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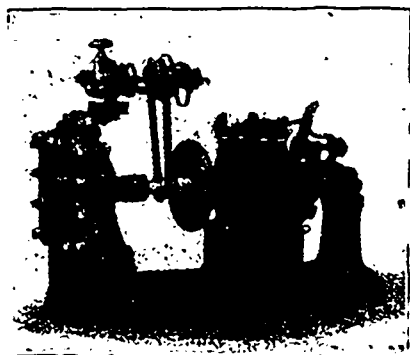
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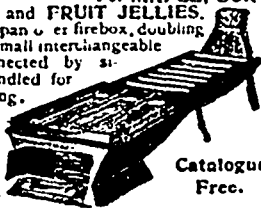
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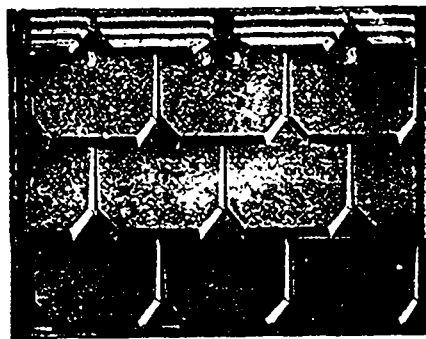


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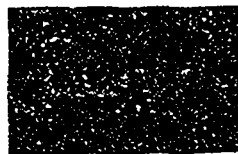
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"WHITE PRINCE"

A winner at the World's Fair, Chicago. Parties desiring a first-class stock bull cannot do better than secure this animal. Large White Yorkshire pigs of the bacon type for sale, also a standard bred mare in foal, sired by Red Chief. Colt sired by Elm City.

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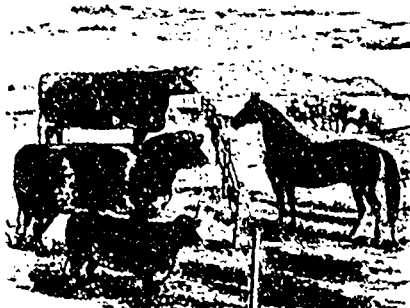
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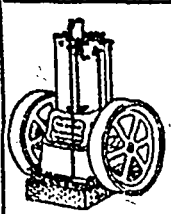
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Dentonia Trout Ponds 100,000 healthy fry ready for delivery this fall. Prices reasonable. Trout Eggs in season. Market Trout supplied on short notice.

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5 Berkshire Boars 6 months old
6 Yorkshire Boars 5 to 6 months old

Sows and Boars of each breed supplied not akin. Write **H. J. DAVIS,** Woodstock, Ont.

TAMWORTH and CHESTER WHITE BOARS. fit for service; SOWS ready to breed, and a choice lot of **FALL PIGS** now ready to ship, at rock-bottom prices, from the sweepstake herd at Toronto, Montreal, London and Ottawa Exhibitions of 1897. We pay express charges to your station, and guarantee safe arrival on all stock shipped. Pairs furnished not akin. Drop a card before buying elsewhere.

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Large White Yorkshires

Boars fit for service and young stock of both sexes from eight weeks to six months old for sale.



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Barred Plymouth Rocks.

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Other leading features..... **Holsteins and Tamworths** of best quality. Pigs ready to wean.

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LAMBS—Canadian bred yearling and ram lambs. Yearling ewes and ewe lambs for sale, reasonable.

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IN order to reduce my flock, will sell **FIRST-CLASS BRONZE TURKEYS** of this year's hatch up to Nov. 15th at \$4.50 per pair, or Gobblers at \$2.60 Hens, \$2.00 each. Can't furnish them not akin, desired.

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A few choice Cockerels and Pullets for sale at moderate prices. Satisfaction guaranteed. Write.

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IN THE POULTRY BUSINESS and how to make it a profitable one is the theme of our **POULTRY GUIDE**. Tells all about poultry, breeds, feeds and market for it. Treats also of the **CYPHERS INCUBATOR**. Light delivered freight paid to every purchaser. This machine requires absolutely no artificial moisture. Send 10 cents and get the book. Circulars FREE. **THE CYPHERS INCUBATOR CO.** Box 49. WAYLAND, N.Y.

FARMING

VOL. XVI.

NOVEMBER 15th, 1898.

No. 11

Agricultural News and Comments

A new pork packing company has been organized at Middleton, N.S., with a capital stock of \$25,000, all of which has been placed but \$5,000, which will likely be taken up soon. Building operations will begin at once, and it is the intention to have the factory ready for operation next April.

Mr. Henry Wade, Registrar of Live Stock, Parliament Buildings, Toronto, is attending the New York Horse Show this week, and will likely bring back some pointers for the Toronto Horse Show next spring, though, as far as we are able to judge, our friends across the line could very well take some pointers from Ontario's Annual Spring Horse Show.

The reports of the export trade for October are encouraging. With the exception of live cattle, horses and sheep, there is a substantial increase over the exports for the same month last year. Among the notable increases are those of butter and eggs, for which special efforts have been made to develop a market. The increase in butter alone amounts to \$445,000.

According to Thornton's record of Shorthorn transactions and animals for private sale for the quarter ending June 30th, 1898, 107 pure bred Shorthorns were shipped to South America during that time, 17 to Australia, 1 to Finland and 1 to Sweden. What is most striking about this record is that during that time no pure-bred Shorthorns came to Canada or the United States.

It is believed that there will be a scarcity of seed corn in some of the Western States next spring, because the corn crop this year is full of sap, and will be gathered before this has dried out. Unless the corn intended for seed is permitted to stand in the stalk until the sap has thoroughly dried it will be unwise to plant it, as it is not likely to germinate so well as corn maturing before the advent of cold weather.

The annual banquet of the West Durham Agricultural Society, held at Bowmanville, Ont., Nov. 1st, was a great success. The society this year had one of the best fall exhibitions it has ever held, and, consequently, there was great rejoicing among the members and officers at their annual feast. If more of our agricultural organizations would indulge in celebrations of this kind life on the farm would be more enjoyable.

Experiments show that every 100 lbs. of milk contains about one-half pound of nitrogen, a quarter of a pound of potash, and one-fifth of a pound of phosphoric acid. In a year a cow giving 4,000 lbs. of milk will produce about 22 lbs. of nitrogen, 11 lbs. of potash, and 9 lbs. of phosphoric acid. From this it will be seen that when milk is sold and sent away from the farm a lot of fertilizing material is carried away with it.

All churns and other vessels for milk or cream before being washed should be first rinsed with cold or tepid water. A little soda or borax put in the water will help its cleaning properties. They should then be washed with warm water, and scalded with water "boiling hot." The use of a brush is more preferable than a dishcloth in such work. All wooden utensils and vessels should be scalded, cooled and dipped into cold water before they are used.

A big poultry farm is about to be established near Toronto. A company is now being organized with a capital stock of \$40,000, of which nearly half is already taken. The farm will be located on Yonge street three miles north of the C.P.R. It is proposed to stock the farm with 15,000 laying poultry, and besides the export of eggs, chickens will be raised for breeding purposes. A special feature of the concern will be the shipping of eggs to Great Britain.

We have received notice from the Secretary, J. H. Pickrell, Springfield, Ill., that the next annual meeting of the American Shorthorn Breeders' Association will be held at the Auditorium Hotel, Chicago, on Wednesday, November 23rd next. The secretary also announces that volume 42 of the Herd book, of which we gave notice in our issue of November 1st, can be had for \$3.00 or \$3.40 prepaid, and that there is a greatly increased demand for Shorthorns all over the country.

‡ The latest fake method is one for falsifying cream, giving it a richness not due to butter. The product is called "albuminoid" and is a mixture of boric acid and gelatine. This compound when added to cream makes it thicker and apparently richer, and also, owing to the boric acid, makes it keep longer. Fortunately, both these compounds are easily detected by the chemist, and therefore a person using this mixture runs a good chance of being found out and heavily fined.

A meeting of the tobacco-growers of the Essex district, held at Kingsville, Ont., recently, decided to send twelve samples—of twenty-five pounds each—of tobacco to Ottawa, to be forwarded by the Government to Great Britain, with a view to establishing a market there. There seemed to be a desire on the part of those present to unite for the purpose of controlling the price of the article. A resolution was adopted fixing the price of Burleigh tobacco at ten cents per pound and Zummer Spanish at eighteen cents.

They have a novel way in Bolivia of keeping potatoes. They are first soaked in water and then allowed to freeze, night after night, until they become soft; after which the natives remove the skins by treading on the potatoes with their bare feet. The potatoes are then thoroughly dried in the open air, where they become as white as snow and as hard as stones and may be kept for a year or more. They have to be soaked for three or four days before they are eaten. Though they will keep well, the life of the potato seems to be taken out by this method.

Lucerne is recommended by English authorities for pastures because of its power to withstand drouth. The plant sends its roots deep into the subsoil, and consequently when other plants are languishing for the lack of surface moisture lucerne has the reserve of subsoil moisture to fall back upon. It is not, however, suited for all soils and climates, and would not withstand the severe autumn frosts in some sections. But it can be strongly recommended for those soils where drouth is most severely felt. It makes excellent hay, and in a green state is greatly relished by stock.

To kill insect pests in stored grain Professor Troop, of the Indiana Experimental Station, recommends the use of a gas-pipe with a screen over the lower end, to keep the grain out. This pipe is pushed down to the middle of the mass and bisulphide of carbon is poured into it, after which the pipe is withdrawn. One pound of bisulphide is sufficient for fifty bushels of grain. It evaporates, forming

a vapor which permeates through the grain, destroying the insect life in it. Bisulphide of carbon is a very deadly substance, but it is claimed that its effects pass off the grain, doing it no injury.

In Great Britain in 1890 the average consumption of milk per head of the population was estimated to be about sixty quarts, while seven years later, or in 1897, it was eighty quarts. In 1890 the estimated consumption of butter per individual was estimated to be 6 lbs., while in 1897 the average consumption per head of the population was 10 lb. In 1897 20s. worth of home-produced milk was consumed per head of the population as against 9d. worth of the foreign-made; while the consumption of British-made butter was 10s. for every inhabitant, as against 8s. worth of the foreign made product.

The Dominion Minister of Agriculture has received advices from Great Britain that there is a good demand there for well-fattened turkeys of good size, and advises the making of small shipments early in November. Turkeys should be fasted forty-eight hours and then killed by breaking their necks, and they are also bled from the mouth. Only choice birds are wanted, and turkeys nearly of the same weight should be sorted into boxes together. Shipments sent in November and as late as February are likely to do better than those sent immediately before Christmas, when there will probably be a glut in the market.

A breeder of Kansas has developed what he calls the "Kansan" breed. The animals rarely have horns. The experiment was started about ten years ago, when the original polled calf was born. This calf was a freak, and dehorning did not enter into the experiment at all. In a herd made of crosses of Herefords and Shorthorns, he was at the time using only Hereford bulls. From that start, crossing with Shorthorns and again with Herefords, he has bred out and back again until he has now thirty to forty of the cattle. He thinks they are an improvement on the Herefords, in the fact that they are squarely built behind, and that they are uniformly good milkers.

The tuberculosis scare seems to have reached Argentina. It is stated that out of the 200 Shorthorns landed at Buenos Ayres since May last 35 per cent. have been proved tuberculous when tested with tuberculin. The question is raised: How can there be so much tuberculosis in cattle from Great Britain which have been tested with tuberculin before shipment? The voyage to Argentina is forty days, and that sound cattle when shipped should show symptoms of the disease after that time is somewhat of a mystery. It is hinted that some British breeders have their cattle tested privately a day or two before the shipment, and consequently the public test does not show any reaction.

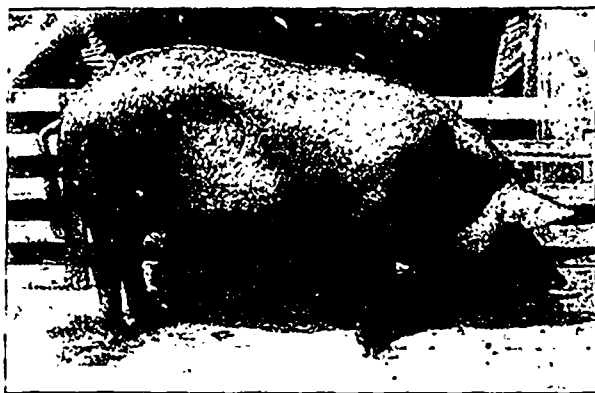
A Ten Days' Milk Test

From the discussion in these columns during the past month regarding the holding of a ten days' milk test next fall at the Toronto Industrial Fair, in which the food consumed will be taken into account, it will be seen that the breeders and others who have taken part in this discussion are almost unanimously in favor of conducting such a test if it can be arranged for. Some have advised a seven days' test, others a five days' test. We hardly think, however, that it would be advisable to make it less than ten days, as it would require that long to make a proper test when food is considered.

What is most important if it be decided to have such a test is upon what basis or plan will it be conducted. In our issue of August 23rd last, page 440, we gave the scale of points upon which the ten days' test at Omaha was conducted in October last. In that test the food was taken into account, and a number of different feeds were selected by the committee in charge, from which the competitor could choose the kind he would feed his cows during the test. Having once selected his feed it could not be changed, except in amount, during the test. The feeds

decided upon by the committee were corn and oats ground, wheat, bran, linseed meal, cotton seed meal, corn ensilage, clover hay, timothy hay and prairie hay. All feed used was weighed and analyzed, and each cow charged with the dry matter therein. One point was allowed for each pound of solids not fat and ten points for each pound of fat in the milk. The points obtained in this way, after adding on one per cent. for each week of lactation, were divided by the number of pounds of dry matter in the food consumed, which gave a factor which represented the relative food economy of the cows tested. This factor, multiplied by an arbitrary number, was added for each day of the test and the sum represented the score.

To conduct a test after this fashion, in which all the food had to be analyzed, would perhaps entail more work than the Exhibition Association or those who might be placed in charge of the test would care to undertake. What we want to get at is the cost of production, and which cow will produce milk, butter, and cheese the cheapest. To ascertain this a complete analysis of the foods consumed should not be necessary. All that would be required would be for the breeders and others interested to meet and select one or several foods which might be used in the test. Mr. N. Dymont, in his letter which will be found in another column, suggests that the breeders meet several months before the test begins and decide upon some one food, which breeders could feed their cows and get them accustomed to before the fair opens. If it were desirable to have more than one kind of food a number could be selected without much difficulty. When the



Tamworth sow, Oxford Queen 696 First prize in the yearling class, Toronto 1898. Out of imported sow, and sired by Nimrod 174. Owned by A. C. Hallman, New Dundee, Ont.

foods have been selected a value could be placed upon them according to the market price for which they were selling at the time of the test. When this value was found it should not be difficult to keep track of the amount of feed consumed by each cow during the test, and charge her up accordingly.

Some of our correspondents have asked that some definite plan for conducting a food test be evolved. Without going into details at all we would suggest that a test might be conducted next fall at the Industrial Fair along the lines that we have already laid down, which may be summarized as follows:

1. That the test extend over ten days, beginning the first Monday and closing second Wednesday of the fair.
2. That the value of the food consumed by each cow during the test be taken into account—this value to be based upon current market prices at the time of the test, or as may be agreed upon; that one or more kinds of feed for use in the test be decided upon by the committee in charge of the test or by a meeting of the breeders of dairy cattle and others interested; and that if more than one kind of feed is decided upon the owner of the cow shall have the privilege of selecting the one which he will feed during the test.
3. That the awards be made on the basis of butter-fat production, the quantity of fat to be ascertained by the Babcock Test and the cow or cows producing it at the

lowest cost per pound to be given the prize. If desirable, prizes might also be given to the cow producing milk or solids not fat the cheapest; but we think all interests would be served by confining them to butter-fat only, as the other products of the milk are based upon it.

A test conducted somewhat after this plan would be simple, easily understood by every person who keeps cows and quite within the possibility at a two weeks' exhibition. Of course there are other details to be considered, such as allowances for period of lactation, age of cows, etc. Then it would be necessary to have one building devoted exclusively to the test, and to have some competent persons to take charge of it. We would suggest that the test be under the supervision of Prof. Dean or Mr. Day, of the Ontario Agricultural College, and that at least two second or third-year students of the college who have given some special attention to the feeding and caring for milch cows be engaged to take charge of the details such as weighing the feed, milk, etc. If it were possible to conduct a test upon the same basis as at Omaha all well and good. But as the analysis of the feed would involve an extra amount of work it would be better to conduct it in as simple a manner as possible, for the first year at least, and the simplest way is to confine the test to cost of production only. It is something practical we want, and what could be more practical than to find out which cow or breed of cows will produce the cheapest?

Farmers' Institutes for 1898-99

The annual bulletin issued by Mr. F. W. Hodson, Superintendent of Farmers' Institutes, containing the list of meetings and speakers at the local institutes for the season of 1898-99, is now ready for distribution. The meetings arranged for number 516. The demand for meetings is greater than ever, and it has been found impossible to grant all the meetings asked for. This indicates the growing enthusiasm and interest in this work from year to year.

In the Superintendent's announcement it is pointed out that, owing to the political campaign last spring, a number of the meetings advertised for the latter part of February had to be cancelled. This caused a loss of membership and a reduction in the number of meetings held. Notwithstanding all this, however, the year ending June 30th, 1898, was the most successful in the history of the Farmers' Institutes of this province. The total membership on the 31st of December, 1897, was 15,707, while on the 31st of July, 1898, it was 16,351. According to this rate of progress it is safe to predict a membership of upwards of 20,000 before the end of 1899.

During 1897, 658 meetings were held, 3,270 addresses delivered, and 126,094 persons attended the meetings, which is nearly 1000 more than in 1896. Through excursions arranged for by local institutes 30,000 persons visited the farm at the Ontario Agricultural College during the summer. It is the intention to have this branch of the work more systematized another year. During the series of meetings announced in the bulletin, the staff of the college will not be employed as speakers. Owing to changes in the college year these gentlemen will not hereafter be available for Farmers' Institutes during December, January and February, but will be during the month of June. Nevertheless a good staff of speakers have been secured, who will cover every branch of farm practice pretty thoroughly. Among the speakers this year will be J. S. Woodward, formerly Superintendent of Institutes for New York State.

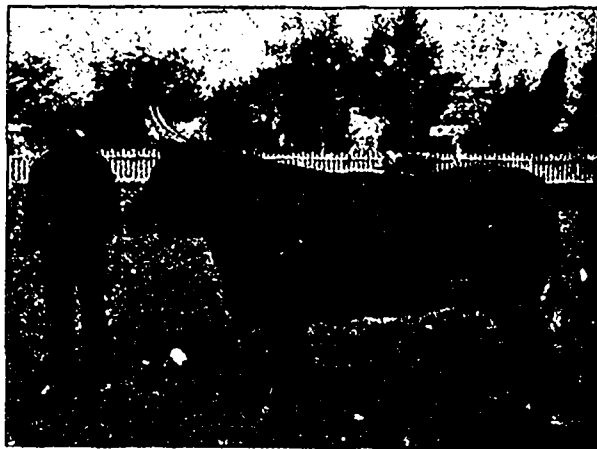
With this programme of meetings and speakers there is no reason why every Institute meeting should not be well-attended and of great practical benefit to the locality in which it is held. A great many people, however, associated with local Institute work seem to lose sight of the fact that a successful meeting can only be secured by every local officer doing his duty. It makes no difference how good the staff of speakers is, if the meeting is not properly

advertised, and, if every effort is not put forth to get the people out, the best results cannot be obtained. The Superintendent recognizes this and stipulates that where the local officers employ "slipshod methods" no speakers will be sent. This is nothing but fair to all concerned. Where the local officers will not help themselves they do not deserve to be helped by others. Besides, it is unfair to a delegation of speakers and to the Farmers Institute system of the province, which supplies the delegation free of cost, for the local officers not to do all in their power to make the meeting a success. It is gratifying to know, however, that the local arrangements for meetings are being improved upon every year and it is to be hoped that when the present series is concluded no delinquent local officers will need to be reported to the Superintendent.

Plank-Frame Barns

Plank-frame barns are coming into use in some sections of the Eastern States. Some do not believe that these barns will be found permanently strong and secure. However, none of them have stood long enough yet to determine how they compare in strength with the timber frames. It would seem, however, that if the plank frame is securely made it ought to be as durable as the timber frame.

Mr. J. A. Woodward, of Penn., in the *Rural New Yorker*, in describing the building of this kind of barn, says: "There are no steps in the work of erection; it is rather a weaving together continuously one plank at a time. There



Devonshire cow, the property of W. J. Rudd, Eden Mills, Ont. First prize-winner at the Toronto Industrial Fair, 1898.

is no such thing as putting a bent together and then raising it as under the old square-timber system. The outside plank of the corner may be set up in place, toe-nailed at the bottom to the sill, and stay-lathed. Then a single plank of each of the other parts in that end of the building may be set up in the same way, and one or two of the nail girts (horizontal pieces) may be nailed on. The several planks of the post, the brace, and both the upper and lower ties are all interspaced, and these are nailed at each and every joint or crossing, and thus all the numbers are woven together, and the frame grows increasingly rigid. With each added plank the nails should correspondingly increase in length."

Mr. S. G. Gilcrest, of Ohio, in describing a barn of this kind he built recently, says: "This frame is made entirely of planks—2x4, 2x6, 2x10, and 2x12 inches, but very few of the latter size, only the collar beams. The posts are 2x8, the joist beams 2x10, and the braces are of the lighter timbers. This barn is 40 x 80 feet, with 24-foot posts. There is a basement eight feet high throughout the entire building, with a 12-foot driveway through the centre the short way. This basement is used exclusively for live stock, all the space above is for hay, and there is no timber, from the floor to the cows, in the way of handling it.

I consider that I saved nearly forty per cent. in timber. I paid for sawing about 20,000 feet of timber for this frame, including roof sheathing and mow floors. It required the labor of four carpenters almost exactly three days to complete the frame ready for raising. All was framed and raised from Tuesday evening to Saturday evening of the same week. After raising, it requires a little more time and labor to prepare it for siding, as the nail ties and side braces have to be put on after raising."

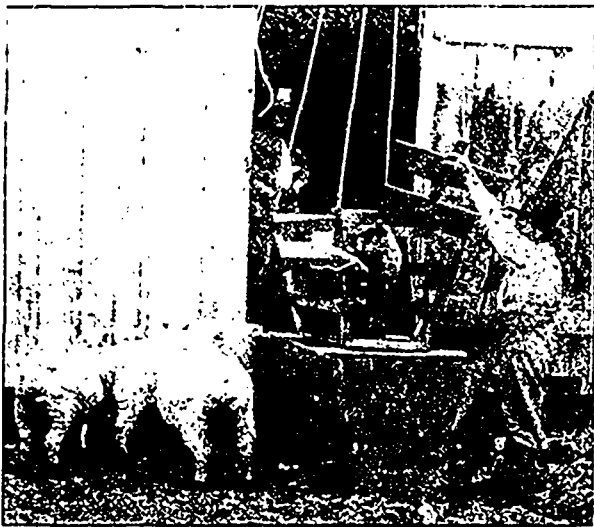
The advantages claimed for the plank-frame barn are many. One of the chief ones is that from 40 to 50 per cent. can be saved in the cost of the timber, which is a big item. Square timber in many sections is very hard to find and costly, while plank may be picked up in large quantities in any well-conducted lumber yard. Skilled labor is not needed in framing, as any one who can handle a saw and square and drive spikes can work at it. Its advocates claim that it is as strong as any square-timber frame of the same size.

Dipping Sheep

By Alfred Brown, Picton, Ont.

(Published in FARMING through the courtesy of the Superintendent of Farmers' Institutes.)

Dipping sheep and lambs for ticks is a necessity, as no animal can thrive and give the best results for food consumed when tormented with insects. One dipping each year with Cooper's dip directly after shearing has kept our sheep clear of ticks where they have been isolated from flocks that have ticks.



Dipping Sheep.

The dipping apparatus need not be expensive. Any arrangement that will saturate the fleece to the skin will do (ours is shown in accompanying illustration). The tub is made water tight 18 x 44 inches at the bottom, 30 x 56 inches at the top and 30 inches deep, inside measurement. A cage for handling the sheep in and out of the dip is made to fit nicely inside the tub by using clear basswood for the frame. At the ends the sills are 1 x 3 x 18 inches and the posts are 1 x 3 x 36 inches, joined to the sills with wire two inches from the ends. The floor is $\frac{5}{8}$ x 18 x 44 inches and the sides are $\frac{1}{2}$ x 3 inches, with a 6 inch space between each piece having the top one a little below the top of tub to be out of the way when working the sheep in the bath. A slide or hinged door is handy at each end for bringing the sheep in at one end and after draining letting them out the other. A rope is fastened to each corner post of the cage and centred in the pulley of the horse-car. A block pulley of any kind will do for raising and lowering the cage.

With this rig two men can dip one sheep every three minutes, allowing one minute to drive the cage, one for soaking the fleece and one for draining, at an expense

of one cent for labor and two cents for dipping material. Full directions for mixing are printed on each package of dip.

The Growing of Sugar Beets

The agitation in regard to the growing of sugar beets in this country about a year ago has not altogether died out yet, and the subject is still of more than passing interest. Experiments conducted at Rothamsted under the direction of Sir J. B. Lawes and Sir Henry Gilbert in the early seventies prove that, by the liberal use of farmyard manure and ammoniacal and nitrogenous fertilizers, much larger crops of beet root can be grown than are produced in those foreign countries where the manufacture of beet-root sugars is systematically carried on. But these experiments also showed that, although the yield of the root (twenty-five tons per acre against the eleven tons per acre produced in France and Germany) was superior in quantity, it was decidedly inferior in quality, as the roots thus grown contained rather less than 10 per cent. of sugar against 11 $\frac{1}{2}$ to 12 per cent. obtained on the continent. By the use of purely mineral manures a larger percentage of sugar was obtained at Rothamsted, but the yield of the root was then only one-fourth. The value of beet-root to the manufacturer is dependent upon the percentage of sugar in the root and upon the purity of the juice, and, as a rule, the higher the percentage of sugar, the greater the purity of the juice. In France and Germany, where duty is charged upon the weight of roots submitted to manufacture, it is essential to the profit of the manufacturer that the roots should contain a large percentage of sugar.

Narrow Versus Wide Tires

There is a French adage which says: "That wagons should make that road and not that rut." There is a lot of sound philosophy in this phrase. Very many roads to day are injured by heavy teaming with narrow tires. Narrow tires cause ruts in the roadway which retain moisture. This is destructive to the road, especially with a frost. On the other hand wide tires make a dirt road better and help to preserve a stone or gravel way. Repeated experiments with dynamometers, and in general practice, have shown that the haul with wide tires under most conditions is easier than with narrow ones. Their use is especially advantageous for all kinds of teaming on the farm. By an ordinance the city of Rochester, N. Y., has effected a complete change to wide-tire wagons, which are now approved by teamsters and owners, and are considered beneficial to the streets. The change in the country cannot be effected as quickly as in the city, but something of this kind is well worth trying. A good instance of the beneficial effects of wide tires is seen in the ordinary traction engine. Though in ordinary teaming the weight would not be so large, the benefit to the roadway by the use of wide tires would be equally as great.

Poultry Fattening by Machinery

A new and quick method of fattening poultry has been devised in one or two districts near London, England. The fowls for this purpose are mostly bred in Ireland, the English farmers fattening them rapidly by means of the cramming machine.

The birds are kept in narrow pens with little room to move about. The food for fattening is a special compound of oatmeal, milk and fat, mixed to the consistency of porridge. The cramming machine consists of a large funnel from which the food falls into a cylinder whence a piston drives it by means of a treadle through a flexible tube into the bird's crop.

The birds are fed twice a day, the person in charge of the machine taking the fowl under his arm, opening the beak,

putting the flexible tube into the throat and forcing the food into the crop with a few strokes of the treadle. The birds are said to suffer no ill treatment by this method, and they fatten and are ready for the market in three weeks.

It is stated that no less than 1,765 tons of dead fowls were sent to London last year from one little village near Tunbridge Wells, and that they were fattened by this process. The average weekly output of English poultry farmers as sent to London is fifty-two tons of birds. This new process of fattening poultry, which appears to be successful in England, might, with advantage, be tried here. The Agricultural and Dairy Commissioner might have the method tried at the Government Poultry-Fattening Station.

Bovine Tuberculosis in New Hampshire

By Col. D. McCrae, Guelph, Ont.

Sanitation as a means, not only of preventing the spread of this disease amongst our herds of cattle, but also as a valuable means of curing animals already affected, is now strongly recommended by scientists. At the annual meeting of the American Public Health Association recently held in Ottawa, Dr. Irving A. Watson, of Concord, New Hampshire, read a valuable paper detailing his observations on bovine tuberculosis in New Hampshire and strongly advocating sanitary measures as the best means of fighting the disease. Dr. Watson is Secretary of the State Board of Health for New Hampshire and also President of the State Board of Cattle Commissioners, and frankly admits a great change in his views on the subject. He says: "We believe that the danger of infection from bovine tuberculosis has been greatly over-rated. On this point our views have undergone a somewhat radical change from those already on record, brought about by evidence which can not be fully discussed at this time. We are convinced that whatever danger exists arises almost entirely, if not wholly, from those animals in which the disease is so far advanced that it may be detected by a competent veterinary surgeon upon physical examination, barring, possibly, the localized appearance of the disease in the udder, in which event the tuberculin test would determine the diagnosis. We believe that a majority of the cattle reacting to the tuberculin test are not diseased to an extent that requires their slaughter for the protection of the public health. This conclusion has been arrived at, not only by the cattle commissioners of New Hampshire, but also by Massachusetts and Connecticut." Dr. Watson is not alone in his change of views on the danger to public health from tuberculosis in cattle. Professor James Law, of Cornell University, has recently written a paper on "Tuberculosis in Cattle and its Control," which is a remarkable modification of his views regarding this disease. Massachusetts, led by medical men who had but a cursory knowledge of the disease, undertook to stamp out the disease thoroughly. The State spent \$700,000 in the destruction of tuberculous animals and then abandoned the attempt. Michigan also began similar work, but had soon to quit, and the expense to that State was enormous.

Dr. Watson says his idea is that stamping out the disease is quite impracticable. To do so, he says, it would be "necessary to destroy all tuberculous animals and persons, and to hold all others in strict quarantine until all the existing germs of the disease were destroyed." How long the latter would take no one knows. Much of the danger to the public health comes from infected buildings holding and disseminating the germs. We know but little about the way the disease spreads, but it seems probable that infected buildings are very dangerous. Were it possible to thoroughly disinfect every stable in the land it would require to keep them pure by a rigid quarantine against all careless and dangerously tuberculous persons entering them.

Good work has been done in New Hampshire to prevent the spread of this disease. In 1891 the State Board of Cattle Commissioners was formed. They went to work at once and the people of the state, through the publication

of the Board of Health, the Board of Agriculture, the State Grange and addresses at agricultural meetings became comparatively well informed regarding this disease. The legislature gave \$10,000 a year, with ample authority and power, to the Cattle Commissioner. In 1895 they passed almost unanimously a grant of \$100,000 to them to begin a systematic examination of all the cattle in the state. This was vetoed by the Governor. Probably a good thing, as at that time the slaughter fever was still prevalent and might have been tried in this state.

The commissioners have examined 1846 herds of cattle—many thousands in number—1,483 animals were condemned and killed. In this number only five showed no traces of the disease. Wherever the disease was found to exist extensively in a herd they always found one of two conditions—either the animals were stabled in close quarters, with an entire absence of proper ventilation and cleanliness—or, second, a degree of inbreeding that, in all probability, improved the power of resistance and made the animals more susceptible to infection.

Where stables are constructed to retain the animal heat without attention to ventilation or other sanitary conditions the surroundings are very favorable for the spread of tuberculosis. If infection be brought to such a herd, either by animals or persons, disinfection of the stable afterwards is very difficult. The germ is said to live indefinitely under conditions of warmth and darkness, more especially if there also be moisture associated with nitrogenous matter. Animals kept in such a stable that had once been thoroughly infected might take the disease two or three years afterwards.

Dr. Watson says: "If particular attention were given to the sanitary construction and care of stables, these kept in thoroughly clean condition, with the addition of some disinfectant and segregation of animals discovered to be diseased, we believe the spread of tuberculosis would be practically *nil*." He gives particulars of an experiment with twelve Holstein cattle reacting under the tuberculosis test. Of these two were evidently in an advanced stage of tuberculosis, and were destroyed on June 12th, 1897. Of the remaining ten one was a heavy bull and he was killed, but the *post-mortem* revealed only the slightest evidences of tuberculosis. The nine remaining were placed upon an isolated farm, where they were given proper sanitary care, including good ventilation, light and moderate feed. They were kept in the open air day and night except in stormy weather. They were tested again December 9th; only three of the animals reacted. One was evidently diseased. They were all again tested February 23 with no change, and on March 29 the three were killed. One was well developed, the other two only showed the slightest traces, and their condition led to the belief that the disease was not only being reduced, but was on the way to ultimate recovery. The six remaining animals were tested with tuberculin February 23 and again May 9 and passed all right. They appeared to be in perfect health and were returned to the original owner, who was well pleased with the result. This act of the board was severely criticised in certain quarters, and the owner, to settle the matter, decided to kill the whole lot. In August, 1898, they were killed. A careful autopsy was made in each case. In not a single case was there evidence of active tubercular progress. If the tubercular process was arrested, as appears to have been the case, there was no reason why the cows might not have died of old age, had they not been slaughtered. A similar experiment was made in Maine in 1895-96, and the animals killed in October 1897. In 50 per cent. of the animals the disease was held in check so that it made practically no progress.

Dr. Watson presented the following propositions:

1. That it is impossible to eradicate bovine tuberculosis, but that it may, without inflicting a great burden upon the state, be reduced to a degree that will subserve the interests of the stock-raisers and likewise protect the public health.
2. That but a very small percentage of the animals infected with tuberculosis in any way endanger the public

health, and that an indiscriminate slaughter of cattle reacting to the tuberculin test is wholly unnecessary, inasmuch as many of them either recover or the disease is permanently arrested

3. That a proper sanitary condition of stables and stable enclosures would do more toward preventing the spread of bovine tuberculosis than any other measure that could be adopted.

4. That the danger of infection for bovine tuberculosis may be reduced to very small proportions, if not wholly eradicated, by sanitary measures, inspections, and physical examinations, by the State, in co-operation with local authorities.

5. That such inspections, once inaugurated, could be maintained without an expense that would be burdensome to the State.

The Country Home.

The following is the concluding chapter of the work on AGRICULTURE by Mr. C. C. James, M.A., Deputy Minister of Agriculture for Ontario, which has just been published and which has been authorized by the Minister of Education for use in the public schools of Ontario :

A FINE COUNTRY HOME.—In the older countries of Europe most families of even moderate wealth endeavor to have two homes or residences, a city or town house and a country house. The greater pleasure, the more lasting recollections, are usually associated with the latter. When we clearly understand the nature and the surroundings of the rural homes, the country seats, of England, Scotland and Ireland, we do not wonder at the preference. With increased wealth, in the future a similar condition of affairs may, perhaps, result in this country, but the building up of pleasant, attractive country homes in this land need not be put off until the day of increased wealth shall make such possible to a few. Far better will it be for this country if every farmer's home can be made attractive and comfortable. Many men of the towns and cities, wearied and perplexed with the driving cares and the never-ending anxieties of their busy life, look forward longingly to a time when they can return to the country, for a part of the year at least, to enjoy the quiet, the comfort, and the healthfulness of a country home, even though it may be a very humble home. The young people of to-day will ere long be making homes for themselves; in fact, even now they can do something towards making their homes more attractive, hence it is not out of place to make a brief study of what the ideal country home should be. Home life in the country, as in the town, is the most important factor in building up character—our after life is largely our early life coming to maturity. A nation's life is largely the combined home life of all the families that make up the nation.

THE HOUSE.—The house depends for its attractiveness not upon what it is made of—stone, brick, wood, logs—but not upon its form, its situation. A log house can be made attractive if the logs are uniform in size, neatly dressed, regularly laid or put together, and relieved by merely a verandah. In deciding upon the outline of a house both plainness and too much variation and decoration should be avoided. It should, if possible, face towards the south, to see the first of spring and the last of autumn, it should be near enough to the road to bring passing vehicles and traffic within range, and yet not right on or against the road. If possible, from the front there should be a pleasant outlook or landscape. It should stand on rising ground, so that there will be perfect drainage away from it, and no possibility of any drainage towards it.

Having selected a good site, we begin with the house, and, of course, start with the cellar. This should extend under the whole house, otherwise some of the rooms may be damp at times. The cellar should be deep enough so that one can walk about in all parts of it erect; it should have a concrete floor, and a well-laid drain from it to keep it dry. Have windows on all sides, so that the whole cellar can be kept well aired. If it can be arranged,

have a root-cellar apart from the house, say in one corner of the garden. All this means a little extra expense, but damp, musty cellars and decaying roots result in sickness, sometimes in death, and the cost of a good cellar will be money well invested.

The arrangement of the rooms in the house is a matter largely of choice. There should be a large kitchen, a pantry, a dining-room, and a parlor on the ground floor. There should be also a reading-room or library or study, in which will be found the best agricultural papers, and at least a small collection of the best agricultural books and reports. Two other things should be provided for, namely, one large bow window for house-plants and a grate for a log fire. The sleeping rooms may be on the second floor, and, in addition, there should be a store-room and a bath-room.

So much for the inside. On the outside there should be a wide verandah with comfortable chairs. This will be found to be the summer living room. It should run the length of at least one side of the house, and, if the style of the house allow and the outlook be favorable, it should run around on a second side. Both sides will be used in different kinds of weather. Around the supports of the verandah there can be twined a climbing plant, Virginia creeper, ivy, honey-suckle, clematis, or climbing rose.

THE SURROUNDINGS OF THE HOUSE.—Two great essentials to health are pure air and sunlight; therefore, have plenty of windows, and keep all trees far enough away so that the windows will not be darkened. You wish a fine outlook from your verandah, therefore, do not plant trees to hide the view. You should, or may have, a few trees along the main road and on either side of the winding driveway from the entrance-gate, but keep the front well open, so as to let in the fresh air and the sunlight, and so as to allow you to see out and away over the country. In the rear have a clump of spruce, to act as a wind-break against the cold north and north-west winds. On the side you may have a neatly-trimmed hedge of cedar, and here and there you may have a native shrub, but between your house and the road have a sloping lawn of green grass, clear of weeds, and well-trimmed. If the lawn is large enough you might have one or two shapely maples, but do not crowd out the grass or obstruct the view. And the flowers? On the side rather than in front, but choice and taste will settle where they are to go. Perhaps you can make a simple plan or sketch of a home such as we have briefly outlined. You will find that you will have to alter it to suit the general situation and lay-out of your farm, but, keeping in mind these simple principles as a guide, you can, if you will, make in time an ideal country home, which is one of the greatest blessings of any country.

Weaning and Rearing Lambs

By Prof. Jno. A. Craig, in "Breeders' Gazette"

In the matter of weaning lambs, the time for it depends largely on the earliness of the lambing season and the degree to which the ewes continue to milk freely. Practices differ greatly, some weaning as early as four months, but most breeders consider that five months is about the proper time one year with another. The ordinary farm flock usually contains ewes and lambs until the lambs are to be sold for market and all the crops harvested. I would go largely by the condition of the lambs and the milking of the ewes. When the milk supply seems to fail, and the lambs are continually after the ewes for the reason that they do not get much at a time, it would be the best policy to wean them. This condition of affairs holds the lambs back, as they continue to depend largely on the dam's milk, and it is not giving the ewe the chance that she should have to get into condition for another year's work. It is not advisable to have a fixed date for weaning, nor does it seem advisable to wean all the lambs at the same time, for in the general run of things there will be some lambs late and some early. For a week or two after taking the lambs away from the ewes I would allow the latter to run over grain stubble or some poor pasture that they may

dry properly. Some attention should be given to the udders, milking them out when needed that no quarters may be spoiled. As soon as the ewes are dry I believe in getting them in condition for fall breeding. By late fall they should be in smooth condition; not fat, but smooth with a nice layer of meat.

Having fed the lambs grain since birth, which I believe should be done with all classes of lambs, they will hardly know that they are being weaned, especially if they are given a fresh run over the best of green foods, such as second-crop clover, rape, fall turnips or rye. Before weaning the grain fed produces the best results if it has been ground or crushed, but for lambs after weaning it does not matter so much unless very rapid gains are desirable. Lambs after weaning should get at least half a pound a head daily of some good grain mixture, with the best pasture or green fodders that are obtainable. For the lambs that are being fattened for market the grain mixture might be corn and oats, equal parts by weight, or if it is a neighborhood where peas are grown or pea screenings are obtainable at customary prices I would include cracked peas in the ration, making it one-third by weight. With rape or second-crop clover or a field of rye to graze healthy lambs should make very profitable progress. For the ewe lambs I believe in just as heavy feeding as they will stand of such foods as bran and oats. I do not believe that there is any other time in the lambs' existence that the good shepherd shows his qualities to more advantage than in forcing the ewe lambs ahead at the time they need the best care and feed, as at this season. To have stout and strong yearlings they have to go through the winter in proper condition, and to be put in that condition they require good feeding in the fall. The ram lambs need to get good feed also to do well. In fact they are given to such restless activity that they require fully better feed to make as satisfactory appearances as the ewe lambs. Good oats with the green fodders that have been named will likely be satisfactory if the lambs are free from worms, clean in fleece and without maggots, which are all things that should be carefully watched for at this season.

The way lambs are pastured and the green stuff that they get has a great deal to do with their thrift. Close feeding is likely to result disastrously both on the appearance of the lambs and their health. Some one has said with more than common aptness that to get the most out of pasturing stock there should be pasture enough for two head and only one to eat it. Fresh pasture is of as much importance as an abundance of it, and if possible it should be so arranged that the lambs may be changed from one field to another at intervals. This can be accomplished by the use of hurdles and for safety should be followed in the instance of any green food that is very luxuriant and abundant. While clover and rape are admitted as very satisfactory crops it has seemed to me that rye has not received the credit for this purpose that should be awarded to it. Rye is benefited by having the sheep run on it in the fall, and it is certainly excellent for the sheep. If the rape fails on account of the drouth, or the clover aftermath does not furnish the required feed, it is a safe plan as a rule to sow some rye early in the fall, for if there is any crop that will produce under adverse circumstances it is certainly this.

What Constitutes a Good Beef Animal

It was not until within recent years that the heavy, inordinately fat, or rough and patchy bullock, became unpopular to such an extent as practically to drive his class from the market and to banish the type from the breeding herds. It is well that this was done; for the modern type makes beef at decidedly more profit and economy to both the producer and the butcher and furnishes the consumer a far superior article.

The parts furnishing the high-priced cuts must be thickly and evenly covered with firm, yet mellow, flesh, of uniform good quality, and alike free from hard rolls and blubbery patches. Coarse, harsh, and gaudy animals will no longer

be tolerated, much less those that are bony and bare of flesh on the back and ribs. The men who buy our cattle and fix their market value are shrewd enough to know, almost at a glance, how much and just what kind of meat a steer or carload of steers will cut out, and if the producer overlooks any of the essential points he is compelled to bear the loss.

Then, in addition to securing the general beef form and make-up, together with good backs, ribs, and loins, there is a certain quality, character, style, and finish that constitute an important factor in determining the value of beef cattle. One of the first indications of this is to be found in the skin and coat. A good feeding animal should have a soft mellow touch and a soft but thick and heavy coat. A harsh, unyielding skin is an indication of a sluggish circulation and low digestive powers. The character and finish exemplified by a clear, prominent yet placid eye, clean-cut features, fine horn, and clean, firm bone, all go to indicate good feeding quality and a capacity to take on a finish of the highest excellence, and consequently to command top prices. Coarse-boned, rough animals are always invariably slow feeders and hard to finish properly. A certain amount of size is necessary, but it should be obtained without coarseness. The present demand exacts quality and finish rather than size.

Besides these qualities, and, above all, it is necessary to have vigor and constitution. We find evidence of these in a wide forehead, a prominent brisket, broad chest, well-sprung ribs, full heart girth, and general robust appearance; and without these other excellence will not have its highest significance.—*Prof. C. F. Curtiss, in Fourteenth Annual Report of Bureau of Animal Industry.*

CORRESPONDENCE

A Ten Days' Milk Test

To the Editor of FARMING:

I read with much interest the remarks of Professor Dean and Messrs. Boden and Rice in your issue of Oct. 25th, concerning the milk test, with much interest. The one thing that suited me in Mr. Boden's letter was that it meant straight business. That is just what we want, as what is right is wrong to no one.

In regard to Professor Dean's view that it would be difficult to carry on the test, I think we could have the test in question without so much expense. I should think if one man were appointed to represent each breed the question of food could be arranged for. All we need is to know what the ration to be fed will be, so that we can get our cows used to it, and, by all competitors feeding the same feed, there should be no difficulty as to the cost of the feed consumed. If all were to feed what might be considered an every-day feed, the public would have a better idea of what was going on.

I think Mr. Rice is about right when he states that a cow should be judged by a milk test. A dairy cow should have a good constitution and udder, but, best of all, the ability to show up well in a test. By judging in this way we should soon have a lot of useful cows. I do not mean that we have not such now, but we would know more about them. I have often heard people say that they had a cow at home that could beat the cow which the milk test. They must remember, however, that a cow at home is not in a public test, and all I have to say to such is to bring out their cows and try their luck. I was surprised to hear the remark at the Toronto Fair that milk was the last consideration in judging a cow. If that be the case, what is the use of breeding dairy cattle? I say, breed for business, and then you will have the kind that fills your pocket. Not many would be in the dairy business if this were not the object.

N. DYMENT.

Clappison's Corners, Ont., Nov. 2nd, 1898.

GUELPH FAT STOCK SHOW.

The seventeenth annual Christmas Fat Stock and Poultry Show, under the auspices of the Guelph Fat Stock Club, the South Wellington Agricultural Society, and the Guelph Poultry Association, will be held at Guelph on December 6th, 7th, and 8th next. The prize list contains a good list of premiums and altogether the show is likely to surpass last year's excellent exhibition. Prize lists may be had from the secretary, Jas. McCorkindale, Guelph. On the same dates as the show the Ontario Beekeepers' Association will meet in the City Hall, Guelph, and on December 7th, 8th, and 9th the Ontario Experimental Union will hold its annual meeting at the Ontario Agricultural. All these events transpiring during the same week will make the second week of December a very busy one in the Royal City.

FRUIT GROWERS' CONVENTION.

The annual convention of the Ontario Fruit Growers' Association will be held in the Court House, St. Catharines, on Dec. 1st and 2nd, next. A good programme has been arranged for, which will include addresses by Dr. Saunders, Director Dominion Experimental Farms; Prof. Robertson, Agricultural and Dairy Commissioner, Ottawa; C. C. James, Deputy Minister of Agriculture, Toronto; Dr. Mills, President Agricultural College, Guelph; Mr. W. T. Macoun, Horticulturist Central Experimental Farm, Ottawa; and H. L. Hunt, Horticulturist O.A.C., Guelph. The Hon. John Dryden, Minister of Agriculture, has also promised to be present if circumstances will permit.

QUESTIONS AND ANSWERS.

DIPPING SHEEP.

Mr. John H. Mallagh, Dunganon, Ont., writes: "Please give in your next issue a description of a good dipping tub or trough for dipping sheep, also a good method for dipping."

On another page will be found a description of Mr. Alfred Brown's method of dipping sheep, which seems to fill the bill pretty well. A tub for dipping sheep can be made in wood at a small cost. Such a tub should be 24 inches high, 56x30 inches on top and 45x18 inches on the bottom and made water-tight. A drainer should be made to attach to the top of the tub and extend out a few feet for the sheep to drain on after being dipped. A convenient size is 48x27 inches with one end on tub and the other on a frame a little higher than the tub so that the liquid will drain off readily. To the other end of drainer may be attached a sloping board for the sheep to slide to the ground when drained. There are other more expensive arrangements, such as Cooper's regular sheep swimming baths, but these

would not be necessary for a small flock. Where a person does not wish to go to much expense and has only a few sheep two large tubs, one to dip and the other to drain the sheep in, will answer the purpose. Directions for mixing the dip go with every package.

HOW TO MEASURE HAY.

In answer to a number of inquiries we again publish a few simple rules for determining the amount of hay in stack or mow, when it is not convenient to weigh it. Selling by measurement is not always the most satisfactory method, but it sometimes is most convenient.

Sellers are disposed to insist that a cube of seven feet is a ton. This is entirely too small, and will not weigh out. How many cubic feet will make a ton depends on so many conditions that no certain rule can be given.

It depends on the kind of hay whether timothy, alfalfa, or prairie; on the character of the hay, whether fine or coarse; on the condition in which it was put in the stack, and particularly on the size, especially the depth, of the stack or mow.

In a very large mow, well settled, 400 cubic feet of alfalfa or timothy may average a ton, but on top of the mow, or in a small stack, it requires 500 to 512 cubic feet, sometimes even more.

It is not safe for the buyer to figure on less than 500 cubic feet, but in a well-filled mow, in selling we would rather weigh than sell at that measurement.

To find the number of tons in a barn mow or hay shed, multiply the length, depth, and breadth together, and divide by the number of cubic feet you think, considering the quality of hay, and the condition in which it was put up, will make a ton.

To measure a cone-shaped stack, find the area of the base by multiplying the square of the circumference in feet by the decimal .07958 and multiply the product thus obtained by one-third of the height in feet, and then divide as before, cutting off five right-hand figures.

The correctness of this will depend somewhat on the approximation of the stack to a regular one, and if the stack bulges out it makes the product too small. The better way is to estimate the area of stack up to the point of tapering in, and apply above rule to cone-shaped top.

The best way is to weigh. The experience of weighing a few stacks will enable any one to judge quite accurately. Another approximate rule for measuring a round stack is this: Select a place which is as near as possible to what the average size would be if the stack were of uniform diameter from the ground to the top point. Measure around this to get the circumference. Add four ciphers (0000)

to the circumference at the right and divide the whole by 3.1559 to get the diameter. Now multiply half of the diameter by half of the circumference and you have the feet of the circular area. Multiply by the number of feet the stack is high, and you will have the solid or cubic feet of the whole. Then divide by 500 to 512, according to its size and compactness, which will give the number of tons in the stack.—Orange Judd Farmer.

PREVENTION OF SMUT IN WHEAT.

The Ohio Agricultural Experiment Station has, for several years past, conducted experiments in the prevention of the smuts in wheat. There are found on wheat in Ohio, *loose smut* and *stinking smut*. The *loose smut* is that noticeable at blossoming time, which destroys usually the entire head. It is, perhaps, more general, though usually much less destructive, than the *stinking smut*, which converts the kernels of wheat into masses of dark brown, ill-smelling fungus spores. This station has been successful in preventing both of these smuts and recommends the following methods:

FOR STINKING SMUT IN WHEAT.

In all the methods employed for stinking smut it is probably advisable to immerse the grain first in cold water, with stirring, and to skim off the smut balls which will, in this manner, rise to the top of the water. After this is completed either of the following treatments may be employed:

(1) *Hot Water*. Immerse this skimmed seed, contained in gunny bag or suitable wire mesh vessel, for 10 minutes, in hot water, at a temperature of 133° F. Then dry on smut-free surface, cooling quickly by thoroughly stirring, or cold water may be employed to cool the grain. Remember, these temperatures are to be determined by a thermometer; longer immersion than 10 minutes, at that temperature, may injure the grain.

(2) *Bluestone, Copper Sulfate*. Make a solution at the rate of 1 pound to 5 gallons of water; in this solution immerse the seed wheat, freed from the smut balls as before described, for 10 minutes. Allow to stand 10 minutes in sack to drain, then spread and dry with air-slaked lime, shovelling over frequently.

Or by sprinkling, use the above solution at the rate of one gallon to one

A QUICK SUCCESS.

Everybody who has seen the picture, "The Thin Red Line," the great battle picture of the century, given with new and renewal subscriptions to *The Family Herald and Weekly Star*, Montreal, predicted an extraordinary success for it, but we do not believe anybody could have dreamed of such an enormous demand springing up for it within a few days. No doubt "The Thin Red Line" will have the distinction of bringing a quicker success, and creating greater demand, than any other premium picture of modern times.

bushel of grain in heap. Apply by sprinkling-can at intervals of 5 to 10 minutes; stir the whole so as to be uniformly wet; at the end, say, of one hour, shovel over and dry with lime, if desired.

(3) *Formalin*. This may be used at the rate of one pound to 50 gallons of water and the seed treated by sprinkling or by immersion for 30 minutes.

FOR LOOSE SMUT OF WHEAT.

Modified hot water treatment as follows. Soak the seed grain for 4 hours in cold water, let stand 4 hours more in the wet sacks; then immerse for 5 minutes in hot water at a temperature of 133° F.; spread at once on a smut-free surface to dry, and sow. Use one-half more seed to replace that injured by the treatment.

MANILLA HEMP.

Manilla hemp is the product of a species of banana which is cultivated in certain localities in the Philippine islands. The plant, called by the natives "abaca," throws up a cluster of sheathing leaf stalks to a height of 20 or 30 feet, which spread out at the top into a crown of huge undivided leaves. When it is three years old it is cut down and the stalks are torn into strips. These strips, while still fresh, are drawn between a knife and a wooden block, and the soft cellulose matter is removed. The fibre is then

hung up to dry in the open air until it is fit for use. Each stalk gives about a pound of fibre, and two natives will turn out about 25 pounds a day. The inside fibre, which is thin and weak, is used by the natives for making articles of dress. The familiar manilla rope is made from the fibre of the outer layer, which is hard and strong. The whole supply of manilla hemp practically comes from the Philippines, and the United States consumes 41 per cent. of it.

The best type of an all-round, general purpose fowl is a hen that has fair length of body and deep through from back to keel bone, with broad body, full round breast, and legs well set apart and of medium length, not too long. A hen of such a type is almost sure to be a good layer of large-sized eggs, and when she is placed upon the scales will weigh nearly one-fourth more than other birds of her size. It is a compact, blocky, hustling hen that the wide-awake farmers and market poultrymen want.

A lawyer, noted for his laconic style of expression, sent the following terse and witty note to a refractory client, who paid no attention to reiterated demands for the payment of his bill: "Sir—If you pay the enclosed bill you will oblige me. If you don't I shall oblige you."

CURES CATTLE

For cattle coughs, sore throat, sprains, sore or caked bag and a score of accidents that might befall the herd, Griffith's Menthol Liniment is the greatest of external applications—proved the success that is claimed for it a thousand times—good in an emergency—quick to cure.

"We have used Griffith's Menthol Liniment with great satisfaction and success on our ranches, and believe that for horses and cattle there is nothing to equal it." P. R. Ritchie & Co., ranchers, Vancouver, B.C.

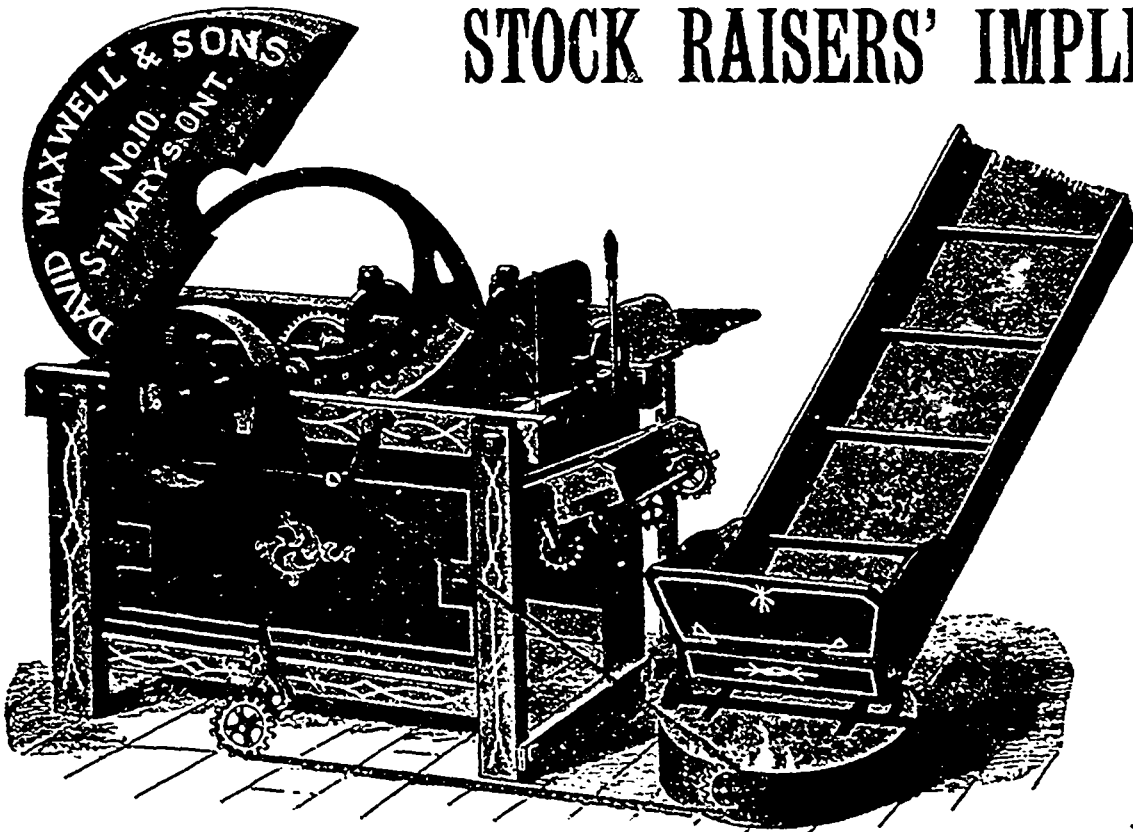
GRIFFITH'S VETERINARY MENTHOL LINIMENT

Relieves the instant applied
At all Druggists—75 Cents

DO YOU WANT \$100?

If so send for particulars of our Grand Prize Offer. It is the most liberal offered

FARMING, Toronto, Ont.



STOCK RAISERS' IMPLEMENTS

Power Ensilage Cutter No. 10

The latest and most modern manufactured.

Unsurpassed for **POWER, DURABILITY, and CAPACITY.**

Made in two sizes, 14 and 12 inch.

We are also placing on the market new and improved Pulpers and Slicers.

Send for catalogue, giving full description.

DAVID MAXWELL & SONS
St. Marys, Ontario, Canada

IGNORANCE IS NOT ALWAYS BLISS.

A man came to town the other day with butter to sell, and called on Will Matthis to buy it, says the Elizabeth-town (Me.) *News*. He said he didn't want any at the store, but he would inquire if his wife wanted any. So he stepped to the telephone, called her up and talked to her a few seconds through the instrument. Then, turning to the countryman, who was standing with his hands in his pockets, his eyes dilated and his face very red, he told him that his wife would not need any butter. The indignant countryman blurted out: "Look here, mister, if you didn't want any butter, why didn't you say so? I ain't such a fool as to think that you've got your wife in hat little box!"

The editor of a paper in Nevada has taken to the hills in the hope of saving his life, as a result of his getting the reports of a cattle show and a concert mixed up. The spicy article in question, when in his paper, read: "The concert given, by six of Carson Sink Lake's most beautiful young ladies was highly appreciated. They sang in a most charming manner, winning the plaudits of the audience, who pronounced them the finest herd of Short-horns in the country. A few are of a rich brown color, but the majority are spotted brown and white. Several of the heifers are able-bodied, clean-limbed animals, and promises to be good milkers."

Figglesly—"My wife's a good sort of woman, but nothing great as an intellectual prodigy. The children, however, are bright enough; I had to furnish them with brains." Fogg—"Too bad. You ought not to have robbed yourself, old fellow."

Publishers' Desk.

Pastures.—*The Border Counties' Advertiser* discusses the clover and phosphate matter, and speaks of "the remarkable examples of the effect of Thomas-Phosphate Powder on grazing pastures."

THE CURE OF ASTHMA.

Liebig's Asthma Cure will cure Asthma, Hay Asthma or Hay Fever. Hundreds of people in four continents will say so. It is a high-class medicine, endorsed by medical men, and used by the best people in all parts of the civilized world.

A free trial bottle will be sent to any sufferer by mail prepaid. If you are afflicted, send your name and address to The Liebig Co., 179 King street west, Toronto, and say you saw this free offer in FARMING.

AS TO EPILEPSY AND FITS.

Liebig's Fit Cure for Epilepsy and kindred affections is the only successful remedy, and is now used by the best physicians and hospitals in Europe and America. It is confidently recommended to the afflicted. If you suffer from Epilepsy, fits, St. Vitus Dance, or have children or relatives that do so, or know a friend that is afflicted, then send for a free trial bottle and try it. It will be sent by mail, prepaid. It has cured where everything else has failed.

When writing mention FARMING, and give full address to The Liebig Co., 179 King street west, Toronto.

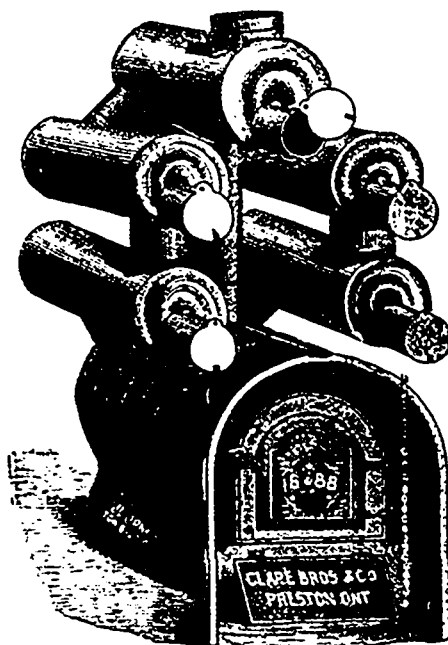
Agents Write for a copy of **FARMING** and Special Terms to Agents. Liberal inducements to good men. FARMING, 44-46 Richmond St. West, Toronto.



EARN A WATCH

Earn this valuable Watch, Chain and Charm by selling twenty **Topaz Scarf Pins**, at 15 cents each. Send your address and we forward the Pins and our Premium List, postpaid. No money required. These Pins will almost sell themselves, for the Topaz has all the brilliance of the best diamonds, and has never before been offered at anything like this price. The Watch is neat in appearance, thoroughly well made, and fully guaranteed. Unsold Pins may be returned. Mention this paper when writing.

THE GEM PIN CO., Freehold Building, Toronto, Ont.



The Hilborn Wood-Burning Furnace. Our Catalogue explains.

WE MAKE A Specialty of Heating

And have placed many thousands of our "Hilborn" Wood Furnaces in country homes. Farmers use only rough and unsalable wood, and in this way soon save cost of a furnace, to say nothing of the comfort.

We can also give you furnaces suitable for coal or coal and wood, or if you want to heat with hot water we refer you to the

PRESTON HOT WATER BOILER AND STEEL RADIATOR

We guarantee every furnace to work satisfactorily. Would you like to see a list of the homes that we are heating?

We prepare free estimates, send catalogues and full information upon application, and invite correspondence.

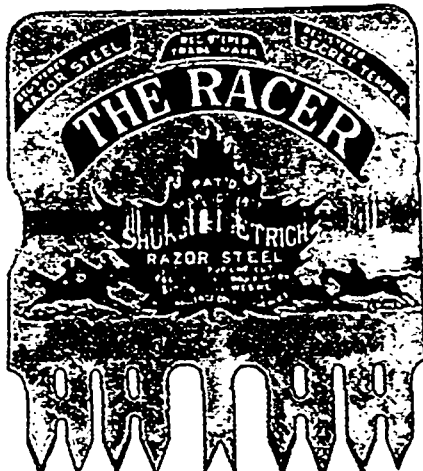
CLARE BROS. & CO.

PRESTON, ONT.

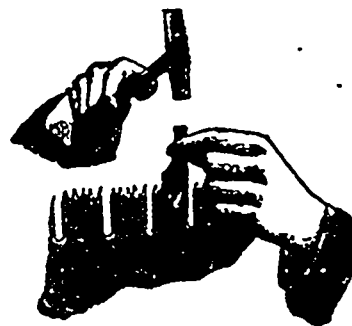
Branch at WINNIPEG, MAN.

THE RAZOR STEEL, SECRET TEMPER, CROSS-CUT SAW

We take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than any process known. A saw to cut fast "must hold a keen cutting edge." This secret process of temper is known and used only by ourselves. These saws are elliptic ground thin back, requiring less set than any Saws now made, perfect temper from tooth to back. Now, we ask you, when you go to buy a Saw, to ask for the **MAPLE LEAF, RAZOR STEEL, SECRET TEMPER SAW**, and if you are told that some other saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best. Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand. It does not pay to buy a Saw for one dollar less, and lose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work. Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.



Maple Leaf Saw Set



Directions.—Place the Set on the point of tooth as shown in the above cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel. If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw.

Manufactured only by **SHURLY & DIETRICH**, Galt, Ont.

Wire Fences.—On cover page we are showing a cut of the Frost Wedge-Lock. The company manufacturing it claim it to be the strongest lock in the market. In writing to the Frost Wire Fence Co., Welland, Ont., for samples, prices, etc., please mention FARMING.

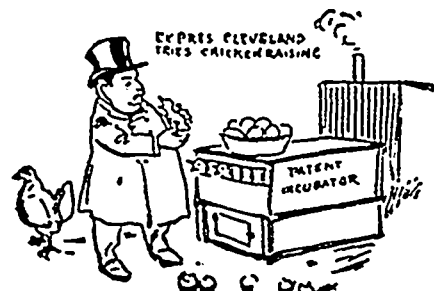
Feeds and Feeding is not a cheap book. Years of time and thousands of dollars in cash have been spent in its preparation. It is without doubt the most valuable book for the farmer ever issued, and no farmer should be without it. It will be found a constant help to him and a source of incalculable profit. It is substantially bound in art vellum and only costs \$2, or will be sent free with three new yearly subscribers to FARMING at \$1 each.

Moss and Phosphate.—*The Border Counties' Advertiser* also has letters from farmers who attest to its having eliminated moss, the general reason given being that the clover which comes seems to lift the moss out of the ground. They recommend as well to harrow such lands when putting on the phosphate to allow it to get down with the earth. Another correspondent, under the *nom de plume* of "Yorkshire" attests to the coming of clover and general improvement from his personal knowledge.

Genuine Fur Robes.—Messrs. Cummings & Sellers, whose advertisement appears in another column, report an immense sale of their Grey Goat Robes during the past two weeks. Farmers and stockmen from all parts of the country are sending in orders for these robes. One customer was so well pleased that he sent a repeat order for three extra robes. Orders are coming in also from as far west as Manitoba, and in the eastern sections of Quebec. The robes are undoubtedly excellent value for the money. The firm's guarantee of money back, if not satisfied, should settle all doubts, if any, our readers are hesitating on that score.

Cooking Feed for Stock.—Many foods require the influence of heat and moisture to render them palatable and digestible with stock. Potatoes, roots and seeds of various kinds cannot be successfully fed to swine in any quantity unless they are first cooked and meal is added to the mass, and the advantages of supplying farm stock with warm feed in palatable form are apparent. Farmers and stockmen cannot do better than obtain one of the feed boilers made by the Waterloo Manufacturing Co., of Waterloo, Ont. They are economical and convenient for cooking feed, boiling sap or scalding hogs, as well as for many other purposes.

Hatches Chickens by Steam.—The problem of successful artificial incubation has been completely and practically solved by Mr. Geo. H. Stahl, of Quincy, Ill. The uncertainty of hatching chickens by artificial means has been removed and the expense and labor reduced almost to zero by the Excelsior Incubator, which Mr. Stahl invented and manufactures. It is so simple in its construction and operation, and so perfectly automatic in its regulation of heat, moisture, and fresh air, that it practically runs itself. Thousands of these perfect hatching machines now in successful operation amply bear out the claim of the manufacturer, that the Excelsior is the lowest-priced first-class incubator made.



Ex-President Cleveland's Farm School at Princeton, N.J., has two of Mr. Stahl's incubators, the manager, Mr. John Henry Vroom, having selected them in preference to all other incubators. Mr. Stahl will gladly send, post-paid, an illustrated book on incubation to any one who writes for it and mentions this paper.

Sample Bargains

JUST IN THIS WEEK: Women's Glove-Grain, Pebble and Buff Bals in sizes 4 and 5 only. These Boots are Travellers' Samples and are worth from \$1.00 to \$1.25 a pair. We will sell them at 80c. Women's Glove-Grain Baiton. Samples, at 85c. Boys' Bals, strong Sunday boots, in sizes 4 and 5 only, \$1, worth from \$1.25 to \$1.50. Men's Waxed-Calf Lace Boots, worth \$2, for \$1.50; a bankrupt bargain lot, all sizes.

Get our Fall Price List and send for your winter supplies. Send us your Butter, Eggs, Poultry, Etc.

The Farmers' Co Operative Store THE PEOPLE'S WHOLESALE SUPPLY CO.

144-146 KING ST. EAST (Cor. Jarvis), TORONTO

R. Y. MANNING, MAN AGGR

Stock Notes.

MR. SMITH EVANS, of Gourack, Ont., writes: "The ram lamb whose portrait appeared in your issue of the 1st November is Kempsford Hero, 16414, owned by me, bred by Wm. Arkell, Kempsford Fairford, England, imported in July, 1898. He was the choice lamb of the first prize pen of three at the Royal Show in England this year, and has won first prize at the Western Fair, London, and sweepstakes for best lamb, any age; also first at Ottawa and first at Aberfoyle."

MR. E. A. GARNHAM, of Straffordville, Ont., who is advertising his farm for sale in FARMING, says: "I am asked 'why I don't farm it myself.' They say I won't work, but I am a bachelor enjoying single blessedness, and cannot properly and will not try any longer to farm with hired help. If this announcement meets the eye of any person with a farming turn of mind who wishes to locate where farming may be made a success, I wish them to come and see this farm or write me for particulars."

SHORTHORNS IN SCOTLAND.—Interest in Shorthorns in Scotland does not seem to be flagging. An important sale of these took place at Lilycairn, Scotland, recently, when drafts of young calves from the herds of Mr. Wm. Duthie, Collynie, and Mr. Wm. Marr, Uppermill, came under the hammer. The display of Shorthorns at the sale fully maintained the reputation of both these famous breeding establishments. The twenty-four animals sold from the Collynie herd averaged

A SMART PUBLICATION

that pleases its readers will please its advertisers. The Co-Operative Farmer has the name of being a successful paper that pleased its readers from the start. Favored by the leading farmers' organization in New Brunswick, it was quickly adopted and endorsed by the other Farm, Dairy and Stock Associations of the Maritime Provinces, and is to-day the Home Farm Paper of Eastern Canada.

Free Sample Copy and advertising rates on application to

CO-OPERATIVE FARMER,
Sussex, N.B.

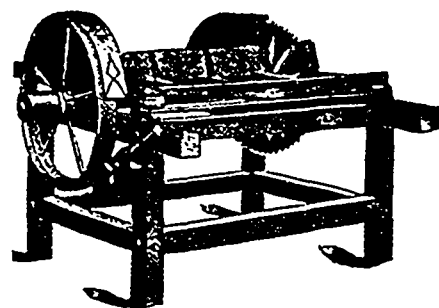
A VERY DESIRABLE IMPROVED FARM FOR SALE

BEING parts of Lots 125 and 126 South Talbot Road, Township of Bayham, County of Elgin. 185 acres—about 115 cleared and in a good state of cultivation. Good orchard and small fruits. Frame barn, 40 x 100. Good stable and accommodation for cattle and horses, sheep and swine. A 150-ton silo. Vegetable and milk cellars. Outbuildings and fences in first-class condition. Good water, and all conditions requisite for success in farming or cattle raising. Price moderate and terms to suit.

E. A. GARNHAM,
STRAFFORDVILLE, ONT.

Still in the lead

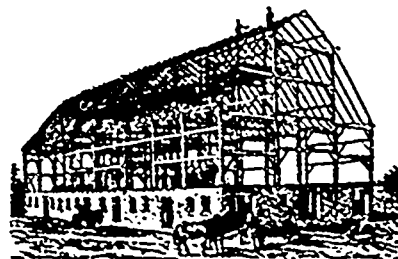
The Jubilee Circular Sawing Machine



Light running Easy to operate
Strong and durable

LANCASTER MACHINE WORKS
Box 113 Lancaster, Ont.

Thorold High in Quality Cement Low in Price 58 years in use



Floors for Horses and Cattle were put in this barn with Battle's Thorold Cement.

Hagersville, Ont., July 1st, 1897.

We used Thorold Cement in our Stable Floors, and we must say it has given us good satisfaction in every particular. Our floors are as hard as stone. We can truly say it is just perfection for stable floors.

BESWETHERICK BROS.

Our Thorold Cement is the best and cheapest for Silos, Barn Walls, Floors for horses and cattle, Pig Pens, Etc. Write us.

Estate of Jno. Battle, Thorold, Ont.

£80 9s. 1d. each and nineteen from the Upper mill herd averaged £76 4s. 2d. each. Mr. Marr's Scottish Champion, a marvellously well-ribbed, thick-fleshed, roan bull, sold for 330 guineas. All animals are sold to breeders in Great Britain with the exception of three which went to Ohio. This sale is one of the most important that has been held among the Shorthorn breeders of Scotland for some time.

IMPORTANT AYRSHIRE SALE.

OUR neighbors across the line are always on the lookout to obtain the best stock available from the herds of prominent Canadian breeders. The latest exportation to the United States is from the celebrated imported and home-bred herd of Mr. R. G. Steacy, of Lyn, Ontario, his splendid Ayrshire bull, Special of Maple Grove—6048—Imp. in dam, having been purchased by Col. J. S. Rogers, Superintendent of the Michigan Military Academy. The dam of this grand bull is Wylie 2nd of Lessnesock, Imp.—2574—9713, having a milk record of 54 lbs. in one day at four years of age, testing four per cent. of butter fat, and a further record in less than one year of 1,000 lbs. milk. She has won a great many distinguished honors, being one of the herd awarded first prize at Toronto, London, Ottawa and Montreal in 1897, and also Mr. Ogilvie's special prize of \$100. Wylie 2nd is well qualified to carry any herd to victory. She held the special gold medal awarded each year at Ottawa's great exhibition for four successive years, and has also been medallist at Toronto and other important exhibitions, and has only been defeated once, and then it was by one of her stable companions. In size and model she is simply the perfection of a dairy cow. The sire of this fine stock bull is a champion, and his pedigree throughout bears the stamp of the greatest excellence. Col. Rogers is to be congratulated on his acquisition of so choice a specimen of the true Ayrshire stock for the improvement of the herd owned by the celebrated military academy of which he is the head.

SHEEP SCAB.

The disease of scab is one of the most serious drawbacks to the sheep industry, and results in enormous financial losses. Yet, despite its insidious nature, its ease of transmission, its severe effects, and its prevalence in certain localities, it is a disease which yields readily to proper treatment. If all sheep owners would dip regularly and thoroughly, using the Persian Sheep Dip, there is no reason why this scourge should not be totally eradicated from Canada.

ONTARIO FAT STOCK AND DAIRY SHOW

In another column will be found an advertisement of the Ontario Provincial Fat Stock and Dairy Show, which promises to be more attractive and successful than on any previous occasion. Single passenger and freight rates have been procured for all those who wish to attend the exhibition.

The Smithfield of Canada!

GUELPH'S CHRISTMAS FAT STOCK AND POULTRY SHOW

THE seventeenth annual Christmas Fat Stock and Poultry Show, under the auspices of the Guelph Fat Stock Club, the South Wellington Agricultural Society, and the Guelph Poultry Association, will be held in the Victoria Curling and Skating Rink, in the City of Guelph, on Tuesday, Wednesday and Thursday.

DECEMBER 6th, 7th and 8th, 1898

Prize lists on application.

JAMES MILLAR, President. JNO. McCORKINDALE, Secretary.

SOUVENIR

...A Perfect Stove

OUR OFFER:

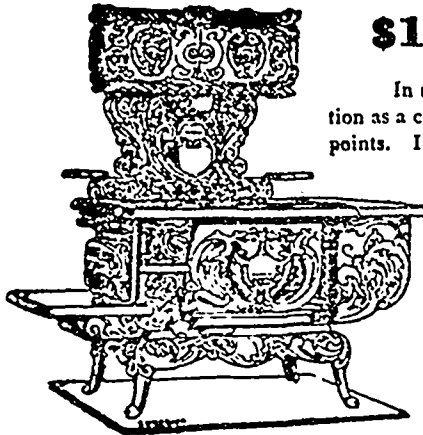
\$155 in cash prizes

In results, whether in warmth as a heater, or satisfaction as a cooker, the Souvenir Kitchen Range never disappoints. Its generosity is to be shown in other ways, too.

That those who own a Souvenir may interest others the manufacturers are giving \$155 in cash prizes, in sums of \$40, \$30, \$25, and \$20, and a Souvenir Stove value \$40, to those who will tell in clearest manner the story of Souvenir's unrivalled qualities. These stoves are sold throughout Canada. One will last a lifetime.

Ask our agents anywhere for booklet and circulars, telling much about Souvenir and especially

- its aerated oven and giving full particulars of the contest.
- These are free for the asking.



The Gurney-Tilden Co., Limited
Manufacturers HAMILTON, CANADA

\$155 in five prizes for five best short essays on SOUVENIR RANGES. Ask for particulars.



FREE! A Solid Gold Shell Ring or Gurb Chain Braoclet

DON'T send money. Just your name and address on a **POST CARD**, and we will send you 20 packages of **AROMATIC CACHOUS**, a delicious confection to perfume the breath, to sell for us, if you can, at 5 cents per package. When sold send us our money, \$1.00, and we will send you **FREE** your choice of the beautiful prizes illustrated. Goods returnable if not sold. Mention this paper.

TISDALL SUPPLY CO., SNOWDON CHAMBERS, TORONTO, ONT.

Genuine Padlock and Key

National Cream Separators

No. 1—330 lbs. \$75
No. 2—600 lbs. \$125
HAND OR POWER
EAST ORO, Aug. 30, 1898.

Creamery Supply Co. Guelph:—

DEAR SIR.—I am well pleased with the separator—very easy to run and a perfect skimmer—milking 12 to 16 cows. The separator has increased the yield of butter 1 lb. per week per cow. We expect the separator to more than pay for itself in one year. Yours etc., T. H. McMAHON.

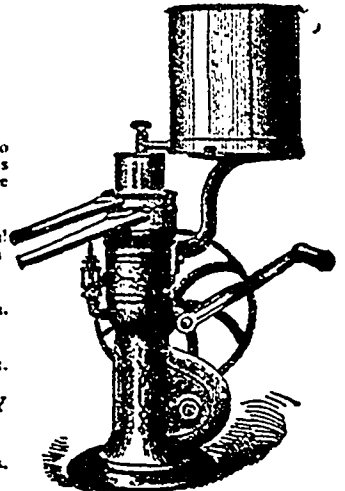
DEAR SIR.—The separator is so easy to run we have to be careful not to use too much power. A child 10 or 12 years old is quite competent to run it for 10 or 12 cows. MISSES A. & B. MACDONALD, Guelph.

DEAR SIR.—My 8-year-old boy can run it from start to finish. The increased yield is about 1 lb. per week from each cow. J. M. HARRER, Guelph.

Saves Labor—Makes Money. The best and cheapest in the market.

Sold by The CREAMERY SUPPLY COMPANY Guelph, Ontario

N.B.—We furnish all kinds of Creamery and Dairy Supplies. Send for Catalogue.



HELDERLEIGH FRUIT FARMS AND NURSBERIES
—400 ACRES—

Situated at the base of the Mountain in a warm and sheltered valley where trees arrive at full maturity. Having over 125 acres planted in fruit, I have unusual facilities for knowing the value of the different varieties and establishing their purity. Everything is **GUARANTEED TRUE TO NAME** or purchase price refunded. I have for the fall of 1897, and the Spring of 1898, a complete line of Trees, Shrubs, Vines, etc., both fruit and ornamental. Write for a Catalogue which is furnished **FREE**, and which contains over ten pages of closely written matter about the various PESTS that trouble fruit growers and means of preventing their ravages.

Buy **CANADIAN GROWN STOCK** only, and thus escape the dreaded San José Scale so prevalent in the States. There is no more reliable, healthier, harder, or more complete assortment than mine.

Good reliable salesmen wanted in a number of fine townships, to start work at once. Complete outfit free.

Address **E. D. Smith, WINONA, Ont.**



The Ontario Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP.

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

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

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

The name and address of each member, and the stock he has for sale, are published once a month. Over 20,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

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

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

LIST OF STOCK FOR SALE

The list of stock for sale has been crowded out of this issue. Watch for it next week.

EXECUTIVE MEETING AT BRANTFORD.

A meeting of the Executive of the Provincial Fat Stock and Dairy Show was held at Brantford, Friday, November 4th, 1898. The president, Mr. John I. Hobson, was in the chair. Others present were: J. C. Snell, D. G. Hanmer, James Tolton, H. Wade, D. B. Wood, H. A. Foulds, C. W. Yapp, G. W. Clemons, G. E. Day and G. B. Hood. The minutes of the last meeting were taken as read.

A letter from W. E. Butler, Dereham Centre, was read *re* the appointment of a person to act in the place of the late J. G. Snell as judge of Chester Whites, Poland Chinas, Duroc-Jerseys and Grades.

It was moved by J. E. Brethour, seconded by James Tolton, that D. DeCoursey act as reserve judge in the above classes. Carried.

The following gentlemen were appointed to take charge of the

Cattle Ring—John I. Hobson, H. Wade and D. B. Wood.

Dairy Exhibit—G. W. Clemons, S. Suddaby and H. A. Foulds.

Sheep Ring—Jas. Tolton and John Jackson.

KILLING TEST.

It was moved by D. G. Hanmer, seconded by Jas. Tolton, that C. W. Yapp and H. A. Foulds take charge of the killing of the animals for the dressed pork exhibit, also to make arrangements for the sale of the same. Expenses to be kept at the lowest possible point, but any expense incurred to be borne by the Association. Carried.

The following judges were appoint-

ed for dressed pork: C. C. L. Wilson, Ingersoll; F. C. Fearman, Hamilton. Reserve, C. W. Yapp, Brantford.

It was decided that the reserves take the place of Mr. Allen in the classes where he was appointed to judge as no answer had been received from him.

The following were appointed a Decoration Committee: Messrs. D. B. Wood, chairman; C. W. Yapp, D. G. Hanmer, S. Suddaby, and H. A. Foulds, this committee also to look after the street decoration. It was also decided that the banners and flags were to be considered in charge of the Superintendent.

It was moved by Jas. Tolton, seconded by J. C. Snell, that the following be the schedule for giving passes to exhibitors:

Exhibitors of three head of cattle are entitled to one attendant's pass, and another pass for each additional six head.

Exhibitors of six head of sheep or swine are entitled to one attendant's pass, and another for each additional twelve head. Carried.

It was decided that eight assistants would be required, four of whom should be on the gates, and in charge of the Secretary.

It was moved by Jas. Tolton, seconded by C. W. Yapp, that the President, Vice-president, and Secretary be instructed to act as Programme Committee. Carried.

It was decided that persons wishing to make an exhibit of implements should be referred to the Secretary.

ADVERTISEMENT IN AGRICULTURAL PAPERS.

It was moved by H. Wade, seconded by Jas. Tolton, that a sum not to exceed \$20 for the three following papers be given for advertising; advertisement to be given by the Secre-

tary, *The Farmer's Advocate*, *FARMING and The Weekly Sun*. Carried.

It was decided that arrangements be made to have a suitable lunch counter in the building, the matter to be left in the hands of the Decoration Committee.

It was moved by Jas. Tolton, seconded by C. W. Yapp, that the meeting adjourn, to meet again at the call of the Secretary. Carried.

The Programme Committee appointed above met and arranged the following programme:

A PUBLIC MEETING WILL BE HELD IN THE OPERA HOUSE, BRANTFORD, NOVEMBER 30TH, 7.30 P.M.

The chair will be occupied by the Hon. A. S. Hardy.

Programme.—Address of welcome, Mayor Raymond, Brantford; 8.00 music.

Reply to address of welcome, Hon. John Dryden, Toronto.

Reply to address of welcome, Geo. McKerrow, Madison, Wis.; 8.30 music.

Address—Hon. Sydney Fisher, Ottawa; 9.15 music.

Address—F. C. Curtiss, Ames, Iowa; 9.45 music.

Address—"Women's Agricultural Interests," Mrs. John Hoodless, Hamilton; 10.15 music.

The annual meeting of the AMERICAN OXFORD DOWN RECORD ASSOCIATION will convene in the G.T.R. Reading Room, Brantford, on Wednesday, November 30th, at 2 p.m.

Programme.—(1) Addresses and reports of officers. (2) Reports of committees. (3) Informal talks on business brought before the meeting. (4) Election of officers. Secretary—W. A. Shator, Middletown, O.

The annual meeting of the AMERICAN LEICESTER BREEDERS' ASSOCIATION will convene in the G.T.R. Reading Room, Brantford, on Thursday, December 1st, at 7.30 p.m.

Programme.—(1) Reading minutes of previous meeting. (2) Address and report of officers. (3) Reports of committees. (4) Unfinished business. (5) New business. (6) Election of officers. (7) Addresses, discussions, etc. (8) Adjournment.

All members and breeders of Leicesters are urged to attend, and all others are cordially invited. Secretary—A. J. Temple, Cameron, Ill.

The annual meeting of the DOMINION SWINE BREEDERS' ASSOCIATION will convene in the G.T.R. Reading Room, Brantford, on Friday, December 2nd, at 7.30 p.m.

Programme.—(1) Addresses and reports of officers. (2) Reports of committees. (3) Nomination of expert judges. (4) Election of delegates to fair boards. (5) Election of officers. (6) Address, Prof. Robertson. (7) Address, Prof. G. E. Day. (8) Addresses, C. C. L. Wilson and F. C. Fearman. (9) Discussion.

It was moved by J. C. Snell, seconded by John I. Hobson, that the arrangement and details of the programmes be left in the hands of the Secretary. Carried.

The Cow-catcher.

Artemus Ward was travelling on a slow-going Southern road soon after the war. When the conductor was punching his ticket, Artemus remarked: "Does this railway company allow passengers to give it advice, if they do so in a respectful manner?" The conductor replied in gruff tones that he guessed so. "Well," Artemus went on, "it occurred to me that it would be well to detach the cow catcher from the front of the engine and hitch it to the rear of the train. For you see we go too slow to overtake a cow, but what's to prevent a cow strolling into this car and horning a passenger?"

Experience is a great school in poultry raising, and the mistakes are guide-posts to keep everyone in line. Get all the experience you can, and avoid making the same mistakes twice, and then you will be on the road to a profitable success.

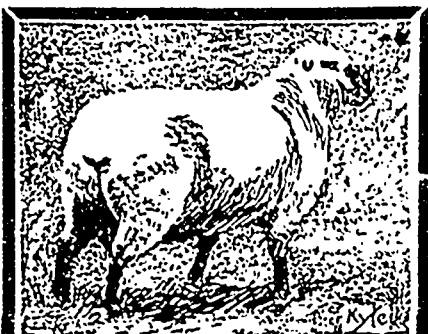
OUR CLUBBING LIST

We will send FARMING UNTIL THE END OF 1899 together with any of the papers in the following list for one year at these remarkably low rates:

	Regular Price	With FARMING
Canadian Magazine.....	\$2 50	\$2 50
Toronto Weekly Globe.....	1 00	1 45
Toronto Weekly Mail and Empire.....	1 00	1 40
Toronto Morning World.....	3 00	3 00
Farm and Fireside.....	1 00	1 40
Montreal Daily Witness.....	3 00	3 00
Montreal Weekly Witness.....	1 00	1 60
Family Herald and Weekly Star— with great premium picture.....	1 00	1 75
London Daily News.....	1 50	2 00
London Weekly Free Press.....	1 00	1 75
London Weekly Advertiser.....	1 00	1 40
Ottawa Semi-weekly Free Press.....	1 00	1 60
Ottawa Semi-weekly Journal.....	1 00	1 55
Ottawa Semi-weekly Citizen.....	1 00	1 50
Ottawa Morning Citizen (daily).....	3 00	3 00
*Hamilton Semi-weekly Times.....	1 00	1 60
*Hamilton Semi-weekly Spectator.....	1 00	1 60
Brantford Weekly Expositor.....	1 00	1 75
The Semi-Weekly Sun (St. John, N.B.).....	0 75	1 50
The Welland Tribune.....	1 00	1 50
The H. H. H. Herald.....	3 00	3 00
*Citizen and Country.....	1 00	1 50
Hoard's Dairyman.....	1 00	1 75
The Breeders' Gazette.....	2 00	2 00
Rural New Yorker.....	1 00	1 85
The Guelph Herald.....	1 00	1 70
The Jersey Bulletin.....	1 50	1 50

Papers marked thus * will be sent until the end of 1899—other papers for the year only—but FARMING will be sent until the end of 1899 for the price mentioned in every case. Address FARMING, Toronto, Canada.

Both gapes and cholera make short work of their victims. When the fowls go about as if they had gapes, and mope around with their heads down for two or three weeks, they are likely to have roup more than anything else, combined, perhaps, with liver disease. The latter is probably due to the fowls being too fat and not having a sufficient amount of grit. If they do not recover in warm weather they should be destroyed and the hen-house disinfected well.



Persic Sheep and Animal Wash

For the complete and effectual removal of all insects or vermin peculiar to sheep and cattle. Powerful, without being harsh; immediate in effect, without any irritating effects; it leaves the animal refreshed and in good spirits after use; does more than destroy the pests, it completely removes all trace of their attacks—healing sores or boils, curing open sores and leaving the skin whole and sound. Mr. G. A. Brodie, a prominent stock raiser of Bethesda, Ont., used it with great success in castrating lambs, the wash healing the wounds rapidly and keeping the maggots away. He considers it the most effectual wash in the market, and heartily recommends it to farmers generally.

If your dealer hasn't it, write us for it, and tell us of anything special in the ailments of your flocks or herds, and we'll advise you how best to use it.

The Pickhardt Rinfrew Co.
(LIMITED)
STOUFFVILLE, ONT.



For Dairy or Table Use

IT IS UNEQUALLED.

Salt on the Farm

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

TRY IT.

R. & J. Ransford,
OLINTON, ONT

BETTER BUTTER

Cleanliness, Basis and Money-making use the

MAPLE LEAF CHURN

Circulars Free on application.

WILSON BROTHERS

Collingwood, Ont

A BEAUTIFUL
SOLID GOLD SHELL RING
WITH A SIMULATING
BIRTHDAY STONE
MOUNTED IN GENUINE BELCHER ETTING

FREE
YOU PAY NOTHING
SIMPLY SEND YOUR NAME
AND ADDRESS ON POST
CARD PLAINLY WRITTEN
and we will send you
Twelve packages of PETAL PERFUME (a con-

Each month is dedicated a precious stone, and according to the Greeks and Ancients any person wearing the enchanted stone of their birth month, insures their great and unending good luck. Thus to January is dedicated the garnet; February, amethyst; March, bloodstone; April, diamond; May, emerald; June, agate; July, ruby; August, sardonyx; September, sapphire; October, opal; November, quartz; and December, turquoise.

PETAL PERFUME COMPANY
91 Adelaide St. - Toronto, Ont.

FARMERS WANTED

To take orders in their section for the famous land renewer,
Alberts' Thomas-Phosphate Powder (Reg.)
Purity and analysis guaranteed. Correspond at once, as fall dressing of the land is important.

WALLACE & FRASER

58 Canada Life Building, - TORONTO

The Spramotor

The only way to prevent what's past is to put a stop to it before it happens, as

Mrs. Partington would say. Many fruit-growers and farmers are induced to buy cheap sprayers, for one reason and another, and they always regret it.

Cheap sprayers are always in need of repairs, cheap sprayers are always made of iron or mostly iron, and iron sprayers are useless in copper mixtures. You would not use a cast iron carving-knife, because it's unsuitable.

The only way to prevent this trouble is to put a stop to it before it happens, or at least before it happens again.

The SPRAMOTORS are the result of the best efforts of the brainiest manufacturers alive.

The SPRAMOTORS embody more good features than all others combined, and that is the reason of the great demand. It is not only necessary to have one good feature, but one to be in the front rank must have all the good features.

The SPRAMOTORS shoot mixtures stronger and evenner than any, which fact has greatly increased their sales.

The SPRAMOTOR will last longer than any other, and is therefore economical to buy.

The SPRAMOTOR is made of brass, is the result of THREE PATENTS and others pending, is carefully made and less liable to need repairs.

Many times more SPRAMOTORS are used today in Canada than all others combined, which is one of the best arguments why you should buy one and be up with the procession. Nearly every first-class store in this country carry SPRAMOTORS in stock.

All the first-class brewers in Canada are using the SPRAMOTORS for whitewashing and disinfecting work.

SPRAMOTORS are recognized as being the standard of the world, and they have proven it by EVERY TEST that a machine can be put to.

They cost from \$5.00 upward, and a catalogue will be mailed you on application.

SPRAMOTOR CO.

357 Richmond St., - London, Ont.

MARKET REVIEW AND FORECAST.

Office of FARMING,
44 and 46 Richmond street W., Toronto.
November 14th, 1898.

There is nothing very new to report in general trade circles. On the whole, business is good, and a big holiday trade is looked forward to. Very little Ontario wheat is coming forward, and farmers seem loth to sell at present prices. This retards country trade somewhat, though local dealers are buying largely for the winter's trade with the expectation of big things as soon as the grain begins to move. The results of the elections in the United States and the triumph of sound money have had an important influence on the markets over there.

Wheat.

On the whole the wheat situation has been somewhat of a puzzle, in so far as the British markets are concerned. Though the war feeling has been intense, British dealers are not the least excited. The excitement seems to be greater in Continental markets where dealers are storing up large supplies. British dealers, however, have been buying pretty largely during the past three months, which may account for their apathy about getting in a large supply at the present time. The visible supply in the United States and Canada has increased by 1,500,000 bushels, and the world's supply in sight 1,700,000 bushels to 41,030,000 bushels, against 58,246,000 a year ago. It is estimated that England will have 20,000,000 bushels more than last year, and Russia 100,000,000 bushels more than in 1897.

A special cable to the *Trade Bulletin* from London, Eng., on Nov. 10th reads: "The market on the Baltic closed decidedly weaker to-day, both for spot offerings and cargoes of boats." The situation on this side is quite in keeping with this, and things have an easier turn. Liverpool and Chicago markets show marked declines. At Montreal the market has been firm and last week's prices maintained, though towards the end of the week it had an easier turn. Sales are reported at Ontario points on the C.P.R. and G.T.R. at 70 to 71c. The market here has been fairly steady, with an easier tendency at the end of the week. Prices have ruled at 67 to 68c. for red and white west. Goose wheat is easier at about 70c. west and north. Manitoba No. 1 hard is quoted here at 81c., and No. 1 northern at 78c. Red and white wheat on the local market here brings 73 to 74c., goose 71½ to 72½c., and red five spring wheat 72c.

Oats and Barley.

There has been a large supply of Canadian oats on the London market of late and prices there are 6d. per quarter easier. There has been a fair demand at Montreal and sales have been made at 30 to 31c. afloat, with No. 3 quality selling at 29c. in store. The market here has ruled fairly steady at 26 to 27c. for white oats north and west. They bring 31½c. on the local market.

At Montreal barley is firm and higher at 45 to 47c. for No. 1 malting grades. The market here is steady at 48 to 50c. for No. 1, and 45 to 46c. for No. 2 north and west. On the local farmers' market it brings 52 to 55c. per bushel.

Peas and Corn.

Offerings of peas on the London market have been light and prices are up 6d. to 1s. per quarter. The Montreal market is about the same as last week. Sales of No. 2 Quebec peas were made during the week at 68c. afloat. The quotations for No. 2 Ontario are 68 to 68½c. afloat. Peas have sold here at from 58 to 60c. north and west, and sell on the local market at 67c.

Chicago No. 2 mixed corn is quoted at Montreal at 40c. afloat, and in car lots at 43 to 44c. Corn here has been fairly steady at from 32 to 35½c. for Canadian yellow, and 40 to 41c. for American Toronto.

Rye and Buckwheat.

There is a good demand in Europe for rye, but Ontario farmers do not seem to be bringing much out. Prices have advanced 1 to 1½c. at Montreal and are 57 to 57½c. afloat.

THOSE \$6 ROBES

IT'LL be harder to get one of 'em at \$8 or \$9 a month hence than it is now to get one for \$6. Nothing like 'em ever seen in Canada for the money. Without saying much we're sending them out in dozens every day to all sections of the country. Orders coming in with every mail. Why wouldn't they? Never be a chance like it again. Think of it! A handsome, long-haired Goat Robe, 60 x 72 inches, plush lined, felt edged, selected skins, and entirely our own make for \$6. Not the kind of Robe that's made up in a hurry, but made specially by our own hands. No haste about the work. You get 'em for \$6, but they're being sold at \$8, and even higher. Can't last much longer—so hurry up.

MONEY BACK IF NOT SATISFIED.

Cummings & Sellers = 244 Yonge Street, TORONTO, ONT.

Manufacturing Furriers

WE PAY CASH FOR FURS

Rye is firm here at 47 to 49c. north and west. On the local market it brings 48½c. There is a fair export demand at Montreal for buckwheat, and quotations are 50½ to 51c. afloat. Quotations here are 37 to 38c. west. It brings 45c. on the local market.

Bran and Shorts.

Large quantities of bran still continue to go from Montreal to the United States. Ontario winter wheat bran is steady at Montreal at \$12 to \$12.25 per ton, and Manitoba at \$11 in car lots. The market here continues firm at \$9 to \$9.50 for bran and \$13 to \$14 for shorts.

Timothy and Clover Seed.

Red clover seed is quoted on the local market here at \$3.25 to \$3.75 per bushel, white clover at \$6 to \$9, alsike at \$4 to \$5, and timothy at \$1.25 to \$1.35.

Eggs and Poultry.

A good demand continues for Canadian fresh eggs, 15 lb. stock, which brings from 9s. to 9s. 6d. per 120, which is an advance of 6d. on the London market. The total exports from Montreal up to October 31st were 136,088 cases, against 108,127 for the same period last year. The Montreal market is firm and higher; strictly new laid bring from 20 to 21c. for 10-case lots. P.E.I. stock is quoted at 13 to 14c. and fresh straight candled at 15 to 16c. The market here rules firm at 17 to 18c. for choice new laid, which are scarce, and 15 to 16c. for fresh held stock. New laid on the local market bring from 22 to 25c.

Dressed poultry at Montreal is steady at 9 to 9½c. per lb. for choice dressed turkeys, and 8 to 8½c. for inferior grades. Choice young chickens bring 7 to 7½c., geese 5½ to 6½c., and ducks 7 to 8c. The supply here is fair and the market is steady at 5 to 8c. per lb. for turkeys, 35 to 60c. per pair for ducks, 25 to 40c. for chickens, and 5 to 6c. per lb. for geese. On the local market prices are about 10 per cent. higher than these quotations.

potatoes.

Sales have been made at Montreal for Ontario points at 45 to 55c. per bag in car lots and at country points at 35 to 40c. In Quebec sales have been made at 30c. per bag, though these low prices are not likely to be maintained. The market here is quiet at 55 to 60c. per bag on cars and 65c. out of store. They bring 60 to 65c. on the local market.

Hay and Straw.

There is a little improvement in London and Liverpool for Canadian clover and clover mixed. The market at Montreal has ruled fairly steady, but there is no advance in prices which are \$4.50 to \$5.50 for choice clover baled on track, \$5.50 to \$6 for No. 2 and \$7 to \$7.50 for No. 1 timothy. The market here is quiet at \$7 to \$7.50 for cars on track and \$4 to \$4.50 for baled straw. On the local market timothy hay brings \$9 to \$10 and clover \$6 to \$7.50 per ton.

Fruit.

The shipments of apples from Montreal up to Nov. 5th were 540,070 barrels as against 347,124 barrels for the same period last year.

is estimated that there are 250,000 barrels of apples stored in Canada to go forward to the British and continental markets. Some very favorable sales have been made in Liverpool which will net at Ontario points from \$2 to \$2.75 per barrel, while other sales will net only from 45 cents to \$1. The former were for good winter stock. Good to choice winter stock will bring from \$2.50 to \$3. Apples on the local market here are quoted at \$1 to \$2.50 per barrel.

Cheese.

The cheese market continues to show a healthy condition, and it is expected from this out that a good steady demand will prevail. The total shipments from Montreal up to Nov. 7th show a decrease of 243,439 boxes, as compared with the same period last year, and those from New York a decrease of 249,244 boxes, making a total shrinkage this year, as compared with last, of 492,683 boxes. It is now estimated that when navigation closes the quantity to go forward from Canada will not be much more than one-half what it was last year. The situation, then, is a hopeful one, and, if anything like a normal demand continues during the winter, a healthy trade may be looked for from this out. Finest Canadian is quoted at London at 45s. to 46s., and good to fine at 40s. to 44s. It is expected that as soon as the present stock there is run off a much better market will prevail. At Montreal a decidedly healthier feeling prevails, and prices have advanced from ¾ to ¼c. Holders there are refusing 9½c. for finest western. Prices on the local markets have ruled all the way from 8¾ to 9 1-16c., but there was a disposition on the part of factory-men not to sell. Most of the cheese east of Toronto is out of factory-men's hands.

Butter.

The creamery butter situation is not quite so hopeful as that for cheese, though at the recent declines a steadier feeling prevails on the London market where choice Canadian creamery during the week brought from 96s. to 100s., and good to fine 88s. to 92s. These prices are good considering that there have been large supplies of Danish of late. The shipments of butter from Montreal up to Nov. 7th were 240,664 packages as against 209,032 packages for the same time last year, an increase of 31,632 packages. Those from New York for the same time show a falling off of 120,879 packages making a net shrinkage from Montreal and New York of \$9,247 packages, an important item in figuring out the statistical position. Fancy western creamery is now selling in New York at 23 to 23½c., which may account for the great shrinkage in the shipments from that point. The Montreal market is quiet but steady at the late decline. The quotations there are choice creamery in boxes, 18 to 18½c.; choice creamery in tubs, 17½ to 18c.; good to fine, 17½ to 17¾c.; and fair to good, 17 to 17½c. Western dairy is quoted there at 14 to 15c. The war scare does not appear to affect the butter situation, though it seems to be necessary for our bread. Creamery is quoted here at 19 to 21c. in prints and 18 to 19c. in tubs.

There is a good demand for a good quality of dairy butter which brings from 15 to 16c. in tubs, and in prints 16 to 17c., medium tubs and rolls bring from 12 to 15c. Pound prints on the local market bring from 18 to 21c. and large rolls 14 to 15c.

Cattle.

The cattle situation shows little change over a week ago. At Chicago and western points, though the supply of range cattle is falling, corn-fed cattle are beginning to come forward in larger quantities. At Buffalo the weather has interfered with trade somewhat, and the market for fat stuff has been somewhat dull. Though deliveries here have been light, trade has been slow, and, though there is a better tone, prices did not advance.

Export Cattle.—Few exporters were on the market last week, and prices continue at \$4 to \$4.10 for choice heavy cattle, and \$3.50 to \$3.65 for light exporters. Heavy export bulls bring from \$3.50 to \$4., and light from \$3 to \$3.37 1/2 per cwt.

Butchers' Cattle.—Prices for the best butchers' cattle were firm on Friday, while in the lower grades, because of so many lean and scrubby animals offered, prices were 5 to 10c. per cwt. lower. Choice picked lots, weighing from 1,000 to 1,100 lbs. each, bring from \$3.90 to \$4 per cwt. Good butchers' and exporters' mixed bring from \$3.50 to \$3.75, and other kinds from \$2.40 to \$3.50 as to quality.

Stockers and Feeders.—Good, well-bred, heavy feeders are in good demand and firm at \$3.60 to \$3.70 for those weighing from 1,100 to 1,150 lbs., under these weights bring from \$3.50 to \$3.55 per cwt. Feeding bulls bring from \$2.50 to \$2.75. Buffalo stockers are in better demand and sell all the way from \$3.12 1/2 to \$3.45 per cwt.

Calves.—The Buffalo market is firmer for these. Veals of choice quality and heavy weight bring \$5 per cwt., live weight, at Toronto, and the general run from \$3 to \$6 each.

Milk Cows.—The general run of these bring from \$25 to \$46 each, while choice milkers fetch as high as \$50 each.

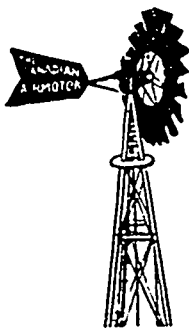
Sheep and Lambs.

Prices at Chicago ruled 10 to 15c. higher earlier in the week and receipts have not been so large as the previous week, when prices went back 20 to 30c. for sheep and 40 to 50c. for lambs. Business was fairly good at Buffalo early in the week, but, towards the end, because of the wet condition of many of the Canadian lambs, prices were easier. There was a good demand here on Friday for sheep, and prices were firmer, ewes selling from \$3.25 to \$3.40, and bucks from \$2.50 to \$2.75 per cwt. The demand for lambs was also good, and prices firm at \$4 to \$4.30 per cwt., or \$2.75 to \$4 each.

Hogs.

Prices for choice bacon hogs do not show much change from a week ago. The de-

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Avoid dangerous machines
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Steam or Gasoline Engines
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liveries here during the week have been fair and prices steady at \$4 to \$4.12 1/2 for choice bacon hogs weighing from 160 to 220 lbs. each, unfed and unwatered off cars. Light fat hogs bring from \$3.90 to \$4 per cwt. and sows from \$3 to \$3.25. Thick fat hogs seem to bring as high prices as choice bacon hogs.

Horses.

The Chicago market has been dull of late and though exporters have been buying a little more, prices have not advanced any. About the same condition prevails on the Buffalo market with no change in the prices for desirable work horses.

BELLEVILLE

Ontario Business College

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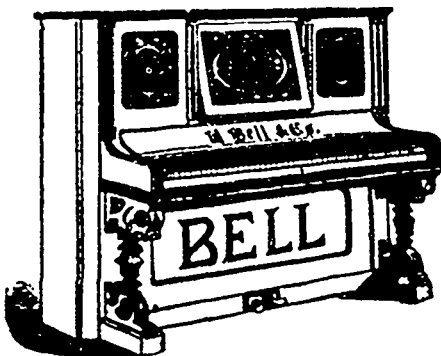
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During the time of the Exhibition the following meetings will be held:

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On November 30th the annual meeting of the American Oxford-Down Record Association; Secretary, W. A. Shafer, Middletown, Ohio.

On December 1st, the annual meeting of the American Leicester Breeders' Association; Secretary, A. J. Temple, Cameron, Ill.

On December 2nd, the annual meeting of the Dominion Swine Breeders' Association, Secretary, F. W. Hodson, Parliament Buildings, Toronto.

Reduced Freight and Passenger Rates on all Railways.

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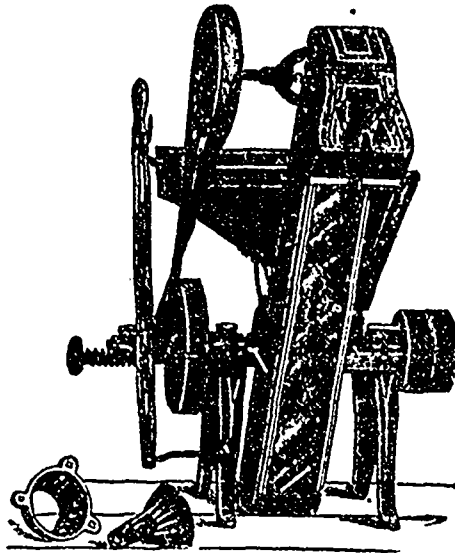
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FOR HORSES AND CATTLE

70c. per 100 lbs; 500 lbs. for \$3.00 here.

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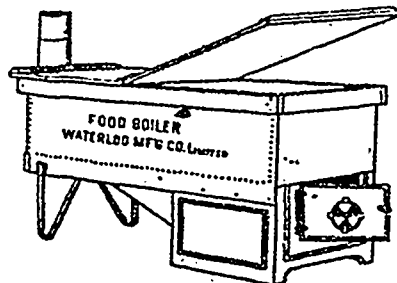


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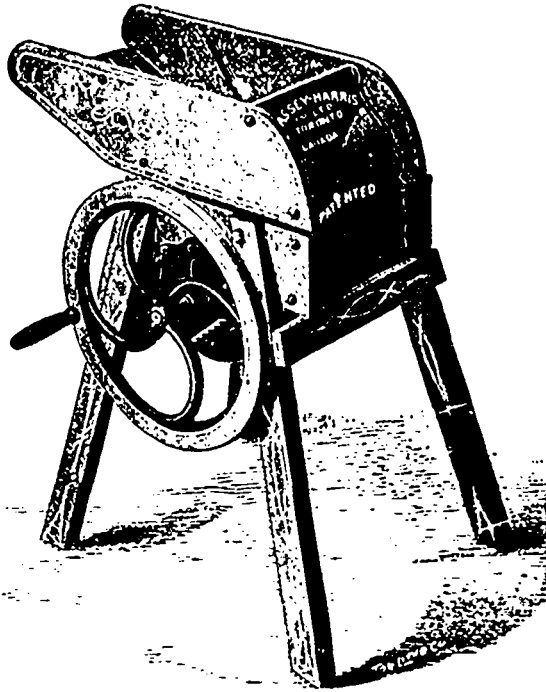
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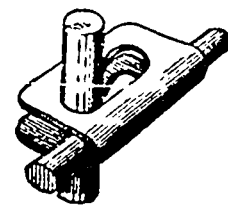
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Extract from Annual Report for 1897

of the Consulting Chemist of the ROYAL AGRICULTURAL SOCIETY OF ENGLAND, published in their Journal, 31st December, 1897, page 732:

"It has been necessary to call attention to the fact that under the name of 'slag,' and sometimes even under that of 'basic slag,' have been sold refuse materials of a very different character, and having little or no manurial value. These have not been the product of the now well-known 'Basic' or THOMAS process of iron or steel-making, and have contained little or no phosphoric acid such as basic phosphate has. In several instances the purchasers believed that they were buying the true basic slag. It behoves one, therefore, to be careful to stipulate for THOMAS-PHOSPHATE, and to have a guarantee of phosphoric acid contained, and of fineness of division."

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