

Prof F T Shatt m dep 15, 99.

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE SUCCEED

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE *

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VOL. XXXIV. LONDON, ONTARIO. FEBRUARY 15, 1899. WINNIPEG, MANITOBA. No. 472

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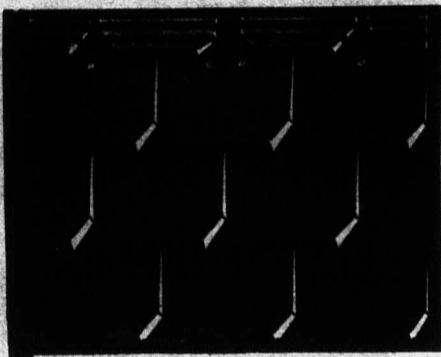


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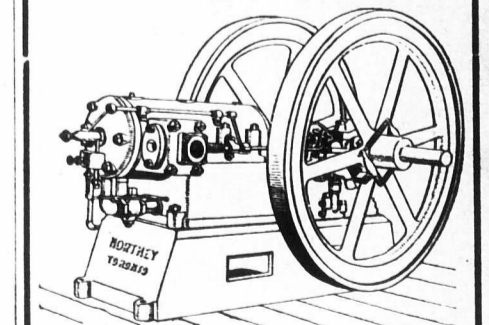
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VOL. XXXIV.

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 15, 1899.

No. 472

EDITORIAL.

The Improvement of Canadian Beeves.

Several correspondents in this issue of the FARMER'S ADVOCATE deal with the subject of calf-rearing and the finishing period in fattening cattle. The feeding of beef cattle is a subject of great practical importance to many farmers in nearly every portion of the country, though of course it is carried on much more extensively in some places than in others. Whether for the local butcher trade or for export, the feeder aims to produce at a profit as good an animal for the block as possible in a reasonable period of time. In this work experience is the great teacher, and those who feed regularly for the British market have no doubt attained the highest degree of skill. It is in the great lairages, such as we find at Liverpool, that our cattle come in direct competition with the cheaply-produced and well-ripened output of the U. S. corn belt and the luxuriant grasses of the Argentine. The foundation of all good beef cattle is laid in the breeding, and for years the South American cattlemen have been buying the best sires obtainable in England and Scotland, the produce of which are reared under peculiarly favorable conditions of climate and food supply. Considering the long sea voyage these animals must make to England, their quality when they land is remarkable. Not long ago came the announcement, which, however, we have not yet seen confirmed, that the Argentine Government proposed to further stimulate the trade by a subsidy in some form. The excellence of American corn-fed cattle is indicated by the higher quotations which in many instances they bring, compared with Canadians, in the Old Country market. For years our Governments, Federal and Provincial, have left no stone unturned to develop dairying, particularly the export butter branch of it. It certainly behooves Canadian cattle-raisers to bestir themselves by producing beeves of the highest quality, and feeding them in such a way as will leave a reasonable margin of profit. Then again, our exporters, small as well as great, must have fair play in the matter of transportation rates and privileges, and where improved facilities are needed the Government must further interpose, as it is doing for the export of butter. At the present moment, however, the practical question on the farm is the rearing of the calf intended for a beef animal and the finishing of export beeves. The individual cattleman may not be able to vary transportation rates or Old Country commission charges, which seem to have the certainty of death and taxes, but he can with intelligent purpose determine what manner of animals he will feed, and regulate their cost. The first few months of an animal's life may determine whether it will be a profit or a loss to its owner. In fattening cattle the feeder must make the best of his conditions, utilize any good foods which he can purchase to advantage, such as American corn, to which our feeders now have access, and neglect no precaution that will promote comfort, health and gain in flesh. We would, therefore, commend a thoughtful perusal of the letters on these subjects elsewhere, and would be pleased to receive from others seasonable and helpful suggestions upon any points not fully covered, because "in a multitude of councillors there is safety."

Canadian Poetry and Butter.

Mr. C. C. James, Deputy Minister of Agriculture for Ontario, takes advantage of the opportunity which is afforded him when replying to the frequent inquiries received at the department from all parts of the world respecting Ontario to bring Canadian literature to the notice of his correspondents. Recently he forwarded to Mr. Thomas Hutchinson, of Pegswood, Morpeth, England, who

has been making the acquaintance of Ontario by correspondence, copies of the Christmas numbers of the FARMER'S ADVOCATE and Acta Victoriana, in which were poems by Mr. J. W. Bengough. The other day Mr. Bengough received a letter from Mr. Hutchinson expressing admiration of his poems, and adds: "I, for one, as one of the directors of our local co-operative society, can vouch for the superlative quality of your Canadian produce—butter in particular. But it is as an ardent admirer of Canadian poetry that I am inflicting this letter upon you."

Experimental Work in the Northwest.

At the last session of the Northwest Territories Assembly at Regina a sum was voted to initiate agricultural experimental work under the direction of the Territorial Government. While work of great excellence and practical value is being done at the Dominion Government Experimental Farm at Indian Head, it has been contended that when the vast area and varying conditions of the three Territories—Assiniboia, Alberta, and Saskatchewan—are considered, there is room for a system of local substations. For a long time the subject has received considerable study on the part of Mr. C. W. Peterson, Deputy Commissioner of Agriculture in the Territories, and the outline of the plans contemplated were given in a letter some time ago in our Manitoba and Northwestern edition. The success attending the district fruit stations in the Province of Ontario was cited as a good precedent for local experimental or demonstrative work in the Northwest, or for that matter in any of the Provinces. The N.-W. T. plan will no doubt be developed gradually. It is not the intention to embark in any elaborate undertaking. Understanding their own needs and conditions, the work will be begun and developed in such a way that full use will be made of the experience gained. For instance, a start may be made by taking up on one farm, or portion of a farm leased for the purpose, the question of irrigation, and so on with other problems having a practical bearing upon agriculture in different districts. The results will be watched with interest.

Importance of Good Seed.

There are good grounds for the belief that a large majority of farmers are not sufficiently careful in the cleaning and selection of their seed grain and clover and grass seeds. The result of experiments at some of the Government Experiment Stations in Canada have shown that an increased yield of from four to six bushels per acre has been reaped from selected, hand-picked seed over that from seed from the same bin cleaned in the ordinary way by running it once through a fanning mill. While hand-picking of seed on a large scale is not practicable, these experiments serve a good purpose in emphasizing the importance of greater care in the cleaning of seed grain by the use of good mills with proper screens, for if but one or two bushels per acre can in this way be added to the yield, it will many times pay for the added labor. Besides the probable increase in the price for the resulting crops which will follow on account of the improved sample. Let each farmer figure for himself what the gain to him would be if by careful cleaning of his seed grain the year's crop on his farm were increased by one bushel per acre, and it is safe to say he will be impressed with a new sense of the importance of this subject. Multiply this result by the millions of acres of grain annually cultivated in Canada, and it is easily seen that the increase would mean millions of dollars more to the farmers of this country. A series of letters of enquiry sent out by this office last year to leading grain-growers, asking their opinion as to the relative importance of selection and of frequent changing of seed, elicited the response in a majority of cases that selection was of decidedly greater importance,

though most of them advised occasional changes of seed from one locality to another, not necessarily a change of variety, for if a variety is doing well in a district, a change to another and untried variety should only be made on a small scale until it has proved itself well adapted to soil and circumstances. It would seem hardly necessary to utter a word of warning against the purchase or exchange of seed from a farm on which noxious weeds prevail, as such a course may lead to endless trouble and annoyance. A few seeds of wild mustard or wild oats introduced in this way may worry a man for years. Probably in no class of seeds are those of noxious weeds more frequently introduced than in clover and grass seeds. In these they are not so easily detected, and it is all the more important that care should be observed to deal only with reliable seedsmen, and that careful inspection be made of all seeds purchased so as to be satisfied, as far as it is possible, that pure seed only is sown. There are many small weed seeds which are difficult to distinguish with the naked eye, and for this reason clover and grass seeds should always be examined under a magnifying glass and, if possible, it is well to ascertain where the seed has been grown and to be assured that it has come from a farm that is known to be free from noxious weeds. It is poor economy to purchase low-priced seed if one is not sure it is of good quality and clean. A few cents per bushel often represents the difference in price between first and second class seed, but if the low priced seed be impure or inferior it may mean many dollars of difference to the purchaser in the character of the crop. It is well, in this matter, to take time by the forelock and make an early selection of clover and grass seeds before the stock has been culled, and to prepare the seed grain for the spring sowing during the winter weeks while there is ample time to do it well, and not leave it till the rush of spring work is on and the temptation comes to hurry and to slight the work. Do well what you do, and leave not for a future day what can be better done to-day. We would also emphasize the great importance of purchasing good selected root and garden seed, and advise farmers never to buy seed simply because it is low priced, expecting to get a good article. Really good seed cannot be bought cheap by the wholesale dealers, and retailers do not sell below cost.

The Live Stock Outlook.

Reports which we have just received from feeders in several districts indicate a decidedly improved demand for export cattle. Several sales are already mentioned at five cents per pound, live weight, for May deliveries. One writes: "I have sold \$2,000 worth of stock in the past ten days." This included, we understand, his stall-fed beasts and a few breeding animals besides. Better prices for export beeves will react favorably on stock for home consumption. Since the removal of the ninety-day quarantine many thousands of feeders have been drawn away to the States at very good prices, considering that they were not of the most desirable type. It has had doubtless a stimulating effect upon trade, but in our opinion a better class of beeves should be reared and finished at home in order that the full advantage of the industry be derived. The prices being realized for other farm stock are also encouraging.

There has been a corresponding advance in the prices, and demand for breeding stock. The annual meetings of the Canadian live stock breeders in Toronto last week were very largely attended and most encouraging throughout, as we foreshadowed in our last issue. From present appearances 1899 ought to be a record year with the Canadian breeder and farmer, whose greatest security rests in an intelligent system of live stock husbandry.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED BY
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, ONTARIO, AND WINNIPEG, MANITOBA.

LONDON, ENGLAND, OFFICE:
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JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published on the first and fifteenth of each month.
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STOCK.

How a Carload of Steers Were Fed.

To the Editor FARMER'S ADVOCATE:

SIR,—We shipped two carloads of cattle yesterday to Glasgow by the way of Portland. One of the carloads was fed in our own stables. In regards to feeding them, they were finished on cut feed made out of corn (sown in drills three and one-half feet apart and stalks eight to ten inches apart in the row), unhusked, and wheat chaff, with roots pulped up, with two pails of water added to it, fed three times a day. The chop-stuff was one quart oats, two quarts corn, one quart of bran, mixed; fed three times a day, with all the hay they could eat twice a day; watered every morning at 9 and 4 p.m. We fed this way for the last month. They didn't get much outdoor exercise, as they were fed in box stalls, and kept warm. A. & D. BROWN.
Elgin Co., Ont., Feb. 8th, '90.

Feeding Steers for Finishing on Grass.

Among the most extensive feeders of cattle in Middlesex County, Ont., are Messrs. John G. Shipley & Son, who generally finish a carload or two during winter, but they now have two stables, of forty-odd cattle each, in preparation for finishing on grass. The steers are tied in pairs in basement stables that are well-lighted and roomy. They are kept continually tied, and have water before them, supplied by hydraulic rams. The water troughs consist of wooden boxes, about eight inches wide, and six inches deep, lined in U shape by galvanized iron. They are continuous along the entire length of the passages at the heads of the cattle. The feed is put into the mangers, beneath the water troughs, from the elevated passage, which forms the back of mangers. The cattle get about forty pounds of ensilage per day each in two feeds, morning and evening, mixed with an equal bulk of cut straw. At noon they get a moderate feed of long good hay. About half the cattle, comprising the better animals, are each getting about four pounds of grain in two feeds, along with the mixed feed. This will be slightly increased as spring approaches, and it is expected to turn them off finished in

June. The others, not getting grain, will be grazed a month or two longer.

It seems to be the practice in Messrs. Shipley's neighborhood to cut all the straw grown except pea straw, and the preferred plan is to cut it from the sheaf with the ensilage cutter before it goes into the threshing machine. The work is done by one engine while the threshing is in progress. A large-sized cutter will take the sheaves very rapidly and run about an hour after sharpening the knives.

How a Stable of Thirty-one Steers are Fed.

Feeding steers for beef is very largely followed by farmers in Western Ontario, and especially in the northern and western portions of Middlesex County. Hearing that Mr. R. H. Siddall, of London Township, is feeding a stable of good steers, we took occasion to visit his farm and learn his method. The lot comprises thirty-one steers, two and three years old. They were in good thriving condition when taken from the grass, weighing on an average about 1,300 pounds each. When first put in they were gone over with an application of equal parts of black oil and fish oil, to a gallon of which was added an ounce of crude carbolic acid. This is applied on the back, neck, rump, etc., every few weeks, and has the effect of destroying warbles in the skin, as well as lice. The cattle are all dehorned, and tied two in a stall in a stone basement. When first put in they were given cut straw, with two pounds of chop, five of oats to one of peas by bulk. At noon each got half a bushel of good corn ensilage, and at night a half-bushel of pulped mangels and two pounds of the chop mixture. This method was continued till about the beginning of January, when the ensilage and cut straw, with a little hay, was mixed two feeds ahead and given mornings and noons—just what they would eat up clean. The grain ration was increased to three feeds daily, till now they are getting nine pounds per day, of oats three parts and peas one part, in three equal feeds. Mr. Siddall prefers to feed equal parts, by measure, of bran with the oats and peas when it is reasonably cheap. Just now he is mixing in a proportion of oat hulls to give bulk, especially for the night feed, when mixed chop is the only dry feed given along with the pulped roots. Mr. Siddall is highly pleased with the plan of feeding the roots in this way, as it seems to keep the appetites of the animals keen and the stomach and bowels in healthy and vigorous condition. On one night a week the cattle are given a feed of long hay, which they relish very much. It is a safe change of diet, and serves to keep their cuds right. They are turned out to drink in the afternoon at a trough in the yard, supplied by a hydraulic ram from Mr. Siddall's mill-pond. The cattle receive no bedding, as the straw is all needed for feeding. The stables are cleaned out, by means of a horseboat with runners, to a pile in the yard. Each animal gets a teaspoonful of sulphur twice a week to keep the blood cool, and a small handful of salt every second day on the feed. The cattle do not all get the same fixed quantity of feed, but are carefully watched, and fed according to the apparent needs of each. As finishing approaches it is the intention to mix in about a quart of flaxseed to each bag of mixed grain, ground. This is much preferred to feeding oil cake.

The stables have plank floors, which are getting out of repair, and it is Mr. Siddall's intention to put in cement floors and a complete new interior at an early date. The water will then be brought into the stables, and a platform weigh-scale will be set up, so that feeding cattle can be weighed every two weeks, when the feeding can be done more intelligently. It is expected that the thirty-one head will average about 1,500 pounds each by March 1st. They are principally well-graded Short-horns.

Finishing Cattle for Export.

To the Editor FARMER'S ADVOCATE:

SIR,—Cattle that are intended for stall-feeding should be fed a light ration of meal or snapped corn while on the pastures in the fall months. Never allow them to shrink or be exposed to storms or frost before being tied up. Apply vermin destroyer the first week you tie up, and be sure that your stables have been thoroughly renovated and white-washed during the autumn.

Feeding should commence with thirty pounds of roots and four or six pounds oat chop and all the clover hay they will eat up clean, for first two weeks. This is done to keep cattle in a high normal condition, or extended condition. It is a great mistake to allow them to "gaunt up." The method afterwards all depends upon the varieties of feed to be used. Cattle, if treated as above, are in condition to make rapid gains if fed and managed as has been my practice for a number of years, since I have had silage, made from corn that is ripe and will shell from thirty to forty bushels per acre, as a part ration. Our cattle are now trained to their new surroundings and quite contented. I commence by reducing the root ration gradually to fifteen pounds per day, reduce the clover hay to ten or twelve pounds each steer, and increase the meal to eight pounds. Give cut straw, hay, and cut cornstalks, with twelve to fifteen pounds of ensilage added to the mixture of cut feed, making twenty-five pounds per bullock, which will produce a rapid gain for the first month or six weeks. I would never feed over ten pounds of meal per day to a fattening steer, and then never have the meal

stronger than one pound of corn or peas to four pounds of oats before being ground, as I consider oats one of the greatest producers of flesh and best regulators of any grain grown.

I am feeding thirty-six head for export or the shambles. Twelve of them are in box stalls. I will give the rations fed per day to ten steers that will average 1,350 pounds. Commencing at daylight (I do not go out with light in the morning), four baskets (weight 35 pounds each) of cut mixture and ensilage mixed night before, making 140 pounds; on that 42½ pounds of the corn and oat chop is fed. After all is cleaned up they get two 70-pound baskets of uncut mangels, making 140 pounds of roots. At 9.30 a. m. they get good oat straw to look at. They eat some; the rest is used in the afternoon for bedding. They are now full as they should be, and lie down until noon. They go out for a drink of lukewarm water (warmed by a heater) and exercise. They come back plump, and are ready to take a bite of the straw or lie down until 4.15 p. m., when they get the same ration as in the morning, except the mangels, viz., cut straw, hay, and corn ensilage, all mixed with same amount of meal. They are full again. They rest until 7 p. m. and get twelve pounds of good clover hay, uncut. Mangers are cleaned out morning and afternoon. The foregoing plan gives animals a chance to assimilate their food, and I call it feeding twice per day. I am not afraid to let the critics see them. Bought and brought home in October, they were not then considered much, but they will be ready by March. They are making great gain, and so are the others that are tied up getting the same ration per head per day, viz.:

CATTLE WEIGHING 1,300 POUNDS.	
The mixture.....	25 lbs.
Meal.....	9 to 10 lbs.
Mangels.....	12 to 15 "
Uncut hay.....	12 "
Straw.....	3 "

Per head each day.....61

This is the weight of ration for steers tied up and the lighter ones.

If I had more roots I would change the above in some particulars. The above ration is what I call full feeding, and will bear inspection. If I had no roots or ensilage I would certainly water twice a day, but I think cattle so treated only require water at noon. I certainly think cattle should have exercise. I would not buy cattle to ship unless they had had exercise. I term them "hotbed cattle," and will shrink in shipping.

With such foods as I have I would offer as a full day's feed for ten big steers the following:

Mixture ensilage, cut cornstalks and clover.....	280 lbs.
Mangels.....	140 "
Meal (oats and corn or peas).....	85 "
Uncut clover hay.....	120 "
Straw, 3 lbs. each.....	30 "

Per head per day.....655

Middlesex Co., Ont. C. M. SIMMONS.

P. S.—All the difference in the figures is that the lighter cattle do not get as many pounds of the mixed ration as the larger steers. All the condiment fed is a tablespoonful of sulphur once a week for the blood. C. M. S.

Finishing Period for Beef Cattle.

The finishing period for fat cattle requires close observation and careful attention to details on the part of the feeder. A successful feeder is born, not made, and it requires experience and close study to run a beef animal to its full capacity and not overdo it. An animal "stalled" or "off its feed" through indigestion or impaction may lose more in weight in a week or ten days than can be put on again in the next month. An experienced feeder who can push a bunch of cattle to their full capacity, and have them always ready for their feed, might be compared to a skilful engineer in a large manufactory who can detect the throwing off of a belt in some distant part of the building by a change in the motion or hum of his engine. With the engineer his ear will detect the change, and with the feeder his experienced eye will enable him to know when he is approaching the "safety line."

The results of several experiments would go to show that a gradually increasing quantity of meal per week or per month is better and cheaper than a given quantity fed daily throughout the feeding period. For example, say 1 pound for the first month, 2 pounds for the second month, 4 pounds for third, and 6 to 7 pounds for fourth month or finishing period. Any grains that the farmer can grow or buy to advantage may be used. A good mixture is equal parts by weight of ground oats, barley and peas, with half a part of bran. Good oat straw cut and mixed with ensilage morning and night (say 5 pounds straw to 50 pounds ensilage), and a feed of 25 to 30 pounds turnips and 5 pounds long hay at noon, with the addition of the meal given above, is a very good and cheap ration for feeding beef cattle. Of the mixture of ensilage and straw an averaged-sized steer will eat 15 to 18 pounds morning and night. I would always advocate feeding three times a day; more is unnecessary, besides adding to the cost; and when fed twice per day an animal will be inclined to eat too much and overload the stomach. With well-cured clover hay, plenty of roots and ensilage, a fair allowance of meal, and regular supply of salt, condiments or artificial food are unnecessary. The hours for feeding may be 5.30 a. m., 11.30 a. m., and 5.30 p. m. All animals should be watered at least

twice per day, which will prevent them drinking too much cold water at one time.

Export cattle would be much the better of a little exercise, say for a few minutes every second day. The advantages are: Keeping the legs and digestive organs in good shape, enabling them to stand the journey by rail and water much better, without the large loss by shrinkage which so many stall-fed animals loose.

Beef animals thoroughly enjoy a good currying and brushing, and it is an advantage, as it keeps the skin clean, and the animals are more content; they should have it at least two or three times per week. Beef cattle require plenty of light and good ventilation in the buildings. The temperature is better about 5 degrees cooler than for dairy cows, or about 45 degrees.

Cattle fed regularly at the same hour, by the same man, will easily let him know when feeding time arrives, and he could set his watch by their actions and not be many minutes astray.

R. R. ELLIOTT, Herdsman.

Central Experimental Farm.

Points by an Expert on Finishing Export Cattle.

To the Editor FARMER'S ADVOCATE:

SIR,—I have already given you my general methods of cattle feeding, and I have made no very great changes. In the first place, I would urge every feeder to buy or raise good fleshy, well-bred cattle, for without *breeding* you cannot get proper results in feeding. Breeding and feeding should go together, because either is of very little use alone; all stock should be fed regularly. I feed at 6 o'clock, 11:30 and 5 o'clock. As to finishing cattle for export, animals weighing under 1,200 should have 2½ gallons meal per day; over 1,200 they can easily take 3 gallons per day of oats, peas and barley, two parts of oats, one peas and one barley. The last month I take a little less barley and add some corn, and all the good hay they will eat up clean, and about half bushel of roots when clover hay is fed, but when timothy is used I feed a few more. The chop is mixed with wheat chaff or cut feed. I do not think very much of oat chaff alone for cattle that get a full ration of strong meal, as it has a tendency to scour them. I don't think it is profitable to cut all the hay; cattle will do better by getting some long hay—it fills them up nice and round. I also think cattle should have a little exercise every day. I have not got the water in the cups in front of the cattle, and have not fully made up my mind whether I will or not. I have a trough in the yard under the shed in a good sheltered place, and as cattle need exercise it may not be so much profit as we sometimes imagine. ISRAEL GROFF, Wellington Co., Ont.

Fattening Cattle Without Roots or Ensilage.

Mr. John P. Beattie's stables in Dorchester each season contain a good bunch of steers, finished for export about June. The present lot were purchased. They are fed tied with chains in double stalls, and are let out once a day for exercise and water pumped from a well in a sheltered location near the stable. To destroy vermin the most thoroughly effective application tried is a mixture of machine oil and coal oil (one third of the latter), rubbed on with a brush. These cattle are being fattened without the use either of roots or ensilage. With the last feed of meal each evening is given a tablespoonful of a mixture one-third sulphur and two-thirds Epsom salts. This has been done for some three weeks past with apparently very satisfactory results, so far as the thrift and condition of the steers are concerned. Up to this time the chop fed has been a mixture of oats and barley, the former predominating, the two being grown together. They have been given four feeds of two quarts each per day, beginning with a feed of straw thing in the morning, followed by a feed of bedding. Between 10 and 11 o'clock the cattle are out for water and the stable cleaned. On coming in they get the second grain feed, followed by hay. In the afternoon they again receive grain and straw, and in the evening the fourth feed of grain, followed by hay. From now on the meal feed will consist of the oats and barley mixture, with American corn added, ground in about equal quantities, and the feeds increased to three quarts each four times per day or more if they will take it to advantage. At this writing the bunch were doing exceedingly well.

Feeding Calves of Beef Breeds.—A Successful Feeder's Methods.

In regard to feeding and management of calves the first six or seven months, intended for a beef animal: If the calf is from a fleshy cow and not a very heavy milker—that is, if she won't give any more milk than will raise the calf well—I would let the calf suck the cow three times a day for four weeks, then twice a day. By that time it will start to eat a few pulped turnips with a little ground oat and pea chop mixed with the turnips. Just commence with a handful and keep increasing it every day as the calf will eat it up clean. If it does not eat it up clean, take it out and give it a little fresh and something that will eat it, and give it a little fresh and a little clover hay in the same manner. I prefer letting the calf run loose in a box stall behind the cows, the larger the better, only don't have too many together if the pen is small, and they will go

ahead till they are seven months old, and then you can be weaned and with plenty of food and exercise they will grow right along.

On the other hand, if you have a cow that will give eighteen or twenty quarts a day, I would say milk her and feed the calf on skimmed milk. As soon as the calf is dropped, take it away from the cow and don't let her see it, if possible, and give it a good hand rubbing with straw till it is dry. Then milk the cow and give the calf three or four quarts of the milk daily in three feeds, and keep increasing it a little as the calf grows, till it will take six quarts. Feed it three times a day. When it is six days old start and feed it a little skimmed milk, say a quart, mixed with the whole milk, and keep increasing it till you get it to all skimmed milk, but be sure and always make the skimmed milk lukewarm by putting it on the stove a few minutes, and then there is no danger of chilling the calf and having it going around with its back humped up, and the first thing you know the calf is sick. A little care at this age of the calf will increase its value a great deal for beefing purposes. In regard to feeding the calf prepared food or cooked flax-seed meal, etc., I think it is useless; that is, if your cows are properly fed with clover hay, a little meal of some kind, and what straw they will eat, and a sufficient quantity of turnips to keep their bowels in good condition, and I will guarantee the calf will do all right. Feed it some pulped turnips mixed with a little meal and clover hay—the same I advised feeding the calf that sucked the cow, and when it is seven months old it will be a little thinner than the one that sucked the cow, but when it is thirty months old you won't be able to tell which one sucked the cow or fed on skimmed milk, providing they are all bred the same. JAMES LEASK, Ontario Co., Ont.

Raising Calves for Beef.

Regarding feeding calves intended for Canadian beeves: Of course the first requisite is to have the proper type of a calf. Having that, we would advise feeding whole milk until they are a month old, making a gradual change from the whole by adding a little skim milk at first, and while increasing the amount of skim, decrease the amount of whole milk until they are on a full diet of skim milk. We generally add a little oil meal or flax seed, increasing the quantity as the calf grows older. It is better to steep the flax seed in warm water for several hours to make a jelly. By having it warm (not boiling) it will heat up the milk for the calf. Always, from the very first, have a little fine hay (perhaps Alsike hay is the best) and a few whole oats in their feed box. As the calf grows we generally give oat and barley meal, mixed with bran, and a few roots pulped, as much as they will eat up clean. We prefer having calves in box stalls about 8x10 ft.—this will accommodate two calves. Have a manger or feed box high enough from the ground so they can't fall into it, and a hay rack in the corner. Give them lots of light; if possible, let the sun shine in on them part of the day. Keep them clean and dry. Disinfect the stalls occasionally, and allow them a free use of the brush and comb. If diarrhoea should occur at any time, we use the following mixture: Laudanum, ginger, peppermint, camphor, capsicum, rhubarb, in equal parts. Dose half a teaspoonful every two hours. BRANT CO., ONT. ROBERT SHAW.

Feeding a Calf for Beef Purposes.

In the first place take good care of the cow while carrying it and when it comes. If we are going to feed it from a pail we do not allow the cow to lick it, but take it to a warm, well-bedded box stall, and rub it off, and leave it for three or four hours to get hungry. Then take some milk from the cow, but do not milk her out thoroughly for forty-eight hours at least after calving. This is a great safeguard against garget; give it about two quarts at first, and increase gradually as the calf requires it; feed three times a day first week, but be very careful not to overfeed, as scours when once started are very hard to stop sometimes. When two weeks old add a little warm skim milk, and increase it so that at four weeks old they are taking skim milk entirely; to the skim milk add a little meal, corn meal, middlings, grd. oil cake, in proportion 4, 4, 2 in the order named. It is not good to mix coarse meal like oat chop in milk; put a tablespoonful or two in at first, and increase as the calf seems to relish it. When about three weeks old put some oat chop in a manger where they can get it; very little at first, and as it licks it up clean keep increasing; also let them have access to salt; also fine, well-saved clover hay and pulped roots. Do not leave it to get stale before them, but keep the manger clean and put in fresh feed. There is nothing that helps them to eat better than learning them to leave a clean plate. Be careful to feed regularly both as regards time and quantity. Continue along these lines, changing the food at times to increase the appetite, and in summer when flies are bad let them have a moderately dark, well-ventilated place to stay in through the day, and a good pasture to feed in at night. When they are weaned from milk in the fall, a run on rape for a month or two puts their stomachs in a fine shape to take hold of the coarser fodder in winter quarters. Calves fed in this way will generally grow well and have a good amount of flesh, which should be always kept on and increased until they are finished. A great deal depends on the attendant—if he likes the calf and the work. JAMES BOWMAN, Wellington Co., Ont.

Scottish Methods in Calf Rearing.

“Many substitutes have been successfully used for the butter-fat abstracted by the separator. Mr. Gilbert Murray, Elvaston Castle Estates Office, recommends the following: To two parts of oatmeal add one part of wheaten meal, one of ground peas, and one-fourth linseed. The mixture should be steamed and mixed with the milk. As soon as the calf begins to eat he prefers a mixture of wheaten meal and ground linseed, with a small quantity of bran or rice, sweet hay chaff.

“A plan successfully followed by a Forfarshire farmer is to provide a substitute for the abstracted butter-fat in the form of a mixture of ground linseed meal, oatmeal, and locust bean meal, in equal proportions, the total allowance per head per day being one pound, say, when the calf is three weeks old. The mixture is either boiled or scalded with boiling water until it assumes the consistency of thick gruel, being then mixed with the separated milk. As the calves gradually get older they get a steadily increasing allowance of linseed cake.

“Sir Robert Jardine, Bart., of Castlemilk, made extensive experiments two years ago, under which he reared calves successfully with separated milk, using as a supplement with one set of calves cod-liver oil, and with another set Bibby's cream equivalent (an artificial calf meal), with the addition at the outset of one-half pound of best linseed cake. At the start, when the calves were two or three weeks old, the one set got one gallon separated milk and two ounces cod-liver oil, and the other set one-half pound cream equivalent. A month thereafter an additional half-gallon of milk was given, and the food was increased to one and one-half pounds daily, all getting one pound linseed cake daily. This diet was continued until they were four months old, and then they were all turned out into a forage field, where they were allowed one gallon separated milk, with one and one-half pounds of linseed cake daily. This system was tried against rearing on whole milk alone. Those on the last-mentioned natural diet cost £3 0s. 8d. per head, those on cod-liver oil cost £1 13s. 10d., and those on the cream equivalent £1 9s. 9d. The entire lot were kept and fed in the same way until they were disposed of in the fat market. The whole-milk lot (numbering, like the others, four) weighed 35 cwt. and realized £55; the cod-liver-oil lot weighed 36 cwt. and were sold for £57 10s.; and the artificial-food lot scaled 34½ cwt. and sold for £55 19s. This experiment demonstrates the successful substitution of other substances for the butter-fat abstracted. It will be seen that the rearing of the calves on whole milk alone was more expensive than the other methods, by £1 6s. 10d. as compared with cod-liver oil, and £1 10s. 10d. in comparison with the cream equivalent. When the cost of rearing in each set is deducted from the price realized in the fat market for the finished cattle, it is seen that the balance was only £51 19s. 4d. for the whole-milk lot, as compared with £55 10s. 2d. for the cod-liver-oil lot and £54 8s. 2d. with the cream-equivalent-food lot. Speaking generally, between economy of rearing and better results at the conclusion, the balance in favor of the lots fed on butter-fat substitutes amounts to about two guineas per head—a sum not to be despised.

“On 13th August last we gave an account of the successful rearing on an upland farm, by a well-known gentleman in the West of Scotland, of eleven calves from Irish Shorthorn cows on the milk of two cows, one of which had been calved for some time. Separated milk was used from the time the calves were eight days old, and the substitutes used were equal parts of linseed, oatmeal, and Indian meal, steamed together in a galvanized pail placed in a sort of double-jacket steamer, supplied by Ludlow Brothers, Birmingham. It was heated by an oil stove, the entire apparatus costing a trifle over two guineas. After being weaned they got fairly good keep, suitable for growing store cattle, and were sold in an auction mart at twenty-one months old for from ten guineas to £12 each. They had been kept in a steadily progressive state on an upland farm, without being forced or pampered to any extent. Here was £11 5s. each realized, on an average, for eleven cattle reared on two cows and kept afterwards on plain diet, almost all of which was raised on the farm.

“Where a cream separator is not available and the cream is skimmed off the milk in the usual way, such supplemental food as we have specified can be added to the skimmed milk with excellent results as regards both the healthy rearing of the calves and the outlay at which this is done. Many farmers might adopt some such methods as we have sketched, and nowhere could this be done with more satisfactory results than where there are members of the farmer's family willing and capable of doing such work.”—*The Scottish Farmer*.

Will Benefit Canada in Britain.

T. D. McCALLUM, Manager Isleigh Grange Farm, Danville, P. Q., says:—“I am very much pleased with your Xmas number of the *ADVOCATE*. I think that the issue of such a number will do a great deal of good to this Canada of ours. It will let the people on the other side of the Atlantic see the progress which we are making in farming in all its branches, and I think will be the means of bringing out a lot of the better class of farmers to locate in Canada. I met a great many breeders in England, Scotland and Guernsey while I was there, and would like to send them a copy of the Xmas number of the *ADVOCATE*. Could you send me fifty copies that I could distribute?”

A Philistine Colt Breaker.

Albert G. Hubbard, horse-breeder, who hails from the town of East Aurora, center of the horse and literary worlds, gives a lesson in the art of colt-breaking in the last issue of his periodical of protest, *The Philistine*. He says: "Some of Theodore Roosevelt's admirers a short time ago presented him with a statuette, entitled, 'The Bronco Buster.' The work was done by Frederick Remington, and shows a lank, lean horse in a perfect agony of fear. So well has the talented artist done his task that the poor horse seems to be sweating blood at every pore; his eyes are bursting from their sockets, the savage bit is tearing the delicate membranes of his mouth, while the long, sharp spur on the right foot of the rider is ripping his hide from ear to tail.

A word with you: In horsemanship I am no theorist, writing from the sixteenth floor of a city office building. I own horses, raise colts, and train them to saddle and harness. I have ridden horses since I wore dresses. I have had the sole care of horses on the plains, in pasture, on the track and in the barn; and this I know: the horse is not a savage animal. Whenever a so-called "vicious horse" is found, it is one that has been monkeyed with by a "bronco buster."

The process of "busting broncos" is to lasso an animal that has never had a man's hand on it, choke it into submission, clap a saddle on its back, cinch this saddle with two girths until the horse can scarcely breathe, then leap onto its back and by whip, curb and spur, followed up with wild hallooing, force the poor beast into a paroxysm of revolt. Then the rider simply sticks until the frantic, fear-stricken animal exhausts its strength. To break the spirit of the proud animal is the result desired.

The other way to break horses is to work with them slowly, "fuss" around them, get acquainted with them, and when the animal finds no harm is intended, put the harness on him and drive off. The horse is the most cheerful and willing servant man has, excepting the dog. And if we treated horses with the same familiarity in colthood that we do dogs in puppyhood, in a few generations your horse would be just as responsive and affectionate as your dog. The horse really wants to serve you; he knows you feed him and care for him, and he will be grateful if you give him a chance.

In the village of East Aurora there is a farm where are kept over six hundred trotting-bred horses. Many men are constantly engaged in training colts, and for one of these men to get into a struggle or a fight with an animal is regarded as sufficient grounds for that man's dismissal. The superintendent of this farm tells me that the entire scheme of training must be toward securing the confidence of the animal; keep him cheerful and conserve and develop his courage. To subdue a horse and break his spirit is as villainous a thing to do as to break the spirit of a man, or the heart of a woman. There are now various horse ranches in the West where no "bronco buster" is allowed to set foot. The horses are trained by gentle means. It takes a little more time, but gives you a better horse. And then it eases up your conscience—if you have such a thing.

Teddy Roosevelt is a pretty good fellow, but he is getting to a time in life when he should leave brutality behind. His desire should no longer be towards "busting" and killing things. Let him sink that statuette, which reveals the very quintessence of shocking cruelty, deep in Oyster Bay.—*The Horseman*.

Dominion Shorthorn Breeders' Association Annual Meeting.

The 13th annual meeting of the Dominion Shorthorn Breeders' Association was held in Shaftesbury Hall, Toronto, Feb. 8th. There was an unusually large attendance of members from Ontario, together with representatives from Nova Scotia, Manitoba and Alberta, and a buoyant feeling prevailed, the result of the increasingly active demand for Shorthorns at improved prices.

The president, Mr. James Russell, of Richmond Hill, occupied the chair, and in his address congratulated the Association on its growing time, which is evidenced by the large increase in registrations, and the very satisfactory condition of the Association's bank account, as well as in the brisk trade being done by the breeders. The report of the Secretary and Executive Committee showed that the paid registrations in 1898 were 5,386, as against 4,128 in 1897, and 2,257 in 1896, the increase in revenue from registrations in the same time being in like proportion; the receipts from this source in 1898 being \$5,233, an increase of \$1,108 over 1897. The financial statement showed the receipts, including a balance on hand Jan. 1st, 1898, of \$6,731.18, to be, on Dec. 31st, \$13,865.95, and expenditure \$5,627.91, leaving a balance on hand of \$8,178.04.

Hon. John Dryden, Minister of Agriculture, addressed the meeting on the question of applying to the U. S. authorities for recognition of Dominion Herd Book certificates of registration by their customs officials, in order to pass breeding stock free of duty. The following resolution, moved by Mr. Arthur Johnston, and seconded by Mr. John I. Hobson, was adopted:

Whereas, this Association has learned that purchasers of Shorthorn cattle for exportation to the United States are put to much inconvenience and delay in shipment because of the necessity, under present regulations, of registering in the American Herd Book in order to pass the customs.

Therefore resolved: That, inasmuch as the standard of the Dominion Shorthorn Association is precisely the same as that of the American Record, and that such cattle, to be useful in the United States, must, in the end, be recorded there, this meeting is of opinion that every interest would be subserved and properly protected by admitting Shorthorns on presentation to the customs authorities of properly accepted certificates of registration, signed by the Registrar, under the control of the Department of Agriculture of Ontario.

Resolved further: That a committee, consisting of Hon. John Dryden, John I. Hobson, Richard Gibson, Arthur Johnston, and Henry Wade, be hereby appointed to enlist the co-operation of the American Shorthorn Association in presenting this view to the proper authorities at Washington.

A resolution was adopted requiring the signature of both the breeder and the owner of animals presented for registration and, in case of death, the signature of the proper representative of the estate, the owner of the dam at the time of service being

recognized as the breeder. Transfer certificates should also bear the signature of the owner of the service bull, the name and number of the bull, and the date of service in the case of females of breeding age.

THE TUBERCULIN TEST.

The following resolution was adopted: Moved by R. Gibson, seconded by Wm. Linton, that we, the Shorthorn breeders of Canada, in our annual meeting, do hereby ask the Dominion Government to allow cattle to come into Canada from Great Britain without being tested for tuberculosis.

LIBERAL MONEY GRANTS FOR PRIZES.

On motion, it was decided to grant \$750 towards the prize list for Shorthorns at the Toronto Industrial, or the Western Fair at London, whichever offers the best terms by way of supplementing the amount offered in prizes in this class.

It was also agreed that \$500 be granted as prizes for Shorthorns at the Winnipeg Industrial Exhibition, provided the management of the Exhibition supplement the grant by a satisfactory amount. It was further agreed to place an additional \$300 in the hands of the Executive, to be offered in prizes at the leading exhibitions in other provinces as they may deem expedient.

Mr. J. C. Hanley, of Read, Ont., contributed an interesting paper on "What Shorthorns have done for the improvement of Canadian cattle," and D. Alexander, Bridgen, an able article on the "Tuberculin test," the latter, unfortunately, being received too late to be read at the meeting.

OFFICERS ELECTED.

The officers for 1899 were elected, as follows:—President, James Russell, Richmond Hill; First Vice-President, John I. Hobson, Guelph; Second Vice-President, Robt. Miller, Stouffville. Ex-Presidents, life members—Hon. John Dryden, Brooklin; Richard Gibson, Delaware; A. Johnston, Greenwood. Vice-Presidents from Provinces—Wm. Linton, Aurora, Ont.; F. G. Boyver, Georgetown, P.E.I.; J. H. Ladner, Ladner's Landing, B.C.; James A. Cochrane, Hillhurst, Que.; Geo. A. Fawcett, Sackville, N.B.; W. D. Shattuck, Davisburg, Alta.; G. A. Archibald, Truro, N.S.; W. E. Heutack, Touchwood Hills, Assin.; Hon. Thomas Greenway, Crystal City, Man. Board of Directors: A list—W. J. Biggins, Clinton; David Rae, Fergus; James Tolton, Walkerton; John Davidson, Ashburn; W. D. Flatt, Hamilton. B list—W. D. Cargill, Cargill; A. W. Smith, Maple Lodge; John Isaac, Markham; W. G. Pettit, Freeman; C. M. Simmons, Ivan. C list—Edward Jeffs, Bondhead; H. Smith, Hay; T. E. Robson, Iderton; F. I. Patten, M.D., St. George; James M. Gardhouse, Highfield. Executive and Finance Committee—James Russell, Richmond Hill, President; John I. Hobson, Mosboro'; William Linton, Aurora; Robert Miller, Stouffville; Arthur Johnston, Greenwood. Delegates to Industrial Exhibition, Hon. John Dryden, Brooklin; John I. Hobson, Mosboro'. Delegates to Western Fair, Henry Smith, Hay; C. M. Simmons, Ivan. Delegates to Central Fair, Ottawa, R. R. Sangster, Lancaster; D. McLaren, Dunmore. Delegates to Provincial Exhibition, Nova Scotia, C. Chasse, Church street, Cornwallis, N.S.; C. W. Holmes, Amherst, N.S. Delegates to Provincial Exhibition, New Brunswick, Senator Josiah Wood, Sackville, N.B.; Geo. A. Fawcett, Sackville, N.B. Delegates to Provincial Exhibition, Prince Edward Island, C. C. Gardiner, Charlottetown, P. E. I.; F. G. Boyver, Georgetown, P. E. I. Secretary and Editor, Henry Wade Toronto.

The Canadian Horse Breeders' Association.

The annual meeting of the Canadian Horse Breeders' Association was held at the Albion Hotel, Toronto, February 9th. There was a very good attendance, and a good feeling was manifested on account of the brighter outlook for the horse trade.

On motion, it was decided to hold a horse show in Toronto in the spring (probably in April) in conjunction with the Country and Hunt Club. A committee was appointed to interview the railway authorities for reduced freight rates on pure-bred registered horses for breeding purposes.

The following is the list of officers elected: President, Dr. A. Smith, Toronto; First Vice-President, H. N. Crossley, Rosseau; Second Vice-President, R. Beith, M.P., Bowmanville. Director—Hackney Horse Association, R. Beith and John Macdonald, Clydesdale Association, R. Beith and R. Graham, Shire Association, H. N. Crossley and W. E. Wellington, Thoroughbred Association, Dr. Smith and W. Hendrie, Jun.; Trotting and Pacing Association, S. B. Fuller, Woodstock, and E. W. Cox, Toronto; Draft Horse Association, A. McInnes, Clinton, and J. Henderson, Belton; Additional Directors, Geo. Pepper, Toronto; D. B. Simpson, Bowmanville.

Delegates: To the Toronto Industrial Exhibition, H. N. Crossley and D. B. Simpson; Western Fair, London, R. McEwan and O. Sorby. Special committee to arrange for horse show—Dr. Smith, R. Davies, H. N. Crossley, J. Macdonald, and H. Wade.

Annual Meeting of the Holstein-Friesian Association.

The sixteenth annual meeting of the Canadian Holstein-Friesian Association was held at the Albion Hotel, Toronto, on Tuesday, February 7th. The attendance was good, and included several visitors from the United States. The President, Mr. Wm. G. Ellis, occupied the chair, and other present, Messrs. A. C. Hallman, New Dundee; G. A. Gilroy, Glen Buell; T. W. Charlton, St. George; Alfred Rice and George Rice, Currie's, Ont.; Wm. Shunk, Sherwood; Wm. Armstrong, Locust Hill, Ont.; H. Bollert, Cassel; R. S. Stevenson, Ancaster; J. H. Patten, Paris; Wm. Suhring, Sebringville; A. Hoover, Jr., Emery; Edward Adams, Toronto; Henry Welch, Weston; John Clarkson, Summerville; Wm. McClure, Norval; R. W. Walker, Utica; S. Shunk, Jr., Edgely; G. W. Clemons, and W. A. Clemons, St. George; W. A. Matteson, Utica, N. Y.; Henry Stevens and Ralph J. Stevens, Lacona, N. Y.

The report of the Secretary showed that the business of the Association had increased forty per cent. during the past year, and although Vol. III. of the Herd Book had been printed and distributed free to members during the year, the satisfactory balance of \$621.76 is now in the treasury. The registrations for the year numbered 282, and the transfers 196, while 17 new members were added to the roll of the Association.

The sum of \$300 was voted in aid of the dairy tests at the Toronto, Ottawa, Winnipeg, Brandon, and the Provincial Fat Stock and Dairy Shows, provided that the rules of these tests were agreeable to the Association.

A committee was appointed to revise the Constitution, subject to the approval of the next general meeting, in order to bring the Executive Committee into closer touch with the work of the Association.

The election of officers for 1899 resulted as follows: President, Wm. G. Ellis, Toronto; First Vice-President, A. C. Hallman, New Dundee; Second Vice-President, T. W. Charlton, St. George; Third Vice-President, Alfred Rice, Currie's; Fourth Vice-President, G. A. Gilroy, Glen Buell. Directors (two years): Wm. Shunk, Sherwood; A. Hoover, Jr., Emery. Directors (one year): H. Bollert, Cassel; R. S. Stevenson, Ancaster. Secretary-Treasurer, G. W. Clemons, St. George. Auditors: J. H. Patten, Paris; Wm. Suhring, Sebringville.

The salary of the Secretary-Treasurer was fixed at \$250 for the year.

Delegates to the different fairs were named as follows: Toronto—W. G. Ellis and Wm. Shunk; London—Edwin Scatcherd and J. W. Johnson; Ottawa—G. A. Gilroy and Joseph Fletcher; Montreal (in case a fair is held)—G. A. Gilroy and C. M. Keeler; Sherbrooke—John Pickering and Ogden Sweet;

St. John, N. B.—O. J. Peters; Winnipeg—Jas. Glennie and J. T. Hutchinson.

It was decided to return to the old plan of having one expert judge at Toronto Industrial, and the following were recommended as suitable for the position: Henry Van Drosser, Cobleskill, N. Y.; A. F. Cole, Morrisville Station, N. Y.; D. J. Hineley, South Brookfield, N. Y. For London—Messrs. Suhring, Charlton, Patten; Ottawa—Messrs. Bollert, Stevenson, Shunk; Montreal—Messrs. Shunk, Bollert, Hallman; Winnipeg and Brandon—Messrs. Charlton, A. Rice, Gilroy; Sherbrooke—Messrs. Fletcher and Clemons.

President Matteson and Mr. Henry Stevens, of the American Holstein-Friesian Association, addressed the meeting on the subject of the amalgamation of the Herd Books of the two Associations and requested that a committee of three members be appointed to meet a similar committee from the American Association for the purpose of discussing the advantages of such a course.

None of the Canadian breeders favored amalgamation, but it was decided that as a matter of courtesy such a committee should be appointed, and the President, Mr. W. G. Ellis, Mr. T. W. Charlton and the Secretary were named as members. The meeting then adjourned to meet again at Toronto next year.

The Canadian Clydesdale Horse Breeders' Association.

The thirteenth annual meeting of the Clydesdale Horse Breeders' Association was held at the Albion Hotel, Toronto, February 9th. Mr. Robert Davies, the retiring President, occupied the chair, and there was a good attendance. Mr. Henry Wade, the Secretary-Treasurer, presented the annual report, in which he stated that there had been a decided improvement in the demand for Clydesdales, increased interest being manifest. With the improved demand has come a renewal of importations of breeding stock from the Old Country. One importer has brought out as many as eleven in the last year. Among those who have introduced new blood into the country have been Messrs. John Isaac, Markham; Dalgety Bros., Dundee, Scotland, and Glenoe, Ont.; Arthur Johnston, Greenwood. There has also been a considerable movement of Clydesdales from Ontario to points in Northwest. Mr. John A. Turner, Millarville, Alta., has taken nine head from Messrs. Sorby, Guelph, and Mr. Chas. Michie, Pavina, Alta., has been another purchaser. Registrations during the year numbered 253, as against 99 in the previous year. The membership has increased from 29 in 1897 to 69 paid members for 1898. Volume IX. of the Stud Book has been printed, and it probably will not be long before there will be pedigree enough on hand to print Volume X. The financial statement showed receipts of \$563.32, and expenditures of \$469.15, leaving a balance of \$94.17.

Mr. Davies, in his annual address, congratulated the members upon the present condition of the horse market. The demand, he said, while not brisk, was certain, and, as in everything else, the superior article could be disposed of most readily, and at a profit. He spoke in strong terms of the necessity of perseverance in the work of improving the stock, and for vigilance in the advancing of the interests of the breeders. They should consider the animal first, and the price it would bring afterwards. He was confident that their branch of the horse trade had a promising future.

Officers were elected as follows: President, Peter Christie, Manchester; first Vice-President, John Davidson, Ashburn; Vice-President for Ontario, Douglas Sorby, Guelph; Vice-President for Quebec, Robert Ness, Howick, Que.; Vice-President for Northwest Territories, John A. Turner, Calgary, Alta.; Vice-President for Manitoba, J. E. Smith, Brandon. Directors—Robert Beith, M. P., Bowmanville; Robert Davies, Toronto; George Cockburn, Baltimore; John Vipond, Brooklin; Robert Graham, Claremont; Alex. Doherty, Ellesmere; A. Innes, Clinton.

Delegates: To the Industrial Exhibition—Peter Christie, Manchester, and O. Sorby, Guelph. To the Western Fair—A. Innes, Clinton, and J. Henderson, Belton. To the Ottawa Exhibition—Robert Davies, Toronto, and Robert Beith, M. P., Bowmanville. To the Montreal Exhibition—R. Ness, Howick, Que. To the Horse Breeders' Association—Robert Graham, Claremont, and Robert Davies, Toronto.

A resolution was adopted respecting the export of stock to the United States, upon the lines of the resolutions previously adopted by the Shorthorn Association and the Shire Horse Breeders, asking for the recognition of certificates of registration in the Canadian Clydesdale Record to pass the customs free of duty. Another resolution was passed authorizing the opening of negotiations with the railway companies, in order to obtain the same terms for shipping horses as those now enjoyed by the Dominion Cattle Breeders' Association. It was also decided to give \$50 to the Spring Horse Show. The prize will be given for the best draft team, to be sired by a registered Clydesdale stallion.

Dominion Cattle Breeders' Association

The annual meeting of the Dominion Cattle Breeders' Association was held in Shaftesbury Hall, Toronto, Feb. 9th. There was a very fair attendance of members, and the chair was occupied by the President, Mr. J. I. Hobson, of Guelph. In a brief address Mr. Hobson referred to the good work which was being done by the Association, and the increased interest which the farmers were showing in the organization. In the course of his remarks he spoke of the falling off in the quality of our export cattle as a matter requiring the serious consideration of the Association and of farmers generally throughout the Dominion, a condition which can only be surmounted by improved breeding and feeding of our stock.

Mr. F. W. Hodson, the Secretary, in his annual report, explained the regulations governing shipments of registered stock and the privileges which had been obtained by the Association in that respect.

It was decided to appoint a committee to wait on the Government to try and secure a grant for the promotion of interprovincial trade, and Dr. Mills and Messrs. A. Johnston and R. Gibson were chosen.

A resolution was adopted asking the Dominion Government to allow cattle to be imported from Great Britain without being tested for tuberculosis, and from the United States as soon as that country agrees to reciprocate.

The election of officers resulted as follows: President, John I. Hobson, Guelph; 1st Vice-President, H. D. Smith, Compton, Que.; 2nd Vice-President, Henry Wade, Toronto; Secretary-Treasurer, F. W. Hodson, Toronto; Vice-Presidents representing the different Provinces—Ontario, J. C. Snell, London; Manitoba, Hon. Thos. Greenway, Winnipeg; Northwest Territories, W. E. Cochrane, High River; Quebec, Robt. Ness, Howick; Nova Scotia, W. W. Black, Amherst; New Brunswick, T. A. Peters, Fredericton; Prince Edward Island, Hon. D. Ferguson, Charlottetown; British Columbia, A. C. Wells, Chilliwack; Newfoundland, Hon. Thos. C. Duder, St. John's. Auditor, J. M. Duff, Guelph. Directors: Shorthorns—A. Johnston, Greenwood; Herefords—H. D. Smith, Compton; Polled Angus—Jas. Bowman, Guelph; Galloways—D. McCrae, W. Clemons, St. George; Jerseys—R. Gibson, Delaware; Guernseys—W. E. Butler, Dereham Centre; Ontario Agricultural College, G. E. Day, Guelph. Representatives to Fair Boards: Toronto Industrial (G. E. Day, Guelph); J. M. Gardhouse, Highfield. Ottawa—J. G. Clark, Ottawa; J. C. Smith, Hintonburg. London—R. Gibson, Delaware; Capt. T. E. Robson, Iderton. Brantford—G. W. Clemons, St. George, and J. R. Alexander, Brantford.

No art is fraught with so many difficulties or has more varied conditions that affect management than that of agriculture. The long winter evenings afford the best time in the world to study them. Experience is a good school, and a little theory for dessert will not come amiss.

The Canadian Shire Horse Breeders' Association.

The Shire Horse Breeders' Association held their annual meeting at the Albion Hotel, Toronto, Feb. 9th. President H. N. Crossley was in the chair, and among those present were: John Gardhouse, Highfield; John Davidson, Ashburn; Wm. Linton, Aurora; Jas. Snell, Clinton; W. E. Wellington, Toronto; T. Boynton, Dollar; Jas. Leask, Taunton; A. Johnston, Greenwood, and J. M. Gardhouse, Highfield.

The Secretary-Treasurer, Mr. H. Wade, presented his report. There had been rather better results during the year in the way of registration and membership fees, but there was still room for progress. The financial statement showed the total receipts, including a balance from last year of \$30.68, to have been \$76.18. The total expenditures amounted to \$23.50, leaving a balance on hand of \$52.68.

Mr. Crossley, in his address, anticipated a much larger importation of Shire horses during the coming year than has been the case during the past four years. Better prices had lately prevailed, and a more active demand.

The Association adopted a resolution asking the U. S. authorities to accept certificates of registration in recognized Canadian Records to pass the customs free of duty.

Officers for the coming year were elected, as follows: President, H. N. Crossley, Toronto; Vice-President, W. E. Wellington, Toronto; Directors—John Gardhouse, Highfield; Jas. M. Gardhouse, Highfield; Wm. Hendrie, Jun., Hamilton; Wm. Wilkie, Toronto; H. J. Smith, Highfield; Geo. Garbutt, Thistleton; Thos. E. Kinner, Mitchell. Delegate to Industrial Exhibition, John Gardhouse, Highfield. Delegates to Western Fair, H. Wade, Toronto, and Thos. E. Kinner, Mitchell. Delegate to Ottawa Exhibition, John Gardhouse, Highfield.

Delegates to Horse Breeders' Association, H. N. Crossley and W. E. Wellington. Judges recommended for Spring Horse Show, R. Gibson, Delaware, and Dr. R. P. Eberker, Springfield; for other shows, R. Gibson, J. Y. Ormsby, John Gardhouse, and Thos. Kinner. Committee on Stud Book, H. N. Crossley, John Gardhouse, and H. Wade. Auditor, C. M. Complin, London.

Dominion Swine Breeders' Association.

A meeting of the Directors of the Dominion Swine Breeders' Association was held at the Palmer House, Toronto, Feb. 8; the President, Mr. Geo. Green, Fairview, in the chair. Present—Messrs. T. Teasdale, Concord; W. H. Jones, Mt. Elgin; J. E. Brethour, Burford; J. Featherston, M. P., Streetsville; Prof. G. E. Day, Guelph; R. H. Harding, Thorndale; W. E. Butler, Dereham Centre, and W. M. Smith, Fairfield Plains.

The Secretary reported a lengthy report, reviewing the work of the Association, and dealing among other things, with the following subjects: "Interprovincial Trade," "The Growth of the Association," and the "Swine Records." A comparative statement of the operation of the Association shows that the receipts in 1891 were \$340, and the membership 40; in 1898 the receipts were \$3,031.55, and the membership 369.

A number of suggestions submitted by the Secretary were adopted, and committees appointed to carry them into effect. It was stated that, finding that the Government grant to the Swine Breeders' Association was some \$300 less than those to the Cattle and Sheep Breeders' Associations, the Minister of Agriculture had promised that if the block tests were continued and extended at the Winter Show, and if the Association would agree to appropriate a suitable amount of its funds to encourage and develop the dressed poultry industry, an additional \$300 would be granted the Swine Breeders' Association.

It was agreed that in the case of wethers and barrows, in the pure-bred classes, registration should not be required, but the sire and dam must be recorded and a statement of the breeding furnished.

On motion, the following were appointed a committee to arrange for a series of experiments in feeding pigs with different kinds of food and under varied circumstances to ascertain the best methods of producing the best quality of bacon: Messrs. Featherston, Day and Hodson.

As the Swine Records are two years behind time, it was decided to have two volumes of the Record published this year, so as to be up to date in future. The prize list for the Provincial Winter Show was revised, and the following judges were appointed: For Chester Whites, Poland-Chinas, Duroc-Jerseys, and grades and crosses—T. Teasdale, Concord; G. B. Hood, Guelph; reserve, C. W. Yapp, Brantford. For Berkshires, Yorkshires, Tamworths, Essexes and Suffolks—W. H. Jones, Mt. Elgin; R. H. Harding, Thorndale; reserve, C. W. Yapp. For Sweepstakes—The two sets of judges on the classes. For Bacon classes—C. C. Wilson, Ingersoll; Chester Fearman, Hamilton; James Leach, Toronto.

The annual meeting of the Dominion Sheep Breeders' Association was held in Shaftesbury Hall, Toronto, on Feb. 7th, the President, Mr. D. G. Hamner, in the chair. The attendance of members was large and much enthusiasm prevailed. In his opening address the President congratulated the members on the successful and profitable year which the breeders had experienced, the demand for pure-bred sheep having been steady, at improved prices. The unqualified success of the Provincial Winter Show, under the joint auspices of the Cattle, Sheep and Swine Breeders' Association, was also referred to as being most gratifying and encouraging, the exhibit of sheep being most creditable and of a high standard of excellence.

Jackson and Richard Gibson, Delegates to the Board of the Provincial Winter Fair—Jas. Tolton, A. W. Smith, and R. H. Harding.

The following expert judges were then elected:—Lincolns—J. T. Gibson, Denfield; William Oliver, Avonbank; E. Parkinson, Eramosa; T. E. Robson, Ilderton; G. Walker, Ilderton; Jno. Geary, London; R. W. Stevenson, Lambeth; L. Parkinson, Marmosa; F. Ralph, Ballynote; R. H. Harding, Thorndale; L. Goodwin, Monroe; Jno. Mitchell, Glencoe; Jno. White, Eramosa; A. W. Smith, Maple Lodge; W. Whitelaw, Guelph.

Dorset Horns—John Jackson, Abingdon; J. G. Hamner, Mount Vernon; R. Gibson, Delaware; W. H. Beattie, Wilton Grove; Prof. Curtiss, Ames, Iowa, U.S.; Thos. W. Hector, Springfield-on-the-Credit; G. P. Everitt, Mount Vernon; Mortimer Levering, Lafayette, Ind.; Arthur Danks, Allamuchy, N.J.; Prof. Craig, Ames, Iowa; G. E. Day, O.A.C.; Guelph; H. N. Gibson, Delaware; J. E. Wing, Mechanicsburg, Ohio; M. A. Cooper, Washington, Pa.

Shropshires—R. Gibson, Delaware; G. P. Everitt, Mount Vernon; J. Conworth, Paris; W. H. Beattie, Wilton Grove; A. Brown, Picton; R. Miller, Stouffville; J. Hamner, Burford; Jas. McFarlane, Clinton; J. Campbell, Woodville, D. G. Hamner, Burford; Jas. Phinn, Hespeler; M. Levering, Lafayette, Ind.; A. Elliott, Galt; J. Dicken, Milton West; J. I. Thompson, Gas City, Ind.; G. Allen, Alenton, Ill.; W. G. Pettit, Freeman; D. J. Campbell, Woodville; G. Phinn, Hespeler; C. Calder, Brook-shire; H. N. Gibson, Delaware; G. Hindmarsh, Ailsa Craig; C. W. Gurney, Paris; W. E. Wright, Galloway; J. Miller, Brougham; H. Hamner, Burford; Prof. Curtiss and Prof. Craig, Ames, Iowa.

Leicesters—James Gaunt, St. Helen's; Jno. Wells, Galt; Hardy Shore, Galloway; Abraham Easton, Appleby; E. Wood, Appleby; William Parkinson, Eramosa; H. Parkinson, Eramosa; John Orr, Galt; William Watt, Salem; William McIntosh, Burgoyne; Thomas Curdell, Ful-larton; R. Eastwood, Mimico; John Kelly, Shakespears; Andrew Thompson, Fergus; J. K. Campbell, Palmerston; J. C. Snell, London; G. B. Armstrong, Teeswater; John Gibson, Denfield; C. E. Wood, Freeman; Jos. Gaunt, St. Helen's; J. M. Gardhouse, Highfield; John Laidlaw, Wilton Grove; Andrew Whitlaw, Guelph; Wm. Whitlaw, Guelph; R. C. Martin, Marysville; A. W. Smith, Maple Lodge; A. Barker, Thistleton; Alex. Wadde, Acton; Walter Nichol, Plattsville; H. G. Arnold, Maidstone.

Hampshires and Suffolks—Henry Arkell, Arkell; R. Gibson, Delaware; J. Hiller, Thornorton, Mich.; J. I. Gordon, Mercer, Pa.; J. A. Craig, Ames, Iowa.

Southdowns—John Miller, Markham; W. Martin, Binbrook; H. N. Gibson, Delaware; John Jackson, Abingdon; J. C. Douglas, Galt; Henry Arkell, Teeswater; W. H. Beattie, Guelph.



MR. J. H. GRISDALE, RECENTLY APPOINTED AGRICULTURIST AND LIVE STOCK EXPERIMENTER AT THE CENTRAL EXPERIMENTAL FARM, OTTAWA.

Wilton Grove; A. Simenton, Blackheath; G. L. Telfer, Paris; J. G. Hamner, Mount Vernon; J. Scott, Aberfoyle; G. Baker, Simcoe; Jas. Smith, Mount Vernon; H. B. Jeffs, Bond Head.

Cotswolds—H. Rawlings, Ravenswood; J. D. Davidson, Belhaven; John Goodfellow, Macville; Val. Fitch, Oriol; Arthur Johnston, Greenwood; W. G. Laidlaw, Wilton Grove; D. McCrae, Guelph; John Park, Oriol; Wm. Rae, Arkell; Jas. Russell, Richmond Hill; And. Russell, Carville; Geo. Weeks, Galloway; T. Hardy Shore, Galloway; J. C. Snell, London; T. Teasdale, Concord; Wm. Thomson, Uxbridge; Wm. Ward, Uxbridge; Jos. Ward, Marsh Hill; A. J. Watson, Castleberg.

Oxfords—Kenneth Finlayson, Campbelltown; J. V. Cooper, Picton; Wm. Newman, Cherry Valley; Wm. Arkell, Teeswater; Jas. L. Tolton, Walkerton; L. Parkinson, Greenock; Smith Evans, Gourack; Jas. Tolton, Walkerton; R. J. Hine, Dutton; Henry Arkell, Arkell; William Dickenson, Midway; Peter Arkell, Teeswater; Herbert Wright, Guelph; John Harcourt, St. Ann's; J. H. Jull, Mt. Vernon; Henry Arkell, Teeswater; John E. Cousins, Harriston; Elmer Turner, Burford; Arch. McKenzie, Corwin; R. E. Birdsall, Birdsall; George McKerrow, Sussex, Wis.; W. A. Shafor, Middleton, O.; J. C. Williamson, Xenia, O.; C. C. Keinar, Brockville, Ohio.

Merinos—W. M. Smith, Fairfield Plains; R. Shaw, Galloway Station; W. H. Beattie, Wilton Grove; Rock Bailey, Union; A. Terrell, Wooler; G. P. Everett, Mt. Vernon.

Provincial Winter Show.

A meeting of the Directors of the Provincial Fat Stock and Dairy Show was held at the Palmer House, Toronto, Feb. 10th. The following delegates from the various Stock Breeders' Associations were present—John I. Hobson, Guelph, President; J. C. Snell, London, Vice-President. From the Cattle Breeders' Association—John I. Hobson, Guelph; G. W. Clemons, St. George; Richard Gibson, Delaware. Sheep Breeders' Association—R. H. Harding, Thorndale; A. W. Smith, Maple Lodge; Jas. Tolton, Walkerton; D. G. Hamner, Burford. Swine Breeders' Association—Geo. Green, Fairview; J. E. Brethour, Burford; G. B. Hood, Guelph. Butter and Cheese Association of Eastern Ontario—H. Wade, Toronto.

The officers, directors and committees for 1899 are as follows:—

OFFICERS. President, John I. Hobson, Guelph; Vice-President, J. C. Snell, London; Secretary-Treasurer, F. W. Hodson, Toronto.

COMMITTEES.

Executive and Programme—President, Vice-President, Secretary, and Messrs. J. E. Brethour, Burford; James Tolton, Walkerton; H. Wade, Toronto; G. W. Clemons, St. George. Committee on Cattle—John I. Hobson, G. W. Clemons, Richard Gibson. Committee on Sheep—R. H. Harding, A. W. Smith, Jas. Tolton. Committee on Swine—G. B. Hood, J. E. Brethour, Geo. Green. Dairy Committee—G. E. Day, Guelph; H. Wade, G. W. Clemons, R. G. Murphy, Elgin; Daniel Drummond, Petite Cote, Montreal, Que. Poultry Committee—J. E. Meyer, Kossuth; Robert H. Essex, Toronto. Reception Committee—John I. Hobson, J. C. Snell, Arthur Johnston, Henry Wade, and F. W. Hodson, Superintendent of Building—D. G. Hamner, Burford. Official Reporter—G. W. Green, Toronto. Judges in the Fat Cattle Department—Thos. Crawford, M.P.P., Toronto; Jas. Smith, Brantford, Reserve, T.O. Robson, St. Mary's, Referee, J. T. Gibson, Denfield. Judge in charge of the dairy test—G. E. Day, Guelph. Judges for Conformation in Dairy Class—D. Drummond, Petite Cote, Montreal, Que., and A. C. Hallman, New Dundee.

Judges for Sheep—Cotswolds, Leicesters and Lincolns—Jas. Gaunt, St. Helen's; Reserve, J. H. Grisdale, Ottawa. Shropshires, Southdowns, Dorsets and Merinos—Prof. Curtiss, Ames, Iowa. Oxfords, Hampshires and Suffolks—George McKerrow, Sussex, Wisconsin; Reserve, H. Arkell, Teeswater. Grades and Crosses—Prof. Craig, Ames, Iowa; Reserve, J. H. Grisdale, Ottawa. Judges for Swine—Chester Whites, Poland-Chinas, Duroc-Jerseys and Grades—T. Teasdale, Concord; G. B. Hood, Guelph; Reserve, C. W. Yapp, Brantford. Berkshires, Yorkshires, Tamworths, Essex and Suffolks—W. H. Jones, Mt. Elgin; R. H. Harding, Thorndale; Reserve, C. W. Yapp. Sweepstakes—The two sets of judges on the classes. Bacon Classes—C. C. Wilson, Ingersoll; Chester Fearman, Hamilton; Jas. Leach, Toronto.

It was decided to hold the show December 5th to 8th, from Tuesday to Friday, inclusive. The place of holding the show was not decided at this meeting.

FARM.

Swamp Muck and Cost of Fertilizers.

To the Editor FARMER'S ADVOCATE: SIR,—Prof. Frank T. Shutt was so kind as to give us the per cent. of nitrogen in swamp muck in your January 2nd number. As it is understood that phosphoric acid and potash are two other very important ingredients for manuring purposes, would he be kind enough to give us the per cent. of actual potash and phosphoric acid that there is in swamp muck?

In a letter published in your paper of January 16th, signed by "W. W.," re commercial fertilizers, he said he was, with other farmers, puzzling his brains on this problem. Mr. "W. W." cannot be raising the quantity and quality of crop he wishes for. It is good manure and thorough working of the soil, with other favorable conditions, that helps to make the quantity and quality of the grain, hay, etc. He says he has been getting a few quotations and circulars on different brands, but the price and per cent. of the different ingredients vary to quite an extent, making it difficult to know which is the best and most profitable to buy. Is Mr. W. W. familiar with the requirements of the crop he proposes to grow? If so, he can easily figure out which one of the different brands of fertilizers would be most suitable for his crop. He also thinks that the prices of a good many brands of fertilizers are too high. Fertilizers are only good as to quantity and quality of plant food they carry. It is very easy to figure out which is the cheapest now offered. The wholesale market prices of the different ingredients are as follows: Ammonia, 13c. lb.; phosphoric acid soluble in water, 6c. lb.; phosphoric acid, reverted, 5c. lb.; actual potash, 6c. lb. For fertilizers carrying 5% ammonia = 100 lbs. to the ton @ 13c. = \$13; 6% phosphoric acid soluble in water = 120 lbs. to the ton @ 6c. = \$7.20; 2% phosphoric acid, reverted, = 40 lbs. to the ton @ 5c. = \$2.00; 4% actual potash, 80 lbs. to ton, @ 6c. = \$4.80. W. A. FREEMAN & Co. Hamilton, Ont., Feb. 4th, 1899.

The Storage of Ice.

It was necessary to give information on the methods of storing ice which could be adopted with the least expense and the greatest success in keeping the ice available for use during the warm season. In the storage of ice in a cheap ice-house, the following points are essential to prevent waste by melting:—

- 1. Protection of the ice from currents of air. (These are likely to get in around the bottom of the building.)
2. Provision for the drainage of any water from melted ice.
3. Close packing of the ice, any spaces between the blocks being packed with pieces of broken ice when the ice house is being filled during cold weather.
4. Ventilation over the covering which protects the ice from the ordinary atmosphere.
Ice is melted only when the temperature is above 32° Fahr. The increase in temperature comes from some source external to the ice. When a lump of ice is left lying on the ground in warm weather, it is melted by the heat from the ground on which it lies, and by the heat from the air which surrounds it. To prevent that, insulating materials of different sorts have been used. An insulating material for this purpose is any substance which prevents, or almost wholly prevents, the passage through itself of the form of energy known as heat. Different substances conduct heat more or less rapidly, and are spoken of as being good conductors or poor conductors of heat. Whatever is a good conductor of heat would be a very poor insulating material; and a substance is a good insulator in proportion as it is a poor conductor or non-conductor of heat.

PROF. J. W. ROBERTSON.

The Weeder for Cultivating Crops.

An implement which is not generally known among farmers, but which, we believe, is bound to gain favor with those who have used it or seen it working, is the spring-tooth weeder, which can be used to great advantage in the early growth of grain, root and corn crops, for breaking the crust of the land, thus forming a moisture-retaining mulch, admitting the air to the roots and relieving the pressure of the baked surface soil upon tender plants, which retards their growth, delays their development, and in many cases makes all the difference between a failure and a good paying crop. Another advantage of the weeder is that it destroys the weeds in the crop while they are young and tender. These, if allowed to develop, prove a serious detriment to the crop by robbing the soil of moisture and appropriating nourishment which should properly go to feed the crop and bring it to perfection. Many advanced farmers have learned the importance of this point and are careful to take advantage of it, but there are many who do not seem to have grasped the significance of it, and it is to such that we desire to address this reminder. The importance of frequent stirring of the soil can scarcely be overestimated in the cultivation of all hoed crops, and applies largely to grain crops as well, and this narrow-toothed weeder is the only horse implement that can be successfully used to break up and loosen the soil between and all around the plants so as to give them freedom to expand and do their best. Manure is good, but tillage is nearly, if not quite, as effectual in producing good crops, for no matter how rich the soil may be, if it is baked and bound it cannot feed the crop, and if weeds get headway they play the part of robbers of the soil and crop, and thus defeat the efforts of the honest husbandman. On clay land, especially in the spring after the grain has been sown, a heavy rain causes the particles of soil to run together and pack close, and when the sun and wind dries it rapidly it becomes baked and a hard crust forms around the plants, preventing them from coming up and retarding their growth if they do get above ground. The use of the weeder at this time, before the land has become dry and hard, will break the crust and loosen the surface soil, giving relief to the plants and placing them in a fair way to grow freely and fast, and this operation may, in one season and in one field, repay in the improvement of the crop the whole cost of a weeder which will, with proper care, last a lifetime. In the cultivation of the corn crop this implement is invaluable, as its frequent use will effectually kill all weed growth and at the same time promote the growth of the crop immensely, and it can be used until the plants have grown a foot high or more with great advantage. The weeder can also be used to good advantage for covering clover and grass seed, instead of using the harrow for that purpose, and one horse will do more work with the former than two with the latter.

Preserving Fence Posts.

To the Editor FARMER'S ADVOCATE:

SIR,—In reply to J. L., of Grey Co., regarding the preservation of fence posts, would say that there might be some objection to setting the posts in masonry or concrete on account of the expense, and in the next place, of removing lower portion should they ever rot off or be broken near the surface. In my estimation it would be better to char the lower ends of dry posts, or encrust them with hot lime, which could be done without much expense by placing a barrel deep enough in the earth to slack the lime and dip the posts in. If the posts are green timber there would be no advantage in any of the above preparations, as they would be more inclined to take an inside dry rot. In light, sandy soil it would be well to dig the post holes large and puddle the post in with clay. Yours truly, A.W.M. York Co., Ont.

Re Commercial Fertilizers and Preservation of Fence Posts.

To the Editor FARMER'S ADVOCATE:

SIR,—Seeing a communication in your January issue from J. L., Grey County, with regard to commercial fertilizers, I would say that I have used these fertilizers, and they have been used a great deal in the vicinity of Toronto, where farmers, having sold their farms at the time of the boom, and the purchasers having sold each year any hay that there might be, then allowed the land to remain in a state of waste. After the collapse of the boom the land came back to the original owners; the question arose with them what was the quickest and best way to obtain a crop and a catch of clover. Bone meal, then at \$22 per ton, was freely used, and in heavy soil it was found most beneficial and well paid the investment, but it was not found to be so desirable in light sandy land, as it appeared too hot. From experience, the commercial fertilizers can be sown and harrowed just before the grain is drilled in, and on any but very dry, sandy land it is a great benefit, and it will generally enable the farmer to obtain a catch for his clover seed. This year I am experimenting with Albert's Thomas-Phosphate at \$25 per ton, having put it in land sown with fall wheat, but of course cannot yet speak of the results. With regard to the preservation of posts, if the bark is taken off them and they are then given a good coat of Finch's Wood Preservative, I think the user will be satisfied with the results. SUBSCRIBER. York Co., Ont.

EVERYBODY LIKES THE FARMER'S ADVOCATE.

LIKE FATHER, LIKE SON.

Geo. Crocker, Lambton Co.:—"We could not get along without the FARMER'S ADVOCATE. My father has taken it nearly ever since it was first published. As a farm paper it is unequalled."

BEGINS THE YEAR WELL.

Walter Simpson, Bay View, P. E. I.:—"Your Christmas number was a gem, and was greatly admired by all who saw it. Your first issue for January to hand to-night—is a splendid issue. Send us a few samples."

IN GOOD TASTE.

Thomas McFarlane, Secretary American Aberdeen-Angus Association, Harvey, Ill.:—"Your Christmas number was exceedingly creditable to your good taste and enterprise, and will, I trust, bring good returns for the large outlay thereon."

BEATS EVERYTHING.

J. R. Dillon, Wellington Co., Ont.:—"The Christmas number beats anything I ever saw, and the January 1st issue is worth a whole year's subscription itself."

TAKES THE CAKE.

John Craig, Professor of Horticulture, Iowa Agricultural College:—"Allow me to offer you my congratulations on the felicitous manner in which you wished your many patrons the good cheer of Christmas and New Year time. Your Christmas number exceeds in comprehensiveness of text, wealth of illustration and beauty of finish, anything I have seen in the agricultural field this year."

BETTER THAN EVER.

Alex. Hume, Menie, Ont.:—"We were much pleased with the Christmas number, particularly as it was all Canadian. Your January 16th issue is also good. If you carry out the year as you have begun it, the FARMER'S ADVOCATE will be better than ever."

John D. McLeay, Oxford Co., Ont.:—"In a few words allow me to say that the Christmas issue of the FARMER'S ADVOCATE is a 'Klondike' of itself and is emblematic of artistic literary ability. When my friends in Scotland receive your Christmas number they will be agreeably surprised at sight of the many magnificent farms, and the views will be much appreciated. Congratulations!"

A REAL HELP!

J. S. McGurn, Hastings Co., Ont.:—"No farmer can conduct his business intelligently without the ADVOCATE."

"LONG LIVE THE ADVOCATE!"

E. C. Bligh, King's County, N. S.:—"I have been so busy of late that I have given the Christmas number of the ADVOCATE but a cursory glance. Now that I have a little leisure I have been scanning its contents more closely and am surprised and delighted with its whole make-up. Its pictures are an art gallery in miniature. I cannot but contrast in my mind the fine photographs of its pages with the crude wood-cuts of my boyhood days. Long live the ADVOCATE, and may the shadow of its editors never grow less! I have loaned my last year's number of the paper to a neighbor, feeling that, on perusal, he will forthwith become a subscriber."

SUITS THE P. E. ISLANDER.

Fred G. Boyver, P. E. Island.:—"The FARMER'S ADVOCATE comes more nearly to being a perfect farm journal than any other publication I am acquainted with. It suits the requirements of our Island farmers to a marvellous degree, considering the distance you are from us. It would add great sums to the annual income of our Province if every one of our farmers got a copy."

DAIRY.

Convention of Cheese and Butter Makers.

A new dairy association has sprung into existence in Western Ontario, and from the work it has undertaken and the support it is receiving, its success is assured. The objects of the Association are: To advance and protect the interests of dairying and of dairymen, especially those of makers; to raise the standard of makers; to assist the patrons in the production and care of milk; to protect the patrons from unskilled makers, and makers from losses over which they have no control; to establish a better system of selling dairy produce, and to secure better sanitary conditions in connection with cheese factories and creameries. This, it will be seen, is an important and wide-reaching programme, but the officers and directors are live, energetic and conscientious men, who have already made the new association appear indispensable, at least to the membership of well over two hundred, which it is hoped will this year be doubled.

Their first annual convention was called to order by the President, T. B. Millar, London, in the town of Listowel, on Feb. 1st. There were about 400 persons present at the first session, largely cheese and butter makers, which, by the way, are the only ones accepted as members. The officers chosen for the ensuing year were as follows: President, T. B. Millar, London; Vice-President, G. H. Barr, Sebringville; Secretary, W. W. Brown, Attercliffe Station; Directors: George Goodhand, Milverton; E. Agur, Brownsville; James Morrison, Stratford; W. W. Brown, Attercliffe Station; John Brodie, Mapleton; T. E. Nimmo, Ripley; T. D. Barry, Ingersoll.

The President's address referred to the history of the Association, which had its birth about one year ago. On January 20th, 1898, a meeting of makers was held in London, when a Provincial Board was elected, which arranged to hold a public meeting at Woodstock on February 23rd and 24th following. At that meeting the organization was completed and officers elected. Mr. Millar referred to the co-operation and support the Association had received from the vast majority of makers, including many of the oldest and most prominent dairymen in Western Ontario. One thing referred to as having been done was the getting out of forms of agreement to be used between factorymen and

makers. These have been heartily received, which shows the advisability of such action. He advised the makers to work together for their mutual benefit, always with an eye to improve the quality of the goods produced. Mr. Millar endeavored to encourage the makers by pointing out that although they could not raise the price of cheese and butter they could increase consumption and therefore the demand by producing a uniformly high quality. There is no reason why we cannot make the finest cheese and butter in the world, but to do this anything of less merit must not be satisfied with. Milk must be delivered in first-class condition, and better factories, especially cheese-curing rooms, are needed.

Care of Milk.—Mr. W. A. Bothwell, Hickson, read a paper, which, if followed by all patrons, very many of the bad flavors in cheese and butter would be overcome. A fine quality of cheese or butter can be made only from fine flavored milk. If only natural grasses were fed to cows, and nothing impure was allowed to get into the milk, and it was made up right, there would be no difficulty from the raw material standpoint. It is unfortunate that classes of foods are often given to cows that produce bad flavors in milk, and too often milk, after it is drawn from the cow, is allowed to become contaminated by filthy surroundings. Milk should be aerated in pure atmosphere till all the animal heat has been expelled. If the weather is very warm, or the milk has to be held over Sunday, the cans or pails should be set in cold water. It should be kept in small quantities in an airy place away from bad odors. The milk should never be put in a cellar, or it is liable to incorporate musty taints. Not only do many kinds of food give undesirable flavors, but impure water is a common source of evil. A cow will not drink foul water if she can get clean. Mr. Bothwell urged makers to refuse milk that was not in good condition. Mr. Bothwell pointed out that it costs as much to draw and make up inferior milk as that which is all right. This paper, as most of those read, was followed by helpful discussion.

Mr. A. T. Bell, of Tavistock, recommended patrons to keep the milk over night in pails hung on a scantling between posts. The scantling should have hooks on which to hang the pails, and should be roofed over with two boards to keep out rain, etc. A good way to air milk in such cases is to pour it from pail to pail a few times at intervals of a quarter of an hour. The importance of keeping everything in which milk is kept scrupulously clean was emphasized by Mr. Bell. He advised using a fine wire strainer, which should be used as soon as the milk is drawn. He had known bad flavors in a patron's milk to arise from bailing milk with a tin-handled dipper with a hole in the handle in which milk entered and became sour. A solid-handled dipper was recommended. The President advised the use of a good modern aerator in dairies of large herds where it was not practicable to have a pail for each cow. Keeping of milk in large bulk was strongly opposed. The use of a cloth strainer was vigorously condemned. A member recommended cooling milk by setting a corked jug of ice water in the milk or setting in a shotgun can with ice. It is not well to cool too low or bitter flavors are apt to arise. Mr. Robt. Cleland, of Alma, a veteran cheesemaker, and ex-president of the Western Dairymen's Association and first president of the Listowel Cheese Board, remarked that cheese-makers were, as a rule, well posted in their work, and that much of the trouble lay with the patrons. The industry is not suffering so much from lack of knowledge on the part of patrons as on their not doing as well as they know. He believed the character of cheese is largely fixed at the farm.

Mr. Agur, of Brownsville, contended that patrons were generally anxious to take proper care of the milk, but too often they did not understand how best to do it. He has found that by visiting patrons whose milk had to be returned, and giving them an object lesson in airing and cooling down a batch of milk, that the trouble with that patron ended there. In one such case, by pouring and cooling he reduced the temperature of a night's milking from 90 to 70 degrees in fifteen minutes. Prof. Dean recommended that a neat, kindly, good-looking man be engaged by a certain number of factories to visit patrons at milking time, giving instruction in caring for their milk. President Millar expressed his intention to fill that office in connection with the three factories of which he is to have oversight the coming season.

Summer Buttermaking.—Mr. Fred Dean, butter-maker at the St. Mary's creamery, reviewed their system of making butter in the summer months. He referred to the need of common sense in conducting the work from day to day, as one is continually being met with new conditions. Cleanliness should be the keynote in all branches of the work. The system reviewed was similar to what was published in the FARMER'S ADVOCATE of July 1st, 1898, page 300, as the result of a day spent at the creamery by one of our editors. In the course of the paper it was indicated that the St. Mary's creamery, which is turning out about a carload of butter per week, is putting in a pasteurizing apparatus, so that a uniform quality will be insured from day to day and from week to week. This the British market demands.

In the course of the discussion which followed, it was pointed out that a little salt paste put on the top of the butter in the 56-pound boxes prevents mold. Referring to the ripening of cream, Professor Dean pointed out that thinner cream ripened more quickly than that which has less milk in it

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and, therefore, less milk-sugar for the ripening organisms to work upon.

Mr. Robert Ballantyne, Stratford, speaking from the standpoint of a buyer who has carefully studied the English market, advised pasteurizing cream only in factories where bad flavors gave trouble. Pasteurizing gives a mild flavor to the butter, which the British consumer would rather have than an objectionable flavor, but he did not believe they wanted a flat flavored butter any more than Canadians do. He considers that first-class cream is better not to be pasteurized.

The Dairy Exhibit.—First, 2nd and 3rd prizes of \$25, \$10 and \$5 were offered for September cheese, white, and September cheese colored. Similar prizes were offered for 56-lb. packages of winter creamery butter, and \$15, \$10 and \$5 for entries of ten one-pound prints, besides specials for cheese and butter salted with Rice's pure salt, and for cheese made with Hansen's rennet extract, and for butter colored with Hansen's butter color. The exhibit was extensive and generally of high quality, the scoring being 96, 95 and 94 for cheese, and 98, 97 and 96 for butter. The judges were Mr. A. F. McLaren, M.P., Stratford; Prof. Dean, Guelph, and Robt. Ballantyne, Stratford, who afterwards explained from the platform the reasons for their decisions. The 1st prize for white cheese went to the Misses Morrison, of the Newry factory, Elma, to whom Mr. McLaren paid a high tribute for the excellent condition of their factory. He said one could safely and with comfort eat his dinner off the floor, vats, or even the bottom of the whey tanks, so clean is everything kept. The Misses Morrison responded to the kind remarks by donating their cheese to the Association, who had it cut up and distributed to the members of the Association that they may know what a first-class cheese is like. The 2nd and 3rd prizes for white cheese went to Mr. I. C. Goodhand, Milverton, and Thos. Grieve, Wyandotte. The prizes for colored cheese went to Newton Kosh, Brantford; J. S. Isard, Paisley, and W. B. Thompson, Brookdale, in the order named. The prizes for butter in 56-lb. packages were won by J. R. A. Laing, Avonbank; Jas. Briston, Sebringville, and T. B. Marshall, Tiverton; and for pound prints, T. B. Marshall, Thos. Malcolm, Kinloss, and Geo. A. Boyes, Mapleton. Mr. Boyes won the Hansen's butter special, and Mr. J. R. A. Laing the butter special for having used Rice's salt. Mr. I. C. Goodhand won the special for Rice's cheese salt, and I. C. Goodhand for cheese made with Hansen's rennet.

The judges pointed out that boxed butter should not be colored nor heavily salted, as it should be intended for the British market, while print butter may have more color and more salt. Several defects and excellencies were pointed out, which was considered a valuable feature of the convention.

Benefits of Organization.—Mr. T. J. Dillon, of P. E. Island, expressed his belief that this Association has an important work before it. Perfection in cheese and butter is what makers should strive for, and it can only be approached by earnest co-operation. He pointed out that great wrongs had been suffered by makers signing a guarantee to make first-class cheese, through faulty milk and faulty curing-rooms. He contended that the wages paid makers were barely enough for their work, to say nothing of bearing the responsibility. He contended that a maker in a proper factory should get \$40 per month for his work, and \$50 per month if he guarantees all first-class cheese. Mr. Dillon strenuously endeavored to impress upon the members to hold together, as this cause is a just one and worthy of the respect of our Governments. Mr. Dillon concluded his address with a talk on practical cheesemaking.

(TO BE CONTINUED.)

Overcoming Long Churning.

To the Editor FARMER'S ADVOCATE:

GENTLEMEN,—Two very interesting letters are those of Messrs. Black and McDonald, in issue of Jan. 2nd, re long churning and no butter. "Misery likes company," though I certainly do not wish anyone to churn and churn and get nothing but vexation of spirit and a tired-out body. It is just about a year since I wrote to the ADVOCATE on the same subject. I felt ashamed to do so, as I was a greenhorn at buttermaking, but if Mr. McDonald has the same disappointment after forty years' experience I need not grumble. Since reading Mr. Sleightholm's kind answer I have failed only thrice in getting butter, and the reason was the cows were strippers. Since last May up till the present time I have not had one failure, though sometimes I have had to churn quite a long time—on two occasions two hours, and that in the end of 1895. Since May 19th last my average time required to churn has been thirty-three minutes. Should like to tell you how I do, as it may interest others, just as other methods interest me. I churn once a week. For gathering the cream in we bought a large tin pail, and had a lid made to fit, perforated in center, just under a broad handle. This allows ventilation, and the handle prevents dust from getting in. Cream is stirred when fresh cream is added. But during cold weather I have to keep the cream pail in the kitchen, for what else can one do, situated as I am? Heat is necessary, and we have only the kitchen stove going. For twenty-four hours before churning no fresh cream is added, but the pailful is often stirred and kept ripening. Churning temperature is from 65° to 69°. The churn is scalded and scrubbed, but in this cold season it is not cooled, but allowed to sit till I am "ready for the fray." Have never required to coax

the butter by adding salt. Last week it seemed as if it would not come for a long time, but we had been reading those letters and the answers, so immediately the cream was run off and placed in a pan of warm water and raised in temperature just what was needed: butter after a few minutes' more churning. I do not believe in adding hot water to the cream, as it only thins it and makes matters worse. For starter I use a proportion of good buttermilk, and find it works well. I keep a note of all details, such as pounds of cream, temperature, time required to churn, pounds of butter made, price, etc., and find it a most useful record. I have to thank the ADVOCATE for much information. If failures are recorded, try to avoid them, while successes are copied and hints made use of. It is in buttermaking as in everything else—one must use common sense and the brain one is blessed with. If one plan does not work I shall try another, and success must come at last. Yours Truly—

ESME SHIELDS.

P. S.—I strain the cream into the churn through cheese cloth. It is a great help, but very slow. Can anyone suggest a quicker method? E. S. Ontario Co., Ont.

Will a Cream Separator Pay?

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I have read with interest in the January 16th number of the FARMER'S ADVOCATE, the experiences of some farmers with cream separators. The first cost and the strength required to run them seem to be the only reasons why centrifugal cream separators are not more generally used. I wish to discuss the first reason particularly.

Before purchasing any machine, we ought to ascertain if it will earn or save enough money to pay a fair interest on the cost, and to make a reasonable allowance for wear. If it does away with considerable drudgery, put that to the credit of the machine also. Now, there isn't an implement on the farm will pay for itself as quickly as a cream separator. A neighbor of mine bought a 350-lb. per hour separator this winter, at a cost of \$90, and he claims that it will pay for itself in one year, and he does not keep twenty-five cows either. Before purchasing, his cows made six pounds of butter a day from 135 pounds of milk, and afterwards, instead of getting 42 pounds of butter a week, he got 52 pounds from the same amount of milk. He says he will make 500 pounds of butter a year more than formerly, which, at 18c. per pound, means \$90. This gain does not imply that this farmer was careless before in his methods of cream separation; indeed, he is one of the most careful and painstaking men I know, and has been sending a first-class quality of butter to Toronto for years, but now he says it's better than ever. With such a showing as this, the first cost does not look so formidable. An investment that pays nearly 100 per cent. interest isn't so bad. Now, is this all? If the machine is set up in a clean and dust-proof room, in or near the stable, there will be no lugging of milk to and from the house, which is particularly unpleasant in winter. Besides this, remember there will be no pumping water into the creamer can tank and no ice to haul and store away (except, perhaps, a little for churning or shipping purposes). As to cream separators being hard to turn, I can say that the Melotte, of 350 pounds capacity (which I have been using), can be run easily by a child.

Ontario Co., Ont. J. E. BENNETTS.

Instructors Appointed.

A fully attended meeting of the Board of Directors of the Cheese and Butter Association of Western Ontario was held at Stratford on February 12th, the President, Mr. Harold Eagle, in the chair. There were also present Messrs. A. F. McLaren, M. P.; R. M. Ballantyne, A. Wenger, James Connolly, Robt. Johnston, J. N. Paget, J. A. James, Geo. H. Barr, Geo. Goodhand, and the Secretary, Mr. Geo. Hatley. It was decided to expend \$3,400 for instruction at such cheese factories and creameries in Western Ontario as should apply for the services of the Association instructors. The following instructors were appointed: James Morrison, Stratford, for the south-eastern division, comprising the counties of Oxford, Norfolk, Brant, Haldimand, Welland, Lincoln, Wentworth, Halton, and Peel; C. O. Luton, Belmont, for the south-western division, comprising the counties of Middlesex, Elgin, Lambton, Kent, and Essex; George Macdonald, Bluevale, for the north-western division, comprising the counties of Bruce, Huron, Perth, and Waterloo; Arch. Smith, Beachville, for the north-eastern division, comprising the counties of Grey, Simcoe, Dufferin, and Wellington. Mr. Smith will be the instructor at the summer creameries over the whole of Western Ontario, while the other instructors will confine themselves wholly to instruction at cheese factories. The following scale of fees will be charged: Fees for visit of one day's duration—one visit, \$5; two visits, \$8; three visits, \$10; four visits, 12.50; five visits, \$15. Fees for visit of two days' duration—One visit, \$6; two visits, \$11; three visits, \$15; four visits, \$18; five visits, \$20. The Board recommended that meetings of the patrons should be called on the evening of the first or second visit of the instructors, and it was arranged that if such meetings were held and due notice given, one of the directors would attend the meeting along with the instructor, explain the aims and objects that the Association is trying to attain, and discuss with the farmers the methods that should be adopted for operating their cheese factories or creameries successfully.

No Trouble in Churning.

To the Editor FARMER'S ADVOCATE:

SIR,—I notice in the January 2nd number of your paper that Messrs. Black and McDonald have had "long churning and no butter," and wish to know the cause. I am milking two cows at present and I churn once a week and have no trouble whatever in churning. I use the "old fashion" dash churn, and I churn in from 10 to 15 minutes, no longer. I do not like the plan of Mr. D. H. McA., Ottawa Co., to pour boiling water till it reaches 66 or 67 degrees. I would have oil instead of butter. I keep my milk in a cool room in shallow milk pans and I do not bring the cream near the heat of the stove till about twelve hours before churning, then I heat the cream over boiling water till 64 degrees, stirring all the time. I have had good success, with nice flavored butter. The cows are fed boiled barley and oats mixed with bran twice a day and all the hay and water they want. AGGIE.

[NOTE.—While "Aggie" may succeed in churning the cream from her two cows in 15 minutes at the temperature stated, such rapid work is not conducive to good grain in the butter. The general experience of both dairymen and dairymaids is against the practice. As a rule slower churning at a slightly lower temperature gives better results. The temperature that answers in one district cannot be taken as a guide in another.—EDITOR.]

Building Up a Great Dairy Herd.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I have just lately made up my milk record for the past ten months of all my cows that have gone dry up to the 1st of February, since last year's record was made on the 10th of last March. I cannot make up the full herd of 55 cows before the 1st of April, as they will not all have milked their full season before that time, but as this is the time of year when dairy conventions and Farmers' Institutes are being held, I was often asked how my cows were doing this year, and a number of parties wished me to send them a record, so I have made up the record of 40 cows, taking them in regular course as they have gone dry, which I think is a fair average of the herd. The average last year of the entire herd of 55 cows was 10,242 lbs.; average time of milking, 11 months 23 days; butter-fat, 34, and 418 lbs. butter. This year they are doing considerably better, owing to having been better cared for, better fed during the summer months. Fed a half winter's ration of both ensilage and grain all summer, and we tried to protect them from the severe heat and flies during July and August, and continued to weed out all the poorer cows and replace them with good heifers coming in, so that our milk record this year is showing a considerable improvement over last year, and we have been trying to improve every year since we started in to weigh each cow's milk once a week. We test the quality with Babcock tester once a month, and keep a yearly record of every cow, and weed out twelve to fifteen of the poorest milkers every year, and replace them with good heifers, which we have coming in every year, as we raise all our best calves and turn them into either beef or cows. We commenced working on this system four years ago, also of providing green feed for the cows during a drought or very dry time during the midsummer months; but last summer we made another great improvement by feeding our cows ensilage and grain all through the summer; when on either good or bad pasture, fed half a regular winter ration of both ensilage and grain. Cows like ensilage in hot as well cold weather, even when on good pasture. We also added another improvement last year. In very hot weather we kept our cows in stable during the day and out in pasture at night, also washed them with a mixture called "Shoofly." We put it on either with a brush or a spray pump made for that purpose; applied it twice a week, which drove the horn flies all off the cows. All of these improvements have had a good effect in largely increasing the flow of milk, so that this season our cows have averaged 11,000 lbs. of milk, each testing 3.5-4 fat, making 476 lbs. butter. Average time of milking, twelve months. The average time of milking twelve months seems long, but that is caused by our milking our two-year-old heifers with first calf longer than we do the older cows, viz., twelve to sixteen months, and cows weeded out for beef are also milked a longer period, which lengthens the average time on the whole herd. My best cow, No. 56, is a cross. A Holstein bull crossed with a Shorthorn cow, being a half Holstein, half Shorthorn. She is now six years old. She gave first year, as a two-year-old, 10,100 lbs. in eleven months; next year she gave 15,000 lbs. in eleven months; next year, 17,740 lbs. in ten months twenty-one days, and this year so far, in ten months up to 1st Feb., 18,000 lbs. of milk. Now giving 33 lbs. per day, we intend milking her two and a half months longer, making twelve and a half months. We expect she will give in the twelve and a half months 20,000 lbs. milk—nearly twenty times her weight in milk in one year. The quality of her milk has averaged during the whole four years about 3.6-10, running from 3.4-10 to 4 fat, which made into butter, for the first year would be 424 lbs.; second year, 630 lbs.; third year, 745 lbs.; and the forth (this) year (the phenomenal), 840 lbs. of butter from one cow in one year. In the four years she has given 62,810 lbs. milk, making 2,630 lbs. butter. You will not find many cows in America that have beaten this record. Now, this

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wonderful record has been brought about by good breeding, extra care, and good feeding. Have a good, warm, well-lighted, well-ventilated, comfortable stable, roomy, single stalls, fresh running spring water and salt always before them, fastened with chains around their necks, giving freedom, allowed to run out for an hour or two twice a week on fine days, but kept in on stormy and bad or cold days. We believe in feeding well, and find it pays to do so. We feed as follows: First thing in the morning, before milking, clover hay; after milking, feed 20 lbs. ensilage, with 6 lbs. of grain feed put on top of it in the manger; at noon they are fed a little wheat or oat straw for a change; at 4 p. m., just before milking, they are fed ensilage and grain same as in the morning, and in the evening, after milking, fed clover hay. Grain feed most generally consists of 6 lbs. bran, 3 lbs. pea meal, 2 lbs. cotton-seed meal feed, average from 11 lbs. to 12 lbs. per day; feed some cows more and some less, according to the amount of milk they are giving; feed our best cow, No. 56, from 16 to 20 lbs. per day, according to amount of milk she is giving; same proportions and mixtures as the other cows. I may say the different kinds of grain feed are well mixed before feeding: weigh out and mix up two days' rations at a time. We sometimes feed oil cake in place of the cotton seed, and corn meal in place of pea meal, but prefer the cotton seed and pea meal, particularly in the summer season, as cotton seed fed in the summer improves the quality of butter—makes it firmer. Now feeding corn meal in place of pea meal, for the reason that peas are so high in price this winter, costing from \$7 to \$8 per ton more than corn. Feed 2½ lbs. corn meal, 2½ lbs. cotton-seed meal, with 6 lbs. bran per day. Our clover hay is good, well saved, cut early (on the green side), well cured in cocks covered with cotton hay caps, protecting hay from rain, sun or dew whilst curing. Our daily winter ration is 40 lbs. ensilage and 10 to 12 lbs. of grain-feed mixture per day. If cotton seed and oil cake were both the same price, we would feed in winter half the quantity of each, but just now oil cake costs \$7 to \$8 per ton more than cotton-seed meal, so that we are not feeding any oil cake to our cows this winter. We are greatly in favor of corn ensilage, both for winter and summer feed; find it to be the best, cheapest, and most convenient for feeding, both for the summer as well as winter. Last summer we fed a half-winter's ration of both ensilage and grain feed all summer, and the result was that our cows averaged 1,220 lbs. more milk this year than last;—milk worth \$1 per 100 lbs. would be \$12.20. Our milk, cream and butter net us 90c. per 100 lbs. milk, clear of all expenses in manufacturing and selling. Skimmed milk is worth 20c. for feed. The extra cost would be 20 lbs. ensilage at 10c. per 100 lbs.=2c.; 5 lbs. grain feed at 60c. per 100 lbs.=3c.; making the extra cost for summer feeding 5c. per day per cow, and for 150 days would be \$7.50; deduct extra cost of feed (\$7.50) from the extra quantity of milk (worth \$12.20) would leave a net balance of \$4.70 per cow, and for the 55 cows would be \$258.50 net gain for the season, as the extra manure saved would more than pay for the extra labor in feeding.

In making the above estimate I have left out my best cow, No. 56, which if included would make a still better showing of profits on summer feeding. You will see that I have not included my best cow, No. 56, in making up this year's record. By putting her in with the 40 would bring the yearly average up to 11,800 pounds for this season, but as there are 14 cows yet to come into this year's record which are still milking, we may find it necessary to put our best cow in with them in order to keep up the average of the herd of 55 cows to the 11,600 lbs. average as stated above.

We are greatly in favor of alfalfa clover for green summer feed, both for cows and pigs; have been growing it four years experimentally; now have four acres. It produces wonderful crops; we cut four times a year, and feed it green to our 300 hogs once a day, and feed it to our cows alternately with the ensilage once a day. Cows, like ourselves, like a change and a variety of food.

I might add that we weighed the milk from our best cow daily for three or four months after she came in, the 4th of last April, and for the first month she averaged daily 88 lbs. milk, testing 3 1/10 fat, which would be equal to 21 lbs. butter-fat in seven days, or 2¼ lbs. butter in seven days. I see that the best record at the International Exposition at Omaha dairy test was 13½ lbs. fat in seven days, so I am a long way ahead. I see that in the milking test made at Brantford last month the best cow, Calamity Jane, made a record of 17¼ lbs. of fat in seven days, so I am considerably ahead of both records.

Our cows are mostly Holstein-Friesian breed, one-fourth of them pure-bred, the remainder are three-quarters to seven-eighths Holstein blood, crossed with Shorthorn cows fifteen years ago.

Yours truly,
E. D. TILSON.
"Annandale Farm," Oxford Co., Ont.

Waterwheel to Run Cream Separator.

THOS. CAIRNS, B. C.: "Could any of your readers give dimensions for waterwheel to run cream separator, De Laval No. 2 Baby? The water discharge on head will be four inches in diameter."

[We invite readers, who can, to give us the information desired. We presume a turbine water-wheel is what Mr. Cairns should use.]

POULTRY.

How to Handle Breeding Stock in Order to Get a Large Percentage of Well Fertilized Eggs for Hatching.

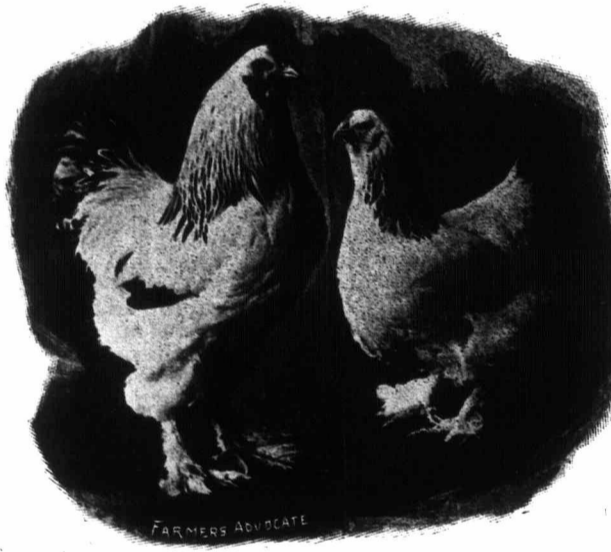
BY E. W. ANDREWS.

The breed of fowls kept should depend mainly on the object sought, whether it be eggs or table poultry. Not more than twelve fowls should be kept in one breeding flock. If these are in vigorous health and properly fed, not only will almost every egg prove fertile, but there will be no difficulty in raising the chicks.

To keep a hen in good condition for laying she should never have a full crop during the day. It is not wrong to give a light meal of warm mixed food in the morning. I do not believe in feeding soft, sloppy food at all. The fowls should go away from the trough unsatisfied and should then seek their food, getting it grain by grain, engaging in healthy exercise in order to obtain it. Feeding soft food leads to many errors on the part of the beginner.

I believe in free range, providing the range is good. During the summer months the hens require less food than in the winter, though it depends somewhat on how they are situated and how many eggs they lay. When on the range they cannot fail to secure a full supply of all they require if they are active and industrious. When hens are confined in their winter quarters without range, their morning food should consist of a warm mash, made from equal parts of corn meal, wheat bran, and ground oats. If it is customary to mix vegetables in the morning mash, these can be used in conjunction with the above mixture. Feed what you think is about half enough in the morning, and let them try to find the remaining quantity desired.

Keep them at work. Give clover hay, chopped fine and scalded, meat and bone, three or four times



FIRST PRIZE WINNING PAIR OF LIGHT BRAHMAS.
OWNED BY T. A. COX, BRANTFORD. SEE PAGE 105.

a week, and wheat at night. Keep plenty of grit before your fowls at all times, and plenty of clean fresh water. It is a good plan to change the variety of grain two or three times a week. Do not fail to give fresh ground meat. Follow this plan and you will get fertile eggs.

The majority of poultry raisers begin to set their incubators during the winter months. They fill them with eggs from hens that are confined in small buildings and not properly fed. What are the results? Not twenty-five per cent. of the eggs hatch. They continue in this way all winter, and condemn the incubator. Toward spring, when the weather begins to warm up, the fowls are turned out into the runs or given free range. Then they get a change of food in the way of green grass and insects. The hens' combs begin to get red, they are more active and in much better condition, and lay more eggs. As soon as a hen begins to get broody, eggs from these thrifty hens are placed under her, and the result is a good hatch.

Now, on the other hand, if the breeder had been able to have his hens sit in the winter when he started his incubators, on eggs from hens that were not properly fed and in poor condition, what would have been the result? It would have been no chicks at all. Would he have said the hens were no good, and that they could not hatch chicks? No, he would say it was the fault of the eggs—that they were chilled or not fertile. Readers, if you will give your hens the proper exercise and food in winter, plenty of meat and vegetables to take the place of insects, green grass, etc., that they get when they have the range in the spring, you will find that a well-made incubator will hatch a larger per cent. of strong, healthy chicks than any hen on earth was ever known to do.

The incubator is a necessity on any well-conducted poultry plant. The incubator chick is free from vermin, therefore is stronger, and if placed in a first-class brooder, made of good material, it will continue to thrive, and a hundred can be raised with less trouble than a dozen under an old hen. The fancier who has a small place in a city or town should give his fowls as much range as possible, but

if you are obliged to confine them in small pens and yards, avoid crowding. Be sure to feed animal foods to take the place of insects that the hens get when they have free range. The poultry raiser on the farm should have a good comfortable laying-house for his fowls, and not allow them to lay the eggs under the barns and other buildings.

All early pullets that will be matured by the time winter sets in should be kept growing, but be very, very careful not to let them get fat. That is a condition a fowl should be in when ready for market, but fat is a detriment to all laying hens. Overfeeding causes more diseases than anything else. If the pullets are not fully feathered when winter comes, as well as being in good condition, they will only be a dead expense until spring, when almost any kind of a scrub will lay. If you keep common hens, commence culling them out as soon as possible and fatten the culls for market, keeping only those you can see are liable to do you good service this winter. Keep only the roosters you wish to breed from, and I would advise you to keep them by themselves until breeding time. Your chicks, as well as the winter egg-basket, will prove to you that you were wise in doing so.—*Artificial Incubating and Brooding.*

VETERINARY.

The New Cure for Milk Fever.

The new cure for milk fever by the injection into the udder of a solution of iodide of potash is claimed by veterinarians and others to give very excellent results, and already it is becoming recognized in certain quarters as one of the most reliable remedies yet introduced. As already pointed out in these columns, it consists in injecting into the udder (through the teats) one dram of iodide of potassium mixed with one quart of boiling water, cooled down to 98 degrees Fahr. before being used. Half a pint of this is to be injected into each quarter of the udder. The animal should then be placed in a comfortable position on her chest, and the udder gently rubbed. Her position should be changed every two or three hours, and only one injection is necessary. It should be borne in mind that before the injection is given the udder and teats should be carefully washed with soap and water, to which a little carbolic acid has been added.—*Farmers' Gazette (Ireland).*

[Dr. Wm. Mole, M. R. C. V. S., writes as follows, commenting on the above: "With reference to the new treatment for milk fever by the mammary absorption process, I cannot speak with any degree of certainty, but it is in accordance with my ideas of the disease, and should be looked upon with favor until proved incorrect. If you will refer to my account of milk fever and the controversy that once took place in the ADVOCATE, you will see that I have always argued that it was due to re-introduction of the milk into the circulation at the time of parturition, due in many cases to want of water, causing toxic blood poisoning, coma, and death from exhaustion, so that by injecting a material that could be absorbed along the same lines, the brain pressure would be relieved and the animal recover rapidly. There is quite a mass of correspondence in the veterinary journals as to this matter, and the general opinion of those men who I know to be good observing practitioners is that after repeated trials of both methods the chloral hydrate treatment is more successful. On the other hand, many men just as good pin their faith to the new method of the injection through the teats of a weak solution of iodide of potassium as detailed in the above statement."]

Bog Spavin.

Professor McCall, Glasgow, at a recent meeting of veterinarians held at Manchester, Eng., is said by the *Horseman* to have given his opinion on bog spavin as an unsoundness, and on the merits of the new treatment introduced by Mr. Deans, of Bishop Auckland. Bog spavin, whether large or small, constituted legal unsoundness; but he ventured to say in ninety-five cases out of one hundred they in no way affected the animal's usefulness and powers of endurance. He said he had paid the greatest attention to these enlarged capsules of the hock, and rarely, in comparison to their numbers, had he found lameness of the hock associated with their presence. Indeed, if a horse pleased him in other respects, and had the power of free flexion and extension of the hock joints, although he could not pass the animal as sound, he would seldom reject him. Professor McCall maintained that a horse with a straight conformation of the hind limb invariably has the capsules of his hock joints distended, and the straighter the limb the more distended was the swelling or so-called bog spavin in front. "In Scotland," said Professor McCall, an eminent breeder of Clydesdales himself, "we have a family of Clydesdale horses in which this conformation is conspicuous. The celebrated Prince of Wales stallion belonged to this family, and, being one of the most impressive sires, he has transmitted the same conformation of hocks to a large number of his progeny. He lived for twenty years and averaged one hundred mares per annum. When four years old, on account of the conformation of his hocks, he was condemned for bog spavins, and lost the prize for which he was contending. I knew the horse during the whole of his life. He never was lame, and to the day of his death his action was the admiration

of Clydesdale breeders." The straight conformation of limb and hock joint, owing to the greater extension of the joint and consequent pressing forward of the synovial fluid when the joint is in a state of extension—as when the foot is on the ground—leads to a bulging outwards and inwards of the capsule, which thus becomes a permanent defect, and no ordinary treatment, he said, will reduce the swelling. As to the use of Mr. Deans' aspirator and injector (referred to in the FARMER'S ADVOCATE of November 15th, 1898, page 538), and the fluid he recommends to be injected, Professor McCall, after making experiments on his own animals and others, considered it a hazardous and dangerous operation. In some cases it was a great success, in others a complete failure, or even worse; and in all, if the operation be properly performed, viz., the joint exhausted of its synovial secretion, and thereafter injected with the liquid, it causes excruciating pain and suffering for not less than twenty-four hours. He was of opinion that the fluid injected is too concentrated and too much of an irritant to the delicate synovial membrane, and that only a proportion, and not the whole, of the synovial fluid within the joint should be aspirated at one operation. It is only fair to add that Mr. Deans, in reply to Professor McCall's criticisms, said that "having operated upon hundreds of cases, all for Clydesdale breeders, without any bad results, he had every confidence in the success of the operation."

Anthrax in Calves.

To the Editor FARMER'S ADVOCATE:

SIR,—In your issue of November 1st last your veterinarian replies to an enquiry about "Anthrax in Calves." The calves in question, from the description of the disease given, died of symptomatic anthrax or, as it is commonly called, black leg or black quarter, a disease of young cattle. It is seldom seen in animals less than six months or more than four years of age, but is nearly always seen in calves and yearlings. It is due to a microbe called the *Bacterium Chauvei*.

True anthrax or, as it is scientifically called, *Bacteridium anthrax*, is due to a microbe called the *Bacillus Anthrax*, and, of course, is an entirely different disease from symptomatic anthrax. It occurs equally in animals of all ages and may spread as an epizootic in all species of animals except rats, but in most cases it confines itself to the bovine species. The writer, in giving his description, seems to have got these two diseases somewhat mixed, for he goes on to say that anthrax is due to the anthrax bacillus, which is quite true, but black leg is the disease in question and not anthrax. Black leg is not anthrax, neither is anthrax black leg, there being as much difference between the two diseases as there is between tuberculosis and glanders.

In the district of Novgorod, in Russia, in 1867-8, an epizootic of anthrax occurred, in which it claimed for its victims 40,000 horses, 800 cattle, 6,000 sheep, and 500 human beings. Black leg is an entirely different disease; the flesh may be eaten with impunity by the pig and dog and also by man, as they are entirely refractory to the disease.

Black leg was once supposed to be a precursor of true anthrax, hence they were at one time thought to be one disease, until isolation of the different microbes and experimental inoculation proved them to be entirely different diseases. I remain, Yorkton, N.-W. T. THOS. V. SIMPSON, V. S.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Legal.

STATUTE OF LIMITATIONS.

SUBSCRIBER:—"1. I reside on and own the south half of lot 2, and I also own the north half lot 3, and if the line fences were on the true boundary lines of the lots my two properties would touch upon each other at a corner; but the owner of the north half of lot 2 has for a long time (more than ten years) occupied the land to where the fence stands between him and me, and this fence is at this point south of the true line between the north and south halves of the lot. Can I compel the owner of the north half now to move his fence, so as to put it on the true line; or can I compel him to give me a roadway to connect my two farms? 2. In some places the line fence between him and me runs over on his place, and the fence is an old one, which has been standing for forty years, but in places it is rotted down and is not a lawful fence; but it is clearly to be seen and has always been treated as the division line between us. Is this a sufficient fence to establish the boundary between us? 3. In another place, about eight years ago, the fence was moved over on to his place a little further than where the first stood. Can he compel me to move it back? 4. Does it make any difference that in placing any of the fences referred to on his land, that either he did it himself, or that I did it with his verbal consent?"

[1. No. 2. Yes. 3. Yes; if it has not been where it now is for ten years he can compel you to move it back, either to the proper line or to the place where it stood before, if its former location was still on his land. 4. No; any agreement of this kind affecting an interest in land must be in writing.]

LINE FENCES.

SUBSCRIBER, Huron Co., Ont.:—"A and B owned adjoining farms, and A himself erected the whole of the line fence; subsequently A sold his farm to C, and B sold his farm to D. C now proposes to take half of the line fence away, and compel D to erect his own half of the fence. Can he do so?"

[As A was the owner of the whole of the line fence, and C now stands in A's place, he would be entitled to remove one half of the fence, and providing that D's farm is improved and that he would be liable to fence at all, he could compel D to erect and maintain his one half of the fence; but C must not remove his half of the fence without complying with the provisions of the Line Fences Act, section 15, which provides that such a fence shall not be removed without giving at least six months notice to the adjoining owner, and then only if such adjoining owner refuses to pay the value of such fence, which value may be fixed by fenceviewers.]

Veterinary.

SIDEBONES OR RINGBONE.

FARMER, Russel Co., Ont.:—"I have a mare nine years old that has been lame of one fore leg for about a year. There are several small bony growths on the fetlock, and she is much given to stumbling when lame. I was told by a farrier that they were "sidebones," and he gave me a preparation to rub the leg with; the lumps are partly gone, but the lameness remains."

[Sidebones or ringbone, for they are much the same, is a bony deposit or growth at the upper head of the fetlock joint; causes are hereditary predisposition, concussion on the road, etc. Your treatment appears to be correct, and cannot be improved upon. Should the lameness become more pronounced, I would advise that you take her to a veterinary surgeon and ask to have the part pointed and blistered. DR. MOLE.]

LUXATION OF THE PATELLA, WITH ABSCESS.

HUGH C. MCLEAN, Bruce Co., Ont.:—"I have a colt that was hurt last July in the stifle joint. The veterinary surgeon said that there were no bones displaced, but that the cords of the stifle joint were sprained. For the last two months it is breaking out in running sores. He cannot step over anything higher than six inches. Please send an early cure."

[We regret that no answer of a satisfactory character can be given in the case. See reply to a similar question in this issue, and we would recommend that you either turn out for life or destroy as being worthless and not capable of being cured permanently. WM. MOLE, M. R. C. V. S., Toronto.]

THOROUGHPIN.

G. E. L., Essex Co., Ont.:—"I have a mare three years old which sprained her hock when about six months old. When swelling was reduced a thoroughpin appeared. What can be done to remove it, and will it hurt her for work if not treated?"

[Thoroughpin is a bursal swelling of the sheath of the large tendon attached to the point of the hock, usually extending through, as the name implies, the swelling is visible on the inside and also on the outer side of the hock; it is soft and pliable to the touch. Elsewhere in this issue there appears an article on bog spavin, which is of the same character as thoroughpin. Treatment is not always satisfactory, but mild repeated applications of sweat blister and astringents usually give good effects. A weak mercury ointment is good as a blister and applications of strong vinegar are also beneficial. A properly applied compress is generally helpful, but only a qualified veterinarian should apply it. Although an unsoundness, it is not likely to give any trouble when the animal is put to work. WM. MOLE, M. R. C. V. S., Toronto.]

HARNESS GALL OR ABSCESS.

W. A. L., Grey Co., Ont.:—"Would you kindly give me some information regarding my horse. It has a lump about the size of one's head quite close to and behind the front leg on the ribs. Sometimes I notice it is a little larger under the belly, and sore when you press it. Can you tell me how to cure it?"

[Wounds or abrasions of this character are very common from ill-fitting saddles, the girth chafing the skin causing an abscess to form. At first the swelling is uniformly hard, and tender under pressure; after a time becomes soft and fluctuating at some portion, mostly near the center. From this the abscess is said to be pointing. In all such cases, when forming the process should be hastened by frequent hot fomentation and poultices. It is a rule with surgeons to open an abscess as soon as pus or matter can be plainly felt, but this can scarcely be recommended in all cases, as it depends on an exact knowledge of anatomy. But you must carefully explore the tumor for the softest part; make an incision and allow the matter to escape, and by afterwards keeping the wound open, dress with some good antiseptic, as Little Phenyle, one part to 20 of water, three times a day. DR. W. MOLE.]

LAME PIGS.

H. HILL, York Co., Ont.:—"We have a batch of pigs four months old, and some of them have gone lame on their legs. We feed them on boiled roots, shorts, and a little peas. Would you tell me what to do for them in your next issue?"

[It seems difficult to account for pigs going lame in the way Mr. Hill refers to, as not uncommonly the most careful pig breeders have trouble in the winter months. We would ask our readers who can suggest what should be done in such cases.]

Miscellaneous.

CROSSES FOR REGISTRATION—VOMITING STEER—MEASURING HORSE—PACER—CROSS-FIRING, ETC.

SUBSCRIBER, Lanark Co., Ont.:—"Will you be kind enough to answer the following questions through the ADVOCATE, in February 15th number, if possible. 1. How many crosses of pure breed do horses, cattle, sheep and pigs require on sire's and dam's side before they are eligible for registration? 2. What is the proper treatment for persistent vomiting in a two-year-old steer which is being stall-fed? It does not appear sick in any way, only vomits everything it swallows, a few minutes after. 3. In measuring the height of horses, is the shoe included? 4. What season of the year is the best to plant maples; also cedar, for a hedge; and the proper way to plant a cedar hedge? And what size of plants would be best? 5. What is the proper way to shoe a pacer that cuts the inside quarter of left front foot with right hind when speeding? I would like as full an explanation on this question as possible."

[1. In the Clydesdale Association a filly has to have four crosses of registered sires to entitle her to be entered in the Clydesdale Stud Book. The same rule occurs with Shire horses; but with Hackney horses we follow a different plan. There is what we call an inspected mare, who is supposed to have lots of high action and be nearly thoroughbred or a trotter. This is what we call the foundation stock, and is inspected. A filly from her by a pure-bred sire will what we call "half register," then a filly from the offspring, by a registered sire, would be what we would call "full registered." With cattle it is different. Every class of cattle we record have to trace, in all crosses, to an imported dam. Sheep require to trace to some flock books in England, or to the American Sheep Record books. In swine—Yorkshires, Tamworths and Berkshires have to trace to an imported dam, while the American breeds, such as the Chester Whites, Duroc-Jerseys, and Poland-Chinas, trace to the American books. They are a made-up breed.

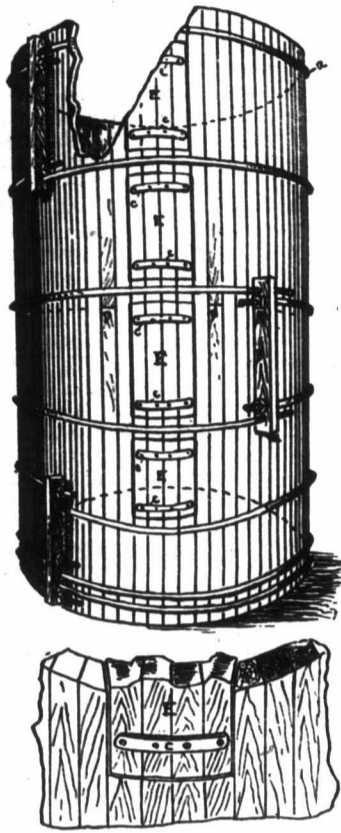
H. WADE, Registrar of Live Stock, Toronto. 2. The causes of persistent vomiting are not quite known. I have only met with two cases previously to this one. In both it seemed to depend on indigestion, producing hiccough, and the animal was generally in very poor condition, the food coarse and innutritious. In one case it was due to ulceration of the second stomach from foreign irritant. I would recommend that the animal receive a good purgative: 1 lb. of Epsom salts, 1 ounce of aloes afterwards, some good tonic powders: carbonate of iron, 2 ounces; powdered gentian, 2 ounces; powdered cinchona, 2 ounces; powdered aniseed, 2 ounces; powdered capsicum, 4 ounce; powdered charcoal, 4 ounces; to be mixed and divided into twelve powders; give one night and morning in a quart of gruel. This will remove the cause. DR. W. MOLE.

3. When a horse is measured for sale or in a showing his height is taken as he stands, whether shod or not, providing the shoes have no calks. When he is raised up on calks the height of the calks must be deducted. When a horse is properly shod with plates, about the same depth of hoof is removed as iron is put on. 4. Maples should be planted in spring any time before the leaves are out. Saplings about one and one-half inches in diameter, carefully dug, leaving on all the fibrous roots possible, and not allowing them to become dried, usually live if set in loamy earth, well packed down and mulched. The top should be cut off from eight to ten feet from the ground. In setting out cedar for a hedge, first of all the ground should be prepared in much the same manner as it would be for fruit bushes, or even for a corn crop, by cultivating and manuring so that a fine, mellow, rich tilth is obtained. It is well to have this done in the fall previous to planting the cedars. It is the custom of some to set out the plants just after grain seeding in spring. Plants from two to three feet high are pulled from a swamp and planted carefully about one foot apart in the row. The larger plants may be trimmed back to the height of the smaller ones. Some of the plants are liable to die, so it is well to draw home a few extra and put them in a block for transplanting into the hedge row next season. The ground on each side of the row should be kept well cultivated the first season and mulched the second. Very little more attention is needed, except to trim the hedge annually. When the plants are secured from their native location, it is preferable to take them from fairly high ground. As a rule, nursery stock has superior root growth, and usually does well. 5. First of all see that the feet are absolutely level, with a good amount of hoof. Put on even-weight, plain, light shoes all around. Then seek to guide the legs by careful weighting. Put on 4-oz. inside weights on front feet, protecting them with light quarter-boots, and 4-oz. on the outside of right hind foot, and 2-oz. on the outside of left hind foot. It is impossible to fix a rule that will suit every horse having the same fault, so would advise weighting by means of light scalpers with weight pockets, as they can be put on whenever the pacer is to be driven. Give considerable slow driving for a few weeks, so as to develop the muscles that influence the leg-steering. Then commence to speed easy at first. It may be necessary to use a little more weight for a couple of weeks while jogging, say 5-oz., but the horse should be able to carry himself straight with lighter side weights before attempting to speed. Balancing pacers and trotters requires a deal of study, but when a driver understands the general laws underlying it, the study becomes very interesting.]

SILO CONSTRUCTION.

HENRY DEACON, Huron Co., Ont.:—"Please publish in your paper the most approved system for building a silo and oblige. 2. How many tons would a silo 10 ft. by 26 ft. hold?"

[There are two general classes of silos being constructed at the present day and it seems to be largely a question of circumstances which is most in favor. Those referred to are of wood and cement concrete. The latter is perhaps to be preferred when one has a good class of substantial, modern farm buildings and can stand a little extra present outlay without undue inconvenience. This class of silo is constructed on a variety of plans, viz., square with corners cut off, single and double, oblong double, and octagonal. These have all been described in the FARMER'S ADVOCATE during the last two years, but for the benefit of our numerous new subscribers the subject will be taken up at an early date by Mr. Hagar, who wrote on "Construction of Cement Walls" in our issue of Jan. 16th, 1899. Those who have last year's volume of the FARMER'S ADVOCATE and wish information on silo construction should turn up pages 235, 259, 260 and 306.]



Of wooden silos the octagonal and round forms are most in favor. Of these we personally favor the round stave form, after two seasons' experience with that sort. While we cannot speak from experience regarding the merits of the octagonal sort, we are free to express satisfaction with the stave style. Ours is 15 feet across and 30 feet high. It has no roof and is as plumb and efficacious as when first erected. During the past summer we covered the top with boards to keep out the sun and wind, which we believe was instrumental in preventing the silo from getting out of shape, as some others have done without roofs or coverings of any sort. Our silo has a stone foundation extending a few inches above the ground to provide a solid base for the 2-inch pine planks and to prevent the ends of the planks from rotting by coming in contact with the ground. The planks used were of two lengths, 14 and 16 feet, cut to the same width—8 inches—and alternated above and below, so as to give strength at the joint. The planks were dressed on the inside and painted at the edges. It is not necessary to bevel the edges of the planks, as the square corners will join more tightly together. When the foundation is ready to receive the planks bend the first hoop, putting the nuts on the extreme ends of the rods or hoops, and lay it 2 inches from the bottom by contemporary blocks. Bend the 5th hoop and raise it 12 feet from the bottom by means of stays and plumb over the lower hoop. Raise the first plank and set it on the foundation, inside the hoops, plumb the edge; drive a four-inch wire nail through under each hoop, and bend round the rod; this will keep the plank in place. Set up the planks all around until the circle is complete. Tighten the hoops already on; put on the three between them and two or more above, according to the height, when the silo will be ready for use. The hoops should be of five-eighths inch round iron, the threaded ends being three-quarter inch. The blocks through which the rods pass may be hardwood (end pressure) or cast iron. The hoops should be in halves, that the tightening may be more perfectly effected.

The accompanying illustration represents a round stave silo, showing a style of block which some prefer. It also shows the construction of the doors. Instead of the wooden or iron blocks already referred to, we know of a number of farmers who are well satisfied with hardwood 4x1 inch scantling extending from the ground to the top of the planks. These are bored and the rods pass through them. These scantlings may stand outside of the planks or stand in between them, coming flush with the inside. This is preferable to the outside position, in which case the planks against which the scantlings lean are liable to be pressed inward. It is impossible to cover all the points of round silo construction in one article, and we will be glad to hear from those of our readers who are enjoying the benefit of a good silo and have a few words of advice to offer regarding silo construction.

2. A round silo 10x26 feet will hold about 12 tons of ensilage.]

FARM POWER.

W. M., Grey Co., Ont.:—"Can you give me some advice as to what kind of farm power would be the most suitable to me? I want it to run a small

threshing, a crusher, cutting box, turnip pulper, and cream separator. The threshing and cutter take about seven horse-power, although six can run them."

[We incline to the opinion that for all the purposes named a good tread power would probably be the most satisfactory. For many of the purposes indicated, a windmill power answers admirably, yet for the cream separator, which requires a steady power and one available regularly twice a day, the windmill could not, for obvious reasons, be depended on. It might be well to make enquiry of the manufacturers of gasoline engines as to their cost and capability for the purposes specified.]

SERVICE FEE FOR BULL.

SUBSCRIBER, Sincoe Co.:—"I have a valuable registered Shorthorn bull, 2 years old, which was exhibited five times at the leading shows in this county and won four first and one second prize. I wish to know what would be a fair service fee for such an animal to insure a calf; that is, no calf no pay. Would \$1.50 be too much? If my bills specify that parties returning the same cow three times in proper season will not be charged if not in calf, can I collect the service fee from parties who only return their cows once and then take them to another bull without my consent? People in this section have had a great deal of trouble to get their cows with calf last year. Some of my neighbors have only one or two cows with calf even after taking them to four different bulls. They appear to come in season irregularly, sometimes in two weeks and at other times in four or five weeks. Is it in the season, or what do you suppose is the cause?"

[The service fee named seems to us a very reasonable one for a bull of this class when the terms are to insure. A usual fee for first-class bulls is \$2 for grade cows and \$5 for registered cows, and this by the season. We would prefer to make the fee \$1 for the season, payable whether there is a calf or not. People would then be more likely to return their cows till they were in calf, and the owner of the bull is entitled to some remuneration for his time in attending to visitors, time being equal to money to a man who has business to attend to. If bills are issued and the terms specified, as indicated, we are of opinion that you could collect the fee by process of law, but it is better to avoid such a course if possible, as it is unpleasant to have such trouble with a neighbor. It is better that both parties be reasonable and seek to agree on a fair compromise. It is impossible to determine the reason why cows are so difficult to get in calf in some seasons. We are inclined to believe the season is generally responsible where there have not been abortions, but if abortion is prevalent among the cows it becomes a very serious matter and is very difficult to cope with. The fact of cows coming in season irregularly would seem to indicate that trouble.]

FINISHING CONCRETE FLOOR.

A SUBSCRIBER, Lennox Co., Ont.:—"The article in Jan. 16th ADVOCATE by F. B. Hagar on how to make and mix cement concrete and gravel is good, but I require some more information. Would Mr. Hagar, or someone else, say what proportion of gravel to cement is best for cow stable floors; how fine should the gravel be, and how thick a coat is necessary to make a good floor, and is one coat sufficient, or does it require a second or finishing coat?"

[NOTE.—Elsewhere in this issue we give Mr. Hagar's letter in reply to the above. We might add that one of our staff who has had one of these floors in use for seven or eight years found no trouble arising from giving the floor a good, smooth finish. In fact, he prefers it, being easier cleaned, and has an idea that it will wear better.]

RIPENING CREAM—SEPARATORS.

JAS. WOODBURN, Carleton Co., Ont.:—"Enclosed you will find one dollar for the FARMER'S ADVOCATE for this year's subscription, wishing you every success, as I consider it one of the most useful papers in Canada. It encourages separating, but does not tell how to ripen or prepare the cream for churning. Give us some information on that point, also where we can purchase a good separator at a reasonable price? Hand separators should be sold for \$25. They are too dear for the small farmer."

[Pointers on cream ripening can be gathered from the FARMER'S ADVOCATE in Jan. 2nd issue, page 15; Feb. 1st, page 69. We know of no firms giving better value in separators than those advertising in our columns.]

CORN SHELLER WANTED.

L. G. S., Ontario Co., Ont.:—"What is the best kind of corn sheller to use by hand or horse power?"

[Here is a chance for manufacturers or dealers in corn shellers to do business by advertising in the FARMER'S ADVOCATE.]

CALF FEEDING.

G. W. M., P. E. Island:—"Kindly advise me as to the best method of raising Shorthorn steer calves. I will have several next month, and wish to raise them in the best possible manner. How much milk can be safely fed (skimmed milk)? I have the following feeds besides milk: Flaxseed, oats, turnips, and clover hay. Please formulate a ration of these for a calf. Any information on the subject will be greatly appreciated?"

[We would refer our correspondent to several letters elsewhere in this issue, giving the experience of successful stock-raisers.]

COLLECTION OF SERVICE FEES.

SUBSCRIBER, Elgin Co.:—"I bred a mare to thoroughbred horse last July and she is not in foal. Can the owners collect fee (the terms were fifteen dollars to insure foal)? Please answer through the columns of your valuable paper and oblige."

[If the terms of the bills advertising the services of the horse required the regular return of mare for trial, and that requirement was complied with, we do not think the fee can be collected if the mare is not in foal; but if you failed to comply with the terms, the probability is that the owner of the horse can collect.]

CONCRETE SILO BUILDING.

J. D. ALBRIGHT, Lincoln Co., Ont.:—"Would be greatly obliged if you would in your next issue give the particulars of cost of constructing a concrete silo of about 40 tons capacity; also what dimensions are best, and what is the best plan for laying the walls, and providing for doors, roofing, and filling when built?"

[A silo 10 x 10 x 20 feet high will hold 40 tons; that is, fifty cubic feet will hold one ton of silage; the walls would have to be 14 inches thick at the bottom and 10 at the top. A concrete silo of the above dimensions in the vicinity of London, Ont., would cost for cement, gravel and labor about \$105. Some object to the concrete silo on account of its cost, others to the wooden ones on account of the short time they last. But I find that why the concrete silo has not been more in vogue was because some of them were built too costly, the walls were too heavy, and twice as much cement and material were used as was necessary. I have seen some that were built three feet thick at the bottom and 14 inches at the top and 20 feet high, but if they were properly built and anchored they could have been constructed at one-half the cost. I will endeavor to give a description of how to build a concrete silo and the probable cost of such. I find the double silo as a general rule gives the best satisfaction, because there is not so much surface exposed, and one can be used for summer feeding. I therefore take a double silo, 12 x 17 x 24 feet high, 14 inches thick at bottom and 10 inches at top, with a partition wall of eight inches thick, which will give two silos 12 x 8 feet 2 in. square. Such a silo would take about 68 barrels of cement and forty days' labor to build it for one man, and fifty yards of gravel and sixteen yards of stone.

To build such a silo, first put in the footings at least two feet wide and one foot deep; then nail two planks together lengthways, and stand them on end for the outside corners, and another on inside diagonally across the angle, so as to cut off the shape angle, as it will allow the silage to properly settle when filling. Wire these planks together at the bottom, and tack a strip from each of them at top to keep them from spreading, and nail 2 x 4s from corner to corner at top to keep them to their places. Then stand upright, to build by the same as I described for walls in my letter of January 16th. But for high walls I prefer bolts, as they are not in the way when building. The silo should be about two inches narrower at top than at bottom, the latter to be on outside. By taking six or eight strands of common fence wire and twisting into a cable and laying it in the concrete wall every three feet high so as to circle the silo, and keep it near the outside of the wall, this will keep the silo from spreading. The doors should be put in one above the other, or zigzag, not in one continuous opening, as that weakens the silo; by taking a 2 x 4 and standing it on end at door-jamb next the inside of silo it will leave a notch in concrete for door to fit in.

NORVAL B. HAGAR.

FARM GOSSIP.

Lincoln County, Ont.

January has been an unusually disagreeable month in the Niagara district. Rain, snowstorms, and zero weather have succeeded each other with disgusting rapidity, and you never know what to expect next. Unfortunately, there has not been enough snow for sleighing—a state of things which not only prevents more or less work being done and makes travelling unpleasant, but creates a hard condition for the land. Thanks to the good top it got on by late fall, the wheat is standing from now on is likely to come through in excellent shape. Hay still keeps down at a low figure, ranging from \$5 to \$6 per ton. There is a lot in the country, and farmers hardly expect better prices this winter. There seems to be a good deal of pork offering in the local markets, and two or three buyers are shipping an occasional car to Toronto. For good stock, dressing from 100 lbs. to 180 lbs., 5c. to 5½c. is being realized; \$4.10 per cwt. is about the figure for the same kind of article live weight. There are very few first-class beef cattle in the district; the chief supply is brought from the West. Prices are from 5c. to 5½c., while the rougher stuff goes about one cent lower. Chickens are fetching 8c. per lb., dressed, or from 5c. to 6c. a pair. Turkeys are pretty firm, at 11c. per lb., dressed. Butter is decidedly low, a fair grade selling at 14c. and the best quality seldom realizing more than 16c. or 17c. per lb. Eggs have shown a marked downward tendency the last two weeks, and the upward turn expected by many by the price paid in the fall practically holds good yet—60c. to 70c. per bag. Fresh milk cows seem fairly plentiful, and are changing hands at from \$30 to \$40. It's pretty early to say much about fruit prospects. Doubtless this has been a hard season on peaches, the sudden changes of temperature during the last month being the worst thing possible for the fruit buds. I hear some people saying at this time of the year, "After a careful examination of several hundred buds to-day, the following results were obtained: Hynes' Surprise (early), 80% of the buds good; Early Rivers (early), 60% good; Longhurst (a late and hardy variety), 90% good; Early Crawford, 20% good; Foster (a variety of the peach), 33% good. These results indicate a pretty light crop of the choicer varieties, but it must be remembered that if even 10% of the buds on a tree were to mature into peaches the tree would still have a big crop. We hope to give another estimate later in the season.

M. B.

Progress of the Palmerston Co-operative Pork-packing House.

The Palmerston, Ont., Co-operative Pork-packing establishment is to be ready to start operations about May 1st, with a capacity of 2,500 hogs per week.

Distribution of Cereals for Improvement of Seed.

To the Editor FARMER'S ADVOCATE: SIR.—For the past ten years systematic efforts have been made to increase the average returns and to improve the quality of the cereals and other important farm crops grown in Canada.

Prince Edward Island Agriculture.

We have had a very fine winter so far. Frost has not been severe, except for a few days. Plenty of snow for good roads and to cover up the grass lands well.

Chatty Stock Letter from Chicago.

Following were the prices lately current, with comparisons two weeks and one and two years ago: Beef cattle, prices now, Extreme 4.90 to 5.00, 1898 5.45, 1897 5.25.

Our creameries and separating stations are doing a largely increased business this winter. Much of our splendid crops of clover and roots is being turned into butter.

The education that we need most just now is to teach the patrons that they must co-operate with the management of the factories by sending only clean-flavored milk.

Farm Prospects Better in East York, Ont.

Our roads are in splendid condition for wheeling at present. Most farms are supplying milk to Toronto, ten wagons entering the city by way of Queen street daily.

The clover mills have been busy this winter, as a lot of clover was cut for seed. Some pastured their fields till June, then run the mowers over them.

Many cattle are being fed in this neighborhood for the export trade, and prospects are bright for a good demand. Prices are higher than for years.

The prospects good, times are brightening and farmers are doing well, and with the advantage that they enjoy in their proximity to the Toronto market, with a ready sale for all their produce.

Prince Edward Island Apples. A P. E. I. correspondent writes of a recent visit to the farm of Mr. F. G. Boyer, near Georgetown.

Before leaving the farm we looked into the orchard, where we saw a vigorous plantation of apple trees, largely Ben Davis, with one corner devoted to Golden Russet, Wealthy, Duchess, and Baldwin.

MARKETS.

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT. Following were the prices lately current, with comparisons two weeks and one and two years ago:

Table with columns: Item, Extreme prices now, Two weeks ago, 1898, 1897. Rows include Beef cattle, Hogs, Sheep, Natives, Western, Lambs, and Fed Westerns.

Official receipts of live stock at five western points were as follows in January:

Table with columns: CATTLE, HOGS, SHEEP. Rows list Kansas City, Chicago, Omaha, St. Louis, St. Joseph, and Totals for 1899, 1898, Loss, and Gain.

Average weight of cattle received at Chicago last month 1,097 pounds, the lightest January average since 1895.

There was quite a severe decline in the cattle market as a result of the beef scandal. The evil reports sent out by Gen. Miles had a most depressing effect upon the trade.

The Department of Agriculture has issued the following: The returns of the number of live stock on farms in the United States, January 1, 1899, show there to have been 13,665,367 horses, 2,131,213 mules, 15,990,115 milch cows, 27,994,225 oxen and

other cattle, 39,114,433 sheep, and 33,651,631 swine. These figures show a decrease of 295,604 in number of horses, 56,069 in that of mules, 1,269,972 in that of oxen and other cattle, and 1,108,362 in that of swine.

There is a movement on foot to induce the Government to make a better classification of live stock, so as to show the calves and other young animals on hand.

Chicago alone received more hogs from Illinois last year than were reported to be on hand in the State at the first of the year.

There is a feeling that prices for cattle must be a good deal higher than at present.

The hog situation is fairly encouraging to farmers, though there is a feeling that the coming crop of hogs will be large.

The sheep market shows signs of weakness, with lambs selling at a loss to feeders, who paid high prices for lambs and for feed.

Toronto Markets.

The market was very good; all classes of cattle sold well, excepting stockers, which were a shade easier.

Export Cattle.—The quality of fat cattle offered was generally better than for some time past. Trade was brisk; all offerings were sold by noon at fair prices.

Butchers' Cattle.—Choice butchers' cattle in good demand at an advance on last week's quotations. Good butchers' cattle sold at \$3.65 to \$3.85 per cwt.

Bulls.—Choice heavy bulls of good quality in demand, sold at \$3.60 to \$4 per cwt. Light and medium sold at \$3.57 to \$3.50 per cwt.

Stockers.—Trade in stockers dull, selling at from \$3.25 to \$3.80 per cwt. for choice lots. A few stock heifers sold from \$2.60 to \$2.85 per cwt.

Feeders.—Heavy feeders in demand, very few on offer. Those weighing from 1,100 lbs. are worth \$3.30 per cwt.

Sheep.—About 400 sheep on offer. Ewes, \$3 to \$3.25; and bucks, \$2.50 to \$2.75 per cwt.

Lambs.—Yearling lambs in good demand; those weighing 100 lbs. and over are in special demand for export.

Cows.—Very few calves on offer, at from \$3 to \$6, according to size and quality.

Milk Cows.—A cold snap brought a good demand, only 15 on offer, selling at an advance.

Hogs.—The William Davies Packing Co. slaughtered in the year ending March, 1898, 80,000 hogs.

Straw.—Only 500 bushels at 48c. to 50c. per bushel. Two loads of barley at 49c. to 50c. per bushel.

Grain.—Eight hundred bushels white and red Ontario wheat, 71c. to 72c. per bushel.

Butter.—The market shows a disposition to weaken. No. 1 green, 84c. lb.; steers, 9c. lb.; calves, 10c. lb.; pelts, 80c. each.

Wool.—Lambskins, 85c. each; wool, pulled, 17c. per lb.

Leather.—Eight hundred bushels white and red Ontario wheat, 71c. to 72c. per bushel.

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Teddy's Trials.

So many steps to be taken!
So many errands to run!
People are mighty mistaken
Thinking a boy has much fun.

"Run to the market," says mother.
"You go so quickly," says she.
Wish I was lame—yes, I'd rather
Hobble like Jimmie M'Crea.

Sister Sue hands me a letter,
"Dear, you will mail it I know."
When sis commences to flatter,
Then I have just got to go.

"Dearest" and "darling" and "Teddy,"
Those are the words she will use;
But if I'm not always ready,
Then she'll begin to abuse.

So, you are mighty mistaken,
Thinking that fellows have fun,
If there are steps to be taken,
And lots of errands to run.

The Emperor's New Clothes.

Many years ago there lived an Emperor who cared so enormously for new clothes that he spent all his money upon them, that he might be very fine. He had a coat for every hour of the day; and just as they say of a king, "He is in council," one always said of him, "The Emperor is in the wardrobe."

One day two cheats arrived in the city. They said they were weavers, and could weave the finest stuff anyone could imagine. Not only were their colors and patterns uncommonly beautiful, but the clothes made of the stuff possessed the wonderful quality that they became invisible to anyone who was unfit for the office he held, or was incorrigibly stupid.

"Those would be capital clothes," thought the Emperor. "If I wore those I should be able to find out what men in my empire are not fit for the places they have. I could distinguish the clever from the stupid. Yes, the stuff must be woven for me directly!"

And he gave the two cheats a great deal of money that they might begin their work at once.

They put up two looms, and pretended to be working; but they had nothing at all on their looms. They at once demanded the finest silk and the costliest gold. This they put in their own pockets, and worked at the empty looms till late into the night.

All the people in the city knew what peculiar power the stuff possessed, and all were anxious to see how bad or how stupid their neighbors were.

"I will send my honest old minister to see how the weaver's are getting on," thought the Emperor. "He can judge best how the stuff looks, for he has sense, and no one understands his office better than he."

So the good old minister went out into the hall where the two cheats sat working at the empty looms.

"Why," thought he, opening his eyes very wide, "I cannot see anything at all!" But he did not say this. The cheats pointed to the empty loom, and asked him if he approved of the colors and the pattern, but the poor old minister could see nothing, for there was nothing to see.

"Can I indeed be so stupid?" he thought. "Am I not fit for my office? No, it will never do for me to say that I could not see the stuff."

"Do you say nothing to it?" said one of the weavers.

"Oh, it is charming—quite enchanting," answered the old minister. "What a fine pattern, and what colors. Yes, I shall tell the Emperor that I am very much pleased with it."

The Emperor soon sent again, dispatching another honest statesman, to see how the weaving was going on. He fared just like the first. He looked and looked, but, as the looms were empty, of course he could see nothing.

"I am not stupid," he thought, "it must be my good office, for which I am not fit. I must not let it be noticed." And so he praised the stuff which he did not see, and expressed his pleasure to the Emperor.

All the people in the town were talking of the gorgeous stuff. At last the Emperor went to see it with a crowd of chosen men.

"Is it not splendid?" said the two old statesmen who had been there before. "Does not your Majesty remark the pattern and the colors?" And they pointed to the empty loom, for they thought the others could see the stuff.

"What's this," thought the Emperor. "I can see nothing at all! This is terrible. Am I stupid? Am I not fit to be Emperor? Oh, it is very pretty!" he said aloud. "It has our exalted approbation."

The whole suite looked and looked and saw nothing, but, like the Emperor, they said, "That is pretty," and advised him to wear these splendid clothes for the first time at the great procession that was presently to take place.

The whole night before the procession was to take place the cheats were up, and had lighted more than sixteen candles. The people could see that they were hard at work completing the Emperor's new clothes.

They pretended to take the stuff from the loom; they made cuts in the air with the scissors; they sewed with needles without thread, and at last they said, "Now the clothes are ready."

The Emperor came himself with his noblest courtiers; and the cheats lifted up one arm as if they were holding something, and said: "See, here are the trousers!—here is the coat!—here is the cloak!" and so on. "It is as light as a spider's web. One would think one had nothing on, but that is just the beauty of it."

Then the Emperor stood before the great mirror, and the cheats pretended to put on him each new garment; while the Emperor turned round and round to examine himself.

"Oh, how well they look! how capitally they fit!" said all. "What a pattern! What colors! That is a splendid dress!"

The chamberlains who were to carry the train stooped down with their hands to the floor, as if they were picking up the mantle; then they pretended to be holding up something in the air. They did not dare to let it be noticed that they saw nothing.

So the Emperor went into procession under a rich canopy, and everyone in the streets said: "How incomparable are the Emperor's new clothes!" No one would let it be perceived that he could see nothing, for that would have shown that he was unfit for his office, or was very stupid. No clothes of the Emperor's had ever had such a success as these. "But he has nothing on," a little child cried out at last.

"Just hear what that innocent says!" said the

orange marmalade, one-quarter pound sugar, four well-beaten eggs. Mix all together, press into buttered mold or basin, tie down with a floured cloth, boil two hours or steam three. Be sure not to allow the water to cease boiling or it will not be so light. Of course, the pudding is plunged into boiling water sufficient to cover it; as it boils away add boiling water from the kettle. These boiled puddings are very wholesome and nice, though a little troublesome to make.

CUSTARD SAUCE FOR THE ABOVE.

Pint of milk brought to a boil, and add to it one well-beaten egg and level teaspoonful cornstarch (moistened with a little cold milk), two teaspoonfuls sugar. Boil up once and serve.

THE QUIET HOUR.

"Desultory Work."

"When a philanthropist said pompously,
"With your great gifts you ought
To work for the great world, not spend yourself
On common labors, like a common man,
I answered him: 'The world is in God's hands.
This part He gives to me, for which my past,
Built up on loves inherited, hath made
Me fittest. Neither will He let me think
Primeval, godlike work too low to need
For its perfection manhood's noblest powers
And deepest knowledge, far beyond my gifts
And if I leave the thing that lieth next
To go and do the thing that is afar,
I take the very strength out of my deed,
Seeking the needy not for pure need's sake.'"
—MacDonald.

During the waiting season while God withholds active work from a man, He often gives little services to be done for Him, which may be called "desultory work"—work that may happen one day and not another, "here a little and there a little," and which is often left undone just because it is desultory, and apparently so small in its results.

Many have been turned from evil ways through the instrumentality of such desultory work. The religious book lent to a neighbor; the persuasive letter to a distant friend; the sermon listened to at the entreaty of a companion; the tract found in a railway station; the short, sudden, but heaven-heard and heaven-answered prayer; the timely word spoken by the wayside; the striking anecdote treasured up and repeated; the pointed text of Scripture that went into the heart, sharpened as a two-edged sword;—who but God Himself can tell what such apparently trivial seeds as these may grow into?

"A blessing such as this our hearts might reap,
The freshness of the garden they might share,
Through the long day an heavenly freshness keep,
If, knowing how the day and the day's glare
Must beat upon them, we would largely sleep
And water them betimes with dews of Prayer."

This "watering betimes with dews of prayer" is a very important part of such desultory work, without which we need hardly expect it to prosper.

The very crumbs of work that fall from the Master's hand—the fragments that remain from what He gives His strong ones, the corners of time snatched from the more secular work of every day, ought to be treasured by the Christian. They whose time is much at the disposal of others, or who are much in the habit of traveling from place to place, and

therefore peculiarly fitted for a "wayside witnessing for Christ," need to consider deeply the importance of seizing all opportunities for desultory work.

"Each word we speak has infinite effects,
Each soul we pass must go to heaven or hell—
And this our one chance through eternity . . .
Be earnest, earnest, earnest!
Do what thou dost as if the stake were Heaven
And that thy last deed ere the judgment day!"

How well it would be if each in going through the world were to remember what the old writer said of life—that it consisted of two heaps, a large one of sorrow and a small one of happiness, and whoever carried the very smallest atom from the one to the other did God a service; much more those who are instrumental in any way in leading or helping one precious soul nearer to God.

If you think yourself unable or unworthy to attempt any such high and important work, remember that the work is God's, and that He is able to fit you for it. If He inspired Bezaleel and Aholiab with wisdom and understanding, filling them with the Spirit of God so that they might be able to work in gold and silver, in carving of stone and of wood, for the building of the earthly tabernacle, surely much more will He give wisdom to those who are trying to help in the building of the great spiritual temple.

"Our day for Him is long enough,
And when He giveth work to do
The bruised reed is amply tough
To pierce the shield of error through."

Let us take heed, then, to be faithful in the smallest things, or how can we expect to "rule over ten cities?" Let us watch over the little cloud, from which, though no larger than a man's hand, great showers of blessing may be poured down. Let us nurture the tiny seed which may spring up into the branching tree, for though our words and deeds may seem slight and powerless things, yet

"The best men, doing their best,
Know, peradventure, least of what they do.
Men used fullest in the world are simply used;
The nail that holds the wood must pierce it first,
And he alone who wields the hammer sees
The work advanced by the earliest blow."



"YOUR CHOICE FOR A DOLLAR."

father; and one whispered to another what the child had said. "But he has nothing on!" said the whole people at length. That touched the Emperor, for it seemed to him that they were right; but he thought within himself, "I must go through with the procession." And the chamberlains held on tighter than ever, and carried the train which did not exist at all.
H. C. A.

"Your Choice for a Dollar."

Is anyone wanting a puppy?
A jolly dear troublesome pet;
They're worth lots of money,
Their tricks are so funny—
Your choice for a dollar you'll get.

But no, I can't bear to sell them—
The darlings so fluffy and small;
It makes me feel badly,
I want them both sadly,
'Twas only a joke, after all!

Recipes.

CREAMED CODFISH ON TOAST.

To one cup shredded codfish add two of water, boil briskly twenty minutes, pour off water, add one and a half cups sweet milk, one teaspoonful butter, half a salt-spoonful of pepper, one beaten egg. Allow this to simmer ten minutes. Serve on rounds of toasted bread.

SCALLOPED PARSNIPS.

Peel and boil until tender, mash (while hot) sufficient to make one pint, beat into this two tablespoonfuls of butter, two of cream, a beaten egg, one heaping teaspoonful of salt, a little pepper. Butter a dish and put in a layer of crumbs, pour in a good layer of the parsnips, then a layer of crumbs, until the dish is full, using a layer of crumbs last. Sprinkle a very little salt and pepper over the last layer, add a tablespoonful each of melted butter, milk, and hot water, and brown rapidly in the oven.

GOLDEN PUDDING.

One-quarter pound bread crumbs, one-quarter pound finely-chopped suet, one-quarter pound

Our Library Table.

[I beg to inform book-lovers that the books reviewed are all to be had in inexpensive form (paper covers), ranging from as low as ten cents, and very few being beyond twenty-five cents.]

"THE LAUREL BUSH." "A NOBLE LIFE." "NOTHING NEW AND OTHER STORIES." Miss Mullock.—Miss Mullock is so well known through her celebrated novel "John Halifax" that any book bearing her name may be taken for granted as worth reading. There is a pure, healthy tone pervading her work which is a refreshing contrast to much of the literature now extant. I intend to draw attention to some of her works not quite so widely known. "The Laurel Bush" is an old-fashioned love story—full of truth and pathos. It tells of the misunderstanding and long separation of two faithful hearts through the merest chance. The whole story is so natural, the characters so exactly what one may meet any day, that it only serves to show how true it is that romance often accompanies the most ordinary surroundings. To tell the end of this "old sweet story" would be a pity, so I leave its readers to enjoy it to the full.

"A Noble Life" is that of a helpless cripple (an English earl), doomed from infancy to a life of inaction, but possessed of a heart of gold, which lifts him above all earthly ailment. His faithful manservant, in whose arms he almost lives, is a splendid type of devotion, and the love between the frail young earl and the big, tender-hearted Scotchman is most beautifully depicted. The "Noble Life" is described from childhood to manhood, and is a grand illustration of how much benefit and happiness can be dispensed by even those who are amongst the "sore afflicted" of this earth, and of how a high and lovely nature can completely rise above itself.

In "Nothing New and Other Stories" we have a collection of short tales which are little gems. The character of Jean Douglas in the first story is finely drawn, and one feels the better for reading about her. We cannot help, too, feeling in sympathy with her handsome young lover, although he did make a mistake.

"THE QUEEN." Mrs. Oliphant.—Those of our beloved sovereign's loyal subjects who would know of her everyday life up to a few years ago should read this book. It shows to us the true woman, and seems to bring us into closer communion with our noble and Christian Queen. The book was written by special sanction, and every opportunity afforded to the talented authoress for truthfully depicting the daily life of Her Majesty. One reads so frequently the most absurd accounts of Royalty's doings, written by those who really have no authentic source of information, that a book like this should be widely appreciated.

"DRIVEN BACK TO EDEN." E. P. Roe.—This author (only lately dead) has an enviable and widespread reputation as a writer of pure novels that can be put into the hands of our youths and maidens. The story mentioned is hardly to be called a novel in the usually accepted sense. It is a plain account of how a small-salaried clerk in New York City is struggling to keep his wife and family in even bare necessities. They live in a cheap flat, the children have no playground save the street, and the anxious parents see evil looming in the future. The father at last resolves to break away from such associations, resigns his situation, collects all his little savings, and boldly strikes out for a different life on a country farm. At first things look very black, for his experience is chiefly from books and what little information he could pick up, but a brave and trustful spirit animates them all. The parents wisely give occupation to the very youngest child, thus creating an equal interest in work. Their everyday life is told in a simple and fascinating way. The father makes a point of explaining all he knows himself to his children, regarding them as co-workers, and the story is thus made full of useful information, besides being most interesting as a story alone. Young people should especially read this little book, although it can be thoroughly enjoyed by people of any age. FELIX.

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c.; 3rd, 50c.]

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1—HIDDEN GIRLS.

Six little maids are hiding here— One in each line, a pretty dear.

Here is a belt that you may wear To run a race at the county fair. Remember that as you run along A cowboy's shout or a tramp's song Could frighten a daisy racer like you— I will not and cannot believe to be true. B. B.

2—SQUARE.

My First is what you have to pay When you send the hired man away; My Second a precious metal is, And a very useful mineral 'tis; You'd pass my Third many times in a day, In walking through fields or along the highway;

My Fourth may be found in a lot of old stuff: Just look through a trash-room: I guess I've told enough. G. E. K.

- 3—HALF SQUARE. 1. to take. 2. science of morals. 3. to reprove. 4. a kind of duck (abbr.). 5. frozen water. 6. a farrier. 7. a vowel. M. N.

- 4—DOUBLE ACROSTIC. 1. dress of a Highlander. 2. an annoying disease. 3. a sound. 4. studies. 5. man (in Latin). 6. an Australian bird. 7. to want. 8. a period of time. 9. reddish color. Initials read downward spell the name of a famous general finally the place where he gained his victories. M. N.

- 5—DROP-LETTER PUZZLE. 1. G-e-t-r-t-i, the mistress of the seas. 2. -t-h-n-, a great general. 3. -a-a-, a progressive country. 4. -k-a-a, where a notable battle was fought. 5. -r-l-a-, a strong fortress. 6. P-r-, a city in Russia. 7. -o-o-v-l-u-, a very nice flower. 8. -o-s-, a small animal. BARCLAY GREEN.

- 6—ANAGRAM. ITS PARENT SEVERE, if I met on the street, He'd threaten to break my head into seven, But, changing his mind, then he'd turn me around And raise me up almost to heaven. "ARRY 'AWKINS."

- 7—ODD SUBTRACTION. 1. Take 2-5 from something hot and leave something cold. 2. Take 1-5 from a piece of wood and leave a sharp sound. 3. Take two thousand from a woman and leave a girl's name; then take five hundred more and leave two articles. 4. Take one thousand and six from a noted king and leave an article. 5. Take one letter from a religious band and leave demons. H. C. G.

- 8—ANAGRAM. He said, as about to start on a tour, And hoping his dear one's love to secure, "VINA, LEST TEN DAYS should not see me return, I hope you will not miss my heart from you spurn." "DICK."

- 9—SQUARE. 1. sad; 2. enclose; 3. steep slopes; 4. an old form of marquis; 5. to eagerly desire; 6. to decrease.

- 10—CHARADE. Here's a man we're ONE to mind, He served his country well and truly; By passion never rendered blind, His temper never grew unruly. 'Mong all our modern men of worth And Grand TOTAL'S foremost, upright, true; His fame extends throughout the earth— He needs no monumental TWO.

- 11—NUMERICAL ENIGMA. 1, 4, 5, 6, is a way. 12, 13, 14, 10, 5, 15, 17, 11, is a poisonous oil. 2, 4, 3, 7, is a rodent animal. 9, 16, denotes surprise. 8, 2, 10, 17, 15, 14, is the science of sound. 2, 7, 16, 3, 5, is one of a suit of playing cards. Whole is a noted English novel. JESSIE HYDE.

- 12—TRANSPOSITION. At school one day, when all was fun, In there came old Uncle ONE. He said he was glad to see us play So long as we didn't get TWO in our way. Some children screamed THREE while in their play; This vexed old ONE, and he did say: "Boys, you're Christians, no doubt, But I think it THREE to no TWO shout." This vexed little DICK, and up he shot And said, "Old ONE, have you forgot That you may ever be gone from me If you think that I FIVE THREE. Our teacher is a very strict man, Yet he tries to teach us all he can, And if we 'cut up' any more He'll mark us by a common FOUR, And whip us, man alive! Now, do you think that we TWO or THREE, FIVE?" "DICKENS."

- 13—DOUBLE ACROSTIC. A famous man my primals show. By initials in what class he is reckoned, you know. 1, a sudden blow; 2, a Japanese city; 3, an animal; 4, a way from home; 5, a kind of fruit on some trees. F. L. HARTSELL, Oriol.

- 14—CHARADE. My first is necessary, but dangerous, strong and useful; when caged can be controlled, but is fierce when free. My second is an insect like a bear and like a bee, and the total appear like sparks on a dark night in summer. M. A. A.

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- 42—CHARADE. Here's a man we're ONE to mind, He served his country well and truly; By passion never rendered blind, His temper never grew unruly. 'Mong all our modern men of worth And Grand TOTAL'S foremost, upright, true; His fame extends throughout the earth— He needs no monumental TWO.

- 43—NUMERICAL ENIGMA. 1, 4, 5, 6, is a way. 12, 13, 14, 10, 5, 15, 17, 11, is a poisonous oil. 2, 4, 3, 7, is a rodent animal. 9, 16, denotes surprise. 8, 2, 10, 17, 15, 14, is the science of sound. 2, 7, 16, 3, 5, is one of a suit of playing cards. Whole is a noted English novel. JESSIE HYDE.

- 44—TRANSPOSITION. At school one day, when all was fun, In there came old Uncle ONE. He said he was glad to see us play So long as we didn't get TWO in our way. Some children screamed THREE while in their play; This vexed old ONE, and he did say: "Boys, you're Christians, no doubt, But I think it THREE to no TWO shout." This vexed little DICK, and up he shot And said, "Old ONE, have you forgot That you may ever be gone from me If you think that I FIVE THREE. Our teacher is a very strict man, Yet he tries to teach us all he can, And if we 'cut up' any more He'll mark us by a common FOUR, And whip us, man alive! Now, do you think that we TWO or THREE, FIVE?" "DICKENS."

- 45—DOUBLE ACROSTIC. A famous man my primals show. By initials in what class he is reckoned, you know. 1, a sudden blow; 2, a Japanese city; 3, an animal; 4, a way from home; 5, a kind of fruit on some trees. F. L. HARTSELL, Oriol.

- 46—CHARADE. My first is necessary, but dangerous, strong and useful; when caged can be controlled, but is fierce when free. My second is an insect like a bear and like a bee, and the total appear like sparks on a dark night in summer. M. A. A.

- 47—REBUS. 5 me 6 for T.

- 48—CHARADE. There are so many cousins who contribute to the Corner, And it's always growing and always getting stronger; To win a prize is quite an honor Whoe'er succeeds, should thank the donor. But what a complete in the FARMER'S ADVOCATE When the January number the winners' names did state! 'Twas not because "Toledo" at second place did tarry, Nor because the very first prize came to our cousin "ARRY." But it was because this 'ARRY was the old-time Henry Reeve, Who in bygone days second puzzling much honor did achieve, He has come from old Kent road to do his very best, He now has tried a quarter, and of course he stood the test. Last "chocolate" he will primal, it is very wholesome, Perhaps on "milk-weed" too, it depends upon his "income." A "punishment," a "chastisement" give him, no, not three, For we're very glad to see him coming back so cunningly. "DICK."

- 4—(1) Salt Lake City. (2) All-eg-heny. (3) Bal-tim-ore. (4) Was-hing-ton. (5) St. Hy-ac-in-the. 5—Anemone. 6—Concatenation. 7—Homesick. 8—Christmas. 9—(1) Khartoum. (2) Soudan. (3) Omdurman. (4) Havana. (5) Cuba. (6) Philippines. (7) Anticosti. (8) China. 10—A river. 11—r a c e r m a r e s n i n e s n e a r s w r i t e

- 12—(1) L-arch. (2) Babe-l. (3) M-ink. (4) M-ale. (5) M-ask. (6) Lady. (7) M-alice. 13—(1) Shamrock. (2) Onion Lily. (3) Cactus. (4) Lavender. (5) Tea Rose. (6) Sweet balm. 14—Punishment Chastisement. 15—Entertainment.

- SOLVERS TO JANUARY 2ND PUZZLES. "Ena," "Dick," "ARRY 'AWKINS" Geo. Lawson, F. J. G. Lizzie Conner, B. V. C. Constance Wilson, Una Shepherd, J. McLean, M. N., Jessie and Peter Hyde, G. E. Kinsman, H. C. G., "Dickens."

- Answers to January 16th Puzzles. 1—Whale, perch, shark, carp, oyster, bass, sword, saw, pike, sucker, devil, flying, plaice, cat, cockle, sole, whiting, sun, mussel, herring (her ring). 2—Eagle, bluejay, vulture, thrush, barn-owl, canary. 3—Sir, between friends, I understand your overbearing disposition; a man even with the world is above contempt, whilst the ambitious are beneath ridicule. 4—Ernest. 5—Income. 6—Blunders sunder lovers (B L under S, S under L, L over S). 7—t h i s h o n o r i n l a i d s o a p n u t r i n s e d u e t 8—D r a c o r o v e r a v e r e c e r r a o r e a l

- 9—Separated, desperate. 10—Sage. 12—w e a l d 13—Shakespeare. e m b a y a b a t e 14—(1) Dan, den, din, don, dun. l a t e r (2) Mass, mess, miss, moss, muss. d y e r s (3) Mate, mete, mite, mote, mute. 15—Klondike, Kincardine, Kamloops, Connecticut, Regina, Toronto. 16—Manchester, Kidderminster, Macclesfield.

- SOLVERS TO JANUARY 16TH PUZZLES. "Ena," "Dick," "ARRY 'AWKINS," "Lawrence," "Barney," M. A. A., Constance Wilson, M. N., Wilson Rowat, G. E. Kinsman, H. C. G., Mrs. A. Bruce, "Boz."

- COUSINLY CHAT. "Toledo."—Do not leave us on that account. M. N. is, too, so you have company. "Dickens."—I have informed Uncle Tom of your apology, and now let's forget all about that affair. H. C. G.—You naughty child! You detest anagrams and so you intend to inflict them on others. Well, do. I think you are good at them. Berta.—The prize is for the whole quarter. Send more than one, so I may choose the best. "Ogma."—You forgot to send the answer to your rebus. I am glad you intend to stay with us. M. A. A.—You are quite right. I am "cousin" to all the contributors, you know. "Ena."—Will you please sign name as well as non-deplume? I will not publish it if you do not wish. Your answer to No. 10, while not the one intended by the author, was quite a good substitute, and I had a quiet laugh over it. Constance.—Square words should read exactly the same down and across. It is not necessary to write as much of the puzzle as you did in No. 1, Jan. 2nd issue. The words as they appear in the answer in this issue are sufficient. "ARRY 'AWKINS."—If that book was for punctuality alone you would fare well. "Una."—I meant the prize offered in Jan. 2nd to be open to solvers as well as contributors of original puzzles. Lizzie Conner.—I have your name and credit for every number, so the fact of your name not appearing is immaterial. Someone sent me several correct answers to Jan. 16th puzzles, but did not sign any name. Who was it? "Dick."—We have not heard from Fair Brother for years, nor Lily Day, either. By-the-by, do not build any more "houses." They take up too much space, Short puzzles are preferable. Barclay.—Your puzzle was too long, so I only used part of it. "Boz" and "Simple Simon."—Your work came in too late for this issue. Glad to hear from you, though. ADA A.

- A Midnight Visitor. Alexander Williamson went cosily to bed, And on the pillow, soft and white, he laid his weary head; A certain something happened which is terrible to tell, And he was filled with wonderment that made him cold and mute, For, standing up beside his bed, he saw his Sunday suit. "O Alexander Williamson!" it lifted up a sleeve— "Your conscience is upbraiding you, I'm happy to believe. For all the things you've done to me in such a careless way Are quite enough to fill the heart with horror and dismay. The first three days you knew me you were careful as could be; You kept me nicely dusted, and you didn't spill your tea. But, oh, those happy days are gone, as happy days will go, And if I seem a little dull, the reason you must know, You've bulged my trouser-pockets until no one thinks them neat; You tore a button off my coat and lost it in the street; You scrambled up a bramble bank to catch a bumblebee, And in your very shocking haste you tore a trouser-knee. Then, coming close beside the bed, it shook a wristband low: "Now, Alexander Williamson, 'tis well that you should know I won't submit to every shame you heap upon the cloth. Your roughness and your tyranny shall bear an awful fruit: I'll go to rags and tatters and you shall not have a suit!" And then it got so angry, as it knelt against the bed, That Alexander Williamson—he covered up his head. Now, if on any morning you should wander down our way And chance to meet a little boy in wonderful array In clothes full neatly dusted, and highly-polished boot— It's Alexander Williamson - and in his Sunday suit.



AN AMERICAN GIRL IN LONDON.

BY SARA JEANNETTE DUNCAN.

(Continued from page 71.)

It was a matter of some regret to poppa that Messrs. Pink & Pink were bachelors, and could not very well be expected to exert themselves for me personally on that account. Two Mrs. Pinks, he thought, might have done a little to make it pleasant for me in London, and would probably have put themselves out more or less to do it. But there were no Mrs. Pinks, so I was indebted to these gentlemen for money only, which they sent me whenever I wrote to them for it, by arrangement with poppa. I was surprised, therefore, to receive one morning an extremely polite note from Messrs. Pink & Pink, begging me to name an afternoon when it would be convenient for me to call at their office, in order that Messrs. Pink & Pink might have the honor of discussing with me a matter of private business important to myself. I thought it delightfully exciting, and wrote at once that I would come next day. I speculated considerably in the meantime as to what the important private matter could possibly be, since beyond my address Messrs. Pink & Pink knew nothing whatever of my circumstances in London, but did not tell Lady Torquillin, for fear she would think she ought to come with me, and nothing spoils an important private matter like a third person.

"First floor, Messrs. Dickson & Davies, architects; second floor, Norwegian Life Insurance Co.; third floor, Messrs. Pink & Pink, solicitors," read the framed directory inside the door, in black letters on a yellow ground. I looked round in vain for an elevator boy, though the narrow, dark little twisting stairway was so worn that I might have known that the proprietors were opposed to this innovation.

Four or five clerks were writing at high desks in the room behind the frosted glass door with "Pink & Pink" on it. The clerks were all elderly but one, for one thing—gray-headed men. Since then I've met curates of about the same date. The curates astonished me even more than the clerks. A curate is such a perennially young person with us. You would find about as many aged schoolboys as elderly curates in America.

Beside the elderly clerks, the room had an air of old leather, and three large windows with yellow blinds pined up in these days of automatic rollers. Through the windows I noticed the cheerful chimneys and spires of London E. C., rising out of that lovely atmospheric tone of yellow which is so becoming to them; and down below, if I could only have got near enough, I am certain I should have seen a small, dismantled graveyard with mossy tombstones of different sizes a long way out of the perpendicular. I have become accustomed to finding graveyards in close connection with business enterprise in London, and they appeal to me. It is very nice of you to let them stay just where they were put originally, when you are so crowded. At home there isn't a dead person in existence, so to speak, that would have a chance in a locality like Cheapside.

The clerks all looked up with an air of enquiry when I went in, and I selected the only one who did not immediately duck to his work again for my interrogation. It was an awkward interrogation to make, and I made it awkwardly.

"Are the Mr. Pinks in?" I asked, for I did not know in the least how many of them wanted to see me.

"I believe so, Miss," said the elderly clerk, politely, laying down his pen. "Would it be Mr. A. Pink or Mr. W. W. Pink?"

"I said I really didn't know." "Ah! In that case it would be Mr. A. Pink. Shouldn't you say so?" turning to the less mature clerk, who responded loftily, from a great distance, and without looking:

"Probably." Whereupon the elderly one got down from his stool, and took me himself to the door with "Mr. A. Pink" marked on it, knocked, spoke to someone inside, then ushered me into the presence of Mr. A. Pink and withdrew.

Mr. Pink first carefully ascertained whether it was Miss Wick, of Chicago, after which he did not shake hands, as I had vaguely expected him to do, being poppa's solicitor, but said: "Pray be seated, Miss Wick!" and we both sat down in the revolving chairs, preserving an unbroken gravity.

"You have been in London some weeks, I believe, Miss Wick," said Mr. A. Pink, tentatively.

"He did not know quite how long, because for the first month I had plenty of money without being obliged to apply for it. I smiled and said "Yes," with an inflection of self-congratulation. I was very curious, but saw no necessity for giving more information than was actually asked for.

"Your—ah—father wrote us that you were coming over alone. That must have required great courage on the part of—here Mr. Pink cleared his throat—"so young a lady!" and Mr. Pink smiled a little narrow dreary smile.

"Oh, no!" I said, "it didn't, Mr. Pink!" "You are—ah—quite comfortable, I hope, in Cadogan Mansions? I think it is Cadogan Mansions, is it not? Yes?"

"Very comfortable, indeed, thank you, Mr. Pink. They are comparatively modern, and the elevator makes it seem more or less like home."

Mr. Pink brightened. He evidently wished me to be discursive.

"Indeed!" he said. "Ye-es?" "Yes," I returned, "when I have time I always use the elevator."

"That is not, I think, the address of the lady your father mentioned to us as your only relative in London, Miss Wick?" "Oh, no," I responded cheerfully. "Mrs. Cummers Porthers lives on Half Moon Street, Mr. Pink."

"Ah, so I understand. Pardon the inquiry, Miss Wick, but was there not some expectation on your father's part that you would pass the time of your visit in London with Mrs. Porthers?"

"On all our parts, Mr. Pink. But it vanished the day after I arrived,—and I could not help smiling as I remembered the letter I had written from the Metropole telling the Wick family about my reception by my affectionate relation."

Mr. Pink smiled too, a little doubtfully as well as drearily this time. He did not seem to know quite how to proceed.

"Pardon me, again, Miss Wick, but there must be occasions, I should think, when you would feel your—ah—comparative isolation," and Mr. Pink let one of his gray whiskers run through his long thin hand.

"Very seldom," I said, "there is so much to see in London, Mr. Pink. Even the store windows are entertaining to a stranger," and I wondered more than ever what was coming.

"I see—I see! You make little expeditions to various points of interest—the Zoological Gardens, the Crystal Palace, and so forth."

It began to be like the dialogues in the old-fashioned reading books, carefully marked "Q" and "A."

"Yes," I said, "I do. I haven't seen the Zoo yet, but I've seen Mrs. Por. There I stopped, knowing that Mr. Pink could not be expected to perceive the sequence of my ideas."

But he seemed to conclude that he had ascertained as much as was necessary.

"I think, Miss Wick," he said, "we must come to the point at once. You have not been in England long, and you may or may not be aware of the extreme difficulty which attaches—er—to obtaining—that is to say, which American—foreigners find in obtaining anything like a correct idea of—of social institutions here. To a person, I may say, without excellent introductions, it is, generally speaking, impossible."

"I said I had heard of this difficulty." "I do not know as to whether you, personally, have any curiosity upon this point, but—"

"I hastened to say that I had a great deal." "The question now resolves itself, to come, as I have said, straight to the point, Miss Wick, into whether you would or would not care to take steps to secure it?"

"That would depend, I should think, upon the nature of the steps, Mr. Pink. I may as well ask you immediately whether they have anything to do with Miss Purkiss?"

"Nothing whatever—nothing whatever!" Mr. Pink hastened to assure me. "I do not know the lady. The steps which have recommended themselves to me for you would be taken upon a—upon a basis of mutual accommodation, Miss Wick, involving remuneration, of course, upon your side—"

"Oh!" I said, comprehendingly.

"And in connection with a client of our own—an old, and, I may say, a highly esteemed"—and Mr. Pink made a little respectful forward inclination of his neck—"client of our own."

"I left the burden of explanation wholly to Mr. Pink, contenting myself with looking amiable and encouraging."

"A widow of Lord Bandobust," said Mr. Pink, with an eye to the effect of this statement.

The effect was bad—I could not help wondering how many Lord Bandobust had, and said:

"Lady Bandobust, somewhat late in life—this, of course, is confidential, Miss Wick—finds herself in a position to—to appreciate any slight addition to her income. His lordship's rather peculiar will—but I need not go into that. It is perhaps sufficient to say that Lady Bandobust is in a position to give you every advantage, Miss Wick—every advantage."

"What is her ladyship's charge?" I inquired.

"Lady Bandobust would expect £300. My client wishes it to be understood that in naming this figure she takes into consideration the fact that the season is already well opened," Mr. Pink said. "Of course, additional time must be allowed to enable you to write to your parents."

"I see," I said. "It does not strike me as exorbitant, Mr. Pink, considering what Lady Bandobust has to sell."

Mr. Pink smiled rather uncomfortably.

"You Americans are so humorous," he said, with an attempt at affability. "Well," drawing both whiskers through his hand conclusively, and suddenly standing up, "will you step this way, Miss Wick? My client has done me the honor of calling in person about this matter, and as your visits, oddly enough, coincide, you will be glad of the opportunity of going into details with her."

And Mr. A. Pink opened the door leading into the room of Mr. W. W. Pink. I was taken by surprise, but am afraid I should have gone in, even after time for mature deliberation—I was so deeply, though insincerely, interested in the details.

XIX.

"Lady Bandobust, may I have the honor of introducing Miss Wick, of Chicago?" said Mr. Pink, solemnly, bowing as if he himself were being introduced to somebody. "I could not do better. I am very glad, Miss Wick, than leave you in Lady Bandobust's hands," with which master-stroke of politeness Mr. Pink withdrew, leaving me, as he said, in Lady Bandobust's hands.

She was a little old woman in black, with sharp eyes and a rather large hooked nose and a discontented mouth, over which hovered an expression of being actively bored. Her whole appearance, without offering any special point for criticism, suggested that appreciation of any pecuniary advantage which Mr. Pink had spoken, though her manner gave me definitely to understand that she did not care one jot about it.

"I said it was a lovely day." "Mr. Pink tells me you are an American, Miss Wick; though anybody could see that much. He knows your father, I believe."

"No, personally, I think," I returned. "Poppa has never visited England, Lady Bandobust."

"Perhaps we had better say 'financially,' then—knows him financially."

"I dare say that is all that is necessary," innocently at the time, though I have since understood Lady Bandobust's reason for looking at me so sharply.

"You come from Chinchinnatti, I understand from Mr. Pink."

"I beg your pardon? Oh, Chinchinnatti! No; from Chicago, Lady Bandobust."

"I understood from Mr. Pink that you came from Chinchinnatti—the place where people make millions in tinned pork. I had a nephew there for seven years, so I ought to know something about it," said Lady Bandobust, with some asperity. "But if you say you are from Chicago, I have no doubt you are right."

Mr. Pink informed me, continued Lady Bandobust, "that he thought you might feel able to afford to see a little of English society. I've noticed that Americans generally like to do that if they can."

"I said I was sure it would be interesting." "It is very difficult," said Lady Bandobust—"extremely difficult. It is impossible that you should know how difficult it is."

I remarked modestly, by way of reply, that I believed few things worth having were easy to get.

Lady Bandobust ignored the generalization.

"As Mr. Pink has probably told you, it costs money," said she, with another little concessive smile.

"Then perhaps it is not so difficult, after all," I replied, amiably.

Lady Bandobust gave me another sharp look.

"Only you rich Americans can afford to say that," she said. "But Mr. Pink has told me that the expense would, in all likelihood, be a matter of indifference to your people. That, of course, is important."

"Poppa doesn't scrimp," I said. "He likes us to have a good time."

"Regardless," said Lady Bandobust—"regardless of the cost. That is very liberal. Americans," she went on, "in English society are very fortunate. They are always considered as—as Americans, you understand."

"I'm afraid I don't," said I.

"And I think, on the whole, they are rather liked. Yes, generally speaking, I think I may say they are liked."

I tried to express my gratification.

"As a rule," said Lady Bandobust, absently, "they spend so much money in England."

"There can be no doubt of the advantages of an experience of English society," she continued, rather as if I had suggested one. "To a young lady especially it is invaluable—it leads to so much. I don't know quite to what extent you could expect—"

Here Lady Bandobust paused, as if waiting for data on which to proceed. "I repeated, not quite understanding."

"But I think I could arrange a certain number of balls—say four; one or two dinners—you wouldn't care much about dinners, though, I dare say; a few good 'at homes'; a Saturday or so at Hurlingham—possibly Ascot—but of course, you know, everything would depend upon yourself."

I could hardly expect you to make me enjoy myself, Lady Bandobust," I said. "That altogether depends upon one's own capacity for pleasure, as you say."

"Oh, altogether," she returned. "Well, we might say six balls—thoroughly good ones—and Lady Bandobust looked at me for a longer time together than she had yet—"and possibly the Royal Inclosure at Ascot. I say 'possibly' because it is very difficult to get. And a house-party to finish up with,

which really ought to be extra, as it doesn't properly belong to a London season; but if I can at all see my way to it," Lady Bandobust went on, "I'll put it into the three hundred. There are the Allspices, who have just bought Lord Freerton's place in Wilts—I could take anybody there!"

"Your friends must be very obliging, Lady Bandobust," said I.

"The 'private view' is over," said Lady Bandobust, "but there is the Academy Soiree in June, and the Royal Colonial Institute, and a few things like that."

"It sounds charming," I remarked.

"We might do something about the Four-in-hand," Lady Bandobust continued, with some impatience.

"Yes?" I said.

Lady Bandobust produced her last card.

"The Duchess of Dudlington gives a *fete* on the twelfth," she said, throwing it, as it were, upon the table. "I should probably be able to take you there."

"The Duchess of Dudlington?" said I, in pure stupidity.

"Yes. And she is rather partial to Americans, for some extraordinary reason or another."

The conversation flagged again.

"Presentation, if that is what you are thinking of, would be extra, Miss Wick," Lady Bandobust stated, firmly.

"Oh!—how much extra, Lady Bandobust?"

"My prospective patroness did not hesitate a minute. Fifty pounds," she said, and looked at me inquiringly.

"I—I don't think I was thinking of it, Lady Bandobust," I said. "I felt mean, as we say in America."

"You were not? Well," said she, judicially, "I don't know that I would advise the outlay. It is a satisfactory thing to have done, of course, but not nearly so essential as it used to be—nothing like. You can get on without it. And, as you say, fifty pounds is fifty pounds."

I knew I hadn't said that, but found it impossible to assert the fact.

"Miss Boningsbill, whom I took out last season, I did present," Lady Bandobust continued; "but she went in for everything—perhaps more extensively than you would be disposed to do. It might facilitate matters—give you an idea, perhaps—if I were to tell you my arrangements with Miss Boningsbill."

"I should like to hear them," I said.

"She did not live with me, of course, chaperonage does not imply residence, you understand that. When she went out with me she called for me in her brougham. She had a distinctly advise you to do the same. I would, in fact, make the arrangement for you. I know a very reliable man."

Lady Bandobust paused for my thanks.

Generally speaking, Miss Boningsbill and I went out together; but when I found this particularly inconvenient she took one carriage and I the other, though she always had her choice. I stipulated only to take her to the park twice a week, but if nothing interfered I went oftener. Occasionally I took her to the play—that bores me, though. I hope you are not particularly fond of the theatre—and then she usually found it less expensive to get a box, as there were generally a few other people who could be asked with advantage—friends of my own."

"She had a box at Ascot, too, of course," Lady Bandobust went on, looking down her nose at a fly in the corner of the window pane, "but that is a matter of detail."

"Of course," I said, because I could think of nothing else to say.

"I gave her a ball," Lady Bandobust continued; "that is to say, cards were sent out in my name. That was rather bungled, though, as so many friends of mine begged for invitations for friends of theirs that I didn't know half the people, and Miss Boningsbill, of course, knew nobody. Miss Boningsbill was dissatisfied about the cost, too. I was foolish enough to forget to tell her beforehand. Everything came from my own particular tradespeople, and naturally nothing was cheap."

"I saw a nigger," said Lady Bandobust, turning her two little indifferent black eyes full upon me.

"Miss Boningsbill insisted on having her name on the cards as well," she said; "Lady Bandobust and Miss Boningsbill, you understand. That I should not advise—very bad form, I call it."

"She was married in October," Lady Bandobust continued, casually. "The second son of Sir Banbury Slatte—the eldest had gone abroad for his health. I knew the Banbury Slattes extremely well—excellent family. Miss Boningsbill! Lady Bandobust went on, absently, "had nothing like your figure."

"And now, with regard to our little scheme, what do you think, Miss Wick?"

"Really, Lady Bandobust," said I, "I am afraid I must think about it."

A decided negative was an utter impossibility at the time.

"Ah!" said Lady Bandobust, "perhaps you think my terms a little high—just a trifle more than you expected, perhaps. Well, suppose we say two hundred and fifty!"

"I had no expectations whatever about it, Lady Bandobust," I said; "I knew nothing about it up to about an hour ago."

"Two hundred," said Lady Bandobust.

"I'm afraid I have no idea of the value of—of such things, Lady Bandobust," I faltered.

"I can bring it as low as one hundred and fifty," she returned, "but it would not be quite the same, Miss Wick—you could not expect that."

XX.

The rest of the conversation, which I find rather painful to call to memory, may perhaps be imagined from the fact that Lady Bandobust finally brought her offer down to seventy-five pounds, at which point I escaped, taking her address, promising to write her my decision in the course of a day or two, and feeling more uncomfortably contemptible than ever before in my life. We happened to be making visits in Park Lane next day, and as Lady Bandobust lived near there I took the next myself, thinking it would be more polite. And I found the locality, in spite of its vicinity to Park Lane, quite extraordinary for Lady Bandobust to have apartments in.

I met Lady Bandobust once again. It was at an "at home" given by Lord and Lady Mafferton, where everybody was asked "to meet" a certain distinguished traveler. Oddly enough, I was introduced to her, and we had quite a long chat. But I noticed that she had not caught my name as my hostess pronounced it—she called me "Miss Winter" during our whole conversation, and seemed to have forgotten that we had ever seen each other before. Which was disagreeable of her, in my opinion.

I went to Ascot with the Bangley Coffins—Mr., Mrs., and the two Misses Bangley Coffin. I didn't know the Bangley Coffins very well, but they were kind enough to ask Lady Torquillin if I might go with them, and Lady Torquillin consented with alacrity.

"You couldn't go away from England without seeing Ascot," said she. "It would be sin! It's far too much riot for me; besides, I can't bear to see the wretched horses. If they would only learn to race without beating the poor beasts! To say nothing of the expense, which I call enormous. So by all means go with the Bangley Coffins, child—they're lively people—I dare say you'll enjoy yourself."

Lady Torquillin was surprised and disappointed, however, when she learned the party would go by train.

"I wonder at them," she said, referring to the Bangley Coffins, "they know such a lot of people. I would have said they were morally certain to be on somebody's drag. Shall you care to go by train?"

Whereupon I promptly assured Lady Torquillin that I was only too happy to go any way.

So we started the morning of the Gold Cup day—I and the Bangley Coffins. I may as well describe the Bangley Coffins, in the hope that they may help to explain my experiences at Ascot. I have to think of Mrs. Bangley Coffin very often myself when I try to look back intelligently upon our proceedings.

[TO BE CONTINUED.]

"Old Songs."

What memories are sometimes conjured up by "old songs!" There is a subtle charm and power in music which seems to belong to it alone. In those who feel music naturally, this charm and power work very vividly. Often one special air or chord will recall, with almost cruel force, some lost scene or loved one, whilst other airs, reminiscences of the same time, will make but a faint impression. It is like with some flower, picture, poem, or even perfume; but I think music has the strongest influence of this kind, it being so eminently emotional.

How can we be sure of what this sweet girl is thinking! She is young, so we must hope she has not had much of life's burden to bear. Perhaps she is only first trying over a few of the "old songs" mother or grandmother used to sing. As to whether she is a young lady of our modern times it is hard to say; for in these days of so many revived old fashions in dress, who can tell? True, the piano is old, evidently, but one sees such in many homes.

Whether of far-off or modern times, however, there is still a touch of sadness over this pretty picture of "Old Songs," seeming to speak of some hidden chord which strikes that young heart and brings that grave expression to the sweet, earnest face.

MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES,—

More than 5,000 years ago a young man gave to his friends the following riddle, which doubtlessly you all know the answer to—Here is the riddle: "Out of the strong came forth sweetness." Of course this means honey. It is Sampson's riddle. Let us think a little about this sweetness for which we are indebted to such a tiny creature as the bee.

Honey was probably the first sweet article known to man, for it is very frequently mentioned in the Sacred Writings. In olden times it was associated with many rites: It was mixed in the sacred water sprinkled on the newly-born child; it was used, too, at wedding feasts and at New Year rejoicings, and was also offered to the dead. In England, before tea was heard of, the favorite drink was mead, which was composed of honey and water. Even yet we speak of the "honeymoon," which is so-called because of the ancient practice of drinking mead for a month after a wedding. It used to be the custom in some parts of England to "tell the bees" of a death in the family.

Honeybees were brought to America from Cashmere and the north of India generally. The Indians of America called them "the white man's fly," and said that "as the bee advanced, the Indian and the buffalo retired." Certain it is, they have been the

is a great honey producer. Its pollen, adhering to the bee, gives a yellow tinge both to comb and honey, and golden-rod honey is said to be thicker than other kinds and to granulate more easily. Other favorite blossoms of the bee are the apple, raspberry, maple, buckwheat, and wild aster, while "down south" the bees seek out the orange, palmetto, and cotton. Sometimes honey has a very undesirable flavor on account of the bee selecting objectionable blossoms, such as the alder and the wild onion. But this is not all. Some plants give to honey not only disagreeable but positively poisonous qualities. Xenophon tells us that his soldiers, having eaten honey near Trebizonde, became very sick. This was attributed to the laurel and azalea growing there, to which the bees had access. A strange feature about this is that the bees themselves seem none the worse of the nectar which they collect from those blossoms.

A scientist in France is trying an experiment by which he hopes to do away with medicines, and to use instead, medicated honey. He has a number of bees which are obliged to gather nectar from certain plants only: the honey from these plants is labelled and is supposed to be as efficacious as other extracts from the same plants. It is doubtful if this Frenchman will succeed in superseding medicine, but if he do, how many children, aye, and older folks too, will arise and call him blessed!

Honey is so delicious in its natural state that there is little need for its culinary use. In "Sing a Song of Sixpence," the Queen used it with bread, for we know that she was "down stairs eating



"OLD SONGS."

Do It Well.

BY CLEM. V. WAGNER.

While the many are looking about for the road to good fortune, there are some who seem to walk steadily ahead toward the desired goal, without any apparent effort to discover the coveted way. It would be difficult to say in just what the secret of their success consists, but to an observer it would seem to be their readiness, watchfulness, and above all, their effort to do their best in the smallest particular. These qualities grant a royalty to their possessors that will, sooner or later, bring them into recognition.

No matter what may be the starting place, the rule is ever the same. He who keeps to his work, and does that work well, is starting toward the top, whether his duty consists in rolling clods or making books, in selling prints and laces, or in drumming away at some profession.

Two lawyers, engaged in a hotly-contested case, became somewhat personal in their running cross-fire of remarks.

"I believe," said one, with a meanness of spirit, "that you once drove a milk wagon in this town."

"Yes, sir," quickly retorted the other, "and I sold good milk. I did my work well."

And that is the spirit that conquers. No matter whether it is driving a milk wagon, or what not, he who keeps honest and does his work well is the good workman, and the good workman need never blush to own his work.

heralds of civilization, steadily moving west as people went west. The old Western settlers give the exact year when the first bee crossed the Mississippi, but the date is not really known. It is said to have been about 100 years ago, and they reached California about the time that the gold-seekers arrived there. This state—California—appears to be a leading place in the honey-producing way. The well-known actress, Madame Modjeska, possesses a honey farm there of 600 hives, and finds it a good investment.

The ancients used honey as a basis for many beverages, etc., as we may see when we remember that the Latin word for honey is *mel*. Hence we have *hydromel*, a beverage of honey and water, and *oxymel*, a mixture of honey and vinegar, used as a demulcent. Then we have *mel* in such words as *melada* (crude sugar), *mellic* grass (found in Britain and much liked by cattle), and *melilot* (a plant of the clover species, used as fodder). And to-day we still use honey as freely as they did in days of old, not only as a table delicacy, but medicinally. It should be considered as a food more than a relish, and is said to be more desirable than cane sugar for persons of weak digestive powers. The sweet juice of the flowers is like that of cane sugar, but is rendered easier of digestion by the aid of the bee. The quality of honey is affected by the nature of the plants from which it is obtained. The famous honey of Hymettus derives its excellence from the wild thyme which grows so plentifully on the mountain-sides. The beekeeper, of course, depends upon clover for the finest honey. Golden-rod, too,

bread and honey," and no doubt she enjoyed it as much as any of her subjects would. It is said that fruit can be preserved by packing in jars and filling all the spaces with honey, and my younger nieces will be glad to know (if they are not already aware) that a little honey added to candies is an improvement. Nearly all of us have a "sweet tooth," and so nearly all of us like honey.

Now, I wish to talk just for a moment about another side of this sweetness. Do not let all the honey and all the sweetness remain in the hive, but take it into the home. Do not keep it all in the cupboard, but bring it into all the rooms—let it be everywhere—make the home a hive of sweetness too. Let us emulate that little creature, the bee, in its life of sweetness. That we may all try not to collect sweetness, but to diffuse it wherever we go, is the wish of—
Your loving old auntie,
MINNIE MAY.

A clergyman was annoyed by people talking and giggling. He paused, looked at the disturbers, and said: "Some years since, as I was preaching, a young man who sat before me was constantly laughing, talking and making uncouth grimaces. I paused and administered a severe rebuke. After the close of the service a gentleman said to me, 'Sir, you made a great mistake; that young man was an idiot.' Since then I have always been afraid to reprove those who misbehave themselves in chapel, lest I should repeat that mistake and reprove another idiot." During the rest of the service there was good order.

EXECUTORS' SALE

(F. W. Stone Estate Farms),
ON SATURDAY, MARCH 4th, 1899.

The remaining farms of the F. W. Stone Estate, Guelph, will be offered for sale by Public Auction, at the front door of the City Hall, Guelph, at 12 o'clock noon. The farms consist of the Moreton Lodge Farm of 300 acres, adjoining the Ontario Agricultural College, with fine large stone stables, stone dwelling house, two large barns, and good outbuildings. The Guelph Electric Railway line runs within three minutes' walk from the house. Thirty-three acres of land on the opposite side of the road from this farm, and in the Ontario Agricultural block. And the Plains Farm of about 247 acres situated at Arkell village, where there is a station on the Canadian Pacific Railway, from which Guelph could be reached in ten minutes, and having on it a house and large barn with stabling accommodation for a large number of cattle. These farms are in excellent condition, a very large herd of cattle having been kept on them for many years. Terms—Ten per cent. cash; balance of half of the purchase money within thirty days; remainder on mortgage as may be arranged.

F. W. STONE ESTATE,
GUELPH, ONTARIO.

NICHOLSONS,

OF SYLVAN, ONT.,
Will offer for Sale, by Public Auction,
at their farm, on

The Eighth (8) of March, 1899,
30 Head of Shorthorns,

20 females and 10 bulls. Our herd has produced more prizewinners during the last 12 years, at the leading shows in Canada, than any herd in the Dominion. The present offering is a fair representation of the herd. Terms: 12 months credit on approved paper. Location, 5 miles south-west of Parkhill Station, G. T. R. Evening before a morning of sale.

CATALOGUES READY 1ST FEBRUARY.
R. & S. NICHOLSON, Sylvan, Ont.
Capt. T. E. ROBSON, Ilderton, Auctioneer.

YORKSHIRES AND COTSWOLDS

Young Boars and Sows on hand now; also well-covered shearing and two-shear Rams, and half a dozen Ram Lambs.

R. HONEY,
Warkworth, Ont.

PINE GROVE FARM HERD OF LARGE YORKSHIRES.

Imported and Canadian-bred, from the Hackett family, which has taken more prizes at the leading fairs in Canada and the World's Fair at Chicago than any other family of Yorkshires in America. Young boars and sows fit for breeding for sale. Correspondence solicited, which will receive prompt attention.

JOSEPH FEATHERSTON, Streetsville, Ont.

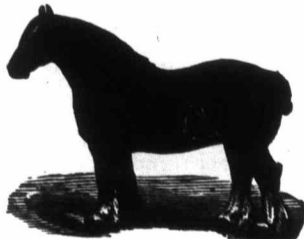
4 HOLSTEIN-FRIESIAN BULLS

from 9 to 12 months old, of choice breeding.
Apply to—**William Suhring, Sebringville, Ont.**

FOR SALE... IMPORTED AND CANADIAN-BRED

Clydesdale Stallions

From One to Four Years Old. Also



SEVERAL THREE YEAR OLD FILLIES,

All registered and warranted sound. Inspection invited.

ROBT. DAVIES,
Thorncliffe Stock Farm, TORONTO.

COACH STALLION For Sale.

The aged stallion, King Fairfield. Sound, gentle, and sure; is an AI stock horse. He is half-brother to Princess Royal, the silver medal mare at Toronto this year, and grandsire of Prince George, winner of the silver medal for the best stallion, any age, at Toronto this year. Will be sold cheap.

W. C. BROWN, MEADOWVALE, ONT.
Meadowvale Station, C. P. R.

.. AUCTION SALE ..

— OF —

Jerseys, Cotswolds, Berkshires

AT SNELGROVE, ONTARIO, MARCH 13th, 1899

(ESTATE OF THE LATE J. G. SNELL).

CATTLE—One registered Jersey Bull (yearling), grandson of a 20-pound cow; Six registered Jersey Cows; Five Grade Jersey Cows; Two Grade Jersey Heifers.

SHEEP—Four registered Cotswold Ewes; Ten registered Ewe Lambs; Five registered Yearling Rams.

SWINE—One imported sow, Premier Belle, aged; One yearling Sow, by Victor XII. (will make show sow); Two Boars out of imported Premier Belle, sired by Imp. Hiawatha, four months; One registered Boar, ten months; One registered Sow, yearling; One registered Sow, eight months; One registered Boar, eight months; Two registered Boars, ten months; One registered sow under one year.

FIVE HORSES and FOUR COLTS. All Farm Implements, Grain, etc., will be sold at the same time.

TERMS: Seven months credit on approved notes.

JOHN SMITH, AUCTIONEER, BRAMPTON. **J. G. SNELL ESTATE, SNELGROVE, ONT.**
Railway Stations: Snelgrove, C. P. R., two miles; Brampton, C. P. R. and G. T. R., four miles.

AUCTION SALE

OF THE Valley Home Herd OF

SHORTHORN CATTLE

On Wednesday, March 22nd, 1899, at our farm one mile from Meadowvale Station, C. P. R.

OUR entire herd of Shorthorns, consisting of 30 head, comprising such well-known Scotch families as Nougarells, Minas, Jilts, Ceclinas, Bessies, and Duchesses of Gloster. Sired by the best imported Cruickshank and Campbell bulls. Among the lot are some very fine show animals, bred from imported stock, as well as cows that are very heavy milkers. The young things are a choice lot, sired by such imported bulls as British Statesman, Comet, Golden Crown, and Grand Sweep. In all ten bulls will be offered, also the imported bull, British Statesman, a first-class show bull, bred from one of the best milking strains in Scotland. See Catalogue, which will be sent on application. All will be sold under reserve, as Mr. Pearson is giving up farming.

JOHN SMITH, M. P. P., S. J. PEARSON & SON,
Auctioneer, BRAMPTON. MEADOWVALE, ONT.

DO YOU WANT TO BUY

CLYDESDALE

Stallion, Brood Mare, or Filly?

If so, it will be to your interest to correspond with us. We have them of all ages and of the best breeding strains. In the pedigrees will be found the names of such sires as Grandeur, Macgregor, Macpherson, Darnley, and Good Hope.

I. DEVITT & SONS, FREEMAN P.O.
Farm quarter mile from Burlington Station, G. T. R.; nine miles from Hamilton, C. P. R.

CLYDESDALES, HACKNEYS, COACH HORSES.

Alex. Galbraith, J. ANESVILLE, WISCONSIN.

OFFERS A SPLENDID SELECTION OF EACH BREED AT PRICES TO SUIT THE TIMES.

His Clydesdales are an extra choice lot, possessing great substance and weight, with excellent quality, and of the most fashionable breeding. Call and select early, if you want a Toronto prizewinner.

CLYDESDALES

We have several imported Clyde mares 8 and 10 years old for sale at moderate prices. Some of them in foal to Grandeur. An imported Hackney mare in foal to Square Shot. Also Ayrshire bull and heifer calves. Write for prices or come and see.

D. & O. SORBY, GUELPH, ONT.

CLYDESDALES, AYRSHIRE and POULTRY.

We are now offering a limited number of imported stallions and mares, and booking orders for young Ayrshires from our show cows. Shetland ponies and fancy poultry. **R. Ness & Sons, Howick, Que.**

CLYDESDALE STALLIONS FOR SALE
Prizewinners of such noted breeding as Prince of Wales and Darnley. For particulars, write—
Kelly Siding, JAS. HENDERSON, G. T. R. BELTON, ONT.

THOROUGHbred STALLION, "Monotony," to Change Hands.

The Thoroughbred saddle and carriage horse sire, Monotony, sired by Monticello, is for sale. He stands 16 1/2 hands, weighs 1,300 pounds, is a model of beauty, with good action, and is bred "in the purple." For extended pedigree, price, etc., write his owner—
F. J. GALLANOUGH, V. S., Thornhill, Ont.

Three Imported CLYDESDALE STALLIONS.

One a winner at the Royal Northern Show, 1898. For particulars, address—
GEORGE ISAAC, BOWMANTON, ONT.
Cowburg Station, G. T. R.

For Sale A Pure-bred Clydesdale Stallion

Turn of the Tide (2403), Vol. X., coming 4 years old, weighing over 1,700 lbs. For particulars, address—
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SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Imported Blue Ribbon—17495—and the famous Money-tuffel Lad—20521. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply
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AM OFFERING
Seven Splendid Young Bulls, 4 TO 11 MONTHS OLD.
Two descended from Waterloo Daisy (World's Fair dairy test), balance Missie and Lady Jane strain, and by Kineller of York; as well as a few cows and heifers equally well bred.

F. MARTINDALE, YORK, ONT., Caledonia Stn., Haldimand Co.

W. R. BOWMAN, MT. FOREST,

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12 Thoroughbred Shorthorn Cows and Heifers (reds and roans). Also, a 10-months Jersey Bull, solid color and richly-bred, for \$35.
YORKSHIRE and BERKSHIRE BOARS ready for service, at \$10 each. Sows due to farrow in April and May, at \$12 each. Two-months pigs, of either breed, for \$6 each.

All stock registered and shipped C. O. D.

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15 SHORTHORN BULLS with Scotch-topped pedigrees. Splendid reds and roans, and sired by Valkyrie 2186, and out of dams by Young Abbotsbury's Heir 15947 and Imp. Mariner 2720. Also a few good females of all ages and in good form. Farm one mile from depot.

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It has proved a clincher to thousands to know that the

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has been endorsed by men of such standing and reputation as W. E. H. Massey, Hon. John Dryden, H. L. Hutt, Prof. Jas. Fletcher, Prof. Wm. Saunders, Wm. M. Orr, L. Woolverton, W. F. Hodson, Alex. McNeil, and the most prominent Fruit-growers and Brewers in Canada.



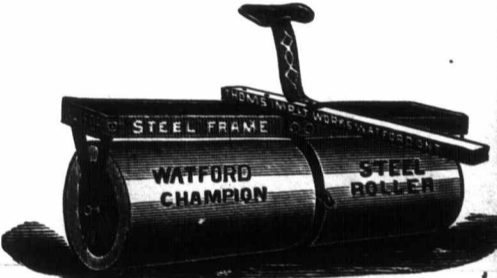
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CERTIFICATE OF JUDGES' AWARD:
THIS IS TO CERTIFY that at the contest of Spraying Apparatus held at Grimby, under the auspices of the Board of Control of the Fruit Experimental Station of Ontario, in which there were seven contestants, the SPRAMOTOR made by the Spramotor Co., of London, Ont., was awarded FIRST PLACE.
**H. L. Hutt, } Judges.
M. Pettit, }**

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SPRAMOTOR CO.,
357 RICHMOND ST., LONDON, ONT.

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There are many different styles of roller. Weight from 6 to 1,200 pounds. We herewith show you a cut of our up-to-date Champion Roller, with special pattern of end. So constructed as to prevent dirt from falling inside of drums.



CHAMPION STEEL ROLLER.
Weight about 1,200 lbs.; Steel Frame; Removable Bottom; low hitch to prevent weight on horses' necks, only the tongue wood. All we ask is comparison; your judgment will do the rest.

Thom's Implement Works, - Watford, Ont.
ESTABLISHED 1875.
Lookout for cut of our Watford Champion Disk Harrow in next issue.

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OFFERS FOR SALE TEN CHOICE SHORTHORN BULLS

from seven to twelve months, served by imported bull, Golden Fame—20150—; also, a few cows with calves at foot. Farm 6 miles from Hamilton. Catalogue sent on application. Visitors met at G. T. R. or C. P. R. if notified.

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The man of vigor, the woman of energy, are the winners in life's race. The struggle is hard and tiresome but DR. WARD'S BLOOD AND NERVE PILLS will give you energy, vigor, health and strength to conquer obstacles and make life happy and healthy. Here is proof;—

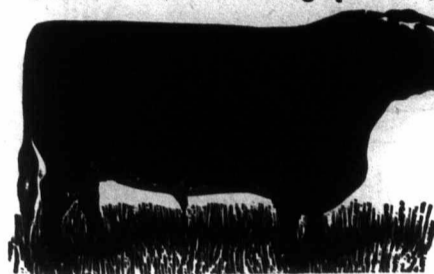
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17 FIRST-CLASS SHORTHORN BULLS
Big, good, and in fine form. Also cows and heifers of various ages. All of which will be sold at moderate prices. Send for catalogue.
BERKSHIRE BOARS AND SOWS FOR SALE
Claremont Station, C. P. R.
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Ten Shorthorn Bulls FOR SALE,

Seven red and three roan, from 10 to 16 months old. In a herd of 95 head, no white calves since 1892.
THE HERD HAS PRODUCED
such bulls as Topman, Banker, Lord Stanley, and Moneytuffel Lad, all of them
1ST PRIZE and SWEEPSTAKE WINNERS
at the principal shows of Canada and the United States. Also, three 1st prize herds out of five at Chicago, 1893.
A Yonge street trolley car leaves the Union Station, Toronto, to C. P. R. crossing, north Toronto; a car leaves here for Richmond Hill, four times a day, passes the farm.
-om
J. & W. RUSSELL, RICHMOND HILL, ONT.

SHORTHORNS

OF THE
Crimson Flower and Minnie Strains

And from such sires as Scotchman 2nd, Duke of Lavender, Premier Earl, Indian Chief, and Clan Campbell. A few splendid young bulls ready now. Cotswold sheep.
DAVID BIRRELL,
-om Greenwood, Ont.

Shorthorns Bull 3 years old, Tofthills Boy, by imp. Tofthills, out of a Canadian Duchess of Gloucester cow. Bull 15 months, by Tofthills Boy, out of a cow
Yorkshires Sows and boars 4 by Victor Hugo.
Yorkshires to 5 months old, out of a Brethour sow, by a Featherstone boar.
POULTRY—Golden and Silver Wyandottes, Barred and White P. Rocks, cockerels and pullets.
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JAS. LENTON, Park Farm, Oshawa, Ont.

SHORTHORNS

5 BULLS 5 HEIFERS 5
Sired by Revenue 21052 and Oxford (imp.) 2725, and out of grandly-bred dams. Farm one-half mile from station: C. P. R. and G. T. R. -om
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W. G. PETTIT & SON,
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Twelve choice young Shorthorn Bulls by Indian Statesman = 23004 =. Fifteen young Cows and Heifers with calves by side, or forward in calf. Twelve yearling Shropshire Ewes, sired by imported ram Flashlight; also Berkshire Boars and Sows of all ages. All of which will be sold at moderate prices. Farm half mile from Burlington Station, G. T. R. -om
FOR SALE! Three Choice Young BULLS,
Red and roans. Imported Prime Minister heads my herd. -om
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Imp. Baron Blanc 11th at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.
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In Bulls I am prepared to dispose of a dozen fine, healthy, and grandly bred, growthy fellows, reds and roans. In Females anything I have on hand I will price; many of which are by imported Kinellar Sort (64209) 18951. Correspondence Invited and Visitors Always Welcome.
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ROBERT MILLER,

STOUFFVILLE, ONT..
Importer and Breeder of
Shorthorns and Shropshires
Offers young bulls and heifers, rams and ewes of the most approved breeding and finest quality, at moderate prices.
Station, Telegraph, Telephone, Post Office, three minutes' walk.

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8 SHORTHORN BULLS 8

Reds and roans, by St. Louis (a Morton-bred bull), and from our best cows reserved from sale. Also a few females of all ages.
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7 - SHORTHORN BULLS - 7

SCOTCH BREEDING.
Good growthy ones from 5 to 15 months. Also an aged bull. Would spare a few heifers. Prices very moderate. Write—
-om
SHORE BROS., White Oak, Ont.

SHORTHORN CATTLE.

Good young bulls of Scotch breeding and a desirable lot of heifers for sale.
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Exeter Station, G. T. R., half mile from farm. -om

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Rose Cottage Stock Farm, Thedford, Ont.,
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2 SHORTHORN BULLS, one 3 years old and one 14 months; also five heifers 2 years old, sired by Great Chief = 16998 =. -om

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HERD ESTABLISHED IN 1872.
Such sires as imported Royal George and imported Warfare have put us where we are.
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HAWTHORN HERD

OF DEEP-MILKING SHORTHORNS.
FOR SALE: 4 young bulls of the choicest breeding and good quality, and from A 1 dairy cows.
Wm. Grainger & Son, - Lonsdale, Ont.

Highland Park Herd of Shorthorns, Berkshire

Are strictly up-to-date in style, quality and breeding. Present offerings: Three young Bulls, young Boars and Sows of various ages.
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FOR SALE:

Four Shorthorn bulls, three Berkshire boars, seven Southdown and Leicester rams; females all ages; and B. & W. Leghorns. Write or come and see.
-o
E. JEFFS & SONS, Bondhead, Ont.

FOR SALE!

2 REGISTERED SHORTHORN BULLS twelve months old, sired by the sweepstakes bull, Moneytuffel Lad.
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GOSSIP.

S. J. PEARSON & SON'S SALE OF SHORTHORNS.

The announcement of the dispersion sale of the Valley Home Herd of Messrs. Pearson & Son, of Meadowvale, Ont., on March 22nd, is made in our advertising columns. A glance over the advance sheets of the catalogue shows that the sale will be made up of exceptionally well-bred cattle, and an inspection of the herd proves that, as a rule, the cattle are as good as their pedigrees; the half dozen yearling bulls, of suitable age and size for service, being an especially good lot, while the yearling and two-year-old heifers include a number of exceedingly meritorious animals. Most of these are sired by the grand imported bull, British Statesman, bred by the late Mr. Sylvester Campbell, of Kinellar, Aberdeenshire, sired by the Cruickshank bull, Royal James, and out of Red Bessie, by Gladstone. British Statesman ranks among the very best bulls in the Dominion, being one of the good, big sort, full of substance and quality combined. He has a model head, a full and prominent brisket, stands wide between his fore legs, has deep and well-sprung ribs, a strong loin, long level quarters, long and broad thighs, and a broad, full twist. He stands well on his legs, is active and useful, has a mild, quiet disposition and has proved a capital breeder. Among the yearling bulls is Scotch Statesman, a rich roan 17-months-old son of imp. British Statesman, and of imp. Mina Lass, by Gravesend. He is a strong, chirpy young bull of fine character and quality, and promising to make a useful sire, as have all the bulls bred by this grand old cow. Her son, Mina Lad, was sold as a two-year-old for \$325 when Shorthorns were selling at low prices, and proved a very impressive sire. Gloster Statesman is a handsome and thick-fleshed roan, 12 months old, got by British Comet, a son of British Statesman, and of Nonpareil 30th, a richly-bred cow of the excellent family of that name. This young bull has all the qualities of a show bull, reminding one of his paternal ancestor Stanley, a Toronto champion, and sire of the World's Fair champion, Lord Stanley. The red-roan Royal Champion, 15 months old, is being used in the herd for service of the daughters of British Statesman. He is a thick, sappy son of imp. Grand Sweep = 17009 =, and of Canadian Duchess of Gloster 18th, by imp. Knight of the Garter, and combines all the elements of a promising sire. Royal Statesman is a red 13-months-old son of British Statesman, and out of the grand cow, Sowerby's Lass, by Mina Lad. This is a low-set, blocky, thick-fleshed bull, well-filled in all his parts, and good enough to go into any herd or to make a show bull. Among the bull calves is a very fine youngster of five months, by British Statesman, and out of Nonpareil 30th. Among the females, which are made up of representatives of the well-known and popular Scotch families, Nonpareils, Minas, Cecelias, Jilts, etc., first-class Scotch-bred bulls only having been used in their breeding. Special mention may be made of the excellent two-year-old heifers, Nonpareil 50th, by British Statesman, out of Nonpareil 39th, and Mina Lass 10th, by the same sire and out of imp. Mina Lass, a pair which would do credit to any herd in the Dominion, being of the low-set, blocky, thick-fleshed sort so much in favor at the present time. Nonpareil 51st, Nonpareil 53rd and Jubilee Jilt are a beautiful trio of yearling heifers, of similar character, by imp. British Statesman, and bred straight from well-known and favorite Scotch families in the herd of the late Mr. Campbell, of Kinellar. Cecelia 12th is a useful three-year-old cow of one of the best of the Cruickshank families, and sired by British Statesman. The grand old imported cow, Mina Lass, who has bred 10 calves, and all good ones, several having sold for high prices, will be in the sale, as also the broad, blocky, thick-fleshed Sowerby's Lass, by Mina Lad, and from one of the best families in the Sheriff Hutton herd, having the benefit in her breeding of several of the prize-winning bulls at the Royal Show. She has proved a capital breeder and mother, and is only 5 years old. A useful lot of breeding cows of the same good families, in breeding condition, being heavy milkers and raising calves of both sexes, some of which will be sold with their dams. This sale will afford an opportunity to get good cattle of first-class breeding, and that is what is needed all over the country. The catalogue will be ready for mailing about March 1st, and all interested should send for it. Meadowvale is easy of access, being a station on the Orangeville and Tecumseh branch of the C.P.R., only two miles from Streetsville Junction, one mile from the farm, and five miles from Brampton, G.T.R.

GRAPE GRANGE FARM.

Aberdeen (Polled) Angus Bulls, Cows, and Heifers.
C. W. HARTMAN,
CLARKSBURG, - ONTARIO.

SCOTCH-TOPPED SHORTHORNS.

Am offering five young bulls, four of which are by Guardsman, the sire of St. Valentine, champion for three years in succession in the United States. The fifth is out of a Guardsman dam. Also a few cows and heifers, mostly by Guardsman.
JOHN GARDHOUSE, HIGHFIELD, ONT.
Weston Station, G. T. R. and C. P. R. -om

ASHTON FRONTVIEW FARM

A. J. Watson, Castlederg, Ont.
Shorthorn heifers, by Statesman; and Berkshires 8 weeks old, by Baron Lee; also one Baron Lee boar 10 months old. -o

Shorthorn Bulls

From 9 to 12 months old; all reds, of good quality; and the 4-year-old bull, Elvira's Saxon 21064, is of superior quality, and in finest possible form. R. MITCHELL & SON, Burlington Station, Nelson P. O. -o

SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.
JAS. TOLTON, WALKERTON, ONT.

6 Shorthorn Bulls

from 7 to 14 months old, of choice breeding. Apply to J. R. McCALLUM, Iona Station, Elgin County, Ont. -om

BRAMPTON JERSEY HERD.

Offering high-class A. J. C. C. cows and heifers in calf, and heifer calves; 9 choice young bulls. High-grade cows in calf; and Berkshires.
B. H. Bull & Son,
-om BRAMPTON.

DON JERSEY HERD.

Offering choiced young Bulls and Heifers by Costa Rica's Son.
DAVID DUNCAN,
DON, ONTARIO.
Nine miles from Toronto Market. -o

Willow Grove Herd of Jerseys

Offering: Eight females, to calve shortly; three bulls, out of tested cows; four heifer calves. Prices right. Come and see them.
J. H. SMITH & SON,
-om HIGHFIELD, ONT.

ST. LAMBERT OF ARCFOST 36943

whose sire was 100 Per Cent.; dam, St. Lambert's Diana 69451. Official test, 18 lbs. 6 ozs. in seven days. A few choice young bulls and heifers rich in his blood, from deep and rich milking dams, for sale at moderate prices. Tuberculin tested. H. E. WILLIAMS, Sunnyside Farm, -o Knowlton, P.Q.

GLEN ROUGE JERSEYS.

WILLIAM ROLFE, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 22-y-om

INGLESIDE HEREFORDS.

UP-TO-DATE HERD OF CANADA!

TAMWORTHES

Orders booked for Spring Pigs. Pairs not akin.
Send for Illustrated Catalogue. Address,
H. D. SMITH, COMPTON, QUE.

Choice Ayrshires and Poultry

FOR SALE.
A number of fine Ayrshire Bulls fit for service, sired by Jack Morton, and from heavy milking dams, and a few heifers. Also, choice birds in Barred Rocks, Black Spanish, and Rouen and Cayuga Ducks.
JAS. McCORMACK & SONS,
-om ROCKTON, ONTARIO.

MAPLE CLIFF Dairy and Stock Farm.

AYRSHIRES Three young bulls fit for service, and bull calves.
BERKSHIRES, TAMWORTHES,
Booking orders for spring litters.
R. REID & CO., HINTONBURG, ONT.
Five minutes' walk from Cen. Expl. Farm, Ottawa.

AYRSHIRES AND YORKSHIRES.

BULL SERVICE.
Young bull calves, from imported stock. Young sows in pig. A bunch of young sows ready to mate. Two boars four and five months old. Orders booked for February pigs and Ayrshire calves. Quality guaranteed right, as well as prices. -o
ALEX. HUME & CO., Menie P. O., Ont.
Importers and breeders. Hoard's Station, G.T.R.

MEADOWSIDE FARM,

J. YULL & SONS, Props., Carleton Place.
Breeders of high-class, deep-milking Ayrshires. Sweepstakes young herd at Ottawa. Shropshire sheep from prize-winning stock. Berkshire pigs and Barred Plymouth Rocks. Young stock for sale. Visitors met at Queen's Hotel. Give us a call. -om

AYRSHIRES.

An extra fine bull calf for sale; dam a first-class milker; sire Royal Monarch = 1941 =, of the noted Sprightly and Maggie Brown of Barmoorhill strains. Also choice young females of same breeding. Prices reasonable.
J. A. R. ANDERSON,
-o HAMILTON, ONTARIO.

AYRSHIRE CATTLE,

KAINS BROS., Byron, Ont. (R. R. London), are offering a number of grand young bulls, prize-winners; also a few choice females. Prices right. -o

AYRSHIRE CATTLE

of the most fashionable and deepest-milking strains. No trouble and expense spared to produce the best. Stock of all ages for sale. Scotch Collies.
WM. STEWART & SON, MENIE, ONT.

W. F. STEPHEN,

Breeder and importer of choice and fashionable

AYRSHIRES

from deep-milking strains. Two bull calves for sale. Write or come to

BROOK HILL FARM,

Carr's Crossing, G. T. R. on Trout River, Que.

CHOICE AYRSHIRE BULLS

FROM IMPORTED STOCK.

I offer for sale three (3) bulls, 9, 10 and 13 months old, all sired by prizewinning imported bulls, and from high-class imported cows; also five bull calves from 1 to 4 months old.

W. W. BALLANTYNE,

Late Theo. Ballantyne & Son. Stratford, Ont.

"NEIDPATH FARM" adjoins city, main line G.T.R.

"GEM HOLSTEIN HERD."

STOCK FOR SALE

We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited.

ELLIS BROS., Bedford Park P. O., Ont. 7-y-om Shipping Station, Toronto.

MAPLE HILL..

HOLSTEIN-FRIESIANS

BULL CALVES from Queen DeKol 2nd, winner of Prince of Wales prize over heifers of all breeds in public test; Lady Akkrum 2nd, 67 lbs. milk in one day and 24 lbs. butter in a week; Kasje DeBoer, 63 lbs. milk and 3 lbs. butter per day at 14 years old; Maroon, 57 lbs. milk per day at 14 years old; Daisy Teake, dam of Daisy Teake's Queen, the great test winner, finest cow I ever saw.

G. W. CLEMONS, ST. GEORGE, ONT.

Holsteins, Tamworths, and B. P. Rocks.

Am offering 1 yearling heifer in calf, 2 August bull calves, 1 two-year-old heifer in calf. Am booking orders for spring pigs from prizewinning sows and imported boars. Stock of best quality and breeding. A. C. HALLMAN, New Dundee, Ont.

HAVEN'T YOU SEEN Our Advertisement?

There is no quarantine law, and now is the opportunity for you to get the best Holsteins there are in the U. S. Our herd is near the Canadian line. Expense of transportation is small. We have 100 head, 90 per cent. of them are strong in the blood of De Kol 2nd and Netherland Hengerveld, the two greatest butter cows ever officially tested. We have a few bulls, sired by De Kol Artis, twelve months old, and ready for service; also females of all ages. Prices reasonable, terms easy. Address - Henry Stevens & Sons, Lacona, N. Y.

Brookbank Holstein Herd

50 CHAMPIONS FOR MILK AND BUTTER. 50 A number of desirable young BULLS on hand, from one to eight months old, from our great milkers. Write for just what you want. Females of all ages. A. & G. RICE, Currie's Crossing, Oxford County, Ontario.

HOLIDAY OFFERING.

Will sell a few very choicely-bred Holstein Bulls at a reduced price if taken before or during holidays; also B. P. R. Cockerels. For particulars write H. HOLLERT, CASSEL, ONT.

SHEEP, CATTLE, CALF, HOG, LABELS AND EAR PUNCHES.

Patent Grain Truck and Bagger. Send for circular and prices to R. W. JAMES, Bowmanville, Ont.

GUERNSEYS.

This is the dairy breed for ordinary farmers. Large, vigorous, and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared. Address - SYDNEY FISHER, 17-y-0 ALVA FARM, KNOWLTON, P. Q.

SCABBY SHEEP. \$50.00 REWARD

To any party who can produce a scabby sheep which the Lincoln Dip will not cure. Write for particulars Lincoln Sheep Dip Co. 855 Elliott St., Bldg. Buffalo, N. Y. Canadian Office: WEST CHEMICAL COMPANY, 15 Queen Street East, Toronto.

GOSSIP.

W. R. Bowman, Mt. Forest, Ont., writes: "As I have disposed of eleven bulls and eight females in the last few weeks, kindly change my advertisement."

R. NESS' CLYDESDALES, AYRSHIRES, POULTRY.

Perhaps no breeders in the Eastern Townships are more widely and favorably known than Robt. Ness and his family of sons, having taken as they have an active interest in live stock matters for a great number of years. Their farms are very conveniently located—right alongside the G. T. R. at Howick Station, on the Quebec side of the river, some 40-odd miles from the City of Montreal. Their first importation of Clydesdale horses was made in 1879, and in the 20 years more than that number of shipments have been personally selected in Scotland; as well as on many trips shipments of work horses have been exported to the large cities where our best animals find a ready market. Mr. Ness frequently selects animals in England and Scotland of not only horses, but breeders of other stock find it an excellent opportunity to have him make personal selection on account of his wide acquaintance in that country and large experience in the business. Among the Clydesdales which he has imported and which he still owns is the Scotch-bred Lawrence Again (7900), by Prince Lawrence and out of Rosy of Boyhall, by Lord Lyon—now in his tenth year—a horse which has stood the test to a remarkable degree and one which has done much to advance the popularity of the breed in this country, possessing as he does an abundance of quality, with the best of feet and legs; bone and hair of the best quality, a grand disposition, and splendid markings. Lawrence has not only distinguished himself as a show horse in this country by winning, with one single exception, all the firsts he ever competed for, but landed many of the good ones offered across the water on his native soil in his young days. Fillies by him also proved too strong for their competitors in Scotland. Of recent importation we were shown at our visit the five-year-old brown horse, Fullerton (9910), by Prince of Kyle 7155, by Prince of Wales, and out of Lady Buchanan (11235), by Go Ahead (5052), a horse possessing a thick, well-formed, stylish body, with good quality of bone and hair, with the best of feet, and in all freshness and a beautiful actor. His grandsire, Go Ahead, was twice imported to America, and considered one of the great horses of the century. The thick-bodied three-year-old, Plowboy (10394), by Darnley Eskine (8360) and out of Jess, by St. Blaise (3887), was also purchased last year, and is a big, thick fellow, promising to reach a ton in weight, with as good a set of feet as were ever placed under a horse. He has all the bone necessary for his weight, and splendidly covered with hair. His body is thick and deep, with a grand back and good length of quarters—in fact, he is an all-round good colt. We also saw a pair of home-bred fellows by Lawrence Again, which possess good size, one in particular having extraordinary style, and both are grandly furnished. Three of the seven females are matured mares in foal. Roseleaf, by Macbeth, was imported as a yearling some eight years ago. Half of her six foals now go to make up the present bunch—a four-year-old mare, a splendid yearling horse colt, and a filly foal. She is again due in April to Lawrence Again. Lady Banff, by Knight of Banff, was foaled in May, 1889. Three of her four colts are now on the farm, one a thick, well-matured yearling horse colt, Nettie, the six-year-old bay mare, is also due in March to Lawrence Again. Coming as a bunch they are an exceedingly creditable lot and will hold their own in comparison with others in the breed, as past fair reports have shown. The Ayrshire herd is conducted personally by Mr. R. R. Ness, Jr., who has done much to associate the name among the foremost in the breed. He has some 50 or more animals constantly on hand, and not only is now but has been breeding with a special view to productiveness. Among the mature cows we saw may be mentioned Minnie of Burnside 6281 by Golden Guinea 451 and out of Luna 2nd 3690. She was the first prize dry cow at Ottawa in 1898. Lady Scotty of Parkhill 5570, by Duke of Howick 7420, is rising eight years old and again due in August. She is a special type of a dairy cow and produces a grand udder. Lady Muriel 7603, by Canada Chief 6179 and out of Fanny 2nd of Parkhill, is a large, smooth four-year-old cow, with immense milk vessels, and capable of producing a large quantity of milk in a year. She is due in September. Winnie of Burnside 6281, is another four-year-old cow specially worthy of a passing notice, possessing strength of constitution with quality, and promises to be a great producer. Among the sires employed in the herd have been such animals as Golden Guinea 451, Matchless 7340, Leckerby Chief 6223, Harcourt imported Monarch of the Glen—was imported in dam by Mr. Wm. Wylie, and selected when a youngster on account of his strength of breeding, which he promises to equal in conformation, and many of the females are in calf to him; and from his strictly up-to-date quality and pedigree. Mr. Ness hopes to advance equal to the rapid age in which we live. In the showings the Clydesdales and Ayrshires have each commanded a strong place in a strong competition, the horses usually making a clean sweep of their portion of the prize list, while the Ayrshires have had much competition they have been able to hold their own most creditably and establish an enjoyable reputation for the herd. The demand has been reduced, and many satisfactory sales have been made; in fact, the number we heard Mr. Ness run over would occupy too much space here to enumerate, but at present a few splendid and promising young things are on hand and a great many cows are yet to calve. A few Tamworth pigs and Dorset Horned sheep have lately been added to the stock from the best breeders of each class, as well as a special interest being taken in the poultry department, for which better and more extensive accommodations are now under consideration. The special breeds which are receiving attention are the B. P. Rocks, Silver Wyandottes, L. Brahmas, China Geese, Rouen and Bk. Cayuga ducks. Much care has been exercised in the selection of foundation stock, and with the care and attention given them, this branch promises to keep pace with the longer established branches on the farm.

... HOW TO GET A ...

First-class Collie

Twelve New Subscribers



Twelve New Subscribers

TO ANY SUBSCRIBER sending us the names of 12 NEW yearly paid-up Subscribers we offer a young COLLIE, six weeks old or over, eligible for registration, and bred by Mr. R. McEwen, Byron, Ont., whose stock has been so successful in the leading shows in Canada and the United States. (See page 36, January 16th issue.)

Bagster's NEW Comprehensive Teacher's Bible,

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, with SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

BINDING—

Strong, durable, flexible American Seal improved circuit cover, round corners, red-under-gold edge.

HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

ADDRESS The WILLIAM WELD CO., Limited, London, Ontario.

EUROPEAN ADVERTISEMENTS.

Hampshire Down Sheep.

SPLENDID MUTTON. GOOD WOOL. GREAT WEIGHT.

This highly valuable English breed of sheep is unrivalled in its

Rapid and Wonderfully Early Maturity,

possessing, too, a hardness of constitution adapted to all climates, whilst in the quality of

MUTTON AND LARGE PROPORTION OF LEAN MEAT IT IS UNSURPASSED.

At the great Smithfield Club Show in London, December, 1897, Hampshire Downs again held their own, the class for wether lambs with twenty entries exceeding in numbers that of any other breed, whilst a pen of wethers stood reserve for the champion plate for the best short-wooled sheep in the show. A Hampshire Down also again took first prize in the dead carcass competition against all other short-wooled breeds. Full information of

JAMES E. RAWLENCE, Secretary, Hampshire Down Sheep Breeders' Association, SALISBURY, ENGLAND.

J. E. CASSWELL, Laughton, Folkingham, Lincolnshire.

breeder of Lincoln Long-wooled Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 20 rams, at the "Annual Lincoln Ram Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hogs and shearlings for sale, also Shire horses, Shorthorns, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

W. W. Chapman, Secretary of the National Sheep Breeders' Association,

Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London.

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

THE ORIGINAL

Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large stockmen.

FOR SHEEP: Kills ticks, maggots; cures scab, heals old sores, wounds, etc.; and greatly increases and improves growth of wool.

CATTLE, HORSES, PIGS, ETC.: Cleanses the skin from all insects, and makes the coat beautifully soft and glossy. Prevents the attack of warble fly. Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

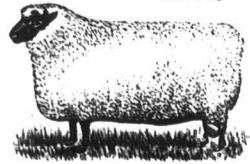
NO DANGER! SAFE, CHEAP, EFFECTIVE.

BEWARE OF IMITATIONS. Sold in large tins at 75c. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities. Sold by all druggists. Send for pamphlet.

ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, ONT. Sole agent for the Dominion.

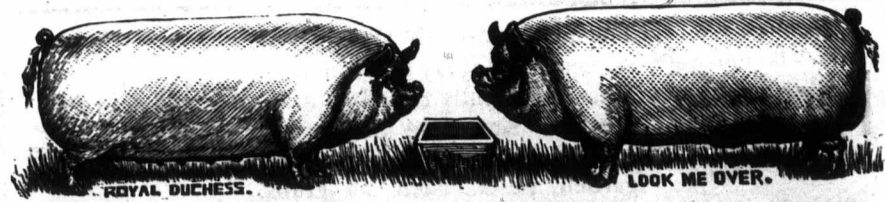
SMITH EVANS, GOUROCK, ONT.

Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited. 6-1-y-0



For Sale: Two Clydesdale Stallions

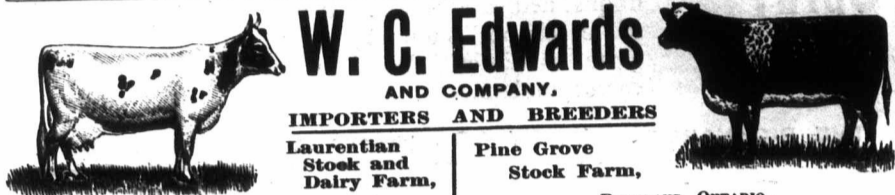
Rising three years old; also some Fillies and Mares from two to seven years old, all registered. For further particulars, address DAVID CARSTAIRS, Bowmanston, Ont.



SUMMER HILL HERD OF YORKSHIRE HOGS.

LARGE, LENGTHY, ENGLISH TYPE.
Among them being the undefeated prizewinning boar, "LOOK ME OVER" 2602. Also Royal Duchess, a first prize sow at the Royal Show of England in 1898, and several choice young sows bred to Look Me Over; also, young stock of both sexes, single or in pairs, not akin. We ship to order, prepay express charges. Guarantee stock as described.

D. C. FLATT, MILLGROVE P. O., ONTARIO.



W. C. Edwards AND COMPANY.

Laurentian Stock and Dairy Farm, NORTH NATION MILLS, P. Q.

Pine Grove Stock Farm, ROCKLAND, ONTARIO.

Ayrshires, Jerseys, Shropshires, Berkshires.

Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Lisgar Pogis of St. Anne's heads the Jerseys. The young stock are all from time-tried dams.

A. E. SCHRYER, Manager.

Shropshires and Scotch Shorthorns.

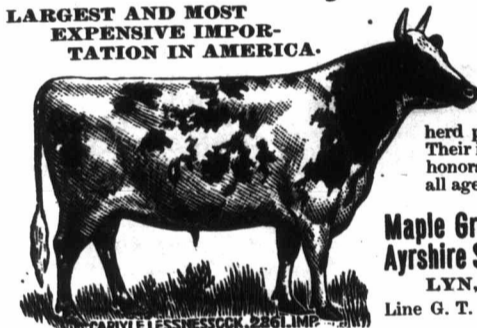
The imported Missie bull, Scottish Pride, at the head of herd, assisted by British Knight. Special bargains in young bulls, young cows and heifers of the best of breeding.

JOS. W. BARNETT, Manager

We can be reached either by steamboat, the C. P. R., or C. A. R.; the C. A. R. making connections with the G. T. R. at Coteau Junction. Rockland is our station on all lines. 7-1-y

Pure-bred Ayrshire Imported Cattle.

LARGEST AND MOST EXPENSIVE IMPORTATION IN AMERICA.



Bred for the dairy, with grand constitution, and champion prize records awarded them in Scotland and England. Sweepstakes herd, Montreal, Toronto, London, and Ottawa, in 1897. Awarded four years in succession herd prize at Ottawa's great exhibition, and special gold medal; at Montreal, herd prize and Mr. W. W. Ogilvie's special \$100.00 prize. Their individual prize records are of the same distinguished honors of the four years of their exhibition career. Stock all ages for sale and at prices in reach of all.

Maple Grove Ayrshire Stock Farm, LYN, ONT. Line G. T. R.

R. G. STEACY, Importer and Breeder, Box 720, Brockville, Ont.

WE ARE OFFERING FOR SALE 8 HIGH-CLASS YOUNG IMPORTED SHORTHORN BULLS

OF THE BEST SCOTCH BREEDING,

TOGETHER WITH A FEW HOME-BRED BULLS AND A NUMBER OF COWS AND HEIFERS BOTH IMPORTED AND HOME-BRED.



CORRESPONDENCE OR A PERSONAL VISIT SOLICITED.

CATALOGUES ON APPLICATION.

H. CARGILL & SON., CARGILL, ONTARIO.

Cargill Station and Post Office on G. T. R., within half mile of barns.

Dentonia Park Farm

EAST TORONTO (Coleman P.O.)

W. E. H. MASSEY, Proprietor.

Address, DENTONIA PARK FARM, COLEMAN, ONT., CANADA.

Dentonia Jersey Herd

Winners of the herd prize at both the Toronto and London fairs last fall, also some thirty other prizes. The herd comprises fourteen head of imported cattle, many of them winners of valuable prizes on the Island; also some thirty animals carefully selected from the best Canadian herds. Heifer and Bull Calves, also good Cows, always on sale.

Dentonia Poultry Yards

Handsome White Leghorn Cockerels (from Wyckoff eggs), also Brown Leghorn Cockerels for sale.

Dentonia Trout Ponds

"Eyed" Trout Eggs, also yearling and two-year-old Brook Trout for sale. Market trout supplied in season.

GUERNSEYS.

The grandest of dairy breeds; good size, hardy, persistent producers of the richest colored milk and butter when fed in the stable. A few young bulls and heifers from prizewinning stock for sale.

CHESTER WHITES.

The farmers' favorite; easy feeders, early maturers, good breeders, giving satisfaction bred as pure or as cross breeds. The largest prizewinning herd in America to select from.

DUROC-JERSEYS.

Easiest fed, easiest fattened; will do best when fed on forage crops. Sweepstake herd to select from. Seventy now for sale.

TAMWORTHS.

The ideal bacon hog; two boars fit for service; 10 sows (bred); some prizewinners included. Write

WM. BUTLER & SONS, DEREHAM CENTRE, ONT.

GOSSIP.

Mr. George Green, Fairview, Ont., breeder of Berkshires, in ordering an enlargement of his advertisement, reports a very satisfactory trade in Berkshires, the demand for first-class stock being steady and improving. Mr. Green's herd ranks amongst the very best in the Dominion, and he is unsurpassed as a judge and a breeder, as well as a successful handler and exhibitor of hogs, producing up-to-date stock and giving them the proper treatment to fill the bill for the most profitable pig for the farmer, and at the same time one that will meet the requirements of the best markets.

H. Bennett & Son, breeders of fine English Berkshires, St. Williams, Ont., write: "We have just imported from M. K. Prine & Son, Oskaloosa, Iowa, the young boar, Nora B's Duke. He is a grand boar in every particular. We have also imported from W. R. Harvey, Sibley, Ill., the boar Royal Star III, half-brother to Columbia's Duke, which lately sold for \$1,200. We claim him second to none that ever came to Canada. At the same time we imported a sow, Royal Nina VII, of the most approved type. These Berks are entirely of different blood from our other stock."

It is authoritatively announced that the Thoroughbred Department of the great Stanford stock farm at Palo Alto is soon to be established. Its abolition means the passing of one of the most famous stables in the world, that will become only a memory of the one-time supremacy of California as a producer of kings and queens of the turf-of racers that have won princely fortunes in sensational events. The Thoroughbred Department of the Palo Alto stock farm as it stands to-day, land, buildings and stock, represents close to a million dollars. It was established in 1880.

SALE OF A CHAMPION.

Capt. T. E. Robson, Ilderton, Ont., has, we are informed, sold to Messrs. Green Bros., of Indianapolis, Illinois, his famous prizewinning Shorthorn bull, Moneytuffel Lad - 26521. This bull has had a remarkable record as a show bull in Canada, having won first honors in his class at the leading shows in Ontario every year since he was a yearling, also the sweepstakes as best bull of the breed, any age, at the Toronto Industrial Exhibition - Canada's greatest fair - in 1895, 1896, and 1898, and the sweepstakes at the Western Fair, at London, in 1897, defeating the bull which had been placed before him at Toronto the previous week, so that he has only been downed once in his four years showing, and then he regained his place on the first opportunity that offered. Moneytuffel Lad is a roan bull, and was five years old in December last. He was sired by Topman - 17847 - winner of the championship at the Winnipeg Industrial Exhibition, 1897, a Nonpareil bull by Stanley, a Toronto champion and sire of Lord Stanley, the champion over all bulls of beef breeds under two years old at the World's Fair at Chicago. The dam of Topman was by the imported Cruickshank Victoria bull, Vice Consul, winner of the championship at the Toronto Exhibition. The dam of Moneytuffel Lad is Isabelle, 14th, descended from imported Louisa, by Nobleman, bred by Sylvester Campbell, Kinellar, Aberdeenshire. Moneytuffel Lad is a bull of grand character and fine quality, having very interesting constitution, a wealth of natural flesh and a fine coat of mossy hair. He has filled the first place among the best of the breed in Canada, and his new owners are to be congratulated on securing such a notable head for their herd.

GUERNSEY CATTLE INTERESTS.

The reports of the Secretary and Treasurer of the American Guernsey Cattle Club, submitted at the recent annual meeting of the Club, showed a marked increase in the number of animals placed in the Register for the breed, and also in the sales recorded. As compared with previous years, the work has nearly doubled in the last five. A committee from the Club has been chosen to formulate plans for increase of office accommodations and safe storage of the records. This committee will report at the next meeting of the Club. The first year's home tests of Guernseys under the auspices of the Club are now well under way and some very interesting results will be obtained. Twenty-one cows are competing for the herd prizes, and five cows in the single cow test. These are owned by Geo. C. Hill & Son, Rosendale, Wis.; Levi P. Morton, Rhinecliff, N. Y.; Ezra Michener, Carversville, Pa., and Jas. H. Beirne, Oakfield, Wis. The January issue of the Register, which is published in quarterly parts, has four illustrations of Canadian and Island Guernseys that have become noted for their excellent record in the showing and in breeding. Wm. H. CALDWELL.

PRIZEWINNING LIGHT BRAHMAS.

The Light Brahma cockerel illustrated on page 94 won 1st and special for best male at the last Ontario (Toronto), Guelph, Brantford and Hamilton poultry shows, as well as 1st at Galt's Winter Show. The hen won 1st and special for best hen at the Ontario, and 1st at Brantford, while the two won 1st for best pair of Light Brahmas at the Ontario Poultry Show. They are owned by Mr. T. A. Cox, Sunnyside Poultry Yards, Brantford, Ont., who has a choice pen of this breed, six of the pullets of which score 92 to 95 points. Mr. Cox also has choice pens of Silver and Golden Laced Wyandottes, S. G. Dorkings, B. Minorcas, B. Langshans, B. Javas, brown and white S. C. Leghorns, Cornish Indian Game, Pit Game, B. B. R. Games, W. and Barred Plymouth Rocks, B. W. C. Polish, B. R. Red Bants, Flye Game Bants, and M. B. turkeys. He has eggs for sale from the above breeds.

A DECIDED MOVE IN HORSES.

The Thoroughbred stallion, Monotony, by Monticello, has been a conspicuous figure in many of the best showings, including the Canadian Horse Show and Toronto Industrial, for a number of years. His class is that for stallions calculated to improve the saddle and carriage horses of few that are as suitable for mind we have seen in the country, and to our purpose. He is a strong horse, 16 hands 2 inches high, and weighs some 1,300 pounds; not only that, but he is handsome, possesses very good action, and is unusually kind and intelligent. He is offered for sale in this issue by his owner, F. J. Gallanough, V. S. Thornhill, Ont., and should find a ready bidder, as he is good property.

HIGHEST TYPE OF BACON HOGS.

Oak Lodge Herd of Large Yorkshires

The largest herd of pure-bred Yorkshires in America. This herd has won the best prizes offered for the breed during the last ten years.

STOCK BOARS.—Three imported boars, all winners at the Royal Show, including championship and gold medal. Also, two Canadian-bred boars, both first prize winners at Toronto, 1898.

BREEDING SOWS.—Royal Duchess, Royal Queen and Royal Queen 2nd, all winners of highest awards at Royal Show, and 15 of the best sows to be purchased in England. Also, 50 matured Canadian-bred sows of the choicest quality.

PRIZEWINNING STOCK A SPECIALTY. -om

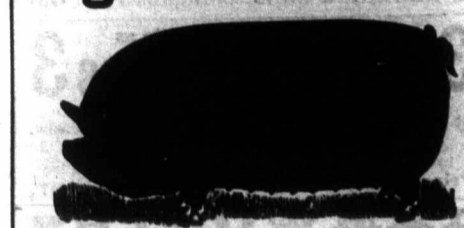
J. E. BRETHOUR, BURFORD, ONT.

MARYSVILLE HERD OF IMPROVED YORKSHIRES AND BERKSHIRES

Have no more for sale at present. Will book orders for spring pigs from the same stock as I breed my winners from. My Yorkshires have been herd winners for three years in succession at Toronto.

R. G. MARTIN, Marysville, Ont.

LARGE English Berkshires.



Herd headed by four first prize stock boars of large size, strong bone and fine quality. Young Boars and Sows, all ages, for sale. Orders booked for Spring Pigs.

GEORGE GREEN, - FAIRVIEW P.O., ONT.

Telegraph and Station: Stratford, G. T. R.

FOR SALE... A CHOICE LOT OF LARGE Yorkshire SOWS

In pig to a show boar; also boars fit for service, and fall pigs of good length and quality. Berkshire sows in pig, and boars fit for service, at very reasonable prices. Two good Short-horn bulls, red-roans. Write -om

H. J. DAVIS, Woodstock, Ont.

HALDIMAND HERD OF BERKSHIRES

Boars and Sows, two to four months old, by Royal King, the choice of the winning pen in 1897, in the hands of Geo. Green, his breeder.

ALB. NAUMAN, Fisherville, Ont. -om

ENGLISH BERKSHIRES.

Herd headed by two imp. boars, Nora B's Duke and Royal Star III., half-brother to Columbia's Duke, which recently sold for \$1,200.

Choice pigs from 6 weeks to 4 months old. Write for prices. -om

H. BENNETT & SON, St. Williams, Ont.

ROSE HILL FARM James Dorrance,

SEAFORTH, ONTARIO, Breeder of REGISTERED BERKSHIRES of the most approved type. Choice young stock always for sale. Write at once and secure a bargain. 18-2-y-om

OXFORD HERD OF POLAND-CHINAS

The home winners of the Healed by the imported boars, Conrad's Model and Klondike, assisted by Bacon Boy and Lennox. Has won 64 out of a possible 69 first prizes. Stock of all ages for sale. Write for prices or come and see

W. & H. JONES, OXFORD CO. -om MT. ELGIN, ONT.

POLAND-CHINA BOARS FIT FOR SERVICE.

A few choice sows three months and under. Black Wilkes (imp.) and Jack Sanders head of herd. A few choice Black Minorca cockerels cheap.

R. WILLIS, JR., GLEN MEYER, ONT.

E. D. GEORGE, PUTNAM, ONT., Importer and Breeder of Ohio Improved Chester White Swine.

The largest and oldest established registered herd in Canada. I make this breed a speciality, and furnish a good pig at a fair price. Write for prices. -o

CHESTER WHITES

Sows two to eight months old. Bred and ready to breed. Boars two months old.
Bred, Formed and Priced Right.
HENRY HERRON,
AVON P. O., ONT.

IF YOU WANT Chester Whites Write me for particulars.
The imported sires, John A. 751, and Nonsuch 910, at head of herd.
JOS. CAIRNS,
Lambton County. CAMLACHIE P. O.

Tamworth AND IMP. Chester White Boars

FIT FOR SPRING SERVICE.
Also, a choice lot of fall sows and sows due to farrow in March and April. Am booking orders for spring pigs from the sweepstake herd of the leading exhibitions of Ontario and Quebec in 1897. We pay express charges to your station, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Drop a card before buying elsewhere.
H. GEORGE & SONS, Crampton P. O., Ont.

Four Months 3 TAMWORTH BOARS 3

By a Bell-bred boar, and out of an O. A. C. bred sow.
JOHN PULFER & SON,
Prices Right. BRAMPTON, ONT.

TAMWORTHS
My stock was founded on Hallman & George bred females, with Spruce Grove Model 405 at the head. Young boars and sows now ready for shipment, and other sows to farrow.
R. O. MORROW, Hilton P. O.,
Northumberland County.

CHRIS. FAHNER, Crediton, Ont.

I have to hand a choice lot of young
... TAMWORTH SOWS ...
Some carrying their first litter and others carrying their second litter. Those sows will be sold at cut prices, by writing at once. Also, write for my new Catalogues.

Chatham HERD OF Tamworths

One boar 9 months, 4 boars 8 months, 8 sows 8 months, 10 sows 4 months, 10 boars and 10 sows 2 months, one yearling sow in pig.
Write for prices if it is pigs you want.
J. H. SIMONTON, Box 304, Chatham.

OAK HILL HERD OF TAMWORTHS.

For sale—young boars and sows, 3 and 4 months old, by Sandy 3rd and Nimrod, and out of prize-winning dams; also young pigs. Prices reasonable.
R. J. & A. LAURIE, WOLVERTON, ONT.

STRATFORD BROS. BRANTFORD.

Tamworth boars, Dorset rams, Shetland ponies, Light Brahmas, Houdans, Cornish Indian Game, Black Langshans, White Langshans, White Plymouth Rock, Buff Plymouth Rock, Barred Plymouth Rock. Prices right.

DUROC - JERSEY SWINE

The earliest established, the greatest prize-winning and most reliable herd in Canada. If you want Duroc-Jerseys, we have them pure. We keep no others. They are quiet, non-squealers, prolific, long, deep and heavy. Just the pig for profit. Write us.
-om **TAPE BROS., Ridgetown, Ont.**

IN POULTRY SUPPLIES

WE LEAD, OTHERS FOLLOW.
Sole Canadian Agents for the Cyphers Incubator, endorsed by all as the only up-to-date incubator on the market. Endorsed and used by L. G. Jarvis, Agricultural College, Guelph; A. G. Gilbert, Agricultural College, Ottawa, and all leading poultrymen. Bone Mills, Mica Grit, and anything needed in the poultry line. Two 200-egg size Willett's silver medal incubators for sale, taken in part exchange for Cyphers Incubator. Price, \$15 each; \$25 the two. Also, a 240 Meyer's Incubator—price, \$20.
C. J. DANIELS,
221 RIVER ST., TORONTO.

For Sale: 10 Light and Dark Brahma Cockerels, at \$1 and \$2 each, bred from prizewinners. Address:
CHAS. B. GOULD, Box 365, Glencoe, Ont.

POULTRY. L. and D. Brahmas, B. and W. Rocks, S. and W. Wyandottes, Black Minorcas, Indian Game, and Red Caps. Young stock and eggs from above breeds. Eggs, \$1.25 for 13; \$2 for 26. Satisfaction guaranteed.
JACOB B. SNIDER, German Mills,

MAMMOTH BRONZE TURKEYS.
S. G. Dorkings, B. P. Rocks, S. C. Brown Leghorns, Black Minorcas. Finest lot of cockerels we ever had. Mated not akin. Write—
T. & H. SHORE, White Oak, Ont.

GOSSIP.

Henry Herron, Avon, Ont., has recently received from that noted Chester breeder, A. G. Alexander, Delavan, Ill., the handsome young sow, Delavan Maid, which Mr. Alexander states is due to farrow to the best boar he ever owned. About a dozen exceedingly choice sows have been bred to the herd boar, Chief, whose sire and dam were both bred in the noted herd of Mr. Willis Walway, Salem, Ohio. Of these Mr. Herron has seven which he now holds for sale. The boar, Chief, is a particularly smooth pig, with good length and depth, together with the type which Chester breeders are aiming to produce.

Mr. D. C. Flatt, importer and breeder of Improved Large White Yorkshire hogs, Milgrove, Ont., writes: "Mr. Thomas Bradshaw, who is bringing out my importation of Yorkshire hogs, left St. John, N. B., on Tuesday, the 7th, per steamer Concordian. I expect him to return in the early part of March. The demand for Yorkshires is increasing with me every day, having made over forty sales since my last report. They are as follows: Boar, Robt. James, Tara, Ont.; boar, A. Smith, Enfield, Ont.; boar, Andrew Graham, Pomeroy, Manitoba; two boars and a sow to Wilson Porter, Port Dover; sow to A. S. Carpenter, Simcoe, Ont.; sow and boar, C. F. Hulbert, New York; two boars and four sows to J. N. Greenshields, Danville, Quebec; boar, Chas. Dymond, Jr., Capetown, Ont.; boar, John Marshall, Penland, Ont.; sow to Ernest Ream, Lewville, Ont.; sow to Alva Stockton, Clifford, Ont.; boar to T. Eaton & Co., Toronto or Islington; sow to Robt. W. Meek, Sandford, Ont.; sow to R. G. Martin, Marysville, Ont.; boar, T. S. King, Beaverton, Ont.; sow to Daniel K. High, Vineland, Ont.; boar to R. Petegrew, Bright, Ont.; boar and sow to Geo. Herrington, Tyrone, Ont.; boar and sow to Geo. A. Miller, Faversham, Ont.; boar to W. J. Graham, Blackney, Ont.; boar to D. McMILLAN, Newington, Ont.; boar and three sows to B. E. Smith, Ohio, U. S.; boar and four sows to John Lane, Michigan; one boar and two sows to C. E. Dunkin, Port Huron, Mich.

James McCormack & Sons, Rockton, Ont., write:—Our cattle are wintering very well. Have sold some young bulls. Have still a few left; among them is a 17-months-old bull sired by Neidpath Jock, dam Sprightly 5th. This is a fine, large, deep-bodied bull of fine dairy type. We have two young bulls, sired by Jock Morton, that will be a year old in March. One of these stood 4th at Toronto for calf under six months. He is a full brother to Sensation of Rockton 4th, our 1st prize three-year-old at Toronto. We also have a few heifers due to calve in March, which we will part with reasonably. One of them is a full sister to the heifer that won 2nd at the Brantford Dairy Show. Our fowl are also doing well. We have some fine Toulouse geese left to offer, also a few fine Cayuga ducks. Our "National strain" of Barred Rocks stand second to none in Ontario, as they have proved it in the show room where, in the keenest of competition, our birds never failed to win. We have a number of choice cockerels left, and are offering some of the leading breeders from nothing but the best. Among the prizes won by our birds at the leading shows, this winter were: At Guelph, on Barred Rocks, 1st on hen, 3rd on pullet; Spanish pullet, 1st; Br. Red Game Bantams, 1st on cock and 1st on hen. At the Ontario Jubilee Show we won 1st and special on Barred Rock hen, forty-seven hens competing (some of the leading breeders from the States were there); our hen scored 94; 3rd on Brown-Red Bantam cock. At Galt, 1st on B. Rock hen; 2nd on Brown-Red Bantam cock, 1st on hen; 1st on Black-Red Bantam cockerel, 2nd on pullet; Toulouse geese, 3rd on gander and 3rd on goose; two 1sts on Cayuga ducks. At Hamilton, on Barred Rocks, 2nd on hen, 1st on cockerel, 2nd on pullet; 1st on Spanish pullet, 3rd on cockerel; 3rd on Black Minorca cockerel and 3rd on pullet; 1st on Bantam cock and 1st on hen, 3rd on cockerel; 1st on old Cayuga drake, 1st on old duck and 2nd on young duck. In the \$4.00 cockerel selling class won 1st on a Barred Rock cockerel. Will have choice matings this season, and will announce our prices for eggs in March number of the ADVOCATE.

NOTICE.

G. H. Grimm's Champion Evaporator.—The annual convention of the Vermont Maple-Sugar Makers' Association was held at St. Johnsbury, Vt., Jan. 5th, 1899. This Association represents a very large number of the maple-sugar makers of the State of Vermont, which produces more maple syrup and sugar than any other State in the Union. Prizes are offered for the best maple syrup and sugar displayed at the annual gathering. This year they were awarded to users of the Champion Evaporator, as follows: Pail and Tub Sugar—Class A—A. A. Leland, Johnson, Vt., First; M. Shattuck, Eden, Vt., Second; C. H. Chase, East Fletcher, Vt., Third; G. W. Humphrey, East Brookfield, Vt., Fourth.

Cake Sugar—Class B—H. W. Shattuck, Eden, Vt., First; M. C. Chase, East Fletcher, Vt., Second; Mrs. Zina Chase, East Fletcher, Vt., Third; F. H. Leland, Johnson, Vt., Fourth.

Syrup—Class B—H. H. Chase, East Fletcher, Vt., First; A. A. Leland, Johnson, Vt., Third; H. W. Walker, Woodstock, Vt., Fourth.

Stirred Sugar—Helen Barkley, East Craftsbury, Vt., First.

Sweepstakes—D. Carlton, Woodbury, Vt., First; W. W. Chase, East Fletcher, Vt., Second.

The manufacturers of the Champion Evaporator in Canada are The G. H. Grimm Mfg. Co., Montreal, Que. They feel proud of the success of their Vermont customers in securing so many prizes. They report a large sale for their goods in Canada, and say that orders should be sent them early in order to be filled promptly, for use in the coming spring.

MARK YOU
your live stock of whatever kind with the thoroughly reliable, rust proof, non-corroding, easily read...
ALUMINUM
***STAY THERE* EAR MARKERS**
Can't get out of ear-ears. Name, address and consecutive numbers on each tag. Free samples, catalogue, etc. WILCOX & HARVEY MFG. CO., 201 LAKE ST., CHICAGO, ILL.

Persiatric Plant Spray

The most effective and highly-concentrated spray in the market. Has successfully coped with the dreaded San José Scale, and readily destroys all orchard and garden pests, such as grubs, worms, brown-rot, curled-leaf, pear blight, apple scab, and all forms of animal life or fungi. Persiatric Plant Spray has been tried and proved by leading nurserymen and farmers all over Canada. It does its work thoroughly and effectively, and gives unqualified satisfaction. If your dealer cannot supply you, write us direct. We invite correspondence.

Kills San Jose Scale.

THE PICKHARDT-RENFREW CO., LIMITED, STOUFFVILLE, ONT.

A Record of over 50 Years as Manufacturers of Farm Implements!

COSSITT'S ALL-STEEL BALL-BEARING DISC HARROW.

FITTED WITH... PATENT LOCK SCRAPER.

THE BEST SELLER ON THE MARKET.

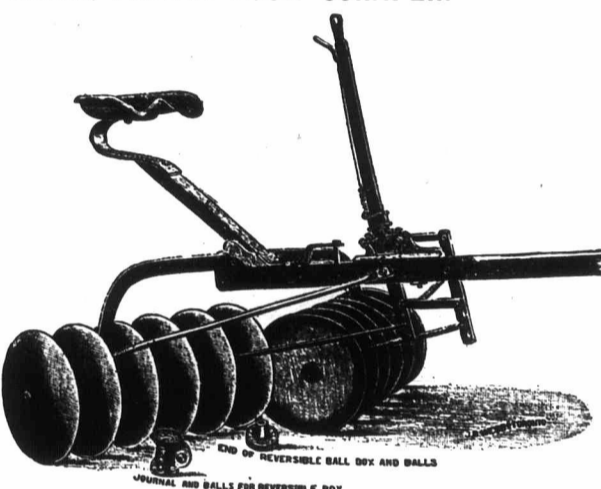
Agents cannot get a better line than

"COSSITT'S"

BALL-BEARING MOWER, TIGER and ITHACA HORSE RAKES, HARROWS, SCUFFLERS, CORN SHELLERS, ROOT PULPERS, &c.

Manufactured in the MOST COMPLETE and UP-TO-DATE FACTORY IN CANADA.

Send for Catalogue.



THE COSSITT BROS. CO., LIMITED,
ESTABLISHED 1849. BROCKVILLE, ONT.

Style and Stamina

Cannot be expected in a horse which is "run down,"—"out of sorts" through impoverishment of the blood,—but build him up with **Dick's Blood Purifier** and he has both. It destroys all the impurities in his system and fortifies it. He feels good and his spirit is high. It aids digestion—gives gloss to his coat—brings brightness to his eye—vim to his action. It will double his usefulness and value.

Dick's Blood Purifier

50 CENTS A PACKAGE, TRIAL SIZE 25 CENTS.
DICK & CO., PROPRIETORS.
LEEMING, MILES & CO., MONTREAL, AGENTS.



BARRED PLYMOUTH ROCKS EGGS

\$1.00 per setting from select stock. We guarantee satisfaction.
E. GBB & SONS,
Hallamand Co. FISHERVILLE, ONT.

EGGS

FOR HATCHING. From Barred P. Rocks, Silver Wyandottes, S. C. White Leghorns, at \$1 per 13. Pekin and Roman ducks, \$1 per 11. Every egg is guaranteed to arrive safely. Try our stock.
W. R. GRAHAM, BAYSIDE, ONT.

BRONZE TURKEYS

WHITE HOLLAND TURKEYS
W. E. WRIGHT, GLANWORTH, ONT.

BRONZE TURKEYS AND TOULOUSE GEES

For sale. Birds right and prices right. Send three-cent stamp for reply.
WILLIAM HODGSON, Mottle P. O., Ont.

Send 15c. for Poultry Annual and Almanac for 1898 to C. C. SHOEMAKER, Freeport, Ill., U. S. A.

STABLE FITTINGS

MADE IN CAST IRON, MALLEABLE IRON, BRASS AND BRONZE METAL.

Send for our new Catalogue of Stable Fittings. We make and carry in stock the finest and most complete line in Canada.

THE Vokes Hardware Co., LIMITED, TORONTO.

SHOEMAKER'S POULTRY BOOK

and Almanac for 1899. 160 pages. 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. Tells how to raise chickens successfully, their care, diseases and remedies. Diagrams with full descriptions to build poultry houses. All about INCUBATORS, BROODERS and Fancy Poultry, with Lowest Prices. Price only 15c.
C. C. SHOEMAKER, Freeport, Ill., U. S. A.

The enormous output of McCormick Machines defies the mental grasp of man. If the machines we manufacture were to issue from the gate of our works, (with the largest output in the world) the spectator would see all throughout the working day a McCormick Machine emerging at full gallop every 40 seconds. The demand of the farmers in the past season of 1898 was for 189,760 McCormick Machines.

This continuing tremendous call of the farmers will result in our manufacturing and selling still larger numbers in one season by the end of the century. What is the cause of this unheard of demand? What is the reason of the everlasting popularity of McCormick Machines? Why are we forced to run our Works by night and by day up to the output of a machine every 40 seconds?

The cause is plain. The answer is simple. It is The Building of the Best in the World. Almost seventy seasons of success have elapsed since Cyrus H. McCormick invented the Reaper in 1831. In all that time the McCormick has been The Best Built Machine in the World. The McCormick Machines for 1899 are The Best in the World. The McCormick Right Hand Self-binding Harvester; the New 4 Mower 4½ and 5 ft. cut; the Big 4 Mower 6 ft. and 7 ft. cut; the One Horse Mower, 3½ and 4 ft. cut; the Folding Daisy; the Corn Harvester; the Corn Husker and Fodder Shredder and the Hand and Self-dump Hay Rakes 8 ft., 10 ft. and 12 ft. are The Best in the World. All these eight machines are McCormick End of the Century machines; built with a brilliance of invention and honor in construction that sets a noble standard to all other agricultural machines on earth.



GOSSIP.

THE NICHOLSON SALE.

R. & S. Nicholson, Sylvan, Ont., write: "In calling attention to the cattle advertised in this issue, allow us to say they are all young or in their prime. Among them is one whole season's crop of heifers, now about two years old. They have with one exception been raised on skimmed milk, and since then fed under very ordinary conditions. They are all safe in calf to Royal Standard, winner of 1st last fall, including Toronto and London. They are as good a lot of two-year-olds as was ever offered at one sale. A number of three or four year old heifers will have calf at foot or near calving to that incomparable show and breeding bull, Indian Brave. Three splendid yearling bulls, large, and carrying a lot of natural flesh, just the kind to do good where cheap production is a desideratum. It would be difficult to bestow too much praise on the five weaning bull calves, all sired by Indian Brave. We never saw five better in one year in one herd. The offering also includes four or five cows by the Toronto silver medal bull, Nonpareil Chief. These will have calves at foot. Five beautiful yearling heifers will also be in the offering. A better lot of Canadian-bred cattle have not been offered in Ontario for many years. Regarding the many prizes won by stock bred by us and shown by others, the yearling bull, Cromwell, shown by Eastwood Bros., of Mimico, as a yearling and a two-year-old at Toronto, took 1st both years. He was afterwards sold to O. W. Fisher, of Assumption, Ill., and shown with remarkable success by him in the West. He was then sold to Mr. Kyle, of the State of Iowa, for the handsome sum of \$300. In his day no bull could defeat him, excepting Young Abbotsburn and Gay Monarch. Valasco 21st, shown by us at the World's Columbian, won third. He was there sold to a Mr. Hunt, of Ashton, Ill., in whose hands he took many first prizes at state and other fairs. Recently that lover of good stock, Robt. Eastwood, bought of us the yearling bull, Crown Jewel 17th. He showed him in two and three year-old form at Toronto, easily defeating all comers. He looks now more like showing than ever. We might also mention the superior cow, 5th Lenore of Sylvan, that stood highest at the Columbian as a yearling in the Canadian contingent. She was afterwards sold to Mr. Joseph Lawrence, in whose hands she won more prizes than any Shorthorn cow in Manitoba, also filling his herd with good things. In fact, there are not many first prize herds at Toronto in recent years but what have had blood from our herd; even the first prize herds at Toronto and Winnipeg last fall had to "draw on us." It took blood from our herd to make the redoubtable show bull, "Nominale," silver medal at Toronto, '97, and unbeaten in the West. Last fall his breeder got his granddam from us. This is but the sequence of the line of breeding we have adopted. The last six sires used in the herd have been first prize Toronto winners with one exception, the exception taking second. More than this, they have all been of either Cruickshank or Campbell's best blood."

NOTICES.

Do Fertilizers Pay? — W. A. Freeman & Co., Hamilton, Ont., write us as follows: "To a letter published Jan. 2nd, signed J. L. Grey Co., Ont., asking if commercial fertilizer can be used in Ontario with profit, in answer would say that it is being used by a great many farmers, fruit-growers, and market truck growers, and the number is increasing every year, and where we first introduced our high-grade fertilizer the demand is increasing. We have shipped 113 tons to one station at one time, to be used for fall wheat and seeding down. We have an order of 50 tons for the same place, to be shipped this spring, to be used on spring grains and corn in this district. Our first order was one half a ton, some nine years ago. The farmers in this district must be making money by using fertilizers or else they would not continue their use. Mr. J. L. says that he thinks he knows just what his land needs. His land has not any requirements, it is only a storehouse for plant food. If Mr. J. L. knows what the different crops require from the soil he has accomplished a great deal in agricultural work, and he should be able to answer the question he is asking. Thirty-five bushels of wheat removes from the soil 24 lbs. phosphoric acid, 55 lbs. nitrogen, 31 lbs. potash; 60 bushels of oats removes from the soil 22 lbs. phosphoric acid, 55 lbs. nitrogen, and 62 lbs of potash; 2 tons timothy hay removes from the soil 32 lbs. phosphoric acid, 89 lbs. nitrogen, and 94 lbs. potash. If these several ingredients are not put back in the soil it must be getting poorer.

It is a fact that no one of our farmers makes enough manure on his farm to keep it up in good fertile condition. In conclusion, would say that a farmer can manure a ten-acre field for fall wheat and seeding down with a high-grade fertilizer for the sum of \$30 to \$45, including manure and labor. This will help a wheat crop and also two crops of hay. At this rate it would only cost \$1.50 per acre for three years. You will see it would not take a very large increase in crop to give a profit to a farmer for his investment. If Mr. J. L. would inform us as to condition of field he wants to improve—as follows: What kind of soil? How it has been manured for the last three years? And what kind and quality of crop has been growing? And kind of crop he proposes to put in this spring?—we will answer fully to the best of our ability."



WANT A GOOD RAZOR?

If you send one dollar (\$1) to Stanley Mills & Co., of Hamilton, Ont., they will at once mail you a first quality concave or hollow ground Razor—a magnificent Razor—with fancy, strong celluloid handle; a Razor that is worth and was made to sell for \$3. It is an English-made Razor, ground in Germany by the finest cutlers in the world. No better Razor can be made. Our price is only \$1 each, post-paid, to any Canadian address. When ordering, say if you want round point or square point.

Address—Letter Order Department, Stanley Mills & Co., Hamilton, Ont.

CHAMPION EVAPORATOR

For MAPLE, SORGHUM, CIDER, and FRUIT JELLIES. Has a corrugated pan over firebox, doubling boiling capacity; small interchangeable syrup pans connected by siphons, easily handled for cleansing and storing; and a perfect automatic regulator. The Champion is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail.



Catalogue Free.

THE G. H. GRIMM MFG. CO., 84 WELLINGTON ST., MONTREAL.

FOR SALE OR RENT, The Turtle Mountain Creamery, AT NINGA.

Building and machinery in first-class order. Situated in the best part of Manitoba. Terms easy. Apply to—**GEO. T. ROBINSON,** Sec.-Treas. Ninga P. O.



ROCK SALT for horses and cattle. Per 100 lbs., 70c., or 500 lbs., \$3.00, Toronto. Cash with the order. Also in car lots. **TORONTO SALT WORKS, Toronto.**

FOR SALE!

Pair of Market Scales, capacity six (6) tons. Guaranteed to weigh correctly. Framework and timber in splendid condition. Has lately been inspected and found in perfect condition in every way. Here is an opportunity for farmers or others to buy a cheap pair of Scales.

Price, One Hundred Dollars. Address—**"SCALES,"** Care of FARMER'S ADVOCATE.

LOTS OF PEOPLE HAVE Hatched 90 to 100 per cent. OF THE FERTILE EGGS IN THE TORONTO INCUBATOR

You can do as well. Write for circulars. Address: **T. A. WILLITTS,** 514 DUNDAS ST., TORONTO, ONT.

To the Farmers of this Canada of Ours!

Gentlemen,—We thank you for your ever-increasing patronage, and remember we do not class our Queenston Cement with the water limes and hydraulic cements now on the market, but we guarantee our cement equal to the Imported or Domestic Portland Cements for all farm structures, such as Basement Walls for Stables, House or Cellar Walls, Cisterns, Hog Pens, Poultry Houses, and for all kinds of stabling. Kindly investigate our system of ventilation. This system is fully covered by letters patent, but to our patrons we make no charge. Write us for our new pamphlet for 1899, containing valuable information, prices, etc.

ISAAC USHER & SON,

Queenston, Ontario.

MANURE NOW

BEFORE THE SNOW GOES OFF, OR AT LEAST BEFORE THE MASS OF GRAVITY WATER DRAINS OFF THE SOIL.

OBSERVE THIS RULE

— IN USING —

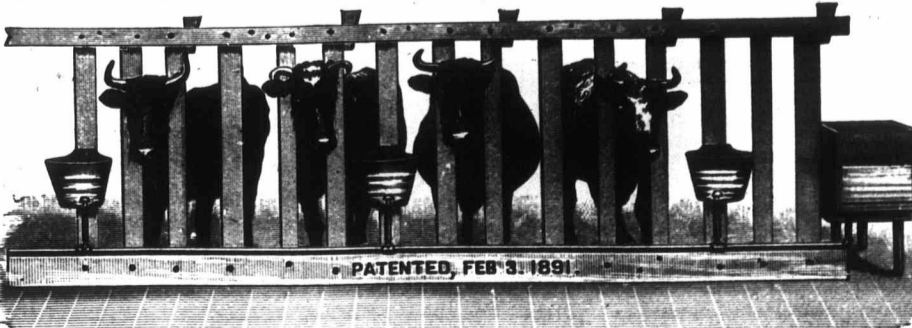
ALBERTS' THOMAS-PHOSPHATE POWDER

OR RESULTS MAY PROVE DISAPPOINTING.

WALLACE & FRASER,

58 Canada Life, TORONTO, ONT.

St. John, N. B.



RANEY, SELBY & COMPANY, BOX 620, KINGSTON, ONTARIO.

Vollmar's Perfect Washer



has gone through various stages of improvement, until it stands, as its name indicates, a perfect washer. All machines are fully warranted. For full particulars, price, etc., apply to

PHILIP VOLLMAR, - CHATHAM, ONT.

Live Agents Wanted.

EVERY MERCHANT AND FARMER SHOULD OWN A PARSELL TRUCK SCALE

Combining a first-class warehouse truck with a fine 800 Canadian Standard Scale. It has "caught on" splendidly and is going like "hot cakes."

WILL SAVE ITS COST IN NO TIME.



For descriptive circular and full information, Address—
THE ST. MARY'S TRUCK SCALE CO., ST. MARY'S ONT.

DO YOU REQUIRE ROOFING?

WE HAVE THE LATEST IN

METAL SHINGLES



Patent "Safe Lock" Shingles

Interlock each other on all four sides, leaving no edges or laps to open up. They cost no more than wooden shingles, are practically FIRE and LIGHTNING proof, give a building a handsome appearance, and are absolutely rain and storm proof. Can be put on easily by anyone. We send free samples and catalogue to intending purchasers.

THE METAL SHINGLE AND SIDING CO. LIMITED, PRESTON, ONT.

TORONTO ENGRAVING CO.
92 BAY ST.
CUTS BY ALL PROCESSES
LIVE STOCK A SPECIALTY.

Farm Help Wanted!

GOOD RELIABLE MEN WHO UNDERSTAND MILKING AND FARM WORK IN GENERAL.
Apply to—**A. C. WELLS & SON, CHILLIWACK, B. C.**
on EDEN BANK DAIRY FARM.

\$8 to \$15 for a machine to weave your own fence of Coiled Hard Steel Spring Wire, 52 inches high, at 25 Cts. per Rod. 250 buys wire for 100 rod fence. Agents Wanted. Catalogue Free. **WIRE FENCE MACH. CO. Box G. Mt. Sterling, O.**

S. CROUCH, Box 12, Ridgetown, Ont., General Agent for Ontario. **FRED SMITH, Box 16, Brandon, Man.,** Agent for Manitoba and N.-W. Territories. No duty on wire.

YOU CAN USE Coiled Spring, Cable, Barbed or Smooth Wire in our \$10 MACHINE And Build the BEST Wire Fence at 16 to 24 Cents per Rod. Agents Wanted. Write for Catalog **BOWEN CABLE STAY FENCE CO. Box 58, Norwalk, O., U. S. A.**

BIG MONEY FOR AGENTS THE STAR RIVETER For MENDING HARNESS, BELTING, etc. Indispensable to Farmers, Livermen and Threshermen. **STAR RIVETER** complete with 50 in.alar rivets \$1.00. Best selling article ever introduced. Agents write for special prices and territory **ENTERPRISE MAN'G CO., TORONTO, ONT.**

GOSSIP.

JAMES A. CASKEY'S HOLSTEINS.

The village of Madoc, in Hastings Co., Ont., is situated in a very fertile and beautifully lying agricultural country, sufficiently timbered to supply fuel and building material for some time to come, and dotted here and there with beautiful lakes and streams. It is highly desirable as a stock-raising section, the fertility of the soil being such that any crops suitable to the climate of that portion of Canada flourish in this part of Hastings. Dairying has been carried on all through the county, and the thoroughness and care with which the work has been conducted has given Hastings an enviable reputation for their cheese and butter in the various markets. Those more wide-awake realize the importance of keeping pace with the demands of the times in the improvement of their stock, and with this realization, Mr. Jas. A. Caskey, acting upon his judgment, paid a visit to the large Holstein breeding establishment of Henry Stevens & Sons, Lacona, N. Y. and made a selection of a dozen head, many of them carrying the most fashionable of breeding. For a sire to head the new herd the handsome and fashionably bred young Manor De Kol's Prince, by Manor De Kol, was chosen. He is out of Manor Kekke, in whose pedigree many creditable official tests are recorded. The dam of his sire made in an official butter test 23.66 pounds of butter in 7 days, while his grandam is none other than the noted De Kol 2nd, so favorably known to those familiar with Holstein breeding. His own dam is credited with 74 pounds of milk per day without special preparation, while others of the connection have equally good records. In conformation Manor de Kol's Prince is an unusually showy type of a bull, very even, though not large, and has a beautifully marked skin, which handles like a piece of velvet; he stands well on his legs, and shows the strong dairying indications peculiar to one of his breeding. Mr. Caskey informed us that the price he was compelled to pay for this bull was a long one, but considered the sire of sufficient importance to warrant even an extravagant figure for a suitable animal, and we believe he has got one. Among the females selected we saw Karndyke Queen De Kol 41934, H. F. H. B., by Manor De Kol 21226, and out of Belle Karndyke 13913, which, on the sire's side, runs to the famous Netherland family, with their grand show of official records, and on the dam's side the famous Karndyke blood predominates. Since dropping her calf in July she gave on the farm on ordinary feed 50 pounds per day in her three-year-old form, proving her to be an individual of high merit. Her young bull by De Kol 2nd's Butterboy 2nd carries the height of fashionable breeding in his pedigree, being closely related to De Kol 2nd (26.57), and a grandson of Netherland Hengerveld (23.10), and is of the same breeding and closely related to the young bull lately selected by the Cornell University to head their dairy herd when their chief object was to increase their butter production. Another young cow of exceptional promise is Pieterje Hartog De Kol, by De Kol 2nd's Butterboy 2nd and out of Netherland Pieterje De Kol (514) pounds milk at 2 years, and 1,416 lbs. in 30 days, 8,170 lbs. in 6 months and 25 days; as a three-year-old gave 59 1/2 lbs. per day, 1,598 in one month; official record at 4 years, 13 lbs. 8 1/2 ozs. butter in 7 days. Much is looked forward to at her next calving, February 20th. The two-year-old heifer, Panerista Pauline, by Pauline Paul's De Kol and out of Panerista H. 2nd Clothilde, is a young animal worthy of the pride of any breeder. Her dam was considered to be one of the most valuable cows in Mr. Stevens' herd. Since dropping her calf in November she has made a good showing, which cannot but improve from such strength of breeding. (Other individuals of equal note with ancestral records were looked over, and could be more fully dwelt upon if time and space would permit, but a brief mention to show what families they belong to must be sufficient for the present. Some five young females of the noted Luka family were chosen, with Jesse Pieterje and 300 crosses at their back. Belle Burke Mechthilde, by Sir Abbe Kirk Burke and out of Artis Bell, was dropped in March, 1896, and now carries her second calf without any forcing. She gave 42 pounds milk per day last season and developed a splendid udder, so that with good attention when she reaches maturity she will account creditably not only for herself but the family to which she belongs. The four-year-old cow, DeDikkert 3rd's DeKol, by Netherland DeKol Pieterje and out of DeDikkert 3rd, lately dropped a splendid young heifer and developed a well-balanced udder of great capacity, with fine veins, and promises to make a good record before the season is out. In all, Mr. Caskey had half a dozen heifer calves at the time of our visit, and all cows are being bred to Manor DeKol's Prince, which with reasonable luck will soon give him a splendid dairy herd of pure-breds, and as he has an up-to-date barn and stabling under consideration, we look forward to being able to visit as complete an establishment of the kind as is in the Province in the near future; and if enterprise and favorable surroundings are any guide, our hopes cannot but be realized.

NOTICES.

Saves Wagons and Horseflesh.—A lubricant that is both slippery and durable is mica, and the axle grease made from mica, and named "Mica Axle Grease," has been found to work well and wear long. It does not run in hot weather nor gum in cold weather, and being a mineral substance of peculiar toughness, it is extremely durable. The use of axle grease should never be neglected, partly to save wear and tear on the wagon, but, principally to save horseflesh, and in buying, it pays to buy the best.

F. W. Stone Estate at Auction.—An executor's sale is advertised in this issue which should interest any who wish to settle down on a stock farm in a good district. We refer to the remaining farms of the F. W. Stone Estate, situated partly near Guelph and adjoining the Ontario Agricultural College farm, and partly at the village of Arkell, a few miles to the south-east. These properties have for years been devoted to the support of high-class cattle and sheep, and are therefore in a fertile condition. See the advertisement in this issue and attend the sale at the Market Square, Guelph, on March 4th, at 12 o'clock.

Work Done With **THOROLD CEMENT** Speaks for Itself.



THE PACKARD ELECTRIC LIGHT CO., ST. CATHARINES, ONT.

Thorold Cement was used exclusively in the Walls of this Building from the Foundation to the Roof. Built in 1882.

St. Catharines, Ont., Sept. 12, 1896.

Estate of John Battle, Manufacturers of the Thorold Cement, Thorold, Ont.:

DEAR SIRS,—In regard to your Thorold Cement, I have had considerable experience with it, and I take pleasure in stating a few facts, as follows: In June, 1883, I was appointed by the late Sylvester Neelon to superintend the erection of his large stone mills (now the Packard Electric Light Co. Works). The walls and foundations and masonry in connection with the building were all laid with your Thorold Cement (nearly 2,000 barrels being used in the work), which gave first-class satisfaction. I have used your Thorold Cement on a great many other jobs; in fact, have always used your Thorold Cement, which gave the best of satisfaction. I would cordially recommend your Thorold Cement for all buildings, either under water or above.

Yours truly, **JAMES TWESELEY, Millwright, St. Catharines, Ont.**

For Free Pamphlet with full particulars, address

ESTATE OF JOHN BATTLE, THOROLD, - ONTARIO.

Agents wanted in unrepresented districts.

FEED BOILERS.

Boils Quickly with Little Fuel.



Capacity of Galvanized Steel Boiler 50 Gallons.

THE arrangement of the fire box forces the heat to travel over the entire surface of the boiler, heating it quickly. Steel and cast iron parts joined together in such a manner as to avoid their warping.

THE MCCLARY MANUFACTURING CO., London, Toronto, Montreal, Winnipeg, and Vancouver.

If your local dealer cannot supply, write our nearest house.

SEND FOR ILLUSTRATED PRICE LIST.



WE SELL EVERYTHING!

240-lb. Platform Scales—Weights from 1 ounce to 240 pounds—only \$5.00. Solid Steel Hammers, 25c. each. Butcher—10c., 15c., 25c. each.

WILKINS & CO., 166 and 168 KING ST. EAST, TORONTO.

PLEASE MENTION FARMER'S ADVOCATE.

SWEET PEAS

The ideal of floral beauty, easily grown, always appreciated. We offer the following select collection of large flowering Sweet Peas, distinct in shades of color and markings, a large, full packet of each separate variety, rich in value, sure to please.

AURORA, white striped salmon
BRILLIANT, dense scarlet
CAPTIVATION, magenta or claret
EMILY ECKFORD, mauve, wings blue
HEE MAJESTY, rose pink
LOVELY, soft shell pink
MARS, bright scarlet
MAID OF HONOR, white, edged blue

METEOR, salmon, wings pink, veined
MRS. ECKFORD, primrose yellow
PRINCESS VICTORIA, scarlet, wings mauve
RAMONA, blush and white, striped
ROYAL ROBE, pink, wings blue
SENATOR, maroon and white striped
THE BRIDE, fine large white

Any seven of above varieties for 25c., or the 15 varieties for 50c. With each collection or order for Sweet Peas, we will enclose a slip telling how to plant and cultivate to get best results.

SWEET PEA MIXTURES.

To those having limited space for separate varieties we offer the following mixtures, they will create surprise and admiration for beauty in colors and markings.

Large flowering sorts, mixed, 1/4 lb. for 15 cents; 1/2 lb. 25 cents; per lb. 50 cents.
Choice sorts, mixed, 1/4 lb. for 10 cents; 1/2 lb. 15 cents; per lb. 30 cents.
Mailed Post-paid on receipt of price.

STEELE, BRIGGS' FAMOUS SEEDS

Sold by leading merchants throughout Canada. Ask your dealer for them. You will get the best seeds grown.

Our aim is to supply the highest standard in quality, the largest possible quantity at a moderate price, and to please the careful buyer. Should you get less varieties for the same money, you will get the best, it pays best.

A BEAUTIFUL CATALOGUE.

A profusely illustrated Catalogue will be sent, with each new order, and to intending purchasers on application; contains the latest new Sweet Peas, Garden and Flower Seeds, Plants, Bulbs, etc. Interesting to amateurs and practical gardeners.

The Steele, Briggs Seed Co., Limited, Toronto

COUPON
NEW
SWEET PEAS

CUT THIS COUPON OUT

And mail with order for any of the above offers, and we will send free with order for 10 to 25 cents—One paper **RED RIDING HOOD SWEET PEAS**; 30 to 50 cents—1 paper **CUPID DWARF WHITE SWEET PEAS**.

NEW SUGAR BEET

"DANISH IMPROVED RED-TOP."

For Feeding to Milch Cows—Noted for its wonderful Butter-producing qualities—Of fine shape; splendid color; a very heavy cropper and easily harvested.

This New Sugar Beet comes from Denmark, where it is used exclusively by the world's famous DAIRYMEN. It is distinguished by its great productiveness. In rich, deep soil, with good cultivation, far surpasses all the standard varieties of Mangel-wurzel in yield of bulk (they standing closer than the Mangels), in connection with a high percentage of sugar and absence of deleterious salts sometimes contained in Mangels in too great proportion. For fattening purposes and for feeding to milch cows, in cases where a liberal flow of rich, creamy milk is the main object (for butter production), this variety of root, without exception, is the best in the world. The roots are nice and clean, of fine shape and of splendid color, and growing considerably above ground, are more easily harvested than any other Sugar Beet.

CAUTION! We control this novelty, and sell it only direct to reliable merchants and farmers. IN SEALED PACKETS to avoid fraud.
SOLD ONLY IN SEALED PACKETS.—1/4 lb., 20c.; 1/2 lb., 30c.; 1 lb., 50c.; 5 lbs., \$2.25, post-paid.

WM. RENNIE—SEEDS—TORONTO.

RELIABLE SEEDS

FOR THE FARM AND GARDEN.

OUR STOCK INCLUDES ALL THAT IS BEST IN

Garden and Field Roots, Flower Seeds and Flowering Plants, Grasses, Clovers, and Seed Grain.

Illustrated Catalogues mailed free on application.

WILLIAM EWING & CO.,
SEED MERCHANTS, 142 MCGILL STREET, MONTREAL, QUE.

PAGE FENCE QUALITY.

When you seek the best fence that can be made from wire, we know that you will buy the **Famous Coiled Spring Page.** It isn't like any other on earth—it's better. It was the first and it is still the foremost woven wire fence. For the truth about its uses and quality, address

THE PAGE WIRE FENCE CO. LTD.
WALKERVILLE, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Our attention has been called to an error in a paragraph in the gossip columns of our issue of Feb. 1st, in which the ownership of the first prize Shorthorn bull calf at the Toronto Exhibition, 1898, was credited to Mr. Leask. Messrs. R. & S. Nicholson, Sylvan, Ont., own the young bull, Royal Standard, which won first prize at that exhibition as over 6 and under 12 months old; and the same gentlemen won the 1st prize for the best bull calf under 6 months at the same show with their 23rd Crown Jewel.

John Morgan & Sons, Kerwood, Ont., report an active demand for Shorthorns in response to their late advertisement in the FARMER'S ADVOCATE. Among their recent sales were five Crimson Flowers, to Mr. W. D. Flatt, of Hamilton, Ont. They have also sold eight young bulls and several females to various parties, and have yet two excellent young bulls for sale. Their stock bull, Vice Regent, a red four-year-old, by Imp. Aberdeen, a first prize winner at Toronto two years in succession, dam by imp. Vice Consul, a sweepstakes winner at Toronto, and at several State Fairs, is in fine shape and condition, and combines in a high degree the good qualities of his sire and grand-sire.

E. DOOL'S YORKSHIRES.

Near the village of Hartington, on the Kingston & Pembroke Railroad, some twenty miles north of the City of Kingston, in Frontenac Co., Ont., is the farming and breeding operations of Mr. E. Dool, whose specialty has been Yorkshire pigs for some time, and although we had heard previous to our visit to the farm that Mr. Dool was well supplied with the right kind, we did not realize until our visit that we were to be shown over one of the most extensive herds of that popular breed in the Province. Mr. Dool informed us that he purchased his foundation stock from the pens of Mr. J. M. Hurley and Joseph Brethour and commenced with the most fashionable strain of the day. Of the one hundred head now in stock, twenty are brood sows, a few of which are daughters of Ida 1266, by Duke of Oxford and out of Madame 2nd—noted as a producer of brood sows. Belle Vere 2389, by Jackson 2nd, is now three years old and in excellent form, full of quality, possessing exceptional length and depth of body, and extremely active. She has been bred to a boar lately imported and is safely in pig. We were especially attracted by a pair of full sisters, Gilt Edge 2390 and Gilt Edge 2nd, by Champion 1597, and out of Yorkshire Daisy 5th 1060, possessing, as they do, the extra length which has been Mr. Dool's aim to produce, coupled with quality and smoothness. They are kept in the best possible form for breeders, not too fat, yet in fair flesh and allowed their freedom to exercise. They have both been bred to the imported boar and much is expected at their next littering. Snow Ball 3069, by Robin H 1678, and out of Gilt Edge 2nd, and Floss 2996, by same sire and out of Gilt Edge, are exceptionally sweet types of sows, being strong and evenly built, with flesh distributed evenly. Also a splendid young sow purchased in the fall from R. G. Martyn, Marysville, and winner of 2nd in Toronto in six-months class, which is also being mated with the new importation. Among the boars more recently employed may be mentioned Jackson 3rd 1626, by Gladiator (imp.) 13, and out of Jewess 3rd 676, who did two seasons' service and left a lasting impression. Champion 1597, by Oak Lodge Diamond 4th 1135, and out of Millie Stamina 2nd 800, with pedigree running to Mollington and Mariani families, is still on the farm and impressed his young stock with the grand, growthy quality which gave his ancestors the high standing they attained in the breed, and no doubt, helped to place the breed in the prominence it now commands. Robin H 1678, by Oak Lodge Bacon 506, and out of Isabella 1228, was bred by Mr. Alex. Hume, Menie. He was employed in Mr. J. M. Hurley's and other good herds, and is credited with much good stock on this farm. Of recent importation we saw the young boar lately purchased at a long price from Mr. Joseph Brethour, Burford, to cross on the young sows. He was selected in England by Mr. Brethour as being the nearest to the true bacon type. He is kept in strong, serviceable form, and all sows bred to him are safely in pig, and very naturally much is looked forward to in his stock. At the time of our visit Mr. Dool had on hand half a dozen good, straight young boars at a serviceable age, any of which are good enough to head a pure-bred herd. A few young sows already bred are also held for sale, a feature which Mr. Dool intends to pursue more fully in the future, which affords an excellent opportunity to new beginners, as none but the very best sires are kept on hand; and a great variety of breeding can be produced, stock not related can be furnished at any time. Watch Mr. Dool's advertisement.

ALEXANDER GALBRAITH'S CLYDESDALES.

Perhaps as fine a collection of Clydesdales as can be found in one stud in America have their home at Janesville, Wis., at the barns of Mr. Alex. Galbraith, secretary of the American Clydesdale Association. The animals are A1 in breeding and individuality, and purchasers may rely on square treatment. Of the horses now in the stud, Mr. Galbraith writes, under date of February 8th, as follows: "Amongst the Clydesdale stallions which I offer for sale at present are the following: Royal Windsor (10005), weighs 2,000 pounds, by Lord Erskine; Royal Rover (10004), 2,000 pounds, by Mount Royal, dam by Prince of Wales; That's a Right (887), 2,100 pounds, by Lockhart's Hand-some Prince, out of the great Darnley mare, Lenora; St. Joseph (10459), 1,975 pounds, by a son of Balmiedie Prince (the £900 yearling), out of a Royalist mare; Prince of Edengrove (10106), a charming five-year-old son of the Prince of Wales horse, Patrician, out of the double Royal winner, Lizzie of Inchparks; Glensadell, by Sir Everard; Prince Ito and Coleridge, by MacGregor (Prince Ito being from same mare as Prince Patrick); Brownlee, a magnificent brown three-year-old son of Topknot; Netherland, by Flashwood's Best, etc., etc. Three-fourths of these horses have been prominent prizewinners in Scotland before importation last October, and taken all over, are perhaps the best collection of the breed on this continent today. Prices and terms very reasonable. Address ALEX. GALBRAITH, Janesville, Wisconsin."

Horse Owners! Use

GOMBAULT'S -



Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best LISTEN ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blomishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or burn. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., TORONTO, CAN.

WINONA NURSERY CO.

Offers for Spring of 1899.

A full line of stock, both fruit and ornamental, at very moderate prices. No agents' commission to pay.

Send for price list and catalogue. Dealers will find it to their interest to correspond at once with

J. W. SMITH,

MANAGER.

Winona, Ontario.

NURSERY STOCK IN VERITY!



Our new catalogue is our agent, giving descriptions, PRICES, and how to plant fruit, ornamentals, shrubs, ROSES, Clematis, evergreens and small fruits. All well assorted, clean and handsome at the Central Nursery. Shall we send you one—nineteenth year. Also choice Seed Potatoes.

A. G. HULL & SON,

(Mention this paper.) St. Catharines, Ont.

ESTABLISHED 1866.

GEORGE KEITH

for sure-growing

SEEDS

Finest Quality. Send for Catalogue.

124 KING ST. E., TORONTO.

FERRY'S SEEDS

were famous years ago—their fame grows every year—as the seeds most to be relied on—as always the best. For sale by leading dealers everywhere. Five cents per paper and always worth it. Insist on having them. Run no risk—buy Ferry's. 1899 Seed Annual is free. E. M. FERRY & CO., Windsor, Ont.

FOR SALE!

A quantity of Herrison's Bearded Spring Wheat, the most productive and one of the nine selected by the Dominion Millers' Association out of fifty-seven varieties as first-class milling wheats. Free from all foul seeds. One dollar per bushel.

JAMES MARTIN, Renfrew, Ont.

FOR SALE!

From 1 to 300 bushels White Russian Wheat—good seed. **THOMAS GRAHAM,** Rock Farm, Bell's Corners, Ont.

CURED TO STAY CURED

ASTHMA

Dr. HAYES, Buffalo, N. Y.

GOSSIP.

BROADLANDS, A PRINCE EDWARD ISLAND STOCK FARM.
 Near Georgetown, the county town of King's, in the Island Province of Prince Edward, is Broadlands, the farm and home of Mr. Fred. G. Boyer, where we find a high-class herd of Shorthorn cattle. At the head of the herd is Silver Chief - 20500 -, a massive bull of pure Cruickshank breeding, his sire being imported Indian Chief, and his dam imported Mimosa, a cow with more than the usual number of Cruickshank crosses, and described by a judge of Shorthorns as "a big, wealthy cow of the most approved Scotch type, a capital milkster - the sort that made the Scotch Shorthorns famous - famous because paying - paying because good." Silver Chief, having so good a dam and famous a sire, is all that a skillful breeder would expect. A model of the best Scotch Shorthorn type, short legged, broad and deep, great girth, smoothly filled out, fine hair, nice handling quality, and withal, a gentle, mild temper. So good is he that one of the best judges in Ontario on seeing him at Halifax remarked that he would have given the best at the Industrial a "tassel" for first place.
 Noticeable among the females in the herd are the Canadian Duchess of Gloster 23rd, a great-granddaughter of imported Duchess of Gloster 12th, and sired by imported Duke of Lavender, and Mina Mowbray, granddaughter of imported Minerva, and sired by imported Indian Chief. Both these cows are as good as their pedigrees, which is saying they are as good as the best. Their red color insures a plentiful supply of roan calves from the yellow-white bull. We find other good cows in the herd descended from imported cows of remote date, such as Clarentine, Easterville, and Rose Gwynne. The offspring of these old imported cows show that none of the valuable Shorthorn character has been lost in the hands of Mr. Boyer. Among the young things we found a nice bunch of heifers. But most worthy of special inspection is the roan bull calf, a son of Canadian Duchess of Gloster 23rd, and sired by Silver Chief; his fine furlike coat and broad back give promise of his future fitness to head a herd.
 While passing through the yards we could not help admiring the grand forms of the Lincoln sheep, bred to typical sires, purchased from Gibson and Walker, Ontario. We were surprised at the rate at which the younger sheep have developed since we saw them at Halifax. Looking at them we cease to wonder at the fabulous prices the choicest of the breed fetch in Great Britain. In another wing of the stabling we saw a choice bunch of Oxford Down, bred from imported stock. There are some magnificent specimens in the yard, typical of the breed, great wool-growers, and still greater producers of high-quality mutton. Both breeds evidently find congenial conditions in their sea-girt home.
 Mr. Boyer has been a successful breeder and exhibitor of pure-bred registered cattle and sheep for over twenty years. But last fall marked his first visit to the shows in Nova Scotia and New Brunswick, where he had a fair share of success, being awarded first for herd at both shows, and first in "champion" beef breed class, and first for flocks in both Lincolns and Oxfords.

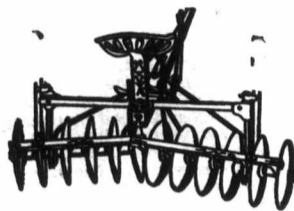
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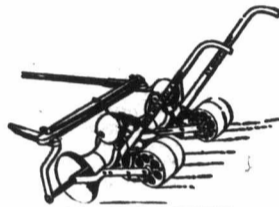
HIGH-CLASS FARM IMPLEMENTS



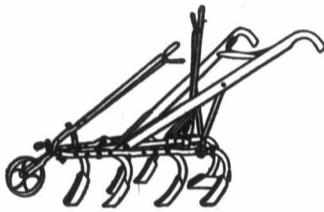
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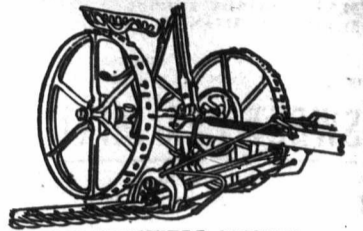
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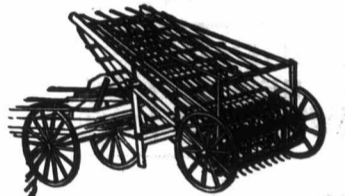
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**CLEAN "ALPHA" SWEEP
 AT SIOUX FALLS**

The superiority of "Alpha" disc made butter has become so pronounced and so firmly established that every competitive butter contest of any importance has become an "Alpha" clean sweep. This has been the history of every Annual Convention of the National Buttermakers' Association since its organization in 1892. The 1899 Convention at Sioux Falls this week has confirmed previous results.

We are just informed by wire that First Prize, with all accompanying awards, medals and honors, has gone to A. W. McCall, of Creston, Iowa, with a score of 97, and Second Prize and honors to O. P. Jensen, Wells, Minn., with a score of 96½.

And further, that out of 229 entries scoring above 90, or, in other words, all high-class butter entries, 206 were positively "Alpha" disc made, with some of the few remaining in doubt and probably so.

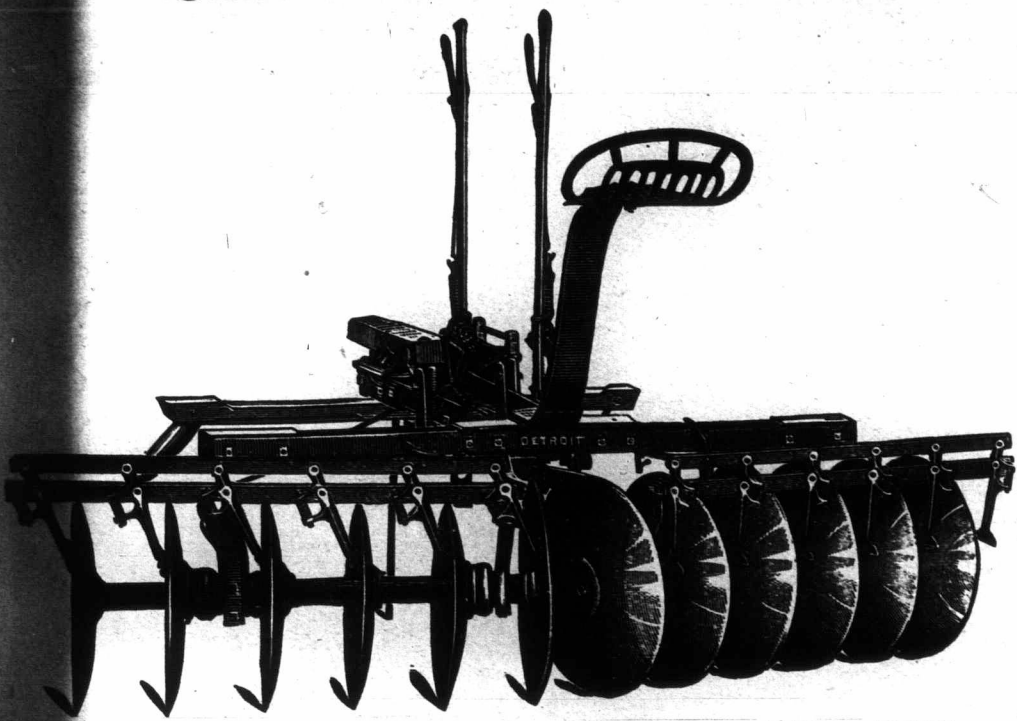
Our representative adds that the convention is a big, enthusiastic one, and that so far as separators are concerned, the "Alpha" is first, last, and everywhere - everybody in sight being an "Alpha" man - just as must necessarily be the case in such a representative gathering of intelligent, wide-awake, and up-to-date creamerymen and buttermakers who know the difference between separators from their own use of them.

We congratulate the buttermakers generally upon the success of their convention, and the prize-winners particularly upon their deservedly successful exhibits.

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 DUNDAS, ONTARIO.

GOSSIP.

The Toronto Industrial Exhibition dates have been fixed for August 28th to September 9th.

Mac Campbell, Northwood, Ont., writes: "My Shortboms and Berkshires are in the best of condition. The young bulls are naturally thick-fleshed, with straight top and lower lines, and on short legs. The Berkshire boars I advertise fit for service are extra good ones of the bacon type, with good hams, in which many of the so-called bacon hogs are deficient. They are sired by Crown Lad =3705=, bred by Geo. Green, and their dam a descendant of the noted Baron Lee 4th. The younger pigs are sired by Oliver Cromwell =5820=, a boar of exceptionally good bone, length and depth of side. Leicester are wintering well, and expect before this reaches your readers to have them greatly increased. I invite personal inspection of our Highland Park herds."

Messrs. H. Ca. gill & Son, Cargill, Ont., writes: "We have been kept so busy answering inquiries for Shortboms since advising you of the sale of an imported bull and two imported heifers to the Messrs. Smith, of Maple Lodge, that we have not had an opportunity of writing you an account of subsequent sales. Since then we have made the following sales: Blythesome Girl 2nd, a good strong, even one; Ury Girl 3rd, a beautiful heifer; Belle of Plainville and a grade heifer, to James Hawkins, Shelbourne, Ont.—Baron's Heir Imported, a massive, thick-fleshed, good, imported bull, to William Dickinson, of Midway. Idlewild and bull calf to J. M. Fisher, of Midway, Ont. This is a fine big Strathallan cow who was 3rd at Toronto Industrial in her palmy days. Christopher (imp.), to Jas. Douglas, of Caledonia, Ont., a very even calf of fine character, good handler, and should make an impressive sire. Red Rose (imp.) and heifer calf, to Cookson Bros., of Downey, Iowa, a big massive heifer, thick-fleshed and a good doer, with a beautiful calf by Illustrious, a pure Cruickshank bull. Rosa Lee (imp. in dam), with her bull calf, to McGregor Bros., Mimosa, Ont., a good cow, very compact, even, and close to the ground. Myrtle 5th and heifer calf, to Mr. Hoffarth, of Carlsruhe, Ont., a very sweet heifer and half-sister to Capt. Robson's show heifer, Myrtle.

Our other cattle are doing splendidly, especially the five imported bulls which we still have. Orange Duke (imp.), who was winner in his class and sweepstakes bull at Banchory show in Scotland this year, continues to look like a show bull. Diamond Jubilee (imp.), although never shown, is a show bull sure, big, long, even, and thick fleshed all over. The three imported bull calves, Red Ribbon, Governor General, and Baron's Pride, are growing immensely, and please us better every day. They are strong, healthy fellows, with grand backs, deep, level in the lines, good bone, and will develop into good sires or we are much mistaken in our estimate. The imported females are doing very nicely, are healthy and growing.

SHROPSHIRE SHEEP FOR CANADA.

On Friday, the 6th inst., Alfred Mansell & Co., Shrewsbury, Eng., shipped by the White Star Line from Liverpool a small but very choice selection of eleven Shropshire ewe lambs and one ram lamb for the Hon. John Dryden, M. P. P., Minister of Agriculture for Ontario, Can., owning for their sires such exceptionally good rams as Butter Blue 9377, bred by Mr. David Buttar and purchased co-jointly by Mr. Bowen-Jones and Mrs. Barrs for 150 guineas; Adam Odstone 3347, bred at Odston, by the Royal winner, Odstone Commander; Star of Ensdon No. 4, 9698. On their dams' side this select shipment traced back to the following distinguished sheep: Bath Brick 5797, The Champion 7163 (purchased for 100 guineas); Royal Jubilee 3702, Ringleader 3693, Attractor 2917, etc., etc.

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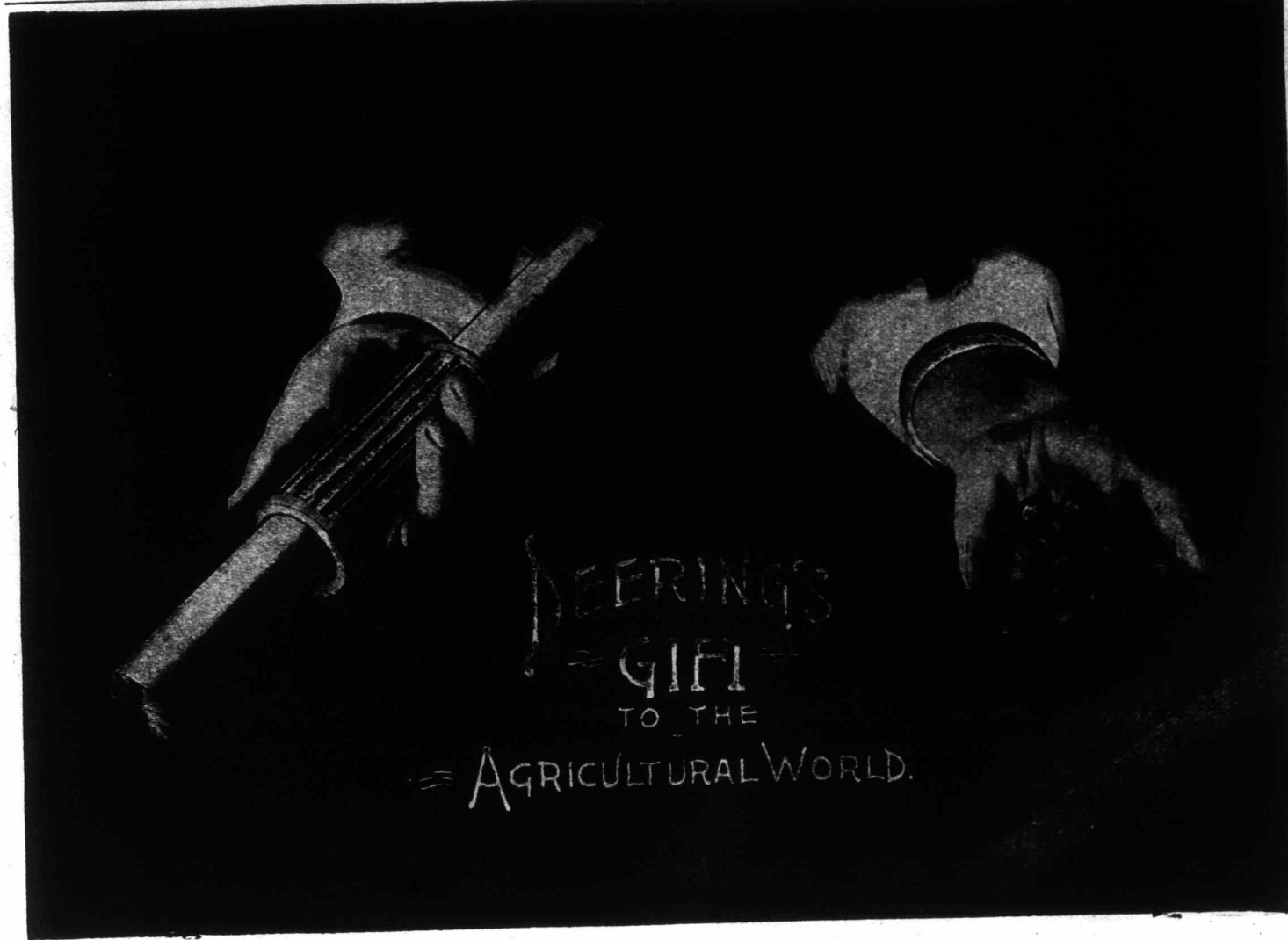
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TUBERCULOSIS IN CATTLE
IMPORTANT TO FARMERS.

The following letter is sent by the Department of Agriculture at Ottawa to persons desirous of having their cattle tested for Tuberculosis, and sets forth the conditions under which the Dominion Government undertake to apply the Tuberculin Test FREE OF CHARGE.


DOMINION OF CANADA.
DEPARTMENT OF AGRICULTURE.
OTTAWA.....1908.

DEAR SIR,—
In response to your letter of the..... I beg to say that the following are the conditions upon which the Department applies the Tuberculin test to cattle:—
When a person makes application to the Department to have his cattle tested for the purpose of ascertaining whether any of them are affected with Tuberculosis, a Government Inspector is sent to test, and all expenses in connection with this are paid by the Department. The owner must accept all responsibility for the result of the test. The Government do not order the slaughter of diseased animals. No compensation will be given in cases where owners slaughter of their own free will. If any of the animals are found to be suffering from the disease, they will have to be isolated and the shed or stall in which they are kept will be quarantined. The owner will then be prohibited from selling any of them or their raw products, should he desire of a cow free will to slaughter them and dispose of their carcasses for food he will have to consult the local authorities as to whether he will be allowed to sell them. The premises in which diseased animals have been must be cleaned and disinfectant to the satisfaction of the Government Inspector, as recommended on page 11 of the Farmer's Bulletin on Tuberculosis, a copy of which I enclose you. The premises in which the diseased cattle have been quarantined will also have to be disinfected and cleaned, as mentioned above, after the animals have been disposed of. When the Minister of Agriculture receives a certificate from the Inspector that the disinfection has been done to his satisfaction the premises will be released from quarantine. No application will be considered unless the owner agrees to submit all his cattle to the test.

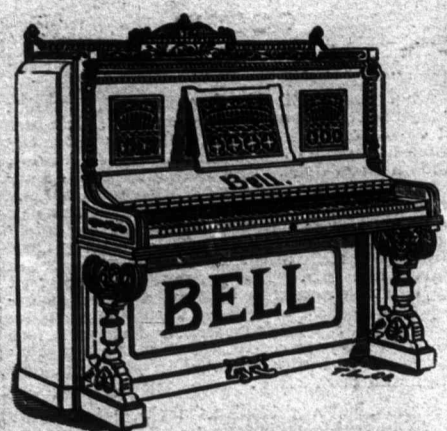
If an applicant refuses to have his cattle tested after having made formal application, he will be charged with and will have to pay whatever expenses may have been incurred by the Department in connection with the sending of a Veterinarian to make the tests.
Upon your signing and returning to us the attached form of request a Government Inspector will be sent to test your cattle.
Yours truly,
W. E. BARTHE,
Deputy Minister of Agriculture.

To the Honorable the Minister of Agriculture for Canada, Ottawa, Ontario:
DEAR SIR,—I hereby request that my entire herd of cattle, consisting of:
..... Bulls,
..... Cows,
..... Heifers,
..... Calves,
be tested for Tuberculosis with Tuberculin, and I hereby agree to conform to the Government conditions as expressed in their letter dated..... which I acknowledge having received.

The nearest railway station to my premises is..... on the line of the..... Railway Company, and if I am notified when the Inspector will arrive at the station I will meet him and drive him to my premises, and, when the testing of my animals is completed, will drive him back to the station free of charge.
Signed.....
Date.....
Address.....

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FOR STOCK RAISERS.

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Fleming's Lump Jaw Cure.
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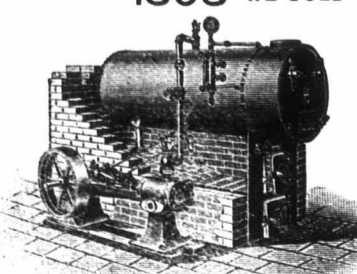
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PRICE: Pan-a-gea and Louse Killer, 35c. each; Stock Food, 7 lbs., 65c.; 12 lbs., \$1.00; 35c. articles by mail 5c. extra.
Send for Scientific Book on Stock and Poultry, FREE.

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