.

I notice one of your correspondents, Mr. R. C. Allen, takes exception to a few men winning the majority of the prizes amongst them. This is beside the main question, in my judgment. It matters very little to the farmer who wins—what he wants is to see as perfect specimens as possible and to learn about the breeds that will pay him best to raise. This is true, not only of poultry, but of all classes of live stock. It may be true that the bulk of prizes are won by a few men. Messrs. McNeil and Oke, of this city, win respectively a very large number of the prizes annually at the "Ontario"—more than anybody else, and they do it mostly on Bantams, Polands, etc. They also win as heavily at the Boston and New York poultry shows, and the result is they ship numbers of birds to the States that would surprise Mr. Allen. Both these breeders live in the city, and their birds are raised almost entirely by the farmers in the country surrounding. It would still further surprise Mr. Allen if he knew the sum these two gentlemen annually pay the farmers in Middlesex for raising for them Bantams alone. I think the receipts from his egg farm would look small in comparison. But I did not start out to defend these gentlemen—they are quite capable of that themselves. The fact is, the ability of these gentlemen, and others as well, to breed high-class, thoroughbred Bantams is a good-sized source of profit to the farmers of Ontario.

London, Feb. 17, 1900.

GEO. W. MILLER.

Sugar-Making in Vermont

To the Editor of FARMING:

I have been the happy recipient of your paper for some time, and permit me to say that it is one of the best of many farm papers that come to my desk. It is full of practical suggestions and common-sense articles that meet the needs of the farmers in your section, and is valuable to farmers everywhere. We who live in the border states

are interested in Canadian farming and the progress that Canadians are making in agricultural lines, because much of your farming is not unlike the farming in these states, especially in methods of dairying. Vermont dairymen have listened with no small degree of pleasure and profit as well to Prof. Robertson, Mr. Dillon and Prof. Dean at our state dairymen's meetings. All of these gentlemen left very favorable impressions with our people. Canadian farmers ought to be and doubtless are proud of such leaders and instructors in dairy thought and practice.

Vermont, as many of your readers well know, is not only a noted dairy state (especially in the butter line) but it leads all other states in the union in the maple sugar industry, both in the quantity and quality of its product. Many of our sugar makers take great pride in the quality of their product, and they are trying to meet the increasing and almost unlimited demand for the light-colored and fine-flavored pure maple sugar and syrup for which Vermont is famous. We have the only state maple sugar makers' association in this country, and it held its eighth annual session at Randolph last week, with the following programme:

WEDNESDAY, FEB. 7.

Afternoon: 2.30—Opening of Meeting; Address of Welcome, D. H. Morse, Randolph; Response, Alpha Messer, Rochester. 3.00—President's Address, V. I. Spear, Randolph. 3.30—Tapping the Sugar Orchard, A. M. Foster, Cabot. 4.00—The Maple Tree and its Product, Timothy Wheeler, Moscow.

Evening: 7.45—Music; Appointment of Committees and Judges. 8.15—The Maple Sugar Industry of Ohio, W. I. Chamberlain, of the *Ohio Farmer*, Cleveland, Ohio. 9.00—The Future of the Maple Sugar Industry, Ex-Gov. Josiah Grout, Derby.

THURSDAY, FEB. 8.

Forenoon: 9.30—Caking Maple Sugar for Market, C. D. Whitman, Brattleboro; Discussion. 10.15—How to Prepare Maple Syrup for Market, Alpha Messer, Rochester; Discussion. 11.00—The Market Demands for Maple Goods, M. D. McMahon, Burlington; Discussion.

Afternoon: 2.00—Report of Judges; Report of Committees. 2.30—The Composition and Flow of Maple Sap, Prof. J. L. Hills, Director of Vt. Experiment Station, Burlington. 3.30—Reports of Secretary and Treasurer. 4.00—Election of Officers; Transaction of Business.

As a part of the association meeting we have an exhibit of the maple product, sugar utensils, etc., with a premium list of about \$200. The association is doing a grand work and its annual meetings are of much interest and value to our sugar makers.

While Canadians make a large amount of maple sugar, they may not be interested in all of the parts of the above programme, but they would be interested in the address of Prof. Hills on "The Composition and Flow of Maple Sap," a brief synopsis of which is hereby given. Prof. Hills said that the Vermont Experiment Station began investigations in this line in 1897 and they have been continued each year since, but the work is entirely new to science, and as the matter has only been touched upon the data is liable to be changed by further investigations.

Maple sap is changeable in quality during the season. The first runs are but little more than a weak solution of cane sugar. As the season advances the sugar crystals are less pronounced, the other organic ingredients increase, and there is a larger amount of malate of lime.

The maple tree draws its support from the soil and the sun. In the leaf minute cells are found, that assist to make the tissues that build up the tree. These cells contain starch grains, which by the action of the sun are converted into sugar, which is stored for the future use of the bud. In the winter these cells are full almost to bursting. The poor quality of the sugar of 1898 was probably caused by the excessive rains and lack of sunshine in the months of July and August of that year, during which time the starch and the sugar are largely developed. This is the reason why trees on the verge of the sugar bush, with

plenty of sunlight, generally produce more and better sap than shaded trees in the forest. Sap flows up and down very slowly, but not sidewise. In the spring the warmth of the sun or atmosphere expands the gas in the cells, and the sap is forced down or up and out of any aperture that may be made in the tree. The expansion and subsequent contraction has the effect of a force pump, causing the sap to flow back and forth. Deep tapping gives a larger flow of sap, but of poorer quality. Low tapping gives the largest amount of sap, and high tapping the sweetest sap. There is no difference in the quality of the sap on the north or south side of the tree. As the sap must pass from the branches to the trunk of the tree, there may be some advantage in quantity by tapping on the side of the tree containing most branches. Sugar sand is an inevitable compound in maple sap, and is formed by the precipitation of the carbonate of lime and the malic acid in the sap. The precipitation takes place where the sap is boiled to a density of 218 or 220 degrees, or eleven pounds to the gallon of syrup.

Average maple sap contains about three per cent. sugar, and the average-sized maple tree in Vermont contains about ninety-six pounds of sugar, consequently the tree cannot suffer much from judicious tapping.

All of the addresses at our meeting were intensely practical, and of much value to our sugar-makers.

ALPHA MESSER.

Maple Hill Farm, Rochester, Vt., Feb. 15th, 1900.

Tree Planting and Road Improvement

To the Editor of FARMING:

In a recent issue of FARMING you gave a very pretty country road view representing a side line somewhere in the township of Scarborough. To my mind there is not enough encouragement given to that side of road improvement. Concluding your observations connected with the view given, you say: "This fine piece of tree planting has had its influence in the community, and the fronts of a number of farms in the same section are adorned with beautiful rows of trees, giving the whole locality a most beautiful and thrifty appearance." How could such a thing of beauty and taste and enterprise have other than an influence upon the community? But do you know that such a thing of beauty, aye, such a thing of utility and valuable climatic influence, is not approved by our authorized road improvement instructors?

That we have a magnificent country here in Ontario most of us are convinced, with pride. That we have the leafy foliage in shrub and shade tree in abundance to make it among the most picturesque and charming lands on earth, we are also convinced. But we are not encouraged to use our natural advantages, develop our tastes, and stimulate our love and pride of country in this direction.

When the road improvement movement was first started by Mr. Pattullo, of Woodstock, I, as another journalist, gave it a hearty seconder and suggested the importance of the picturesque side as well as the improvement of the road-bed. My suggestion was discouraged, on the ground that it would tend to injure the road-bed by shading it too long in the spring time and during wet seasons and thereby keep it damp. Whatever there may be in the argument I do not consider it sufficient to justify the neglect of beautifying all our highways with shade trees and thereby adding beauty to, as well as improving, the climatic conditions of our country.

It is true that the agricultural department offers some trifling encouragement to tree planting. But it might well offer more, and with its offer lay down some fixed rules or definite plan as to how they should be planted. I would not have trees planted along the roadside close enough to do injury to the road-bed by a too constant shade, nor would I advocate planting on both sides of the road. If the owners of the farms are pleased to do it for the beauty of the thing let them do it. But for concession roads run-

ning east and west I would plant on the south side; and for side lines running north and south, plant on the east side. The road commissioner would do just the opposite, since my plan will throw the shade mostly upon the road. Better to throw it there than into the farmer's fields and upon his growing crops. And I would never plant closer than thirty-six feet, and at this distance there will always be a sufficient breadth of sunlight passing between the trees to keep the roadbed dry, if the latter is properly constructed.

With such a system of tree planting encouraged and generally carried out, we would soon make of this splendid province of ours a thing of beauty and a joy to every citizen who inhabits it, or the stranger that passes through it. I value FARMING very highly for the excellent work it is doing, and was especially pleased to see it manifesting an interest in this, the picturesque side of rural Canadian home-life.

T. H. RACE.

Mitchell, Feb. 19th.

Commercial Fertilizers.

To the Editor of FARMING:

The letter from Mr. W. A. Topham, in FARMING, Jan. 30th, I presume is intended as a reply to mine of Nov. 7th, 1899, recommending Thomas Phosphate as a manure for clover. Mr. Topham has shown a spirit of cynicism in his letter which is very much to be regretted in a discussion of this nature. Besides recommending Thomas Phosphate on the principle for which it undoubtedly stands, I have seen and corresponded with lots of intelligent farmers who have successfully demonstrated the principle in using it. I can point to a farm where 5 tons were used last year and 8 more since purchased for this. I can point to a man who bought half a ton four years ago and this year has already purchased 150 tons for himself and his friends, after using it for various crops and in connection with clover. I fully recognize that the reports of practical agriculturists on manurial subjects are seldom of much practical value unless we know and carefully weigh all the attendant circumstances in detail, but when once we recognize a scientific principle one can gauge the effect of this or that plan of applying it to practice. But I must point out to Mr. Topham that to carry on a profitable discussion he should stick closely to facts and not speak of the only letter of mine recommending Thomas Phosphate which he ever read, as if it were one of a number.

Mr. Topham pointedly asks why Thomas Phosphate should be recommended so much when it does not contain either ammonia or potash, and its phosphoric acid is not soluble in water. This, no doubt, is a stumbling block to more than him, and yet there are abundant evidences published continually proving the superiority of Thomas Phosphate over mixed fertilizers or superphosphates and bone meal, if the results are taken over a period of years. It is on the field and in the crops a fertilizer must be judged on its merits, and not in the laboratory. This principle applies to soil analysis as well as to fertilizer analysis. But let us get to the Government bulletin which Mr. Topham suggests that farmers consult. He refers to page 25 where an analysis of Alberts' Phosphate shows a total of 15.35 per cent., but he fails to remark that the phosphate as sold tested worth \$1.30 more than the standard sample. He does not point out, as does the chief analyst in his report, that the values given are only relative and have no regard to the origin of the fertilizer in particular. The chief analyst carefully points out that the laboratory method does not distinguish between the phosphoric acid of bone meal, rock phosphate and Thomas Phosphate. The same principle, I presume, applies in estimating nitrogen which may originate from poor tannery refuse or more valuable forms, in which the nitrogen is much more valuable to plants. Further than this, I understand that the methods of analyzing Thomas Phosphate found to correspond best with the action of the soil and plant roots upon it as now used by eminent agricultural chemists have not yet been adopted by our government laboratory. I say freely, that

if the method adopted by our Chief Analyst in the examination of Thomas Phosphate is a fair one and a proper test of its agricultural value, the law should be used to prosecute the vendors of such a sample. I have before me an analysis, a high class Thomas Phosphate of which large quantities are being sold in Canada, showing 17.72 per cent, citrate soluble out of a total 20.16 per cent. phosphoric acid. I have also seen a further checking analysis of this material by Voelcker, of London, showing 20.17 per cent. total. This phosphate is only guaranteed 18 per cent. total and above government requirement, but, as we see, it analyses higher. None of the phosphoric acid in Thomas Phosphate is "water soluble," and neither is it necessary that it should be. In fact, if it was "water soluble," it would not have the lasting effects, particularly in light lands, it possesses.

Prof. Shutt, of Ottawa, says in his report, "It is readily soluble in dilute acids, and, for this reason, it is readily acted upon by the exudation of rootlets and absorbed."

As for mixed fertilizers, such as Freeman's, of which Mr. Topham speaks, it has long been pointed out that they are unscientific and uncertain. The same chief analyst to whom Mr. Topham recommends our farmers has for years dwelt on and pointed out these facts, yet it was not until Thomas Phosphate was introduced that any material progress was made by the farmer in buying fertilizers of any kind on intelligent principles.

On page 41 of the last fertilizer report Mr. Macfarlane makes this statement:

"In many of the fertilizers described in this and former reports their cost is very much increased by the admixture of nitrogenous constituents. This cost farmers might save by properly caring for the stock of nitrogen on their farms, and this stock might even be increased by cultivating those crops which have the power of appropriating the nitrogen of the atmosphere. Nevertheless, the fertilizer manufacturers still seem to be under the necessity of supplying this element in considerable quantity in their goods, and of charging for it. *In the case of the mixed fertilizers the extra charge varies from \$8 to \$14 per ton*, which the farmer must pay if he purchases, and which he can readily save in his own stables, or produce upon his own farm." Continuing, Mr. Macfarlane properly points out that "nearly the whole of the nitrogen in the fodder fed to farm stock is to be found in the excreta of the animals and one-half of it is contained in the urine." It is further well-known that 93 per cent. of the potash contained in the food of cattle and sheep may be recovered by carefully saving the liquid manure only.

If Mr. Macfarlane's calculations were applied to Freeman's "Sure Growth" fertilizer, then it ought to sell for \$10 per ton instead of \$30 per ton, since it only contains about one-third the amount of phosphate matter that Thomas Phosphate contains, and then in a form originating from the sulphuric acid on phosphate, and neutralized with lime, which forms gypsum.

It is all very well to talk of a balanced food for the soil, but it is another question when it comes to stuffing the farmer with the idea that he is getting something superior to his stock manure in a mixed fertilizer. Mixed fertilizers have a place to fill, and those who sell them should know what that place is, for, unfortunately, the majority of farmers do not know. Hence the reports of their results are more often classed as failures than successes. If Mr. Topham thinks these principles out thoroughly, he will understand then why Thomas Phosphate has won such a record, and why also it must continue to be one of the cheapest and purest sources of phosphoric acid so essential for the production of clover and all seeds. I would suggest further that Mr. Topham had better make an intelligent test with Thomas Phosphate, and then he will be able to group the principles which he seeks to know at present.

W. J. THOMPSON.

Bronte, Feb. 12th, 1900.

Clover and Phosphates

To the Editor of FARMING:

The letter of Mr. A. McNeill in FARMING of January 30th, in criticism of Mr. T. C. Wallace's address on clover as an exhauster of the phosphate of the soil opens up the way for a good discussion on soil fertility. Mr. Wallace's ideas, as published in the Ontario agricultural journals of the past four years, and in his lectures before Farmers' Institutes, have no doubt appeared very unorthodox to some farmers. Still, if they are wrong, it is a surprise (as Mr. McNeill points out) that the agricultural press has not drawn attention to the actual truth of things. Personally, in common with all the farmers of my acquaintance, I have been led in the past to suppose, like Mr. McNeill, that clover is a soil enricher rather than a soil impoverisher. My own personal investigation permits this idea as correct within certain limits, but beyond these I found there were facts to show that clover was an exhauster of soil fertility. So far as I have read Mr. Wallace's ideas, I find that he recognizes as most important the value of clover as a supplier of soil nitrogen, thus saving the necessity of buying it in the expensive form of nitrogenous fertilizers at \$30 to \$60 per ton. He has also emphasized the function of stock manure as supplying the potash requirements of most soils, where the manure is properly cared for. But his ideas on the question of keeping up the phosphate supply of the soil are worth looking into before passing any judgment or unfair criticism. I satisfied myself on this point, but did not feel it incumbent upon me to make known the result of my investigation, for the reason that I supposed every person was capable of working out their own conclusions in their study and working of soils under their own observation. Thanks to Mr. McNeill, however, I was led further to look into this question of clover as a soil enricher or impoverisher, and to find out the relationship of phosphate fertility to the grain and stock or dairy branches of farming.

No better authority, I think, could be consulted than Prof. Roberts' work on the "Fertility of the Land." This is not only the most recent, but also an exhaustive, detailed and clear summary of the questions underlying soils, crops and manures, and is, above all, very practical. Here it may be learned that a soil capable of producing 30 bushels of wheat per acre removes from the soil 14.4 lbs. phosphoric acid. The same soil in producing 3 tons of clover hay in a season removes no less than 33 lbs. of phosphoric acid per acre. At the same time, of course, it enriches the soil in nitrogen, but this power has been shown to be very dependent upon the phosphate and potash supply of the soil, hence one reason may be found for failure in growing clover. The results, as given above, are from an average of 788 tests of wheat and of 178 tests of clover.

In the dairy and stock business still more interesting are the results of analysis, showing that the exhaustive nature of soil fertility where these lines are followed is confined almost entirely to the phosphate supply, while at the same time the potash and nitrogen supply is increased in the soil. A cow giving an average of only 7,200 lbs. of milk per year removes as much phosphate (in the milk only) as 30 bushels of wheat. Every 1,000 pounds of live weight of cattle require 18.6 lbs. phosphoric acid; sheep, 12.3 lbs.; swine, 8.8 lbs. The potash needs amounts only to 1.7, 1.5 and 1.8 lbs. respectively.

If these evidences appeal to Mr. McNeill and farmers generally, there need be no necessity for accepting the possible conflicting statements of fertilizer agents. True, as Mr. McNeill says, that "agents of potash salts and nitrate of soda" are quite sure that their respective fertilizers supply exactly the material most needed by the soil. Nitrogen and potash are certainly needed, but the question is getting at the cheapest source of supply and buying only that which is imperative in keeping up a balanced fertility.

AGRICULTURIST.

Springfield-on-the-Credit, Feb. 18th, 1900.

The 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 2,000 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.

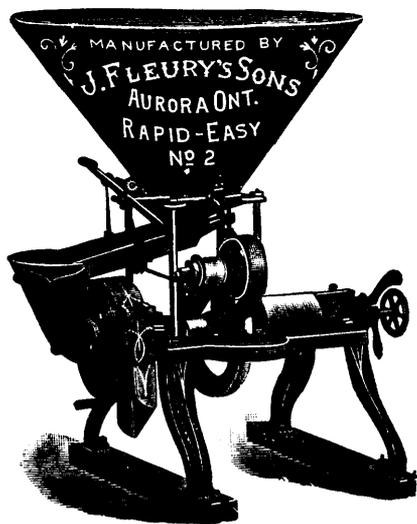
The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members wishing stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex 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.

A. P. WESTERVELT, Secretary.
 Parliament Buildings, Toronto, Ont.

Another Car of Stock for the Northwest.

There are vacancies for two more animals in a car of pure-bred stock that will be sent by the Associations to Northwest points as soon as these vacancies are filled. Apply at once to A. P. Westervelt, Parliament Buildings, Toronto.

A Valuable Prize.



Among the special prizes offered at the late Ontario Provincial Winter Fair was one by J. Fleury's Sons, Aurora, Ont., who offered as a sweep-stake prize for the best animal in the class for Lincolns, a Grain Grinder, valued at \$40.00, of which the above is a cut. The prize was won by Messrs. Gibson & Walker, of Denfield, Ont.

[American—Well, sir,] I ken assure yer that a lie never passed the lips of Garge Washington. Britisher—Hum! I suppose he spoke through his nose, like most of you Yankees do.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

Wanted single man for general farm work on farm near Niagara Falls, Ont. Yearly engagement. No. 375. a

Young man, single, age 17 to 20, required to drive a team on a farm, plough and do general farm work. Good home to right man. Will hire by year or for summer months. No. 376. a

Wanted immediately, first-class cattle-man, capable of taking care of dairy stock. Must be good milker. Married man not over 40 preferred. No. 377. a

Young married man, handy, tidy, healthy, willing to work, used to live stock, and who knows how to farm and clear land, wanted on farm on Manitoulin Island. Extra help given in busy time. Permanent job to right man. Farm one mile from village. Wages \$15 per month. Garden, house, wood, and use and feed of cow the year round free. Engagement to commence between April 15th and May 1st, on opening of navigation. No. 378. a

Wanted young man who understands all kinds of farm-work, is good milker, good with stock, honest, trustworthy, with no bad habits. Employment for 8 months or for a year. Wages moderate, with board. Work to commence April 1st. References required. State age, size, and wages required. No. 379. a

Wanted, at once, one married and one single man on farm of 250 acres in Grey Co., to whom liberal wages will be paid. Men must be honest, truthful and willing to do all kinds of farm labor. Permanent employment given. Preference to one having knowledge of dairying. No. 380. a

Two married men, not afraid of work, and whose wives would help in the milking in the summer time, can find employment on a farm in New York State. Good wages to good men. Also good cheesemaker, male or female, to make soft dairy cheese on the farm. Everything handy. No. 381. a

Good farm hand wanted at once on farm near Williamstown, Ont. No. 382. a

Wanted 4 men for Manitoba grain farm by April 1st. One, a young single man as foreman, competent to do all kinds of farm work, will be paid \$200 for 8 months, if steady. Two men to do the general work on the farm, and one to cook and do chores. Wages \$160 for 8 months. Also young woman wanted to do general housework. Must be able to bake and make butter. No children. Wages \$10 per month. No. 383. a

Married couple, with no children, wanted on farm. Will pay \$300 wages if they will furnish all the furniture. All breakages and depreciation in value of furniture made good, and transportation paid to suitable persons. No. 384. a

Wanted, on farm of 75 acres, near Avon, young man about 17 years old. Wages \$90 for 8 months, commencing April 1st. No. 385. a

Wanted, at Thessalon, Algoma, young man, or good boy, for a year, to deliver milk round town and do general farm work. Wages \$160 a year, board and washing. Work to begin April 1st. No. 386. a

Wanted, man, good worker and of good habits, for eight months, work to commence in March. Wages, \$14 a month. No. 352. b

Married man wanted to live on a

farm adjoining the home farm, near Guelph. Good house and garden, with place for poultry. Man must be able to do all kinds of farm work, and be steady and reliable. Engagement to commence about April 1st, for eight months. State wages. No 353. b

Wanted to engage a lad about sixteen or seventeen years old. Must be used to farm work and have no bad habits. Farm consists of 100 acres of which 60 are worked. Not much stock kept. Wages \$11 a month, board and lodging, for eight months. Engagement to commence March 20th. No. 354. b

Good boy wanted for general farm work. Twelve dollars a month given to one who suited. No. 355. b

Wanted on farm in Missouri good farm hand, one that can speak English. No. 356. b

Wanted on 100 acre farm, young man about seventeen, who is accustomed to farming. Must be honest, reliable, sober, and trustworthy, and have no bad habits, and not be afraid of work. Protestant preferred. Good references required. Yearly engagement, to commence on March 15th. No. 357. b

Good, strong boy, or young man, required to do general work on a farm near Palmerston. Engagement for 7 or 8 months. Give references, age, size, weight and wages wanted. No. 358. b

Wanted, a young man for about seven months, commencing March 1st or 15th. Must be honest, temperate, healthy, and not smoke. No. 359. b

Wanted, about March 1st, young man, steady, truthful, and with no bad habits, to work on 100-acre farm. Engagement for 6, 7, or 8 months, or longer. No. 360. b

Wanted, young man or good boy to work on a fruit farm or market garden near Lundy's Lane. Work to begin March 15th. Must be steady, have no bad habits, and furnish good references. State salary expected. No. 361. b

Young man of good character wanted for farm in Minnesota. Must have no bad habits and be good stock man and general farm hand among dairy cattle. Wages, first year, \$200 a year and board. No. 362. b

Will hire by month or year good boy that can team, plough, and harrow, or would engage married man and furnish him with a house. No. 363. b

Wanted, young man on farm where considerable stock is kept. State wages wanted. No. 364. b

Wanted, two married men and single young man. Our farm consists of 230 acres, with large herd of dairy cows and pigs. Men must be able to do all

kinds of farm work, run farm machinery, etc., and be reliable, industrious, intelligent, and free from bad habits. Of the three men wanted, one is to board himself and will be supplied with brick house and garden. Young married couple preferred. Engagement by year. State wages, with and without board. The other married man to board with his employer's family, and sleep at home, as house is some distance from barn. The single man to board and lodge with the family. Give testimonials. A. Hume, Menie, Ont. b

Married man wanted, with small family, about April 1st. Wages \$175, free house, wood, potatoes, apples, and milk. No. 365. b

Married man, who thoroughly understands farm work and machinery, required on April 1st, on stock farm. Also smart young man to work with team during the summer months. No. 366. b

Required good man, that can plough, is careful with horses, and willing to do all kinds of farm work. Steady employment to suitable person all the year round. No boys from Old Country Homes wanted. Wages \$180 a year and board. Age should not exceed 30 years. Give references. Farm near Souris, Man. Engagement to commence between March 15th and April 1st. Joseph Taylor, Elgin, Man. b

Willing, trusty, young man, of good temper, who can handle a team and plough, wanted at once. No. 367. b

Wanted as working foreman, married man about 26, capable of doing all kinds of work, and handling machinery and caring for stock. Also two single men, accustomed to dairying and market gardening, required. Good wages paid to steady, industrious men. Protestants preferred. Farm near Fort William, Ont. No. 368. b

Good, honest man, used to milking and general farming, wanted on farm near Toronto. No. 369. b

Wanted, married man without family as farm hand to board with family. Man must be a good plowman, and wife be neat and good housekeeper. Yearly engagement to suitable couple. None but first-class need apply. Also single man wanted. No. 374b

Situations Wanted.

First-class gardener, with 3 years' experience, and good references, is open for an engagement. No. 387. a

Farm manager, with 19 years' experience as manager in England, and who is well up in care of feeding sheep, cattle, and pigs, wants similar position in this country. State wages. No. 388. a

Young man, at present attending the

Ontario Agricultural College, Guelph, who has had considerable experience on a farm as well, wishes position as farm foreman. Good references. No. 370. b

Wanted, place on a farm between Brandon, Rapid City and Oak River, Man., from April 1st to August 1st. No. 371. b

Good ploughman and stockman, and capable of doing all kinds of farm work, wants place on farm in New York State. Wages, \$145 a year. No. 372. b

First-class milker and cattle man, who is willing to attend to a garden in summer-time, is open to an engagement. No. 373. b

N.B.—Where no name is mentioned in the advertisement apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Matters of Interest to Institute Workers.

AGRICULTURAL EXPERIMENTS.

Under this head the Superintendent of Farmers' Institutes will each week review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to the Superintendent of Farmers' Institutes he will be put in direct communication with the Institution that has carried on the work.

THE IMPORTANCE OF MAINTAINING A SUPPLY OF HUMUS IN THE SOIL.

Several of your Institute workers have during the present season been asked questions in reference to the value of humus in the soil. Wm. Rennie, Sr., discussed this question pretty fully in his address on Cultivation, and the Experiment Station of Minnesota has spent a lot of time and money in experimenting along this line. From one of their late bulletins we glean the following information:

One of the most important elements of soil fertility is the partially decomposed animal and vegetable substances (organic matter) which is known as humus. It has been shown that a decline in fertility is not entirely the result of the removal from the soil of the essential fertilizing constituents—nitrogen, phosphoric acid, potash or lime, but is due in many cases to a loss of humus. The loss of humus is due to a variety of causes, among which are (1) the continuous growth on a soil of a crop which does not return any residue to the soil; (2) systems of

cultivation which leave the soil exposed to the action of the oxygen of the air, such as summer fallowing and fall plowing, and (3) forest fires.

Investigations have shown that there are serious losses of humus from all these causes, but that probably the greatest decline in fertility in the soils of that region was due to continuous grain cropping. It was found that soils so cropped were in many cases abundantly supplied with nitrogen, phosphoric acid, and potash, and were not benefited by applications of fertilizers containing these substances; but there had been a decided decrease in the amount of humus which the soil contained, and this undoubtedly accounted for the observed decline in their productive power. That this was true was shown by the fact that with methods of farming in which humus-forming materials were returned to the soil, its productive power either did not decline or declined much slower than when crops like wheat, cotton, or potatoes, which leave little residue on the soil, were grown continuously.

The same station has recently carried on experiments to compare the influence of continuous grain cropping and rotation of crops on the humus content and fertility of soils. On separate plats wheat, corn, oats, and barley were grown continuously for four years. On another plat the following rotation was practised: Wheat, clover, wheat, and oats. On still another plat oats followed by clover, barley, and corn (with manure) were grown.

The gain or loss of humus during four years in the soil of the different plats is shown in the following table:

Gain or Loss of Humus in Soils Under Different Systems of Cropping.

	Humus at the beginning of the experiment.	Humus at the end of 4 years.	Gain (+) or loss (-).
	%	%	%
Plat 1, wheat continuously.....	3.30	3.00	-0.30
Plat 2, rotation (wheat, clover, wheat, and oats).....	3.30	3.80	+ .50
Plat 3, rotation (oats, clover, barley, and corn).....	3.30	3.50	+ .20
Plat 4, corn continuously.....	3.30	3.10	- .20
Plat 5, oats continuously.....	3.30	3.08	- .22
Plat 6, barley continuously.....	3.30	3.10	- .20

From the data thus obtained it is calculated that with continuous wheat raising there was an annual loss of 1,800 pounds of humus per acre. The annual loss from continuous cropping with corn, oats, and barley was about 1,500 pounds of humus per acre. On the other hand, on the rotation plats there was an annual gain of about 1,500 pounds of humus per acre in one case and over two tons in the other.

Since humus is one of the principal sources of nitrogen in the soil these variations of the humus content affected to a marked extent the supply of nitrogen. In the case of continuous wheat growing there was an annual loss of 146 pounds of nitrogen per acre over and above that utilized by the wheat. In other words, for every

pound of nitrogen removed in the wheat crop there was a loss of over five pounds of nitrogen from the soil. In the case of oats, the loss was 150 pounds; with barley, 170 pounds; with corn 29 pounds.

On the first rotation plat there was an annual gain of 61¼ pounds of nitrogen per acre, notwithstanding the fact that larger crops were grown on this soil than on those cultivated continuously in the same crop. A gain of nitrogen was also observed in the case of the second rotation plat, although it was smaller than in the case of the first, probably on account of the poor stand of clover secured, since it is believed that the increase of nitrogen in the rotation plats was due largely to that gathered by the clover from the free nitrogen of the air.

Humus is not only the principal source of nitrogen in the soil, but it influences to a marked extent the available potash and phosphoric acid. Humus-forming materials, like green manures and barnyard manure, have the power, when they decompose in the soil, of combining with the potash and phosphoric acid of the soil, and thus converting them into forms which are readily utilized by plants.

The influence of the loss of humus upon the physical properties of the soil is fully as important as its effect upon the chemical properties. The relative power of soils for water and for fertilizers declines rapidly with a decrease in its humus content. It is well established that applications of lime and commercial fertilizers give the greatest return on soil well stocked with humus. Soils with a

liberal amount of humus are capable of more effectively withstanding drought than similar soils with less humus. Determinations of moisture in the soils, upon which the above experiments were made, almost invariably showed a higher percentage of water in the rotation plats than in those on which the grains were grown continuously.

In arid regions and in sandy soils the loss of humus is most severely felt. Under these conditions the humus of the soil should be "increased by the use of well-prepared farm manures, green manures, and by a systematic rotation of crops in which grasses, or preferably clover, form an important part."

There are certain soils, however,

that do not need humus. "Ordinary prairie soils, for the first ten years after breaking, are usually well supplied with humus. Swampy, peaty, and muck soils contain large amounts of humus. If the soil is sour to the taste, the acid may be neutralized by a dressing of lime or wood ashes. Soils from poorly-drained places frequently contain sour humus. Very frequently muck soils are deposited over marl beds. Marl, which is a mixture of limestone and clay, may be used as a top-dressing for the muck soils."

From the above it is seen that a soil well stocked with humus will withstand drought better, furnish more available plant food, and hence larger crops, and give better returns for fertilizers applied than one deficient in this substance.

Horse-Breeding.

By Prof. J. Hugo Reed, V.S., Guelph, Ont.

(Continued from last issue).

CONFORMATION OF THE HACKNEY STALLION.

Head. Of medium size, slightly dished laterally, wide between the eyes, eyes full, prominent and mild, but lively in appearance, ears small, fine, turned inwards at tips when pointed forward, set wide apart, nostrils of medium size but very flexible, mouth small, muzzle fine, jaws not heavy but wide apart, cheeks flat with well developed muscles, but not too fleshy, head carried fairly high, nose drawn slightly inwards towards breast.

Neck. Of medium length, crest well-developed, hard and whipcordy, well arched, clean, but not too fine at throat, wide and muscular at shoulder.

Withers. High but not sharp, back short with rise at loin, which should be broad, full and muscular.

Croup. Slightly drooping, long, not steep, tail set on rather high, well haired and carried straight and well out from body.

Chest. Ribs long and well sprung.

Breast. Tolerably wide and well muscled.

Shoulder. Oblique, deep and well muscled.

Elbow. Well muscled and strong, fitting close to chest.

Forearm. Long, well and prominently muscled.

Knee. Broad and deep in all directions, straight, with an absence of malformations.

Knee to Foot. Cannon bone, short, strong and flat, with an absence of beefiness, back tendons standing out prominently, no coarse hair on posterior border, tendons not too much tied in below knee, pasterns strong and of medium length and obliquity.

Foot. Of medium size, round and strong, tolerably concave sole, well developed frog, strong and broad heels, not too high, must not turn toes either in or out.

Haunch. Heavily muscled, thick through ham, hindquarters broad and strong.

Stifle. Strong and well muscled.

Gaskin. Well and prominently muscled and strong, ham string standing boldly out and well let down at hock.

Hock. Strong, clean, rather short, an absence of coarseness, well developed in all points, no puffiness, point well marked, posterior border straight.

Hock to Foot. Cannon rather short, strong and flat, an absence of beefiness, back tendons standing out prominently and not tied in below joint, skin lying closely to bone and tendon, without long hairs on posterior border, pastern strong, of medium length and rather oblique.

Foot. Smaller than forefoot, sole more concave, frog well developed, heels broad, strong and not too high.

Skin. Soft, mellow, loose, not like parchment.

Color. Bay, blown, black, chestnut, roan, grey, with reasonable modifications. (A good horse of this class may be an undesirable color.)

Action. Knee and hock action high, with considerable extension, stride, grace and speed, must not paddle or roll forefeet nor allow them to tarry in the air, but fetch them up and forward in a straight line, with grace, promptness and style; hind feet must be lifted promptly and high, not with a sprawling action nor yet going close enough to interfere, but being brought forward in a straight line, with a good long stride and firmly planted.

Temperament. Docile but very energetic, free from nervousness, general appearance attractive and symmetrical.

Weight. 950 to 1,200 lbs.

Height. 15 to 16 hands.

The conformation of the Hackney mare or gelding the same as above, with the absence of the masculine appearance of head, crest and general physiognomy.

CONFORMATION OF THE STANDARD BRED STALLION.

Head. Ear of medium size and pointed, eye large, prominent and of docile expression, bones of the nose straight in front and slightly dished laterally, bones of cranium nicely rounded, nostrils firm, large and readily dilated, muscles of cheek well developed, but not too heavy, mouth of medium size, lips firm, muzzle fine and tapering, branches of lower jaw well spread apart at their angles.

Neck. Rangy with well-developed crest and attached to the head in an angular sort of way, rather of the obtuse order.

Withers. May be continuous with the superior border of the neck, well developed and not too broad, back straight and rather short, loins broad.

Croup. Somewhat sloping with dock coming out high up, tail well haired and carried in a graceful manner.

Chest. Deep through the girth, ribs long and well sprung with well marked angles, breast broad and well muscled.

Shoulder. Oblique from above downwards and forwards, blade bone well covered with muscles.

Elbow. Well muscled and lying close to chest.

Forearm. Well developed and strong, with muscles well defined and standing boldly out.

Knee. Straight, strong in all directions, free from malformations.

Knee to Foot. Cannon bone rather short, broad, flat and clean, not feathered, tendons well defined and prominent, skin lying close to bone and tendon, tendons not too much tied in below knee, an absence of beefiness, pasterns strong, of medium length and obliquity.

Foot. Of medium size, rather round with strong wall, sole rather concave, frog large and well developed, heels broad, strong and not too deep, must not toe either in or out.

Haunch. Muscles well developed, deep through ham, quarters broad and strong.

Stifle. Strong and well muscled, compact.

Gaskin. Muscles prominent and hard, hamstring prominent.

Hock. Large and strong in all directions, all parts well developed, an absence of malformation and puffiness, point well developed and posterior border straight.

Hock to Foot. Cannon bone rather short, broader and flatter than in front, little or no feathering, an absence of beefiness, tendons standing out prominently and well defined and not tied in below joint, skin lying close to bone and tendon, fetlock joint large and strong, pasterns strong, of medium length and obliquity.

Foot. Smaller and not so round as in front, sole more concave, frog well developed, heels strong and not too deep.

Color. Bay, brown, black, chestnut, roan, grey, with reasonable modifications.

Skin. Soft, mellow, loose, not like parchment.

Temperament. Docile, kind, prompt, energetic, not nervous.

Style and Action. Free and elastic, perfect in trotting gait, a good walker, must not paddle or roll in front, may go wide behind, may either trot or pace, and must go level without hitting himself in any place and be able to go fast.

Weight. 950 to 1,200 lbs. or even more.

Height. 15 to 16½ hands.

The mare and gelding of this class may be of the same general type as the stallion, but not so masculine-looking; the neck, withers and general physiognomy being the points which contribute most to the more effeminate appearance of these animals. The neck should be more delicate and cleaner cut, the crest not so

well developed, the withers more pronounced, not so thick through and through at the upper part, and there should be a line of a demarcation between withers and neck, the general physiognomy milder and more gentle and less impetuous.

CONFORMATION OF THE THOROUGH-BRED STALLION.

Head. Ears fine, not too long, approaching each other at the tips when thrown forward; cranium broad and nicely rounded, forehead flat and broad; eyes wide apart, prominent, large and bold in expression, nasal bones straight in front but slightly dished on lateral surfaces; nostrils firm, large and flexible, of large capacity when the animal is excited, lips firm, mouth of medium size, muzzle small and tapering, cheeks well but not too heavily clothed with hard, well-developed muscles, branches of lower jaw well spread apart at their angles.

Neck. Clean cut and rangy, crest well developed and whipcordy but not so heavy as in other classes, head attached to neck in graceful, angular manner, rather of the obtuse order, jugular gutter well marked.

Withers. Well developed, high and not too wide; unless animal be fat there should be a line of demarcation where the neck leaves off and the withers commence, back straight and rather short, loins broad and strong.

Croup. Rather long and slightly sloping with dock coming out high up, tail carried straight, well out from the body in an arched and graceful manner.

Chest. Somewhat cone-shaped, with good broad base behind, apex between forelegs, where the animal may be narrower in proportion than other breeds, the cavity should be deep from above downwards especially at the girth, ribs long, well sprung, with well marked angles, breast muscles well defined and prominent but not too wide.

Shoulder. Oblique from above downwards and forwards, the blade bone being well covered with hard, well-developed muscles.

Elbow. Well muscled and lying close to chest.

Forearm. Long, well developed and strong, well clothed with hard, well-developed muscles, having grooves of demarcation between them, showing the outlines of each individual muscle.

Knee. Clean, straight, large and strong in all directions, the bone forming the back part somewhat prominent, an absence of malformations.

(To be Continued).

“I suppose your son broke himself down at college football.” “No, indeed; the doctor said what gave him nervous prostration was trying to get his lessons in between the games.”

The Farm Home

Bubbles.

I.

I stood on the brink in childhood,
And watched the bubbles go
From the rock-fretted, sunny ripple
To the smoother tide below.

And over the white creek bottom,
Under them every one,
Went golden stars in the water,
All luminous with the sun.

But the bubbles broke on the surface,
And under, the stars of gold
Broke; and the hurrying water
Flowed onward, swift and cold.

II.

I stood on the brink in manhood,
And it came to my weary brain,
And my heart, so dull and heavy,
After the years of pain—

That every hollowest bubble
Which over my life had passed,
Still shone, with each bursting bubble,
Some heavenly gleam had cast.

That, however, I mocked it gayly,
And guessed at its hollowness,
Still shone, with each bursting bubble,
One star in my soul the less.

—Wm. Dean Howells.

The Potato.

By Laura Rose, O.A.C., Guelph.

Considering its cheapness, abundance and good keeping qualities, and since it can be prepared in so many ways, and we never tire of its mild flavor, the potato will, doubtless, continue to come upon our tables more frequently than any other vegetable, notwithstanding it ranks so low in food value, as the following table shows: Water, 75 per cent.; nitrogenous matter, 2 per cent.; very little or no fat, over 20 per cent. starch, and a small amount of ash-yielding mineral salts, and different kinds of acids.

The quality of the potato is of great importance, and none but the best should be used. It should be a mealy variety and perfectly ripe.

The potato is not fit to be made the exclusive food of a people, as was the case in Ireland a few years ago when an adult Irishman consumed 10½ lbs. of potatoes per day, or 3½ lbs. at each meal, but, if a person wants a cheap, good and sufficient food—potatoes, taken with butter-milk, forms the ration—the large percentage of casein in the butter-milk supplies the lack of nitrogenous substances in the potato.

In studying up this subject I was glad to find (for I like potatoes myself) that Dr. T. Burney Zeo, an acknowledged authority on the composition and assimilation of foods, said many good things regarding the potato, which of late has been so condemned and renounced as an article of diet by many. The starch of the potato has the advantage of being very diges-

tible when thoroughly cooked, and when taken with meat or other food, rich in nitrogen, forms a good diet for healthy, active people—the starch in the potato furnishing fuel to produce the heat and force required for the body.

Enough consideration is not given to the different methods of preparing this vegetable. I have gone in and out among the people to quite an extent, and have found invariably the plain, boiled potato. The great essential in serving potatoes lies in thorough cooking, as the heat breaks down the wall cells, and so lets free the starch they contain. If this action does not take place they are very indigestible.

1. *Plain Boiled Potatoes.*—Pare, put in a kettle with boiling water, add salt when nearly done, when tender, drain, shake up well and serve. Steaming is preferred to boiling, as there is less loss of the mineral salts.

2. *Irish Boiled Potatoes.*—Boil with the skins on till they can be pierced with a fork. Then drain and put in a hot oven for 15 to 20 minutes.

3. *Creamed Potatoes.*—Nice for cold meat—Boil, mash well, add one half cup milk or cream, a generous lump of butter and a little pepper; stir vigorously with a fork until smooth and light.

4. *Scalloped Potatoes.*—for lunch or supper—peel and slice a quarter of an inch thick; let stand 15 minutes in cold water, drain; grease a baking dish, lay in a layer of potatoes, pepper, salt and small pieces of butter, continue until dish is filled, cover with milk; bake in a moderate oven one hour or until cooked.

5. *A nice way to warm over potatoes.* Make a white sauce with one pint of milk, two tablespoons flour, one of butter, pepper and salt to taste; cut potatoes into dice, add to the hot sauce, boil a few minutes, then serve.

6. *A tasty breakfast and dish* is made by partly filling a dish with minced hash, spreading over a generous covering of cold mashed potatoes and baking to a delicate brown.

7. *Potato Puffs.*—Two cups of cold mashed potatoes, beaten yolks of two eggs, one half cup milk, one tablespoon butter, pepper and salt, stir thoroughly then add the beaten whites of the two eggs, drop in a hot greased pan or into gem tins, cook to a golden brown.

Winter Evenings on the Farm.

To the Editor of FARMING:

I have noticed that several of your correspondents have given various ways of spending the winter evenings on the farm both pleasantly and profitably. I would like to propose still another plan for the consideration of your readers, which would be the tak-

ing of a course in the correspondence department of the Social Science College. This college is one of the results of the social and political conference which was held in Buffalo last summer.

Prof. Will, late president of Kansas Agricultural College, is at the head, with such men as Professors Parsons, Ward, Commons, Bevins and others on the staff. These men have all been forced to give up lucrative positions in colleges and universities in the United States because they would not prostitute themselves and their talents to the money power. I would mention a few of the subjects which are as follows:—Economics, how nations are fed, the nature of wealth and the principles governing its production, exchange, distribution and consumption, the science of right and wrong, the science of citizenship, nineteenth century history, money, monopolies and trusts, literature. The rates have been recently lowered so that those who take immediate advantage will get their tuition at very little more than will pay for the cost of postage and the books supplied.

A good plan would be for a number of neighbors to form clubs, one from each family taking a different subject, when they could meet weekly or as often as desirable for a general discussion. In this way the evenings would be found both entertaining and instructive.

The work is conducted by personal correspondence with each student, which in itself is an education as well as a pleasure. This work will appeal to all, the old as well as the young, the rich and poor, the ignorant and the college-bred man.

The man who works for his living on the farm will be pleased with the low cost of obtaining an education as well as the small amount of time necessary, while as much time as a person has at his disposal may be profitably employed. The busy man may devote his evenings, or such odd hours as usually go to waste may be employed usefully and systematically.

A course in this college will greatly increase your general influence and standing, render you capable of taking part in public affairs, show you the meaning of life, reveal the social crisis to which we are hastening and teach you the way to prepare for it by learning the laws of social development.

For terms, information, etc., apply to Prof. Thos. E. Will, Manhattan, Kansas, U. S. A.

G. FRED MARSH.

Clarksburg, Ont., Feb. 19, 1900.

What word contains all the vowels in due order? Facetiously.

The Poultry Show.

Maria is a Brahma fowl with feathers on her legs,
 She's queen of Perkin's barnyard when it comes to laying eggs;
 She's earned a social standing through her "one-a-day" success,
 But Maria'd swap her honors for a rainy daisy dress.
 On such a day as Monday, now, the trim young Plymouth Rocks
 Can go a-promenading through the puddles with the cocks,
 The white Maria tempest-bound, with comb all creased with care,
 Regards this flirty jollity with jealous envious stare.
 She does not cross the barnyard for she'd wet her feathered legs—
 And a case of epizootic interferes with laying eggs.
 Off yonder is the cuttle fish and yonder is the sand
 And here she stands full-bloomered and all helpless on the strand
 The while her sisters 'tend to biz and travel at their ease
 With water to their—what d'ye say?
 Their elbows or their knees?
 And though she's social leader, ah, Maria will confess
 She'd swap her hard-won honors for a rainy daisy dress.

Conundrums.

What sort of a day would be good for running for a cup? A muggy day.
 What have you to expect at an hotel? Inn-attention.
 When may a man be said to break-fast before he gets up? When he takes a roll in bed.
 If a church be on fire, why has the organ the smallest chance of escape? Because the engine cannot play upon it.
 What is worse than "raining cats and dogs?" Hailing omnibuses.
 What is even better than presence of mind in a railway accident? Absence of body.
 Why has a man more hair than a woman? Because he's naturally her suitor (hirsuter).
 What tree is more suggestive of kissing? Yew.
 When may a man be said to have four hands? When he doubles his fists.
 Why are sailors bad horsemen? Because they ride on the main (mane).
 What letter is the pleasantest to a deaf woman? A, because it makes her hear.
 When does a pig become land property? When he is turned into a meadow.
 Why are fowls the most profitable of live stock? Because for every grain they give a peck.
 Why does a duck put its head under water? For divers reasons.
 Why does he take it out again? For sundry reasons.
 What vegetable products are the most important in history? Dates.
 What is higher and handsomer when the head is off? Your pillow.
 What is the keynote to good breeding? B natural.

A War Dictionary.

Words You See Daily in the Telegrams, and What They Mean.

The following list will be found useful by readers of the war news. The pronunciation of the more difficult words is given:

Aapies River (Arpies) — Runs through Pretoria into the Limpopo.
 Afrikander—A white man born in South Africa, of European stock.
 Berg—A mountain.
 Bethulie (Beth-ooly)—Town in the Orange Free State.
 Biltong—Boer provender. Dried meat.
 Boer—A peasant.
 Burgher—Males over 16 years old possessing the franchise.
 Commandant—Commander.
 Commando—A body of Boers.
 Commandeer—To mobilize; to requisition.
 Dam—An artificial lake.
 Disselboom—Pole of an ox wagon.
 Donga—A water hole or deep ditch.
 Dop—Boer brandy.
 Dopper—The Puritanical Lutheran Boer.
 Dorp—A village.
 Drift—A ford.
 Eishowe (Etsh-owy) — Camp in Zululand. Residence of Commissioner.
 Field Cornet—A magistrate with certain military powers.
 Fontein—A spring.
 Gaberones (Gab-ber-oons) — Very important native town, 90 miles north of Mafeking.
 Geldenhuis (Geld-den-hise)—Formerly member of the Volksraad for Johannesburg.
 Griqualand West (Greek-a-land)—District of Kimberley diamond mines.
 Kantoor (Kantore)—Rocky mining valley near Barberton, in Transvaal.
 Klip—A stone.
 Kloof—A ravine.
 Komati Poort (Ko-marty-poort)—Bordertown Transvaal and Portuguese territory.
 Kopje—A hillock.
 Kraal—A cattle pound, or collection of native huts.
 Krantz—A cleft between hills.
 Laager—A Boer camp.
 Mealies—Indian corn; staple food of natives, and much grown and used by the Boers for bread, etc.
 Nek—The saddle connecting two hills.
 Oorlog—War.
 Palapswe (Pal-larp sway)—Very large native town in Bechuanaland. Chief Khama's headquarters.
 Pan—A sheet of water.
 Pont—A ferry.
 Poort—A pass between or over the mountains.
 Ramathlabama (Ray-math-lay-barm-er)—Near Mafeking; British camp.
 Rookinek—Literally red neck. Boer term for English soldiers.
 Schuin's Hoogte (Skeins Hoog-tay) —Hill in Natal, just over the Transvaal border. Battle in war of 1881.

Sluit—A dry ditch.
 Spruit—A small stream.
 Taal—Boer low-Dutch language.
 Trek—Travelling by ox wagon.
 Uitlander—A non burgher of the Transvaal.
 Veldt—The South African prairie.
 Veldt-Cornet—See Field Cornet.
 Vereeniging (Fur-eeny-ging)—First station on the Transvaal side of the Vaal River. Custom House.
 Vierkleur—The four-colored Boer flag, red, white, blue and green.
 Vlei—A small lake.
 Voorlooper—The boy leading the first span of an ox team.
 Voortrekker—The older generation of Boers who took part in the Great Trek of 1837.
 Zarp—A Boer policeman.
 Zoutspansberg (Zoot-pans-berg)—Very large northern district of Transvaal. Highly mineralized.—*London Mail*.

Farm Life the Best.

A North Georgia farmer, who was possessed of some means, entered the office of his county paper and asked for the editor.
 The farmer was accompanied by his son—a youth of seventeen years—and as soon as the editor, who was in his secret sanctum, was informed that his visitors were not bill collectors, he came forward and shook hands.
 "I came to get some information," explained the farmer.
 "Certainly," said the editor, "and you came to the right place. Be seated."
 The farmer sat on one end of the table, while his son sat on the floor.
 "This boy o' mine," he said, "wants to go into the literary business, an' I thought you'd know whether there was money in it or not. It's a good business—ain't it?"
 "Why—yes," said the editor, after some little hesitation. "I've been in it myself for fifteen years, and see where I've got to."
 The farmer eyed him from head to foot, glanced around the poorly-furnished office, surveyed the editor once more, then, turning to his son, who was still on the floor, said:
 "Git up, John, an' go home, an' go back ter plowin'!"—*Atlanta Constitution*.

Anecdotes and Fun.

Over the door of a church in the south of England is engraved in stone, "This is the gate of heaven," but down below the inscription is a printed notice to the effect, "No admission during the winter months."

After a quarrel with his wife, who violently expressed a wish that he were dead, an Irishman said: "Oh, it's a widow you're wanting to be, is it? Be dad, I'll take good care you're no widow as long as I live!"

Farming.

A PAPER FOR FARMERS AND STOCKMEN.

Managing Director, D. T. McAINSH
Editor, J. W. WHEATON

Farming is a paper for farmers and stockmen, published weekly, with illustrations. The subscription price is one dollar a year, payable in advance.

Postage is prepaid by the publishers for all subscriptions in Canada and the United States. For all other countries in the Postal Union add fifty cents for postage.

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Receipts are only sent upon request. The date opposite the name on the address label indicates the time up to which the subscription is paid, and the change of date is sufficient acknowledgment of payment. When this change is not made promptly notify us.

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QUESTIONS AND ANSWERS

FEEDING FLAXSEED.

To the Editor of FARMING:

I subscribed for your paper the first of this year and I like it very much. I am interested in the Questions and Answers column, and would like to see more taking part in it. I have a few bushels of flaxseed and I was thinking of feeding it to my cattle.

Would it not help to keep them loose and from getting indigestion? (There are a number of cattle dying around here supposed to be due to too much dry feed.) What would be the best and handiest way of feeding it, and how much at a feed for cows and young cattle?

I have a grain grinder. How would it do to grind the flaxseed and feed it dry on the cut feed?

I boil some with the grain that I boil for the horses.

Is the flaxseed as good for young calves as the oil cake?

Please answer these questions through your paper and oblige a young farmer.

A SUBSCRIBER.

Jarvis, Ont.

Flaxseed, or better, the oil meal or oil cake made from the seed after the oil is extracted, forms one of the most healthful foods for stock. Its general effect is to place the animal in fine condition, with a pliable skin, an oily, sleek coat and a good quality of flesh upon handling.

Pure flaxseed carries a considerable quantity of protein with an excess of oil, and therefore is a very rich food. On account of the high commercial

value of the oil, flaxseed is rarely used as food, the common practice is to feed the oil cake or meal which gives good results.

Flaxseed fed at the Iowa Experiment Station to cows at the rate of eight pounds per head daily produced no ill effects from such heavy feeding. But it would not be advisable to feed that much. From $\frac{1}{2}$ to 1 lbs. per head per day would be sufficient for cows, with other foods, and the young animals in proportion. Some feeders claim that flaxseed should only be fed in limited quantities, since it contains a cathartic or purgative principle.

We would advise grinding the seed and feeding it dry with the other feed.

Flaxseed should be fed to horses very sparingly, as it is a fattening food and does not make hard flesh, so desirable in the working horse. A little flaxseed in the food will, however, help to keep the skin pliable and the hair smooth.

It would be preferable to feed oil cake to young calves rather than flaxseed. Flaxseed has, however, been fed to calves with good results, notably at the Iowa Experiment Station. Prof. Henry, in his work, "Feeds and Feeding," gives the result of an experiment where calves receiving about one-half pound of flaxseed per day with skim-milk made an average gain of 1.85 pounds per day, while those receiving skim-milk only gained 1.55 lbs. The age of the calves is not given. Oil meal converted to jelly by adding barley-water is relished by young calves. At first a tablespoonful of oil meal is sufficient for a feed, which may be gradually increased to half a pound per day as the calf grows.

If "Inquirer" would furnish more details as to the symptoms, etc., which the cows showed that he reports to be dying in his locality, we might be able to say something definite as to the cause of death. It is not likely that dry food alone was the cause.

Canadian Fairs Association.

The annual convention of the Canadian Association of Fairs and Exhibitions was held in the County Council Chamber, Toronto, on Wednesday and Thursday of last week, Mr. J. T. Murphy, Simcoe, Ont., presiding. Papers dealing with several phases of exhibition management were read by James Mitchell, D. G. Hamner, Wm. Richardson, Wm. Laidlaw, James Reith, J. W. Sheppard, and others.

The Western Fair.

The Western Fair Association, London, Ont., held its annual meeting on Feb. 21st, when the old board of directors were re-elected as follows:—Lieut.-Col. W. M. Gartshore, Lieut.-Col. F. B. Leys, M. P. P., Messrs. A.

M. Smart, George Taylor, W. J. Reid, W. M. Spencer, B. Shaw-Wood, Jas. H. Brown, W. R. Hobbs, J. S. Pearce and J. W. Little.

The financial statement showed the receipts to be \$34,642.04 and disbursements of \$32,010.44. The assets of the association total \$43,322.44, with no liabilities. Last year was, with one exception, the best in the history of the fair.

The Brandon Fair.

The date fixed for western Manitoba's big fair for 1900 are July 31st to August 3rd inclusive. This exhibition is held under the auspices of the Western Agricultural and Arts Association; and next to Winnipeg, is the best and largest fair held in the West.

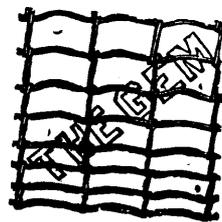
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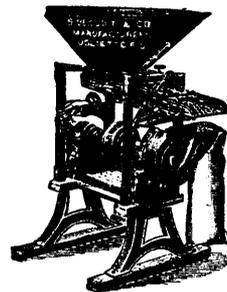


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SEND FOR CATALOGUE

Institute Round-Up.

The fourth annual round-up of the Michigan State Farmers' Institute takes place at Ann Arbor, Mich., this week. An elaborate programme has been prepared, comprising addresses on practical farm topics by the leading agriculturists of the State. The meeting extends over four days. A separate woman's section is provided for and a two days' programme prepared for this department.

Homes for Children.

Mr. J. Stuart Colman, secretary of the Children's Aid Society, Confederation Life Building, Toronto, writes us as follows:

The Children's Aid Society is desirous of obtaining homes of adoption for the children whose descriptions follow. It will be quite useless for anyone to apply for girls older than those mentioned, as there are already a lot of unfilled applications for girls over three years of age on the society's files.

BOYS.

Four months old—Roy B., fair complexion, brown hair, brown eyes; Baby N., fair complexion, fair hair, blue eyes. Nine months—Harold K., fair complexion, sandy hair, blue eyes. Twelve months—Emerson C., fair complexion, fair hair, blue eyes. Fourteen months—George S., fair complexion, brown hair, blue eyes. Two years—Douglas S., fair complexion, auburn hair, blue eyes; Alex. A., fair complexion, fair hair, blue eyes. Three years—William A., fair complexion, golden hair, brown eyes. Seven years—Harold and Howard H. (twins), fair complexion, fair hair, brown eyes. Nine years—Samuel H., fair complexion, fair hair, brown eyes; Frank B., fair complexion, fair hair, grey eyes.

GIRLS.

Four months—Pearl B., fair complexion, fair hair, grey eyes. Ten months—Ruth J., fair complexion, brown hair, blue eyes; Dot M., fair complexion, fair hair, blue eyes; Hilda S., fair complexion, fair hair, blue eyes.

Roy and Pearl B. are twins, and it is desired to get them a home together or homes so near by that they will not be permanently separated by a long distance.

The Society is desirous of sending two infants to Calgary, Assa., and if some woman going that far who is used to young children will offer her services, it is possible that the intending foster-parents will be willing to pay her full railway fair.

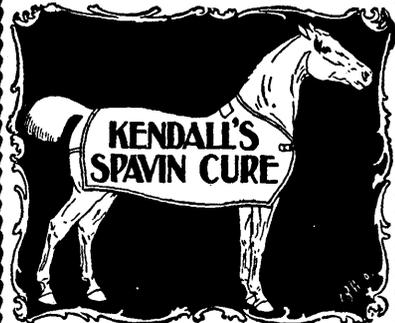
THE BEST HE EVER SAW.

Mr. E. E. Cooper, Oshawa, Ont., writes, of date Feb. 9, as follows: "In regard to FARMING I must say it is getting better and better every week and is, in my opinion, the best agricultural paper I ever saw."

The Horse Market

Demands Sound Horses Only

Lame horses sell at less than half their actual value and are neither desirable for use or sale. The remedy is easy. A few bottles of



will work a permanent cure for Spavins, Ring-bones, Splints, Curbs, etc., and all forms of Lameness. It cures thousands of cases annually. Such endorsements as the one following are a guarantee of merit.

Dear Sir: After using your Spavin Cure for Cuts, Galls, Splints, Etc., I found one of my horses had a Splint, I thought I would try a Cure, which cured it. Since that time I have cured one other Splint and two Spavins. Now I am not afraid to recommend it to all. I remain,
Yours truly,
H. A. LAWRENCE.

Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address
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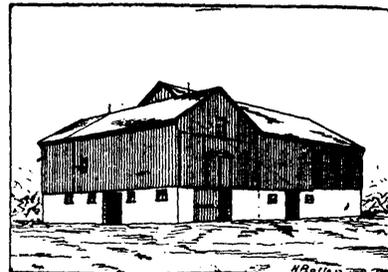


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Cyphers Incubator Warranted to last ten years without repairs, and to out hatch any other machine, during three trials, bar none. 16-page circular free. Send 15c. in stamps for \$4000 Poultry Book No. 69. Address nearest office. **CYPHERS INCUBATOR CO.,** CHICAGO, ILL. WAYLAND, N. Y. BOSTON, MASS.

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Stock Notes

REGISTERED AYRSHIRES BY AUCTION.

As announced in last week's issue the well-known herd of registered Ayrshire cattle, the property of the estate of the late James Johnston, Robertland Farm, Como, Quebec, will be offered by public auction at the above address on March 14th next. This herd of Ayrshires was founded about nine years ago from that of the late Thomas Brown's, of Petite Cote, and two years later by importation. The cattle are from the very best stock, both as prize winners and milk producers, many of them tracing to Villie Osborne and Silver King. The bulls used on this herd have always been prize winners, including Prince Henry of Barcheskie (imp.). He won first at many of the leading exhibitions in Canada and was sold to the Model Farm, Compton, Que., in 1897. The bull now at the head of the herd is "Baron of Maple Grove," 2263, vol. 9, from imported sire and dam, and bred by R. G. Steacy, Lyn, Ont. Some of the cows to be sold are Queen of the Roses, 6936, Villie of Barcheskie, 5808 (imp.), Afton Water, 7487, Belle of Robertland, 7863, and fifteen others including heifers of equal breeding and merit. This sale affords an opportunity seldom offered to breeders to procure valuable animals of choice breeding at their own price as the sale will be positively unreserved.

SOME EXCELLENT CLYDESDALES.

J. Devitt & Son, Freeman, Ont., write: Our Clydesdales were never in better condition at this season. The stallion, Douglas Macpherson, has been at the head of our stud for several years and has proved a most satisfactory sire, his gets having won many prizes at leading fairs of the province. They are large, smooth and active, just what is wanted for export trade at the present time. He is fresh and vigorous, a good thick sort, a good tempered horse with plenty of ambition, and a sure getter; weight about 2,000 lbs. Grandeur II. stood at head of our stud last season. He is a grand big horse weighing 2,200 lbs., has the best of feet, good pasterns, plenty of good, clean bone, nicely feathered, grand quarters, good short back ribs, well sprung and deep; good shoulder with good head and neck. We consider him one of the best Clydesdale stallions in Canada. He has proved himself a good getter. Our brood mares are a good lot, ranging in age from 3 years to 9 years old, all in foal to the above-named stallions, except one, a half-sister to them, which was bred to Lord Charming. They are in nice breeding condition, not in high condition, but good and healthy, several of them have been winners at Toronto and London fairs, and all of them are from good breeding strains and some of them have proved themselves good breeders. The colts are a nice even lot, not overly large but of good quality and will make splendid horses.

Publishers' Desk

Battle's Thorold Cement. — Among the many basement barn walls built with Battle's Thorold Cement last year was one

FREE **DAISY AIR RIFLE**



We give this splendid Rifle for selling only two dozen packages of Sweet Pea Seeds at 10 cents each. Each large package contains 55 most fragrant varieties. All colors. This Rifle is of the best make and latest model, well finished nickel plated, carefully sighted and tested before leaving the factory. It is just the thing for target practice or for shooting cats, rats, sparrows, etc. Return this advertisement with your address and we send seeds. Sell them, return money and we forward your Rifle all charges paid. The season for selling seeds is short so order at once. Our Sweet Pea packages sell themselves. Premium Supply Co., Box Toronto.

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Absolutely pure and free from all injurious ingredients. **POSITIVELY CURES and prevents CHICKEN CHOLERA, ROUP, GAPES and all disorders of the Flock.**

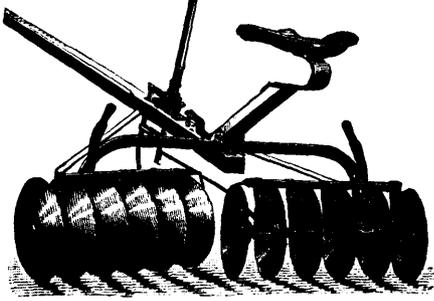
Makes Hens Lay Regularly

YOUNG CHICKS grow healthy and free from disease when PRATTS FOOD is fed regularly. Trial pkt., 8 oz., postpaid, 10c. Regular sizes, 26 oz. pkt., 30c; postpaid, 35c. 5 lb. pkt., 475c; postpaid, \$1.00.

Send two-cent stamp for "PRATTS PRACTICAL HINTS" about Horses, Cows, Hogs, Sheep and Poultry. Dealers will find this an exceedingly profitable line to handle. If your dealer cannot supply you, send direct to **ROBERT GREIG, 29 Melinda St., TORONTO.**

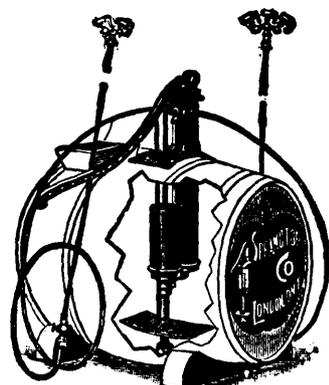
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Will loosen up Fall Plowed land ready for seed in the Spring. Will prepare Root Ground to perfection. Will work the Hardest Stubble Ground after harvest. Will make a Garden of a Sod Field, whether Fall or Spring plowed. **KNOWN TO FARMERS AND AGENTS AS THE MOST POWERFUL CULTIVATOR ON THE MARKET.** Address, **T. E. BISSELL, Fergus, Ont.**

WHY THROW AWAY ONE-HALF YOUR LABOR ?



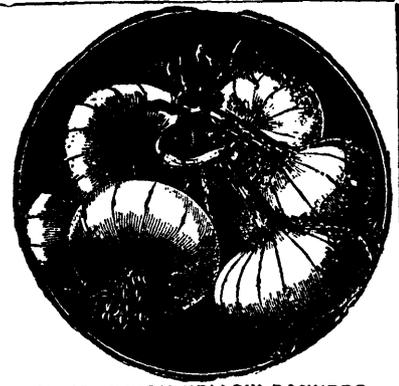
THIS is just what you do with almost all sprayers sold to-day. All the Spramotor salesmen have to do to show this is to shut off all discharge outlets, and ask customers to pump up the pressure. When this is done the handle is held tight, nothing is lost, showing the perfect mechanism. All other machines lose from 5 to 15 strokes each minute from leakage with a pressure of 100 pounds. One machine in the market, which is claimed to have no packing, but which is in reality packed with metallic rings, lost 10 strokes each minute from leakage back through the plunger, and, to overcome this difficulty, put on leather-faced valves and plunger in the machines used at the Fall Fairs during 1899, displaying the rings to the public. A metallic packing in a steam engine is a very satisfactory packing, as it can be oiled and kept in proper working order, and are made to expand in width as well as in diameter, but all mechanics know what the result is when it is not kept oiled, and they are amused when told that it is a suitable packing for a sand pump, which is just what a sprayer is when using Bordeaux mixture or whitewash. Take two pieces of brass, and put sand and water between, and rub them together, and you will soon see what the result is. Why throw away one-half your labor, when with the Spramotor you use it all at the nozzle. Each Spramotor is guaranteed, and the guarantee is good. The Spramotor Treatise of 76 pages is yours for the asking. **SPRAMOTOR CO. 49-70 King St., LONDON, ONT.**

SEEDS FOR 25c.

Any 12 Varieties—Regular 5 cent Packages—Money Refunded if not Satisfactory.

VEGETABLES.	10—Herbs, Sage.	21—Radish, Rosy Gem, White Tipped.
(Order by Number.)	11—Herbs, Savory.	22—Squash, Hubbard.
1—Beet, Eclipse, Round.	12—Herbs, Marjoram.	23—Tomato, Extra Early Atlantic.
2—Beet, Egyptian, flat-round.	13—Lettuce, Nonpareil (Cabbage).	24—Tomato, Dwarf Champion.
3—Cabbage, Winningstadt.	14—Lettuce, Denver Market (Curled).	FLOWERS.
4—Cabbage, Fottler's Brunswick.	15—Musk Melon, Extra Early.	25—Asters, Mixed.
5—Carrot, half-long, Scarlet.	16—Water Melon, Early Canada.	26—Mignonette, Sweet.
6—Carrot, Oxheart, or Guerande.	17—Onion, Large Red, Wethersfield.	27—Pansy, Mixed.
7—Cucumber, Chicago Pickling.	18—Onion, Yellow Globe, Danvers.	28—Petunia, Mixed.
8—Cucumber, long green.	19—Parsnip, Hollow Crown.	29—Nasturtiums, Tall Mixed.
9—Celery, Golden Self-Blanching.	20—Radish, French Breakfast.	30—Sweet Peas, Fine Mixed.
		31—Wild Flower, Garden Mixed.

WM. RENNIE, TORONTO. BY MAIL POSTPAID. ORDER TO-DAY.



No. 18—ONION YELLOW DANVERS.

FREE Providing this coupon is CUT OUT and sent to us with an order for 12 packets, we will include 1 packet New Giant Yellow Sweet Sultan—Price 25c—FREE OF CHARGE TO READERS.

50 ft. x 70 ft. x 9 ft., above footings, by the Hon. E. J. Davis, Provincial Secretary, on his farm, near King, Ont., York Co. Mr. Davis also put in cement floors for horses and cattle with Thorold Cement, and the farmers living near there are much pleased with both walls and floors. This barn has stabling for thirty-eight head of cattle and four horses, leaving room for a large root-house, feed-way, etc.

Gold Medal Grinders.—S. Vessot & Co., Joliette, Que., write: "We have lately shipped five different sizes of grinders to the Paris Exhibition, and expect to repeat our Chicago experience, *i.e.*, obtain two gold medals, and perhaps more. At Chicago we were the only manufacturers of grinders out of over fifty who obtained awards. Our present grinder is one hundred per cent. better than the one shown at Chicago."

Publishers' Talks

A Much-Thumbed Paper

It is a compliment to a book, usually, that it bears many thumb marks, evidence that its contents merit much reading.

A paper that is not quickly thrown aside, but passed from one member of the house to another—and often from friend to friend—is like the much-thumbed book. The fact is evidence that within its pages there is found reading matter of interest to every member of the family.

The publishers have reason to believe that this is very largely the situation with FARMING. Father and mother, brothers and sisters, down to the smallest tot, find something to interest them, and with the older ones there is hardly a line, in many cases, that is missed the reading.

We aim particularly to make FARMING not simply entertaining, but practically valuable, because of the information and helpful suggestions within its pages. It is an indispensable tool to the farmer himself; a money saver through its market reports; and in its family departments provides entertainment as well as instruction for all other members of the family.

In many cases FARMING is filed regularly, whilst in others it helps in a large degree to make up a family scrap book, and it is a pretty well scissored paper when done with.

Because more than ever anxious to make the paper valuable to subscribers is our reason for asking for their co-operation in increasing its circulation. The larger this becomes the better able the publishers are to increase its attractions and features of usefulness.

A Quiet Word

In our advertising pages we make the first announcement this week of our new premium—a handsome copy of that ever-welcome book, "The Pilgrim's Progress," to be given to any one who will send us just two new subscriptions to FARMING. The book is handsomely bound and profusely illustrated, in large, clear print, making it easy reading for everyone. No need exists for emphasizing the readableness and the value of "The Pilgrim's Progress," one of the remarkable books of the century. Present subscribers who are not in arrears have the privilege of securing a copy of this book for the minimum price of 50c., just half published price.

Many kindly letters, expressive of appreciation of FARMING, are constantly reaching us. The last week or two has brought us more than the usual number, and with these, payment for subscriptions. Wesley H. Harvey, of Exeter, Ont., making his remittance for year's subscription, says this: "I consider FARMING the best agricultural paper published in Canada and wish it continued prosperity." The best when used in the right sense is the best, and as the best farm paper the publishers may with confidence appeal to the farming population generally of the Dominion with the suggestion that each and all become subscribers to this journal.

Reliable Feed Cookers

What Messrs.

BRETHOUR, DAVIS and FLATT

Say in favor of them.

BURFORD, Ont., Feb. 3, 1900.

Ripley Hardware Co.,
Grafton, Ill.,

GENTLEMEN:—The more I use your Cooker the more I am pleased with it. We have no trouble heating our hog-pen 18 by 80 feet, and at the same time heating water for over 100 pigs. I purchased my cooker at the Springfield Fair from your agent, in the fall of 1898. I can heartily recommend your cooker to any person in need of an article of this kind, as it will do all and more than you claim for it.

J. E. BRETHOUR,

Breeder Oak Lodge Yorkshire Hogs.

WOODSTOCK, Ont., Jan. 5, 1900.

Ripley Hardware Co.,
Grafton, Ill.,

GENTLEMEN:—Having used your Cooker for heating pens over 100 feet long by 30 feet wide, also cooking feed for 60 hogs daily, can say that it gives satisfaction, saves time over old process, saves fuel, and is very easily operated. Hogs relish the feed and it makes them grow in cold weather.

Yours truly,

H. J. DAVIS,

Breeder of Yorkshire, Shorthorns and Berkshires.

MILLGROVE, Ont., Dec. 26, 1899.

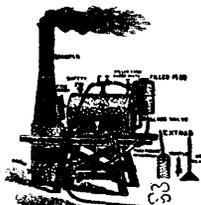
The Ripley Hardware Co.,
Grafton, Ill.,

GENTLEMEN:—The Cooker we ordered from you Nov. 14, '99, far exceeds our expectations and fills a long felt want and we honestly believe it will doubly pay for itself in 6 months. Should we not be able to get another could not be persuaded to let it go for ten times the price of it. We usually keep from 200 to 300 Yorkshire hogs and have been using a large furnace for heating water and food and find your Cooker can be run with 70% less fuel than it took to run the furnace. I am free to say that every farmer who has stock, be it cattle, sheep or swine, could not invest his money better than by putting in one of your Cookers.

Yours very truly,

D. C. FLATT & SON.

It will only take two minutes to read our **Special Offer** for February and March orders.



On any and all orders we receive from Breeders and Farmers during February and March we will allow 5 per cent. discount from our regular price or in place thereof, pay the freight to your nearest railroad station. We will also accept bankable notes to run 2, 3, 6 or 8 months, in payment for Cookers, but we will not allow any discount or pay the freight on any time sales. We guarantee our cooker to cook more feed and heat more water in less time and with less fuel and attention than any cooker made.

Take advantage of our special offer and get one of the greatest feed savers, labor savers and money makers the feeder can possibly have. Cooks a barrel of ground feed in 30 minutes; 25 bushels of ground corn in 2 hours; heats a barrel of water hot enough to scald hogs in 20 minutes; will heat water in tanks 100 feet from Cooker. Used and recommended by feeders throughout the United States and Canada. Highest awards at Omaha Exposition in 1898, and at Toronto, Canada, and at Dallas, Texas, in 1899, and at State Fairs everywhere. Sold on a positive guarantee. Your money back if it does not come up to the contract. Send for 1900 Century Catalogue and introduction prices. The Ripley Co. proved its superiority by taking first premiums at the Chicago, St. Louis and Cedar Rapids Poultry Shows in Jan., 1900. It has no flues to rust out or leak. No scorched feed if you use it. The best machine of any kind proves the cheapest in the end.

Ripley Hardware Co., Box Grafton, Ill.

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The Choicest
FARM and GARDEN SEEDS

EWING'S ILLUSTRATED SEED
CATALOGUE is now ready, and will be
mailed free on application.

WILLIAM EWING & CO.

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Save Time and Labor and Get Better
Results by Using Mattheus

**NEW UNIVERSAL HAND SEEDERS
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Suitable for every class of work.
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Persianic Sheep Dip and Animal Wash

POSITIVELY NON-POISONOUS

Kills Ticks,	Cures Scab and	Removes Scurf and
Kills Lice,	Greatly Improves	Prevents Rubbing.
Heals Wounds,	Quality of Wool.	Thoroughly Cleanses the
Heals Ulcers,	Removes all Insects,	Skin, leaving Coat
		Soft and Glossy.

Leading **Stockmen** endorse it as the cheapest and most effective "Dip" on the market. Sold by Druggists, 50c. per qt. can. Special terms to Breeders requiring large quantities. Made only by

The Pickhardt Renfrew Co.

LIMITED

STOUFFVILLE, Ont.

Market Review and Forecast

Office of FARMING,
Confederation Life Building,
Toronto, Feb. 26th, 1900.

Reports from country merchants seem to show that farmers are well supplied with money, and are paying more cash over the counter for goods purchased on spot than ever before. We trust that this glowing summary in regard to the position of the farmer from one of our trade journals has the stamp of truth upon it. General wholesale trade is looking forward to a good spring business. Money continues ample for all legitimate trade. The relief of Kimberley and General Roberts' movements have no doubt given a feeling of relief to financial and commercial circles generally.

Wheat.

The wheat market shows little material change during the week, though on the whole there has been a slightly easier tendency in some quarters. For several weeks past the market early in the week has ruled firm with a higher tendency, only to ease off at the end of the week, leaving the market in about the same position as at the beginning. There has been an extra export demand during the past ten days which has made things more active, but as this has been for the present supplied an easier feeling prevails. An easier feeling is reported at Montreal out of sympathy with Chicago and Liverpool. A lot of spring wheat is reported sold east of Toronto at 66½c. for export. Manitoba No. 1 hard has changed hands at Fort William at 66 to 66½c., with some holders asking 67c. The demand here is only fair, and, if anything, the market is easier at 65 to 66c. for red and white north and west, and 69 to 70c. for goose. On Toronto farmers' market red and white bring 69 to 71c.; spring file, 70½c., and goose, 71½c. per bushel.

Oats and Barley.

An advance of 3d. per cwt. is reported in the English market for Canadian oats and stocks are light. On this side the oat market continues to strengthen and sales are reported at 27 to 27½c. f.o.b. at points west of Toronto and 28½c. at points east for export. Oats are quoted here at 28c. east and 26 to 27½c. west. On the farmers' market oats bring 30½ to 31½c. per bushel.

Dealers here quote barley at 41c. west, and 42c. east for No. 2 and 35 to 36c. for feed barley. On Toronto farmers' market barley brings 44 to 47c. per bushel.

Peas and Corn.

Cable despatches report an advance of 1s. 6d. in England for Canadian peas with the market decidedly firmer and higher. The market on this side is firmer and prices at Ontario points have been moved up 1½ to 2c., with sales at 63 to 63½c., higher freights. Quotations here are 62 to 63 north and west. On farmers' market peas bring 61c. per bushel.

The corn market is firm, Canadian being quoted at 41c. and American at 41½c. on track, Toronto.

Bran and Shorts.

Winter wheat bran is quoted at Montreal at \$15.50 to \$16, and shorts at \$17 to \$18 in car lots. City mills here sell bran at \$14.50, and shorts at \$16 in car lots, f.o.b. Toronto.

Eggs and Poultry.

The English egg market is decidedly easier for eggs as well as the market on this side, supplies being more liberal. Sales of large lots of new-laid eggs have been made at Montreal at 17 and 18 to 19c. per dozen in small lots. Pickled stock is pretty well sold out. The market here is easier and new-laid are quoted at 18 to 19c. in large lots. On To-

ronto farmers' market new-laid bring 22 to 25c. per dozen.

There is nothing much doing in dressed poultry except in a small retail way. On farmers' market here chickens fetch 60c. to \$1 and ducks 80c. to \$1 per pair and turkeys at 12 to 14c. and geese at 8 to 9c. per lb.

Potatoes.

The potato market is quiet and prices somewhat irregular. Quotations at Montreal are 40c. to 45c. per bag in car lots on track. Car lots on track sell here at 38 to 40c. On farmers' market potatoes fetch 45 to 50c. per bag.

Hay and Straw.

The export demand for hay has slackened off and the market is very unsettled. A shipper at Montreal reports having had an order for 5,000 tons for South Africa, but after the relief of Kimberley this was reduced to 500 tons. Prices at country points east have dropped to \$6.50 and \$7 for No. 2 quality as compared with \$7.25 to \$7.50 reported last week. Montreal quotations are \$9.50 to \$10 for No. 1 baled hay; \$8 to \$8.50 for No. 2, and \$7 to \$7.50 for clover in car lots. Baled hay is quoted here at \$8.50 to \$9, and straw at \$4 to \$4.50 in car lots on track. On Toronto farmers' market, timothy brings \$10 to \$11.50; mixed \$9 to \$10; sheaf straw, \$7 to \$7.50, and loose straw, \$4 to \$5 per ton.

Apples.

Heavy losses continue to be reported on shipments of apples to Great Britain, due to the fruit arriving in almost unsaleable condition. A lot of 450 barrels of apples consisting of Spies, Greenings and Baldwins is reported to have sold at about 75c. per barrel, and as they cost \$1.75 per barrel there was a loss of \$1 per barrel. A Liverpool cable of Feb. 21st to Mr. Eben James, Toronto, shows more enquiry for apples, firsts fetching 15s. to 21s. and seconds 10s. to 15s. per bbl. On Toronto farmers' market apples bring \$2 to \$3 per bbl. as to quality.

Seeds.

Clover seed is reported scarce, and more red clover seed has had to be imported this season into Canada than for several years back. On Toronto farmers' market red clover brings \$5 to \$5.75; alsike, \$5.50 to \$6; white clover, \$7 to \$8, and timothy seed \$1 to \$1.35 per bushel.

Cheese.

The excitement in cheese reported last week still continues. Cable has advanced 1s. with 61s. to 62s. for finest westerns and 60s. to 61s. for finest easterns quoted at London. The market continues to advance steadily on this side. Sales have been made at 12 to 12½c. for white and 12½ to 13c. for colored, with some holders asking 13½c. for the latter. There is reported to be a corner in Canadian colored cheese and some are looking for this quality going as high as 70s. English dealers fully realize now that Canadian stocks are low. The outlook for the beginning of the season is very bright indeed. A few fodder goods are reported as being made west of Toronto.

Butter.

There is no Canadian butter to speak of being offered on the English market, where prices have dropped 1s. with a steadier feeling at the decline. On this side the scarcity of choice butter continues, and is especially marked at Montreal where it is hardly sufficient to supply local demand. There is an entire absence of English orders, as prices are higher here than on the other side. Some butter is being shipped from Montreal to Toronto and other points west. Sales are reported at Mon-

treau of choice creamery tubs at 22½ to 23c. and small jobbing lots at 23½ to 24c. per lb., and higher prices are looked for as supplies are very low. Creamery butter is reported to be selling at Belleville at 24 to 25c. in shipping lots. A marked scarcity of dairy rolls is reported at Montreal and sales are reported at 22 to 22½c. in small lots. Here butter is as scarce as ever. Creamery is quoted at 22 to 24c. for boxes and 24 to 25c. for prints. Choice dairy tubs bring 20 to 21c., and lb. rolls 21 to 22c. per lb. in large lots. On Toronto farmers' market pound rolls bring 20 to 25c. each as to quality.

Cattle.

The leading cattle markets in the States have shown but little change of a general character, as compared with those of several weeks past. Too many undergrade beef cattle are coming forward, for which prices rule easy. The run of live stock at Toronto cattle market on Friday, the last market day of the week, was light, as has been the case all week, consisting of 643 cattle, 1,374 hogs, 229 sheep and lambs, and 8 calves. The quality of the fat cattle was generally fair, but too many of the poorer qualities are coming forward. Trade was not quite so good as earlier in the week for exporters and for lower grades of butchers' cattle, prices declining from 15c. to 25c. per cwt. The scarcity of vessel space, and the uncertainty of boats sailing on time caused prices for exporters to be easier.

Export Cattle.—Choice lots of these sold at \$4.75 to \$5, and light ones at \$4.40 to \$4.60 per cwt. Heavy export bulls brought \$4 to \$4.25, and light ones \$3.40 to \$3.65 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, and weighing 1,000 to 1,100 lbs. each, were about steady at \$4.25 to 4.60 per cwt. Good butchers' cattle sold at \$3.75 to \$3.90; medium at \$3.45 to \$3.65, and inferior to common at \$2.60 to \$3.15 per cwt.

Feeders.—Few choice heavy feeders are coming forward, and choice well-bred steers weighing 1,050 to 1,200 lbs. are worth \$3.75 to \$4 per cwt. Light steers weighing 800 to 950 lbs. each were more plentiful at \$3.30 to \$3.60, and feeding bulls for the byres at \$2.75 to \$3.40 per cwt.

Stackers.—Yearling steers, 500 to 600 in weight, sold at \$3 to \$3.25, and heifers and black and white steers of the same weight at \$2.25 to \$2.75 per cwt.

Milch Cows.—Trade in milch cows and springers was fairly brisk, 20 selling at \$30 to \$50 each, with only a few bringing the latter prices. Good cows are wanted.

Calves.—Calves have been in more liberal supply at Buffalo, where the demand is lighter and prices lower. Prices were steady at Toronto market at \$4 to \$12 each.

Sheep and Lambs.

The Buffalo market keeps in good shape, choice to extra were quotable on Friday at \$7.25 to \$7.35, and good to choice at \$7 to \$7.25 per cwt. At Toronto market on Friday sheep remained steady; the demand for choice export sheep was good with prices firm at \$3.50 to \$3.75 per cwt. for ewes, and \$2.50 to \$2.75 for bucks. Butchers' sheep sold at \$2.50 to \$3.50 each. Lambs were easier at \$4.25 to \$5.50 per cwt. Some picked ewes and withers sold at \$5.25 to \$5.50 per cwt. Too many inferior and buck lambs are coming forward. Wether lambs sell much better than buck lambs.

Hogs.

Hogs have made another step in advance with the market firm and the outlook good. Best select bacon hogs, not less than 160 nor more than 200 lbs. each, unfed and unwatered off cars, sold on Friday at \$5.25 per cwt., and thick and light fats at \$4.62½ per cwt. The

bulk of unculled car lo's sold at \$5 to \$5.10 per cwt. This is the first time for several months that choice bacon hogs at Toronto have sold for higher prices than paid at Buffalo for heavy hogs. The quotations there on Friday were heavy \$5.10 to \$5.15, and Yorkers \$5.10 to \$5.12½. The Montreal market is firm and higher at \$5.20 to \$5.25 per cwt. for selections, with some holders asking \$5.50 per cwt. The *Trade Bulletin's* London cable of Feb. 22d re Canadian bacon reads thus: "The market for Canadian bacon very firm, and prices have moved up 1s. per cwt., and at the advance there is more doing."

Prices continue to advance for dressed hogs. Dealers report light receipts and a good demand. West of here holders are asking \$6 f.o.b. for dressed hogs.

Books and Bulletins Received.

The Feeding of Live Stock. Bulletin 110, giving the results of experiments conducted at the Ontario Agricultural College, Guelph, by G. E. Day, Professor of Agriculture.

Bulletin No. 34, Central Experimental Farm, Ottawa, containing the results obtained in 1899 from trial plots of grain, fodder corn, field roots, and potatoes. Edited by Dr. Saunders.

Spraying Notes. Bulletin 117. Cornell Experiment Station, Ithaca, N.Y., giving results of experiments for 1899.

Annual Report of the Secretary of the State Board of Agriculture of Michigan, and also of the Experiment Station for 1898-99.

VICE VERSA.

Horace Porter, formerly minister to Paris, said he always went to sleep under the preaching of his pastor, Dr. Tyng. The doctor once told him he did not blame him. "I am not fully satisfied with my sermons myself," he said. "What shall I do with them? Shall I put more fire into them?" "Well," said Porter, "it might be well for the clergy generally to put more fire into their sermons, but in some cases it would be better to put more sermons in the fire."

A SATISFACTORY PRESCRIPTION.

The other day a distracted mother brought her daughter to see a physician. The girl was suffering from "general lowness." The doctor prescribed for her a glass of claret three times a day with her meals. The mother was somewhat deaf, but apparently heard all he said, and bore off her daughter. In ten days' time they were back again, and the girl was rosy-cheeked, smiling, and the picture of health. The doctor congratulated himself upon the keen insight he had displayed in his diagnosis of the case.

"I am glad to see that your daughter is so much better," he said.

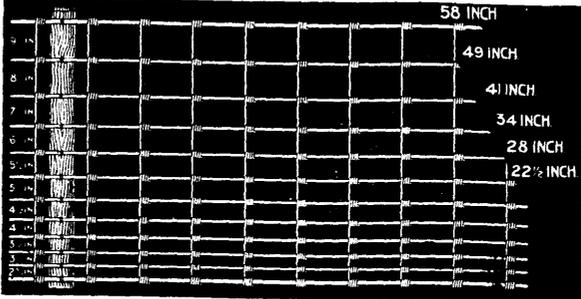
"Yes," exclaimed the grateful mother; "thanks to you, doctor! She has had just what you ordered. She has eaten carrots three times a day since we were here, and sometimes oftener—and once or twice uncooked—and now look at her!"—*Argonaut*

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to learn how cheap we are selling fencing this year considering the cost of wire. Better see about it before you buy. No other fences made of wire like ours. Put Page up with good end posts, it will stay there tight and nice.

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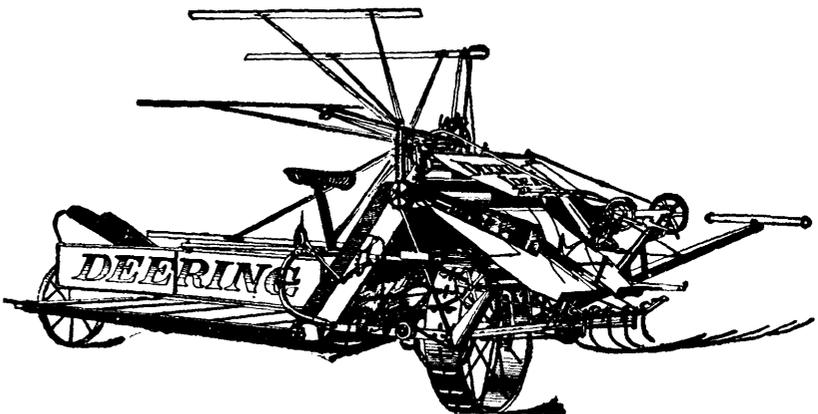
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American Field and Hog Fencing

Sold by our agents in your city. If no agent, write to us and we will solve your fencing burdens.

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"TWO HORSES, THAT'S ALL." LIGHTEST DRAFT BINDER THAT EVER CUT A SWATH
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POTASH gives color, flavor and firmness to all fruits. No good fruit can be raised without Potash.

Fertilizers containing at least 8 to 10% of Potash will give best results on all fruits. Write for our pamphlets, which ought to be in every farmer's library. They are sent free.

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93 Nassau St., New York.



GREGORY'S SEED CATALOGUE FOR 1900

Get ready for good crops by settling the seed question right first. Gregory's seeds are sold on their merits as profit makers. They are home grown, hand selected, scientifically tested. If you want the finest crops your ground can give, get **GREGORY'S SEEDS**

Warranted as per catalogue. Include many novelties for vegetable and flower gardens. Year book for 1900, an invaluable help to all growers. Yours free for the asking.

J. J. H. GREGORY & SON, Marblehead, Mass.

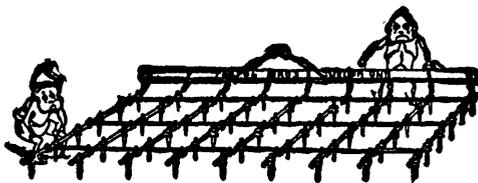
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Impure Salt spoils good Butter; WINDSOR SALT makes good butter better—makes it, keeps it sweet; puts a higher price on it. Try it.

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IS THE STANDARD
STEAM PUMPS, AIR LIFTS,
GASOLINE ENGINES
WRITE FOR CIRCULAR AND
THE AMERICAN WELL WORKS
AURORA, ILL. - CHICAGO - DALLAS, TEX.

Why—In these times of keen competition, is there such a great demand for this All Steel Flexible Harrow?



We can guarantee more than double the strength and wear in this Harrow than there is in any other make.

Parties wishing a first-class Harrow will do well to write us direct or apply to the local agent.

OUR MOTTO: "Not how Cheap but how Good."

TOLTON BROS., GUELPH, Ont.

BECAUSE The Flexibility of the Harrow enables it to adapt itself as readily to rough and uneven ground as to smooth, and the oscillating motion produced by its flexibility pulverizes the ground, and leaves it in a loose and more porous condition than any other Harrow, and it is made of the very best material money can buy for the purpose. The bars are made of **Hard Spring Steel** very stiff and strong, the hinges and teeth being of solid steel, all of which are of a higher grade than is possible to use in any other make of Harrows.

ALEXANDRA AND MÉLOTTE CREAM SEPARATORS

We ask all intending buyers of Cream Separators to study the merits of the "Melotte," if they want to get the best results. The "Melotte" has beaten all competitors in public working trials. Takes one-third less power. Sent on free trial.

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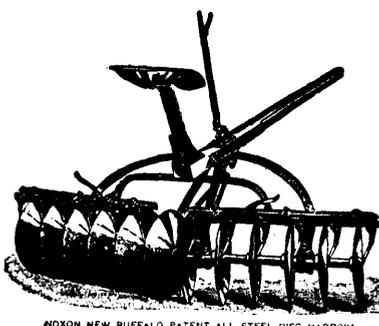
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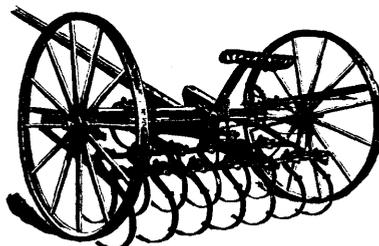
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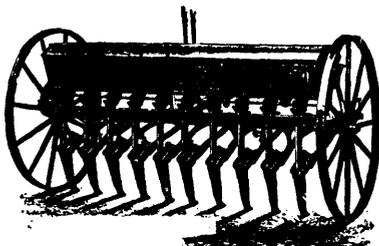
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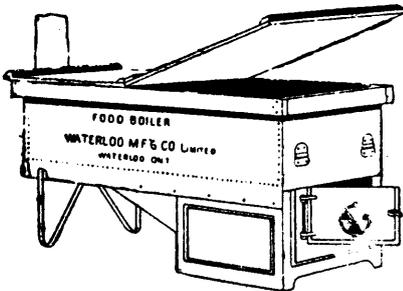
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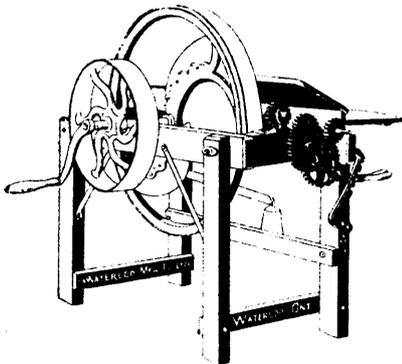
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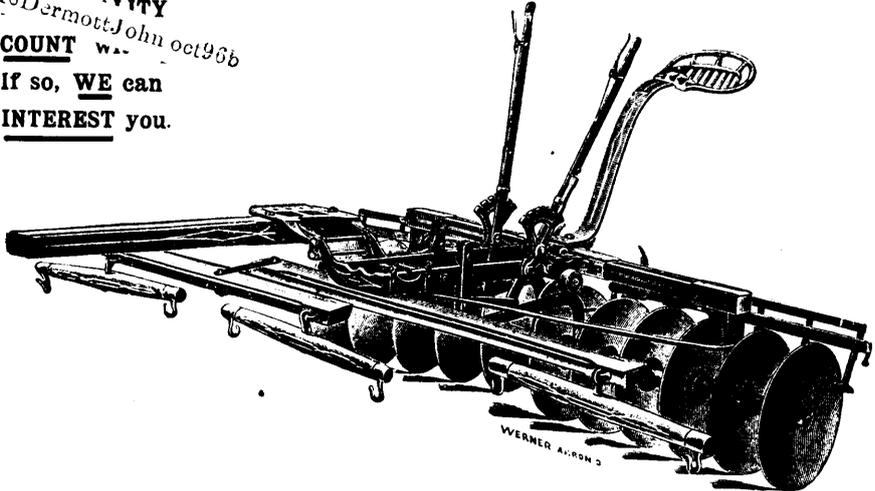
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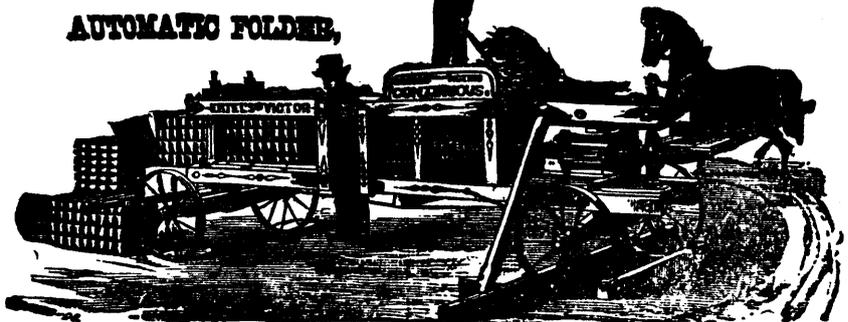
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