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FARMING

December 27th, 1898.

Good Butter Making

Do you want to make your churning sure, safe, profitable? And easy, too? Do you want to find a quick market for your butter?

Then try WINDSOR SALT—the salt that is pure and dissolves so easily. It has no bitter taste—successful buttermakers recommend it, and they ought to know.

Progressive Grocers Sell

Windsor Salt

The Windsor Salt Co.
Limited,
Windsor, Ont.

HORSEMEN! THE ONLY GENUINE IS



A safe, speedy and positive cure. The Safest, Best BLISTER ever used. Takes the place of all treatments for mild or severe action. Removes Hunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Write for circulars. Price \$1.50 per bottle, express prepaid.

THE LAWRENCE-WILLIAMS CO.,
21 Front St. W., Toronto, Ont.

Quick Cure For Lump Jaw

Not one case in a hundred that cannot be cured by one to three applications of

Fleming's LUMP JAW CURE



Trade Mark Reg'd.

Lump Jaw has heretofore baffled treatment. It has infected herds and pastures, and caused loss of hundreds of thousands of dollars. This new remedy cures quickly, thoroughly, and permanently. Leaves jaw smooth and sound. Easy to apply; costs but a trifle compared with results.

GUARANTEE.—Every package sold under positive guarantee; money back if it should ever fail to cure. Sent everywhere by mail, Price, \$2.00.

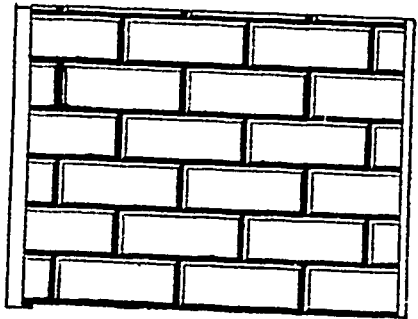
FREE A valuable illustrated treatise on cure of Lump Jaw sent free to readers of this paper.

Address: FLEMING BROS.
Chemists, ST. GEORGE, ONTARIO

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for new buildings, or fixing up old ones.

Our Sheet Steel Pressed Brick



It affords a warm, durable and handsome finish—is easily applied—fire-proof and economical—and gives a uniform effect that is highly appreciated.

Why not try it?
Our Catalogue gives full information.

Metallic Roofing Co., Limited.
1192 King St. West, TORONTO

Fashionable Hackneys and Prize-Winning Clydesdales

OF THE
BEST KNOWN STRAINS

For Sale

A number of superior Hackney stallions and mares, sired by such well-known prize-winners as Ottawa, Banquo, Seagull, and the world-renowned JUBILEE CHIEF, winner of the Hackney championship at the World's Fair.
Also a number of Clydesdale stallions and mares sired by such famous stockgetters as Sir Walter and Eastfield Laddie.

MATCHED HIGH-STEPPING CARRIAGE HORSES. FASHIONABLE COBS, SUPERIOR SADDLE HORSES, HANDSOME PONIES.

R. BEITH & CO.. - Bowmanville, Ont.

HOLSTEINS.

Brookbank Holstein Herd

CHAMPIONS FOR MILK and BUTTER

A number of desirable young bulls on hand from one to eight months old from our show herd and great milking stock. Also females of all ages.

Write for just what you want.

Registered Poland China Pigs, one month old, for sale.

A. & G. RICE, Currie's Crossing, Oxford County, Ont.

MAPLE HILL Holstein-Friesians BULL CALVES FROM

QUEEN DEKOL 2nd. Winner of Prince of Wales' prize, over heifers of a 1 breed in public test.

LADY AKKRUM 2nd. 77 1/2 lbs. milk in 1 day and 2 1/2 lbs. butter in a week.

KAATJE DE BOER. 13 lbs. milk and 3 lbs. butter per day at 11 years old.

MERCENA. 37 lbs. milk per day at 14 years old.

DAISY TEAKE. Dam of Daisy Teake's Queen, whose 1 yr. old public test has never been equalled.

G. W. CLEMONS, St. George, Ont.

ROSE HALL STOCK FARM.

HOLSTEIN-FRIESIAN

FOR SALE—Two choice young bulls, sired by Lord Everet and a great grandson of Barrington; one of the best bulls ever imported. Dams are Cecilia Mink Mercedes, 1st and 2nd, both of good milking strains.

Also heifer and heifer calves. Prices reasonable. T. W. CHARLTON, St. George, Ont.

SPRING BROOK HOLSTEINS, TAMWORTH AND B. ROCKS

Great bargain. Holsteins from new Mill New Year's. Take advantage of cheap rate over holidays. Stock of best quality. Tamworth the choicest in the country. A few cockerels on hand.

A. C. HALLMAN, New Dundee, Ont.

E. PANNABUCKER, Fairview Farm, Hespeler, Ont., Breeder of reg. Holsteins. Stock for sale.

GREGOR MACINTYRE, Renfrew, Ont., Breeder of Thoroughbred and High Grade Holstein Cattle. Stock for sale.

J. A. RICHARDSON, South March, Ont., Breeder of Holsteins, Dorset Horned Sheep, Tamworth Swine.

W. M. ARMSTRONG, Locust Hill, Ont., Breeder of Purebred and High-Grade Holsteins.

GALLOWAYS.

A. M. & R. SHAW, Brantford, Ont., Breeders of Galloway Cattle. Choice young animals for sale.

DAVID McCRAE, Jansfield, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

DEVONS.

W. J. RUDD, Eden Mills, Ont., Breeder of Devon Cattle, Cotswold and Suffolk Sheep, Berkshire Pigs, Plymouth Rock Fowls. Young stock for sale.

HENRY ARKELL, Arkell, Ont.

Importer and Breeder of

OXFORD-DOWN SHEEP

Ewes in Lamb to Royal Warrick and Imp. Hero 5th for sale.

PRICES REASONABLE.

Hermanville

Tamworths

Yorkshires

The Central Idea of the Hermanville Farm is to produce bacon pigs that will give to the swine-raiser the largest constant return at the lowest net cost. Young stock, rich in bacon inheritance, and capable of bringing up your herd to a high standard, generally on hand for sale. Our TAMWORTHS are of the "Parkhill Mash" strain, and are absolutely the finest herd in this country. The merits of our YORKSHIRES and JERSEYS are well known. Orders now looked for spring pigs. Address (P.O. on the farm), Hermanville Farm, P.E.I., Can.

HICKORY HILL STOCK FARM



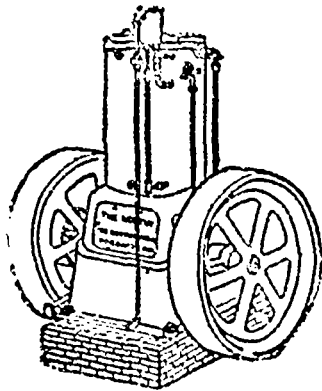
3 Ayrshire Bull Calves from dams that have won milk tests.

Great Bargains if sold before winter sets in. Write or come and see.

NAAMAN DYWENT, Clappison's Corners, Ont.

W. M. SMITH, Colambus, Ont., Breeder of Clydesdale Horses, Shortborn Cattle, and Cotswold Sheep. Stock always for sale.

Northey Gasoline Engine



An Ideal form of power for the Farm

Simple, Strong, Economical. No handling of fuel. No smoke stack to throw sparks. No danger of explosion. Can be readily moved about from one place to another, and will do with the greatest ease all that the windmill or steam engine could do, at a far less cost.

Our booklet tells all about it. Write for it.

Northey Manfg. Co., Limited, Toronto
1068 King St. Subway

BRAMPTON JERSEY HERD.

Fell stock of A.J.C.C. cows, heifers, heifer calves and bulls. Ask for what you want. A number of young Berkefires.

R. H. BULL & SON, Brampton, Ont.

J. H. SMITH & SON, Willow Grove Farm, Highd., field, Ont., Breeder St. Lambert and St. Helen's Cattle. Prize herd at the Industrial.

ROBT. REESOR, Locust Hill, Ont., Breeder Jersey Cattle and Shetland Ponies. Young stock for sale. Locust Hill is 20 miles from Toronto on the C.P.R.

W. M. ROLPH, Glen Rouge Farm, Markham, Ont., Breeder of Jersey Cattle. Herd nearly all pure St. Lambert. Young stock always for sale.

W. M. WILLIS, Pine Ridge Farm, Newmarket, Ont., breeder of St. Lambert Jersey Cattle, Cotswold Sheep.

DENTONIA PARK FARM

EAST TORONTO (Coleman P. O.)

W. E. H. MASSEY, Proprietor.

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 S. C. Brown Leghorn and Light Brahma Cockerels for sale.

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

Henry Dudding

Riby Grove, Great Grimsby, Lincolnshire, England

Has always for inspection, and sale, the largest flock of pure Lincoln Longwool Sheep in the county, including many prize-winners, having taken prizes for many years at the Royal and other shows for both Ram and Ewe, including champion medals at both the Paris Exhibitions, Vienna, Amsterdam, Canada, Australia, New Zealand, and all the leading prizes at the Chicago Exposition; also the first for the best collection of Lincoln fleeces of wool at the Royal Windsor Show and the Lincolnshire Show, which proves the character of this flock. The sheep are famous for their great size and one hundred and twenty-five years' good breeding. At Lincoln Ram Sale, 1876, this flock's consignments not only made the highest individual average of any consignor, but also made an average price exceeding that made by any other breed in England, i.e., \$511 per head, the first six making an average of \$340. The sheep for sale this year are all sired by noted rams, and are fully equal to their predecessors in every way.

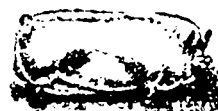
Rail Stations: Stillingbore, 3 miles distant, and Great Grimsby 7 miles.
Telegrams: "Dudding, Reelby, England."

Hursley Stock Farm.

A.J.C.C. JERSEYS

St. Lambert Blood.

Registered Stock, all ages, including some excellent choice Young Bulls ready for service. Also some choice Grade Milkers and Heifers, cheap.



Large Improved Yorkshires

Six Young Boars ready for Service cheap.

Some Choice Young Breeding Sows. Also Young Stock, at right prices.

SILLS SHAVER & SON, Winchester Springs, Ont.

STRATFORD BROS.

BRANTFORD, ONT.

Tamworth Boars, Dorset Rams, Shetland Ponies, Light Brahmas, Houdans, Cornish, Indian Games, Black Lambhans, White Langshans, White Plymouth Rocks, Buff Plymouth Rocks, Barred Plymouth Rocks. Prices Right.

W. C. EDWARDS & CO. Breeders and Importers

PINE GROVE STOCK FARM, Rockland, Ont.

On the C.P.R. and C.T.R. Railways. Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at the lowest prices.

Ayrshires, Jerseys, Shropshire Sheep, and Clydesdale Horses.

Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

J. W. BARNET, Manager.



LAURENTIAN STOCK and DAIRY FARM, North Nation Mills, Que.

Ayrshires, imported and homebred herd headed by imported Tam Glen 2nd, No. 1110 D. A. H. B. Jerseys all of the celebrated St. Lambert family, herd headed by Ligez Foggie of St. Anne's 2704 A.J.C.C. Berkshire Pigs. Young stock of all the above breeds for sale.

Post Office, Telegraph Office, and Railway Station, North Nation Mills, P.Q., on the C.P.R.

A. E. SCHAEFER, Manager.

FARMING

VOL. XVI.

DECEMBER 27th, 1898

No. 17

New Year's Greeting

Last week we had the pleasure of wishing our friends and patrons "A Merry, Merry Christmas," and this week another pleasure is ours, that of wishing them a prosperous and happy New Year. We hope and trust that 1899, the last year of the century, will bring them greater prosperity and success in their business and farming operations than 1898 has afforded, and that their cup of joy and happiness will continue full and overflowing till the blessings of the twentieth century are upon us.

A New Zealand Opinion of our Exhibition Number

The October number of our esteemed contemporary, the New Zealand *Dairyman and Dairy Messenger*, which has just reached us, contains the following complimentary reference to the special Exhibition Number of FARMING:

"It is certainly the finest production of a strictly agricultural publication that has come under our notice, and is a credit to the publishers, The Bryant Press. We are glad to know that they believe, and have proved, that a high class production, finely printed and finely illustrated, is appreciated by the farming community. We are trying to follow in their footsteps—a long way behind, it is true."

Has Found the Right Paper to Advertise in

The following letter from one of our advertisers speaks for itself and needs no comment other than that Mr. Ford's experience is the same as many more of our advertisers. Mr. Ford's advertisement only appeared in four successive issues, and the splendid results he has had show clearly the advantages of a weekly publication in giving quick returns to advertisers:

Drumquin, Ont., Dec. 19th, 1898.

FARMING,

Toronto, Ont.:

Dear Sirs.—Please give my advertisement one more insertion and that will clear me out of stock. Have found out the right paper to advertise in and also the benefit of advertising in the right paper. We have received from four to six enquiries every day since our advertisement appeared in FARMING and sales have been surprising. We sold two birds last Saturday, and to-day are shipping a 34 lb., year-old tom and a young hen to Sam Snowden, Bowmanville, Ont., and a 24 lb. gobbler to Martin Night, Burgessville, Ont. FARMING is all right.

Yours truly,

JAMES FORD.

Agricultural News and Comments

Milk is pasteurized when it is heated from 155 degrees to 167 degrees. This process kills most of the germs. Boiling the milk (212 degrees) or heating it nearly to boiling point kills all the germs and is called sterilization.

A good way to start a forest of nut trees is to plant the seed in the ground where the tree is to grow. Samuel Miller says: "Cover the walnut two inches, hickory one, acorn one, hazel nuts and chestnuts the same as hickory."

A common estimate of the cost of eggs is one cent each. This is a fair estimate, allowing the average cost of a hen to be \$1.25 a year, supposing that she lays about ten dozen eggs in that time. But the hen above the average will lay more eggs and therefore produce them at less cost each.

To clean a rusty plough or cultivator use sulphuric acid, four ounces to a pint of water, handling the dangerous acid

with care. Pour the mixture on the rusty place and when the rust is softened scour it off with sand, dry and coat with grease. A plow treated this way will quickly brighten when used again.

The largest horse in America has been discovered in Illinois. He stands twenty hands high, weighs 2,500 pounds, and has never been either broken or shod. He is nearly a pure blood Clydesdale. Of course he is a freak, and not likely to be worth anything except for exhibition purposes.

A writer in the *Practical Farmer* says: "I have cured my horses of colic several times with common salt. Take a large handful and put it back as far in the mouth as possible. Hold up the head so they cannot spit it out. More salt will not hurt them. They will generally be all right in an hour or two."

Here is a good recipe for curing hog meat so that it can be used in summer as well as winter. The proportions are to 1,000 pounds pork take ten quarts fine salt, three pounds brown sugar, and a little saltpetre (dissolved). Mix and rub on the meat as soon as cut up. The meat is laid on a board about ten days, then sewed up in a cloth bagging.

The rarest bird in existence is a certain kind of pheasant in Annam. For many years its existence was known only by the fact that its longest and most splendid plumage was in much request by mandarins for their head-gear. A single skin is worth \$400, and the living bird would be priceless, but it soon dies in captivity.

Cattle have been known to have been poisoned by eating the leaves of wild cherry trees or shrubs. It is caused by the prussic acid in the leaves, and it is estimated that one half pound of black cherry leaves may be considered as a fatal quantity for a cow to eat. If this be true the leaves of the cherry tree should be excluded from all hay.

Nikoteen, the essential element of tobacco, is used in Australia for spraying. The preparation used is an intensely concentrated form of that substance. In one small bottle of Nikoteen is the narcotic from twelve pounds of tobacco stems, a ton of the stems making four pounds of the preparation. It is said to be very effective in destroying the codling moth or aphid.

Pigs may be made useful in more ways than one. Recently an Australian coasting steamer struck on a reef and those on board were likely to come to grief. There being no rockets on the ship, the captain tied a life line to some pigs which formed part of the cargo, and had all the animals put overboard. The pigs swam to the shore taking the lines with them, and by establishing communication every soul on board was rescued by means of travelling cages.

Color fads in farm management are common in English agriculture. One noble lord has a white farm upon which all the birds and animals are white in color. Another fancy farmer shows a strong partiality for yellow. His costume, from boots to straw hat, is of that shade, he drives a yellowish, dun pony, keeps yellowish-brown Jersey cows, fills his hennery with buff cochins and buff leghorns. His flower garden is a mass of marigolds and other flowers of similar golden hue. All the buildings are painted yellow. White and yellow are about the only colors available.

Co-Operative Pork Packing

A subscriber in western Ontario asks for information regarding the cost of erecting and operating a co-operative pork factory, and whether it would be advisable to erect one in his locality. It is very difficult to give definite estimates as to the cost of buildings, etc., and the amount of capital required to successfully operate one. To start on a scale that would allow for growth and expansion, would require at least from \$25,000 to \$50,000 for plant and equipment, and then it would be safe to have a working capital of several thousand dollars in addition. We know of one or two instances in the eastern provinces where a pork factory was started on a capital of \$10,000 for building and equipment, but we think this is too small, and only admits of a very small business being done. We would advise all parties contemplating erecting pork packing factories, whether they are co-operative or not, to visit some of the establishments already in operation. Such a visit would enable them to understand the nature of the business and the magnitude of the undertaking.

As to the advisability of erecting co-operative pork factories there is some difference of opinion. One very important advantage which the co-operative packing establishment has over the large establishment in the big centres is that if properly managed it would be able to control to a large extent the kind of hogs produced by the farmer. A co-operative factory drawing its supply from a district within a comparatively few miles distant would be able to educate the farmers in that section as to the kind of hog to raise and how to feed it so as to make it produce the finest quality of Wiltshire bacon. This, the packer in the large centres is separated a long distance from where he gets his supply can do only in a general way. But a co-operative factory with the stock held largely by farmers in the district would have a great advantage in being able to come directly in touch with every hog producer in the locality.

But it is well to consider the question from every point of view, whether a co-operative or any other kind of pork-packing establishment is contemplated, it is absolutely necessary that some skilled expert should be secured who thoroughly understands the selection and killing process, and the making and curing of bacon suited to the export trade. The erection of buildings and the management of the whole concern should be placed under the control of such an individual, who, as is the case with skilled labor, will have to be paid a good salary for his services. Where large capital is invested, such as would be required to operate a pork-packing establishment some person or persons of more than the average business ability should be connected with the concern to overlook its finances. There are no doubt farmers in every districts quite capable of looking after this part of the business if they would give their time to it. To finance well requires special training and careful attention, and unless that could be given care should be exercised in investing large capital. The buying and selling is also an important part of such a business, and unless the markets are closely followed, and the quality of the best, failure is likely to result.

As far as we are able to judge we do not think there would be much difficulty in disposing of the product in Great Britain so long as the quality was right, and the very best Wiltshire sides were exported. But then the supply must be regular, and when a customer is secured the factory must be in a position to send forward a certain quantity every week or fortnight, as the case may be. And just here, for a time at least, will be one of the great difficulties in successfully carrying on a pork-packing establishment where the supply of hogs is to be drawn from a certain limited district. A factory that has a killing capacity of 1,000 hogs a week is not considered very large, and this would require a capital of about \$50,000 for buildings and equipment. But we are very doubtful at the present time if there is one single county in Ontario in a position to supply every week (1,000 hogs) for a year. Double this number each week, however, is not beyond the capacity of

every county if the farmers make a regular business of it; but this will take a year or two to bring about. Of course, in a district where a packing establishment were erected, the supply of hogs would quickly increase, and it would only be necessary to wait a year or two, if conditions were favorable, till a sufficient quantity of hogs could be secured.

Recent experiments conducted at Guelph, an account of which is given elsewhere, show that whey and skim-milk, combined with other feeds, make a good, firm quality of bacon. This being so, pork-packing and dairying should go hand in hand. Where both winter and summer dairying are made a specialty of it should not be difficult, to get a sufficient supply of hogs in a comparatively small area to keep a good-sized packing establishment going. Ten or a dozen good cheese factories or creameries in close proximity, as is the case in Oxford or Perth counties, if running all the year around, making cheese during the summer and butter during the winter, or butter both winter and summer, could supply a good share of the food necessary to raise sufficient hogs to make a pork-packing establishment in the locality a success.

Co-operation, however, may be made useful to the farmer who raises hogs without investing money in a co-operative packing establishment. Co-operative selling of their supply of hogs would help farmers to get better value for their products. The plan would be for the farmers in a locality to co-operate and ship their hogs direct to the packer and do away with the middleman. If, say, twenty farmers would co-operate in this way, an ear-tag with the farmer's name or a number on could be provided and fastened to each lot of hogs. When the hogs arrived at the packer's each farmer could be paid what his hogs were worth. In this way the quality of the hog would count, as it does not where a middleman buys any and every kind at the same price. We would like to see this plan tried, as we believe it would be of great educational value and enable every farmer to get better value for his hogs than the present plan affords.

South American Competition in the Cattle Trade

In another column a correspondent points out that the reason why Canadians are not able to compete with the people of Argentina in grain-growing and the export cattle trade may be due to the different monetary systems in vogue in the two countries. Argentina has a silver currency, while Canada has a gold currency. While this is true, we are at a loss to understand just how such a condition of affairs would enable the one country to produce beef cheaper than the other. The export cattle trade of Argentina is with Great Britain, where a gold standard of currency prevails, and all cattle or any other product shipped there would have to be sold on the gold basis, or, in other words, for the value of the animal or product in English currency when it is landed. This being so, it would not make any difference what kind of a currency was in vogue in Argentina, the price paid in England being governed altogether by the supply and demand.

The cost of producing beef or any other farm products depends nearly altogether upon the cheapness of the land and its ability to produce an abundance of cheap food. Argentina seems to be specially favored in this particular. There are large runs where cattle can graze all the year round at very little cost. Besides this, corn and other fodders can be produced at a very low cost, so that the expense of producing good beef is very much reduced. The general plan followed by feeders there is to allow the cattle to graze till within a few months of the time when they should be ready for export. They are then placed in stables and fed a ration made up largely of corn; silos being in use in many parts of the country. It will thus be readily seen that the South American feeder has a great advantage over his brother feeder on the northern half of this continent.

But cheap feed is not the only requisite in producing good cattle. There must be the right type of animal to begin with. Five or ten years ago the feeders of South America were not so favorably situated in this regard as they are to-day. At that time they had to depend upon the native stock, which was unsuited to the production of beef suitable for the British markets. However, they did the right thing under the circumstances, and began importing largely of purebred animals of the right type to cross with the native stock, with the result that to day Argentina is our strongest competitor both as regards the quality and quantity of the cattle she exports. The same system of improving the stock has been followed in connection with sheep and horses. Purebred rams of the best breeds have been, and are being, imported in large numbers to cross on the native sheep, and likewise shire and Clydesdale stallions have been brought into the country to improve the quality of the native horse.

Cheap feed and a good breed of cattle seem to us to be the chief factors in the production of cheap beef in Argentina and not the adoption of a silver currency. No matter what value an animal might have under a silver standard, if shipped to a country where the gold standard prevailed, its value would have to be changed accordingly. For instance, a British dealer whose standard is gold would not pay the cattle dealer in South America in gold the value which the animal would have under the silver standard in Argentina. Because an animal is worth say \$100 under a silver standard does not prove that it is worth the same amount under a gold standard. It therefore seems clear that the cattle producer in Argentina will have to figure out his profits on the basis of what his cattle sell for in Great Britain just the same as the cattle producer in this country has to do, and quite independently of the nature of the currency in his own country. The only way in which a silver currency might be of advantage to the South American cattle feeder would be in the cost of labor, but from what we know of that country such is not the case. Relatively speaking, labor costs about as much there as in Canada. A silver currency, no doubt, gives a higher value to all products in the coinage of the country in which it is in vogue, but the real value or worth of the product is not changed in the least. More than anything else, all agricultural products are governed by the law of supply and demand.



Ontario Bee-Keepers' Association

The annual meeting held at Guelph, Ont., on Dec. 6th, 7th and 8th last, opened at 2 p.m. The president in his opening address mentioned the lessons which had been brought out during the season. He thought bee-keepers in general were good citizens. They had passed through a very favorable season, although some reported a partial failure. There were many attractions in Guelph and the Agricultural College in its vicinity. The prices of honey had been slightly downward. To offset this he advocated better methods of bee keeping and decreasing the cost of production.

Mr. H. G. Sibbald, Cooksville, gave an excellent address on "Spring Management." He advocated early setting out, placing them on the stand they were taken from the previous fall. He examined the hive from below when in the cellar, and those not having clean bottom boards, etc., he marked and attended to when on their summer stands. Light colonies were marked when carried out and stores given. He then left them well alone for about a month. He took combs out the bees were unable to cover, and tried to have the brood chamber well filled with brood at the beginning of the honey flow.

W. J. Brown, Chard, Ont., spoke on "Summer Management." He stated for summer management to be right the previous autumn, plenty of stores for winter, a prolific queen and good wintering. Supers were put on when the clover honey began to come in. He removed in extracting combs sufficiently sealed, and left the balance

until a later stage. He kept the extracting room at a temperature of 90 to 100°. After extracting all the honey it was strained through a cloth.

F. A. Gemmell, Stratford, in an address gave some excellent advice on rendering wax from old comb. He advocated the use of a press, the broken comb after heating being put into a gunny sack and all between the press.

W. Z. Hutchinson, Flint, Mich., followed on "Management in Swarming Season." Mr. Hutchinson recommended getting the bees started in the supers before swarming, drawn comb in the first super, full sheets of foundation in those following, which should be put on, and when the bees began storing well, this additional room should be given. He hived the new swarm on the old stand, and advocated a queen-trap and swarm-catcher at the entrance.

R. F. Holtermann, Brantford, followed on "Honey for Market."

First-class extracted honey sells in Canada at 6 to 15c. per lb., more frequently at 6 cents when purchased in large quantities, such as 1,000 to 5,000 lbs., and comb honey at 11 cents. The difference thus far on first-class honey is $\frac{1}{4}$ to $2\frac{3}{4}$ cents per pound. Those who consider that in production 70 lbs. of comb honey is equal to 100 lbs. of extracted honey, are considered by the majority of bee-keepers as over estimating the ratio of comb honey, many more say it is 50 to 100 lbs. I am inclined to believe that with the best management the first is right, but with a bee-keeper not thoroughly experienced, or not having time to apply his knowledge, it may be even less than the latter, but taking the ratio of 70 to 100 pounds of extracted would bring generally \$6, while the 70 lbs. of comb honey would generally bring \$8.40. With $2\frac{1}{4}$ cents deducted, which is the cost of foundation, sections, and crates, this leaves \$7.30, a difference of 30 cents.

COMB HONEY FOR MARKET.

In producing comb honey for the market it is desirable to keep colonies strong, to know when the supers should go on and when they should come off. In going through the country I have time and again seen sections on the hives, even freshly put on, when there was not the slightest hope that the bees would do anything with them. I have seen them on colonies so weak that they could not take care of a full brood chamber, to say nothing of these supers, and producing surplus honey suitable for market. While we find such frequently the case, these errors can be comparatively easily avoided. To prevent inferior honey from being stored in the sections is, however, more difficult. The bringing from the brood chamber into the super inferior honey, and the storing of early gathered honey, can be avoided, first by shifting and uncapping honey, compelling the bees in strong colonies to convert dark honey into brood. If the bees require more room than the brood chamber affords, the extracting supers should be put on, and if there is any spare energy let the bees pull out sheets of foundation. Combs thus newly built offer an excellent opportunity for watching the color of the honey coming in from day to day, and at the opening of clover, just as soon as the bees cease bringing in (or up) dark honey, the sections are put on. To avoid cull sections towards the close of the season, we then change to extracted honey. This system has been the most satisfactory to us. Although we depend upon buckwheat as a crop, we do not consider, if it can be avoided, that it pays to finish with dark honey sections having a considerable quantity of light honey.

EXTRACTED HONEY.

In extracting honey a little too much does less harm than not enough. Two, or even three, supers on one hive can be used to great advantage, and this additional investment will do much to help the bee-keeper to decrease the cost of production. In running for extracted honey the danger of having dark honey carried up from the brood chamber is greater than with comb honey. To watch the extracting supers at the opening of the season would result in much

less inferior honey being put upon the market. Better extract a little early honey than have a lot of well-ripened dark honey. Even during mixed and unfavorable seasons a fairly good article can be secured by holding each extracting comb up to the light as it is taken in hand, and at the first extracting uncapping only such combs as show the light color through the capping. The practice of exposing a large surface of honey in so called ripening cans placed in an ordinary temperature, is, in ninety-nine cases out of a hundred altogether wrong. The honey becomes thinner rather than thicker. A simple test can be made of this by taking a plate, putting upon it a layer of honey 1-16 thick; the honey set out in the atmosphere generally becomes thinner. If it takes up moisture on the plate it will be almost sure to do so in the open can. This is contrary to the opinions of those I have met thus far, but it can easily be tested. Seasons vary, it is true, but after the close of the honey season there is generally a considerable quantity of moisture in the atmosphere.

R. H. Smith, St. Thomas, in his address, "Management of Comb Honey," stated that he would not advise a beginner to produce comb honey. Supplies, hives, supers, etc., should be prepared during the winter, and sections filled with thin comb foundation. He hived bees in a contracted wood chamber.

The Death of Mr. John Robertson

Father of Professor J. W. Robertson, Agricultural and Dairy Commissioner, Ottawa

Many dairymen and farmers in Western Ontario and in some of the Eastern Provinces will regret to learn of the death of Mr. John Robertson, of Ingersoll, Ont., on Saturday, December 17th. In his quiet and unpretentious way he did a great deal towards improving the quality of Canadian dairy products and inducing a better system of farming in this country. His practical knowledge of dairy farming, gained from a quarter of a century's experience in conducting a large dairy farm in Scotland's banner dairy County of Ayrshire, eminently fitted him to give valuable and helpful information to the farmers of this country. This he was able to do in a very effective way as a speaker at our Farmers' Institutes and dairy meetings. His style was convincing, his manner forceful, and the fund of practical experience which he had to draw upon made his addresses on all farm topics both interesting and profitable.

Mr. Robertson was born at Dunlop, Ayrshire, Scotland, in 1828, and came to Canada with his family in 1875. He purchased a farm near London, Ont., which he worked for several years, when he engaged in the cheese-exporting business for a time. After retiring from business he rendered valuable services as a dairy instructor and Inspector for the Western Dairymen's Association. In 1891 Mr. Robertson moved to New Brunswick, where for six years he acted as Dairy Superintendent of the Province, being in the employ of the Local Government. His efforts in pioneering the dairy movement, which was begun in 1891 in that Province, were instrumental in placing the industry on a sound basis at the start and in enabling the dairymen to carry it on in the best possible way. In 1897 Mr. Robertson returned to Ontario and resided in Ingersoll till the time of his death.

Mr. Robertson was a fine type of a sterling Christian gentleman, and his ability and time were always ready to be offered for the good of others. He was a Baptist by persuasion, and for several years was the regular minister to a small congregation near London, carrying on his farming and other work at the same time.

A family of four sons and five daughters are left to mourn his decease. His eldest son, who is Agricultural and Dairy Commissioner for Canada, is well known to every Canadian farmer. Another son went to Scotland several years ago as Dairy Instructor in Wigtonshire, and is now a partner in a large dairy importing business in Glasgow, Scotland. The third son, Mr. Robert Robert-

son, is manager of the dairy department of J. Y. Griffin & Co.'s pork packing and dairy produce business at Winnipeg.

Fattening Poultry for the Export Trade

In our issue of December 6th, Mrs. Joseph Yuill, Carleton Place, Ont., gave some particulars regarding an experiment in fattening poultry for the British markets conducted under the direction of the Dominion Department of Agriculture. The poultry thus fattened have been shipped to Liverpool, where they will be sold and reported up in later. A similar experiment was conducted at Bondville, Que., from which the poultry when fattened were sent to the London market. The chickens were fattened for periods of three to five weeks before they were killed, when they were put up in crates for shipment to Great Britain. There is a great and growing demand in Great Britain for properly fattened poultry. Two years ago the imports of poultry into Great Britain exceeded three and a half millions of dollars' worth. The quality of the flesh is said to be very much improved in whiteness, tenderness and flavor by this special fattening process.

To further test the quality of the meat produced Prof. Robertson, Agricultural and Dairy Commissioner, put up a number of chickens to fatten at his own place. He bought ordinary chickens in the Ottawa market. When he got them home he killed three representative ones. These weighed, after plucking, eight pounds eight ounces. After the chickens (over 90 altogether) had been fattened for 36 days on the fine ground oats and skim milk, three other representative chickens were killed. They weighed, when the feathers were off, 16 pounds 4 ounces. The following table shows the difference in the edible part from the chickens killed before being fattened and the chickens killed after being fattened for a period of 36 days:

Weight of three chickens:

	Before fat- tening.	After fat- tening.
	lbs. oz.	lbs. oz.
With feathers off	8 8	16 4
Ready for cooking	5 2	11 6
After being cooked and left cool for two days	3 8	9 2
Bones	1 2	1 11
Edible portion	2 6	7 6

This shows that there was three times more edible portion from the fattened chickens than from the others, and every ounce of it was of better quality. The fattening gives increased value to every pound of live weight at which the chickens were put up. The chickens when put in were worth at the outside six cents a pound, which would be equal to 25 3/4 cents each. The same chickens when fattened were better value to the consumer at 10 cents per pound, which would be equal to 63 3/4 cents per chicken. To give each chicken the increased value of 43 cents, the food consumed was worth 15 1/2 cents. That does not allow anything for the labor of fattening the chickens.

Excessive Freight Rates in Nova Scotia

The people of Nova Scotia have a freight rate grievance. The ocean freight rates on apples shipped from Halifax are considered to be altogether too high as compared with other ports. From stations on the D. A. Railway, which runs through the Annapolis valley, the freight charge via Halifax to England is 90 cents per barrel. Deducting 17 cents from this as the railway charge, there remain 73 cents as the ocean freight from Halifax.

All the season, until a few weeks ago, the freight from Boston to England has been a little under 40 cents per barrel. Add to this 31 cents as the freight from points in the Annapolis valley to Boston, and the cost of shipping apples from points in the Valley to England via Boston is found to be only about 72 cents, as compared

with 90 cents from the same section to England *via* Halifax. It is even hinted that when account sales are received the freight charge is not 90 cents per barrel, as advertised, but \$1 per barrel.

According to this the Nova Scotians have a real grievance, and it is all the more aggravating because the steamers sailing from Halifax are heavily subsidized by the Dominion Government, while those from Boston get no subsidy whatever. It is claimed that there are more steamers running from Boston, and, therefore more competition from that port. But surely a substantial subsidy from the Dominion Government should counterbalance this competition, and keep freight rates from Halifax as low as those from Boston. Some of our Nova Scotia exchanges contend if the subsidy does not do this it does little or no good, and had better be withdrawn.

Another grievance that the Eastern fruit men have is that of improper handling and want of ventilation, etc., on board the steamer. The steamship companies collect the same freight per barrel whether the fruit is injured or not in transit. An effort is now being made to induce the Government to compel the steamship companies to assume part of the risk of shipping by withholding the subsidy for any trip in which the fruit is landed in a bad condition. It is also hoped by this agitation to secure cheaper freight rates for next season. To sum up, the fruit growers of Nova Scotia are demanding (1) cheaper freight rates; (2) Government inspection of subsidized boats, the subsidy for each trip to depend upon the condition in which the fruit is landed; (3) cold storage facilities to assist in developing trade in perishable food products between that province and Great Britain

CORRESPONDENCE

South American Competition in the Cattle Trade

To the Editor of FARMING:

I observe an article in your last issue, remarking on the rapid increase of the cattle trade of Argentina as compared with that from Canada, attributing in a great measure this result to the large importation of pedigreed stock by the former. I noticed in a previous issue of your journal that the High Commissioner (Lord Strathcona) seems to be of the same opinion, quite ignoring the real cause of the trouble, viz.: the difference in the monetary condition of the two countries. Argentina does business on silver basis and Canada on a gold basis; consequently, we have to pay wages, taxes and all accrued indebtedness in gold, and fifty per cent. premium as compared with similar disbursements in silver standard countries, consequently they can afford to so seriously undersell both in cattle and grain that there is no profit or encouragement to compete with them.

F. C. SIBBALD.

Sutton West, Dec. 10th, 1898.

Soft Bacon

Notes from Professor Day on some Experiments at the Ontario Agricultural College, Guelph

To the Editor of FARMING:

SIR,—As Canadian packers have recently had a great deal of trouble with what is known as "soft bacon," perhaps a few notes on the subject may prove of interest to the many farmers who read your valuable paper. One of our leading packing houses makes the statement that, during the months of May, June, and a part of July of the present year, the number of soft sides ranged from 20 to 40 per cent of the whole. This means that Canada placed upon the English market this year a large quantity of inferior bacon; and though this bacon was not misrepresented, but was sold strictly upon its merits, at the same time it was Canadian bacon, and tended to bring discredit upon

Canadian bacon as a whole. It requires no argument to convince any intelligent man that the condition of affairs just described means an ultimate loss to the farmer, because, when our packers meet with losses of this kind, their only remedy is to pay lower prices. It is therefore a matter of great importance, not only to the packer, but more especially to the farmer, that less soft bacon should be placed upon the market; and the problem of how to produce firm bacon should be carefully studied by every man who has a pig to sell.

Soft bacon does not mean fat bacon. It means a soft condition of the fat, which develops while the bacon is in the salt, and reduces the value of a side according to its degree. An absolutely soft side is comparatively worthless, and between this condition and firmness there are all shades and degrees of tenderness. Sometimes softness is noticeable before the bacon is put into the salt, but apparently firm sides frequently come out of the salt decidedly tender and soft.

Various speculations have been indulged in regarding the cause of softness. Corn, clover and lack of exercise are perhaps the chief things which have been blamed, but there is considerable diversity of opinion regarding the matter. For some months past, experiments have been in progress at the Ontario Agricultural College to ascertain, if possible, some of the causes of softness, and to study methods of producing firm bacon. In these experiments the hogs are shipped directly to the factory, slaughtered, and the different groups packed separately in salt. When the bacon comes out of the salt it is carefully examined by experts, so that there can be no mistake as to its firmness or softness. Our investigations are by no means complete, but some interesting results have been obtained. Full details of the experiments will be found in the College Report of 1898; but the following are some of the principal points brought out by the work up to date:

1. Though corn has been commonly blamed for producing soft bacon, it apparently has no evil effects when used for finishing hogs that have had plenty of exercise until they reach 100 pounds' live weight.
2. Neither does corn appear to cause softness when used for finishing hogs that have had no exercise, but have been fed skim-milk with a mixed grain ration until they reach 100 pounds' live weight.
3. What has been said of corn may also apply to rape, when a two-thirds meal ration is fed with it.
4. Hogs confined in pens and fed wheat middlings during their early growth, and peas, barley and shorts during the finishing period (without either skim-milk or whey), have a marked tendency to softness of fat.
5. Hogs given plenty of exercise, and fed as just described, produce firmer bacon than those confined in pens and fed the same ration.
6. The evil effects arising from lack of exercise can be overcome by the judicious feeding of whey or skim-milk with the meal ration. From two to three pounds of whey or skim-milk to a pound of meal will be satisfactory.
7. Whey and skim-milk appear to have a greater influence than exercise in producing firm bacon.
8. Unthrifty hogs are more likely to produce soft bacon than growthy, well-fed hogs.

The influence of whey and skim-milk in these experiments was especially marked, not only in making rapid and economical gains, but also in producing a fine quality of bacon, in spite of lack of exercise. While corn produced firm bacon when used for finishing well-grown hogs, it must not be assumed that it will not cause softness when used under other conditions. Its influence on younger animals has yet to be tested. In Danish experiments corn was found to be decidedly injurious to firmness when fed to very young animals.

It is to be hoped that feeders of hogs will carefully study this question of producing firm bacon, for it is a matter of vital importance if we are to retain our profitable English trade.

Yours, etc.,
G. E. DAY
Ontario Agricultural College, Guelph, Dec. 14th, 1898.

The Great Smithfield Show

The 1898 Smithfield Show, held at Islington, London, England, December 5th to 9th inclusive, was a celebrated one in the annals of the Smithfield Club (under whose auspices the show is held) as being the centenary show. The event was celebrated in a fitting way. His Royal Highness the Prince of Wales is president of the club.

The show this year was characterized by the success of former years. The total number of entries were: Cattle, 327; pens of sheep, 198; pens of pigs, 122; or a total of 647, or two more than in 1897. When the first show was held at Smithfield, 100 years ago, there were only two classes for cattle and two for sheep; the membership of the society being 113, and the total prize money 50 gs. In the 1898 show there were forty classes for cattle, twenty-nine for sheep, eighteen for pigs, as well as seven carcase classes; the number of members were 1,120; and the total prize money £4,966.

The show of cattle was good and every variety of beef breeds was well represented. The general average of the animals shown was better than ever before, though the winners of the Champion awards were no better in quality than the winners on former occasions. But the rank and file, especially when age is taken into consideration, were better than seen at former shows. One of the noticeable tendencies of the show of late years is the great development for age of young stock. As compared with half a century ago the change in this regard is most astonishing. The abolishing the cow classes and those for oxen of more than three years, except in the mountain breeds, has done away with these old fashioned mountains of fat that at one time were the prominent feature of the exhibition, and has given altogether a more uniform character to the classes in general. The Devons, which are always given prominence at Smithfield, made a good display with the quality excellent. Both the younger and older animals were well brought out. Her Majesty was one of the leading winners in the heifer class. The Hereford though rather weaker in some respects than on former occasions made a good display. In the class under two years, in which seven steers competed, Her Majesty headed the list with a fine steer by Ladas, which won the breed cup. This steer is said to possess the best back and loin with style that has ever characterized a Hereford of his age. In the Shorthorn section, not only were the numbers considerably increased, but the increase came from the district where the best animals are produced, including animals provided by such well-known feeders as Mr. George Bruce and the Earl of Rosebery. It is seldom that three better steers are found together than those shown in the older class. The first was Lord Rosebery's Rob Roy, a massive, level and well finished roan, by Kingleader; then followed Mr. Bruce's Lochineal, a remarkable one, and last came Baron Rothchild's Cameronian, an excellent specimen. In common with other breeds the female class of Shorthorns was weak numerically, though in its small band were included the breed cup winner and the reserve. The Sussex breed as seen at the show here remarkably improved during the past ten years. The Aberdeen-Angus presented perhaps the finest all round display of any of the breeds and once more contained the champion of the show. Very much improved classes of Galloways were shown and included some of the best stock at the show from a butcher's and consumer's point of view. There was a good display of cross-bred cattle, the centre of attraction being the aged steers and heifers. The Champion plate of 100 gs. for the best beast in the show was awarded to the Earl of Strathmore for his Aberdeen-Angus heifer "Juju." This beast, which was bred by the exhibitor, also holds the Queen's Challenge Cup for 1899 valued at £150.

There was a fine display in the sheep department, and every breed for which classes were provided was well represented in point of merit. Leicesters were represented by a few select pens. The quality of the Cotswolds was very fine, though only five pens, one of which, a pen in the lamb class, secured the champion cup in the longwool section. Lincolns were well represented in point of quality, and fully up to the average in numbers. Kent and Romney Marsh sheep, though not known in this country, made one of the most even and best exhibitions that has ever been seen at Smithfield. The Southdowns made the largest entry of any single breed in the show, and the general evenness of the exhibit was fine. The early maturing Hampshire Downs made a fine exhibit. The lamb class of the Shropshire breed was a weak one, but the wether class was headed by a pen of sheep, one of the best of the breed that has been seen for a long while—long, wide, and deep, excellent in type and character, and splendid in flesh and conformation. This pen were breed cup winners, and the first pen of sheep to hold the challenge cup presented by the Prince of Wales for the best pen of sheep. Oxford Downs did not make a large entry. Dorset Horns were cut in average numbers. First and second honors and breed cup went to Mr. McCalmont for a pen of wethers, the best seen at the show for some time.

Pigs made a fair show, though not as large as was expected at the Centenary Exhibition. The quality was excellent, but there were so few in each class that the competition could hardly be called keen. The champion plate for the best pen of pigs at the show went to Berkshires, owned by J. A. Fricker, as also the Duke of York's challenge cup for the best pen of two pigs at the show, bred by exhibitor. The reserve in these two were Middle Whites owned by J. P. Chissell.

THE BLOCK TEST.

The slaughter test was one of the chief features of the show, and a great many more animals were entered for competition than ever before. These tests started in 1895 with 45 entries. In 1896 they

reached 56; in 1897, 58; and in 1898, 83. The test is confined to cattle and sheep, three classes being for cattle and four for sheep. Thirty-six cattle and forty-five sheep were slaughtered. The animals were all exhibited alive on the first day and were removed for slaughter on the evening of that day, their carcasses being returned and judged on the third day. The fasted live weight, taken immediately before slaughter, was recorded in conjunction with the carcase weight. The following table taken from the London *Rural World* shows the breed or cross of each prize-winning animal, its live weight and carcase weight:

BLOCK TEST, SMITHFIELD SHOW, 1898.

Prize	Exhibitor.	Breed.	Fatted live weight.		Carcase weight.	
			Cwt.	qr. lb.	Cwt.	qr. lb.
CATTLE.						
	Steers, not over 2 years old.					
1	Mr. Murray Stewart.....	Galloway..	10	2 2	6	3 17
2	Mr. A. B. Lawson.....	Shorthorn Aberdeen	10	3 18	7	0 16
3	Earl of Rosebery.....	Aberdeen Angus...	11	1 26	7	2 2
	Steers, 2 to 3 years old.					
1	Mr. J. S. Wroth.....	South Devon.	14	1 8	9	1 10
2	Mr. J. D. Allen.....	Shorthorn Highland	12	3 8	8	2 6
3	Mr. R. Stratton.....	Shorthorn Kerry..	11	3 16	7	3 9
	Heifer, not over 3 years old.					
1	Mr. Murray Stewart.....	Galloway..	10	1 9	6	2 13
2	Viscount Fortman.....	Devon ...	11	2 8	7	1 3
3	Mr. W. Parkin-Moore.	Shorthorn Galloway	11	1 25	7	1 18
WETHER SHEEP.						
	Longwool Lambs not over 12 months old.					
1	Mr. J. McDowall	Blackfaced	120		74	
2	Mr. H. Dudding.....	Lincoln ...	182		106	
3	Mr. A. B. Lawson ...	Cheviot ...	103		64	
	Longwool Sheep, 12 to 24 months old.					
1	Mr. C. T. A. Robertson	Suffolk- Cheviot..	184		123	
2	Sir Walter Gilbey ...	Leicester- Mountain	144		91	
3	Mr. Parkin-Moore.....	Herdwick..	116		75	
	Shortwool Lambs, not over 12 months old.					
1	Mr. S. R. Sherwood... .	Suffolk....	164		106	
2	Mr. C. T. A. Robertson..	Suffolk....	165		106	
3	Mr. S. Kidner.....	Dorset....	151		89	
	Shortwool Sheep, 12 to 24 months old.					
1	Mr. L. H. Baxendale ..	Hampshire Down..	219		147	
2	Mr. P. F. R. Saillard....	South down Hampshire	128		81	
3	Mr. T. F. Bunton.....	Hampshire Down..	194		134	

There is a School of Agriculture at Ghizeh, Egypt. The course of study extends over four years and includes practical and theoretical agriculture and allied subjects, including the Arabic and English languages. Eight hours a week throughout the course are given to practical exercises in agriculture. Each pupil is allotted a plot of land which he must cultivate with his own hands, "the employment of hired labor or assistance being absolutely prohibited." This plot consists of a little over an acre the first year, double the area the second year, and three times the area the third and fourth years. Every pupil is allowed to dispose of the produce of his plot, subject to the approval of the principal. The annual fees for tuition and other expenses are \$75 for day pupils and \$125 for boarders.

The following is an American plan for preserving fence posts: Bore half a dozen auger holes two thirds through the end of the post to be set in the ground. Fill the holes with salt, and drive in plugs to keep it there. I have seen posts that have stood in the ground thirty years that when taken up were perfectly sound, as sound as the tops which had always been kept well painted. They were chestnut posts. Of course one should take off the bark.

BACTERIA IN MILK.

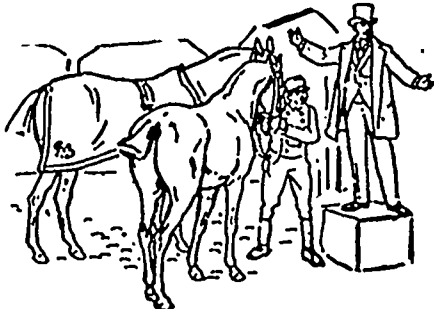
Bacteria in milk, which either favorably or unfavorably affects it and its products, is the lowest form of vegetable life. The milk can is a good deal like the farmer's field with respect to vegetable growth. Every farmer knows that unless he takes very good care of his fields they will be filled with weeds that not only possess no value of their own, but are seriously injurious to those forms of vegetable life that are useful. Similarly, bacterial vegetation exploits itself in the milk can. Unless you take care of the milk can those forms corresponding to the weeds—that is the hurtful kind—will multiply immensely, and destroy the usefulness of the milk and of the helpful kind of vegetation in it, whereas those that are helpful to the milk and its products must be carefully cultivated, and the hurtful kind kept out. Cleanliness in the dairy corresponds to the cultivator in the field, and the employment of the former in the one instance is just as necessary as the latter in the other.—*Exchange.*

MANUFACTURING EGGS.

To know what ingredients are required we must examine the egg itself. It weighs on an average 3000 grains and consists of three parts, shell, white and yolk. The shell, weighing 100 grains, is mainly carbonate of lime. The white, weighing 600 grains, is one of the purest forms of what we call albumen. The yolk, weighing 400 grains, consists of oil, albumen, phosphate of lime and traces of sulphur, iron, etc. In fact, an egg contains everything essential to the manufacture of a chick. All the materials required for making muscle, bone, feathers, etc., must be in the egg, for in incubation nothing is added, and everyone who eats an egg for his breakfast eats animal food—eats an embryo chick, more nutritious, or at least more easily assimilated food, than so much weight of beefsteak. Of course, the production of such rich food must make heavy drafts on the hen, and no mill can turn out a rich grist unless the hopper is kept well supplied.

These several ingredients in the egg the hen gets from what she eats and gets it from the organic matter she eats. Grit in its various forms she uses to grind her food and not to build up her body or to make eggs out of. The oil, or fatty substance needed is found in greatest proportion in seeds, chiefly in corn. The albumen, which is a nitrogenous substance, is found also in grain to a limited extent, more in wheat than in corn, and in still larger proportions in wheat bran and linseed meal. The chief source of albumen in winter feed is clover hay, milk and meat. The latter is furnished in the form of meat meal, canned refuse meat, green cut bone, etc. The shell material is found in all the grains, but principally in oats and wheat bran. It is contained also in milk and in the

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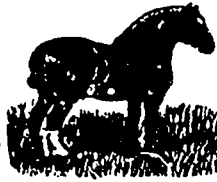
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ROB. DAVIES, PROP. TORONTO, CANADA

grasses and clover. In summer, clover, green grass, vegetables, bugs, worms, seeds and the cultivated grains furnish the egg factory with needful grists to hens with free range. In winter, much of this supply is cut off and must be supplied by the owner of the hen if he expects business to prosper.

Incidentally it should be mentioned that about three-fourths of the contents of an egg consists of water, and in this the substances named above are suspended. It will at once appear that water is essential to egg making.—*Farm Journal.*

A SIMPLE TEST OF DRINKING WATER.

An inquiry has been made as to a simple test for the presence of sewage in water. All drinking water should be tested in town or country frequently, as there are other impurities besides sewage which are quite as deadly, and every cistern of water is liable to be a source of blood-poisoning—mice, rats and other pests must have water, and many a case of typhoid is set up by such as these falling into the cistern and remaining there for months in a decomposed state. To detect this impure condition is very simple and unfailing. Draw a tumbler of water from the tap or pump at night, put a piece of white lump sugar into it, and place it on the kitchen mantel-shelf or anywhere that the temperature will not be under 60° Fahr. In the morning the water, if pure, will be perfectly clear; if contaminated by sewage or other impurities the water will be milky. This is a simple and safe test and easily made.

Fur Garments

Direct from Manufacturers

WE are Manufacturing Furriers, and can do better for out-of-town customers than the dealer who buys his goods from the wholesale house. We sell fur garments to scores of wholesale houses. They sell them to the country dealer—both get a decent profit. Buying direct from us, you can always save the difference between these double profits.

LIKE THIS . . .

Coon Coats—50 inches long, made of select skins, lined with satin, storm collars, the kind you pay \$50.00 for, we sell 'em at \$35.00. You save \$15.00 on a coat. Money sent back if not satisfied. They're natural fur—not the dyed kind.

TAKE ASTRACHAN JACKETS

We make up an A1 quality of . . . handsome curl, 36 inches long, lined with quilted satin. Usually sold at \$35.00, well, we sell 'em at \$25.00. You save \$10.00 on each Jacket by buying from the Manufacturers.

Then we sell all kinds of Fur Caps, Persian, Seal, Otter, Astrichan Besides Fur Ruffs and Muffs, Gauntlets, etc. In fact everything you can desire or want in Fur Goods. Send to us for anything, and if it isn't right we will return the money.

Cummings & Sellers,

Manufacturing 244 Yonge Street,
Furriers . . . TORONTO, ONT.

WE WANT RAW FURS

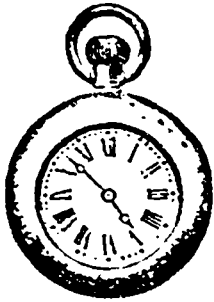
VALUABLE POULTRY HINTS.

The value of skim milk for chickens has been proved by careful tests. The milk did not take the place of other food, but added to its value, for the chickens with milk and grain gained 4.46 oz. per week, and those with grain only 2.62 oz.

Oats are an excellent poultry food, especially during the moulting season.

FREE! For a Few Hours' Work.

WE give these beautiful Watches and this splendid Air Rifle for selling our gold-topped, enamel-backed LEVER COLLAR BUTTONS at 10 cents each. The Boy's Watch for selling 2 doz., the Air Rifle for 2 doz., and the Lady's Watch for 3 doz. **NO MONEY REQUIRED, you run no risk.** Write and we forward the buttons, postpaid, together with a large list of other valuable prizes—Spring and Hockey Skates, Cameras, Magic Lanterns, Tool Sets, Work Boxes, Musical Instruments, Manicure Sets, etc., etc. Sell the buttons, return our money, and we send your Watch or Rifle promptly and **FREE OF ALL CHARGES.** The Boy's Watch is of American make, handsome, durable and reliable. The Lady's Watch is a genuine Swiss, as durable as appearance. It is accurate and durable. The Air Rifle is the All "Daisy," the best ever made, neat, strong and accurate. These premiums would make splendid Holiday or Birthday Presents. Send your name and address at once, and be the first to sell our buttons in your neighborhood.



Free with a beautiful guard for Selling 3 Doz.

quarter past. It is not worth to sell them, but only play.

THE LEVER BUTTON CO., GENTLEMEN.—I have used my chum's Daisy Air Rifle that he got from you and it's a dandy. Please send me 30 buttons so that I can earn one for myself.

CORNWALL, Nov. 12th, 1898.
DEAR SIR,—I received my watch yesterday. It is a little beauty, and it is much better than I expected. Please accept my thanks.
LEWIS McDONALD.

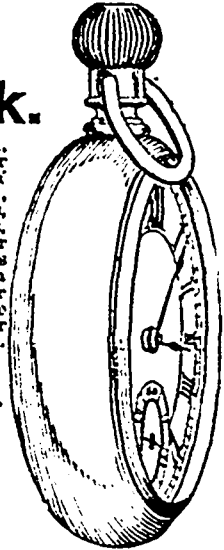
DEAR SIR,—I received my watch and chain Saturday night. It is twice as good as people said I could get. Many thanks for your kindness and also for your honest way of doing business. I never could have got a prettier watch earlier in my life.

When writing mention this paper.
LEVER BUTTON CO., Toronto, Ont.

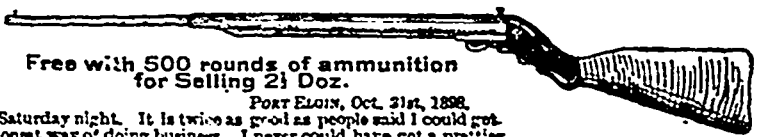
With every Watch we give a **WRITTEN GUARANTEE** to Repair or Replace **GOOD FOR ONE YEAR**

Read what our Agents say:
DEAR SIR,—I received your buttons at about ten o'clock, and had them all sold by a Yours respectfully,
NORMAN CAMPBELL.

38 BUSE AVENUE, Toronto, Nov. 24th, 1898.
31 LEWIS STREET, Toronto, Dec. 7th, 1898.
Yours honestly,
J. BARKER.



Free with a handsome chain and charm for Selling 2 Doz.



Free with 500 rounds of ammunition for Selling 2 1/2 Doz.

PORT ELGIN, Oct. 31st, 1898.
Yours truly,
VERKIS McLEAK.

Maize should be fed sparingly, being fattening rather than egg producing. Bone should always be provided, particularly during the moult.

In building a hen-house all the inside furniture should be made to be easily removed and taken apart. Roosts and nests and boxes that are nailed on catch a good deal of dirt around the fastenings, and become perfect breeding places for lice. But, if they can be easily got at, and cleaned and kerosened, such trouble will be avoided.

It is mostly the late moulting fowls which are laying the eggs now, but these fowls will probably stop altogether at the first really cold snap and lay no more until spring. The only old hens which are likely to lay in winter are those which moult early and get over it quickly. The late moulters might as well be sold off when they stop laying.

The laying of soft eggs, that is eggs covered with a membrane rather than a shell, is easily ascribed to over-fatness, but some hens persist in the habit, whether fat or lean, even if well supplied with lime, and such fowls are doubtless affected with chronic disorder of the organs of reproduction. While these are all right for table poultry they are good for nothing else. If several hens in a flock lay soft eggs it is a sure sign of over-feeding.

Hens can be crowded and get along somewhat, but there is no sense nor profit in it beyond a certain limit. Ten square feet to a fowl in a winter pen is the least allowance that pays. The roosting pen should have about

LITTLE'S PATENT FLUID

NON-POISONOUS

SHEEP DIP AND CATTLE WASH

The Original Non-Poisonous Fluid Dip.

Still the Favorite Dip, as proved by the testimony of our Minister of Agriculture and other large Breeders.

FOR SHEEP
Kills Ticks, Maggots; Cures 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, and Effective.

BEWARE OF IMITATIONS.

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

ROBERT WIGHTMAN, Druggist, Owen Sound,
Sole Agent for the Dominion.

FARMERS WANTED

To take orders in their section for the famous lead renewer.

Alberts' Thomas-Phosphate Powder (Reg.)
Purity and analysis guaranteed. Correspond at once, as fall dressing of the lead is important.

WALLACE & FRASER

38 Canada Life Building. - TORONTO

ALL PEDIGREE STOCK-BREEDERS

Should keep in touch with Herd, Flock and Stud movements by reading the

FARMER AND STOCK-BREEDER

The best, most complete and attractive Agricultural and Live Stock new paper. Enlarged to 36 pages weekly; frequent special issues 40 to 48 pages. Illustrations are a specialty, each number containing many of the leading prize-winners, etc. Brilliant and practical articles on the Farm, Dairy, Horses, Cattle, Sheep, Pigs, Poultry, Veterinary, etc.
Unequaled as a medium for advertisements intended to reach the best class of breeders and farmers throughout Europe.

Subscription, postpaid for one year, \$2.50
Intending purchasers of British Purebred Stock should send us particulars of their requirements, large shipments and extensive connections having given our staff of expert buyers that experience which is indispensable in live stock transactions.
Enquiries welcomed. Address—

FARMER AND STOCK-BREEDER, London, Eng

A SMART PUBLICATION

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

Free Sample Copy and advertising rates on application to

CO-OPERATIVE FARMER,
Sussex, N.B.

FREE FOR BOYS and GIRLS
The German Silver Keyless Watch guaranteed for 5 years with chain, or a "Flash-Light" Camera with all accessories ready to take pictures, given free for selling for us 25 cheap buttons at the **ONE-SELLS IN EVERY HOME.** Send name and address, we'll forward goods without money. **CANADA Supply Co., Toronto.**

three square feet of space to a fowl, and should be made as tight and warm as possible: with double walls, bankings of earth or leaves, inside linings of paper, and an inner roof covering of straw packed tightly behind laths over the roosts. If hens are warm nights and dry times they will not mind winter weather much.

CORRECTION.

In our report of the Provincial Fat Stock and Dairy Show in the swine department a mistake was made in giving the prize winners in some sections of the Chester White class. The third prize for sow over nine and under fifteen months was won by Daniel DeCourcy, Bornholm, Ont., and not by W. E. Butler & Sons as reported. DeCourcy also won first prizes in Sections 4 (sow 6 months and under 9) and 5 (sow under 6 months), which were not credited to him in our report. We are glad to be able to rectify this mistake, which was totally unintentional on our part.

BOOKS AND BULLETINS RECEIVED.

Fourteenth Annual Report of the Bureau of Animal Industry of the U.S. Department of Agriculture for 1897. It contains a fund of valuable information pertaining to the live stock interests of the country.

The London *Live Stock Journal* Almanac for 1899, containing valuable information regarding the different breeds of horses, cattle, sheep, swine, poultry, etc.. Great Britain during 1898.

Peach Culture in Canada, Bulletin No. 1, second series, issued by the Department of Agriculture at Ott. a. and compiled by Prof. Craig, late Horticulturist Central Experimental Farm.

Publishers' Desk.

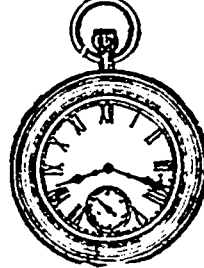
"The Best" Incubator.—For particulars and prices of this incubator see advertisement of Messrs. John S. Pearce & Co., London. Full particulars sent on application to them

Guelph Business College.—The winter term of the Guelph Business and Short-hand Institute will commence on Tuesday.

WHO IS THE SINNER? A FAIR QUESTION.

The publishers of the FAMILY HERALD and WEEKLY STAR lately put the above straight question to their subscribers, some of whom sometimes become indignant when they receive notice that their papers have been stopped owing to their own failure to renew in time. We can understand how it is impossible for a large paper like the FAMILY HERALD and WEEKLY STAR to allow subscriptions to continue beyond the expiry date, unless a renewal is received in good time. The publishers of the FAMILY HERALD pay great attention to their old subscribers, but they justly claim the right to cut off promptly all names not renewed on time. This is business, and the only business-like plan with a metropolitan paper of such wide circulation. New subscriptions from every post office in Canada are simply flooding into the FAMILY HERALD, and this county seems to be in line, because the FAMILY HERALD and WEEKLY STAR is to be found in a large percentage of the homes. THE FAMILY HERALD is undoubtedly the biggest and best dollar's worth to be had.

GIVEN AWAY! Free, with 500 Rounds of Ammunition, for Selling 2 1/2 Doz. For helping to introduce our WHITELIGHT WICKS. We ask not a cent of your money. Simply send your name and address, and we mail you a shipment of the best wicks in the world, absolutely free of charge, also our complete prize list of articles which you may earn by selling them. Here are a few: For selling 2 doz. wicks at 10 cents each, we give a handsome Boy's Watch, or a pair of Boker's Lady's Best Steel Spring Knives, any size; for selling 2 1/2 doz., we give an Air Rifle, or a pair of Boker's Matchless Hockey Skates, any size; for selling 3 doz. a beautiful little Lady's Watch. We also give Cameras, Magic Lanterns, Manicure Sets, Musical Instruments, Tool Sets, Solid Gold and Sterling Silver Jewelry, etc., etc. Liberal Commission if Preferred. You merely sell the Wicks, return our money, and we at once forward you the prize you have earned, all charges paid by us.



Free, with Chain and Charm for Selling 2 dozen

Clear steady white light which makes reading and needlework a pleasure. It makes the whole world brighter.

The Whitelight Wick Co.,

Dear Sirs,—I don't know what is in your wicks, but they are way ahead of anything in the wick line I've ever met with. Yours truly, CHRISTOPHER KENNEDY.

All we need is to have it introduced, and we can well afford to make the most generous offers to get agents. Lose no time. Order at once. You run no risk. Unsold wicks are returnable.

WHEN WRITING MENTION THIS PAPER AND THE PRIZE YOU WANT.

The Whitelight Wick Co., Toronto.

We Have Hundreds of Testimonials, but have Space for only a Few.

Rapides des Joachims, P.Q., Nov. 21, 1898.
Dear Sirs,—I received my watch, chain and charm, and I must say it is a little beauty, and a time-keeper as well. I timed it beside a \$40.00 watch and it lost nothing by it—and just for selling 2 doz. of your wicks. Please accept my thanks.

HARRY TAIT.

My little girl received her watch in perfect order. She is very much pleased with it, as we all are. She sends her thanks. Wm. CALDER.

Free, with screws, for selling 2 1/2 doz.



HENRY BOKER'S BEST HOCKEY



Free, with straps, for selling 2 doz.

HENRY BOKER'S AIR

31 Lewis St., Toronto, Dec. 15th, 1898

Dear Sirs,—Your Boker's Hockey Skates are the best I have ever seen. They are better than my brothers, for which he paid \$2.50. Yours truly, G. BROWN.

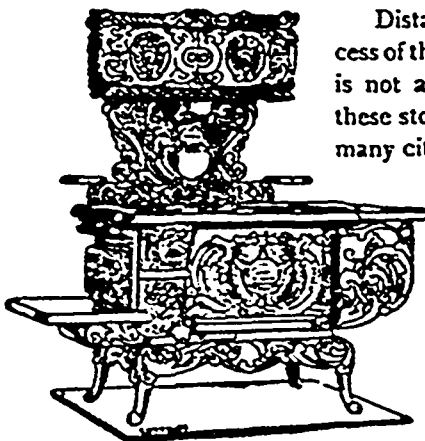
Toronto, Dec. 12, 1898.

Dear Sir,—I have earned several premiums in the way of mandolins and penknives, but all put together don't equal your Daisy Air Rifle. Yours forever, E. BITCHER.

With Every Watch we send a **Written Guarantee** To Repair or Replace Good for One Year.

Souvenir Stoves

KNOWN FROM OCEAN TO OCEAN



Distant friends have told the story of the success of the SOUVENIR Kitchen Range, until there is not a hamlet in our beautiful Canada where these stoves are not known—and widely used by many citizens

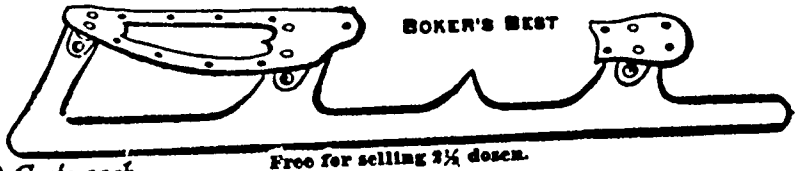
In all points of detail it is a perfect Stove, but *par excellence* it leads all kitchen ranges as a cooker and baker. It is the only Stove possessing an Aerated Oven, and absolutely safe and certain cooking can only come when this scientific principle is in operation.

—Ask the local agent in your locality for new booklet telling specially of the Aerated Oven.

THE GURNEY-TILDEN CO., LIMITED HAMILTON, ONT.

AGENCIES—Toronto, Montreal, Winnipeg.

FREE No Money Required.

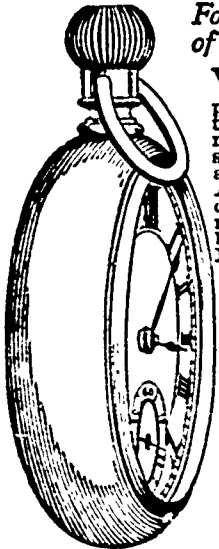


BOKER'S BEST

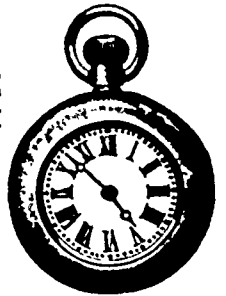
Free for selling 2 1/2 dozen.

For Selling a few Packets of Exquisite Perfume at 10 Cents each.

WE give this handsome **Boy's Watch** or a pair of **Boker's All Spring Skates** for selling 2 doz. packets; a pair of **Boker's Best Hockey Skates** for selling 2 1/2 doz., or this dainty little **Lady's Watch** for selling 3 doz. Our perfume has a most delicious and lasting odour, and is put up in very pretty packets. The testimonials below will show how easily it sells. Send us your name and address and we will mail the perfume, postpaid. **You run no risk.** We send an extra package to cover your postage, so that you need not spend a cent of your own. Sell the perfume, return our money and we will at once forward your watch or skates, all charges paid by us. The **Boy's Watch** is of genuine and once forward your watch or skates, all charges paid by us. The **Boy's Watch** is of genuine as American make, very handsome and reliable. The **Lady's Watch** is a beautiful little Swiss, as durable and accurate as it is pretty. The **Skates** are **Boker's Best**, and you know what that means. We have them in every size, for boys or girls. Remember that the first agent in a neighborhood has the best chance. Liberal commission if preferred. Unsold perfume may be returned. Mention this paper when writing.



Free, with a handsome Chain and Charm, for selling 2 dozen.



Free, with a beautiful Guard, for selling 3 dozen.

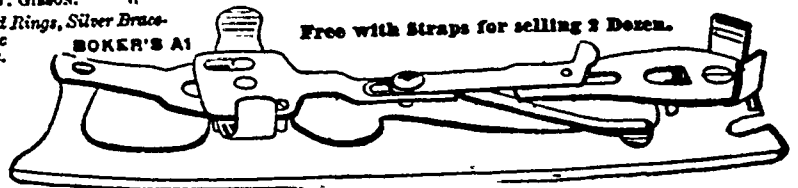
THE HOME SPECIALTY CO., TORONTO

Every day we receive dozens of testimonials like the following:

DACER, ONT., Nov. 24th, 1898.
DEAR SIR, - Enclosed you will find your money for the perfume. I sold it on the way home from the post-office. Yours for business,
ANNIE J. COLE.
CANNINGTON, N.W.T., Oct. 28th, 1898.
DEAR SIR, - I received the watch on the 22nd with chain and charm. They are far better than I expected. Your watch is a dandy and takes the shine wherever it is. It is true you give more than you promise. I thank you many times, for the work was not enough for this prize. Yours truly,
JOHN G. W. GIBSON.

You may also earn Air Rifles, Gold Rings, Silver Bracelets, Cameras, Tool Sets, Magic Lanterns, Manicure Sets, etc.

THOROLD, ONT., Nov. 20th, 1898.
THE HOME SPECIALTY CO., - I sold your perfume in 2 1/2 hours. Please find enclosed a post-office order for your money. Yours respectfully,
WILLIE CLIFFERTON.
ESSEX, ONT., Nov. 28th, 1898.
DEAR FRIENDS, - I received the watch and guard on Wednesday last and I like them very much. I will recommend your company whenever I can, for I think my watch is worth double the trouble trying to get it. Yours truly,
CASSIE ELLIS.
31 LEWIS STREET, TORONTO, Dec. 7th, 1898.
Your Boker's Hockey Skates are worth all the rest put together. Yours truly,
JOHN CAMPBELL.



BOKER'S ALL

Free with Straps for selling 2 Dozen.

With every watch we send a **Written Guarantee** to Repair or Replace good for 1 year.

January 3rd. Special attention given to boys and girls from the country. For information write the principal, Mr. J. Sharp.

Storing and Marketing Eggs.—The trouble and annoyance attending the shipping and storing eggs in the old-fashioned way can now be avoided by using the "Humpty Dumpty" egg crate made by the Dowsell Manufacturing Co., of Hamilton, Ont. It will save its cost many times over. See their advertisement.

Harbingers of Spring.—We have received the first seed catalogue of the season from F. B. Mills, Fairview Seed Farm, Rose Hill, N.Y. It is a handsome production and does credit to the establishment. Besides containing many useful hints, it announces the distribution of a large amount of money in prizes. Get a copy of it and you may become one of the winners. We have also received a very attractive calendar from J. E. Richardson, the seed grower, of Princeton, Ont.

Stock Notes.

MR. JAS. FORD, of Drumquin, Ont., writes as follows: "Mr. Bell, of Angus, states that my imported bronze turkey is not the heaviest yearling as advertised. This is his record: Before he was shipped to the Ontario Poultry Show in Guelph in 1897 he weighed 43 1/2 lbs. At that show he got the first prize and special for the heaviest turkey at the show, weighing 42 lbs. after being cooped up for four days. Before he was shown at London in 1898 he had gained over 4 lbs. and weighed 47 1/2 lbs. at home. None of the turkeys were weighed at London, but that makes no difference in the weight. I advertised him at 46 lbs., which was his weight. He took the first prize at London in 1898 and a special prize for the best two-year-old gobbler, or over. He was the first prize winner as a cockerel at the great fair at Covington, Ky., with a score of 98 points, and the first prize at the Bourbon County Show, which claims to be the champion turkey-producing county in the world, and first at the Kentucky State Fair. The judges at these fairs were such men as Mr. Sharp Butterfield; Mr. B. E. Dorsey, of Kentucky; and Mr. H. Schrader, of New York. I think it is a show record to be proud of. I am no writer, but a farmer, and may not make myself properly understood. But I have got the facts right, I think."

THE HOME MONEY MAKER



HOME WORK.

We want the services of a number of families to do knitting for us at home, whole or spare time. We furnish \$20 machine and supply the yarn free, and pay for the work as sent in.

Distance no hindrance. \$7 to \$10 per week made according to time devoted to the work. Write at once.

Name references.

CO-OPERATIVE KNITTING CO.
TORONTO, ONT.

Cash Prizes Of from \$10.00 to \$100.00 Will be given

For securing New Subscriptions for FARMING

With additional prizes of \$20.00 and \$15.00 respectively for the largest and second largest lists sent in. Our premium announcement for 1899 is the most attractive and liberal yet published, containing a large number of valuable and useful articles besides the cash prize list. Sent free to any address on application.

Address **FARMING**

44-46 Richmond St. West
TORONTO, Can.

MR. WM. WILLIS, Newmarket, Ont., has about as fine a herd of purebred Jerseys as is to be found in the country. It consists of thirty purebred animals of particularly good St. Lambert breeding, and all of them are in the pink of condition. Mr. Willis has recently purchased as young stock bull for his herd a grandson of the celebrated cow, Adelaide of St. Lambert, recently sold by Capt. Wm. Rolph, Markham, Ont., to Miller & Sibley for a good round figure. This calf is of exceptionally good breeding, and will make a valuable addition to the herd. Mr. Willis has two fine young bulls for sale, one 6 months old, out of Pretty, of Pine Ridge, and one 9 months old, out of Milly McLellan. Both are of good St. Lambert stock and will make excellent animals for heading any herd. His

celebrated cow, St. Lambert's Florence, has recently calved and is now giving 45 lbs. of milk per day. This cow gave 1,000 lbs. of milk a month for 8 months in 1897, and last fall made an average of 20 lbs. of butter a week. In addition to Jerseys Mr. Willis keeps a very fine flock of purebred Cotswold sheep. At the head of his flock is the celebrated ram, "Muggins," who is doing well this fall and getting No. 1 stock. This ram has been sought for by a number of breeders, but Mr. Willis is unwilling to part with him because of his excellent breeding qualities. He has recently sold some of his stock to Wm. Linton, Aurora, and is now offering four fine ewe lambs of the same breeding. Mr. Willis can show two ram lambs got by Muggins which weigh 200 lbs. each at 9 months old. The

milk from Mr. Willis' Jersey herd is made into butter. The butter-making department is under the direct supervision of Mrs. Willis, who has a most enviable record as a butter-maker. During the fall fairs of 1898 she won no less than fifteen prizes for butter, and about all of them were firsts. Mrs. Willis ascribes her success in butter-making largely to the fact that strict cleanliness is observed in every particular from the care and milking of the cows to the sending of the butter to market. Since writing this we have learned that Mr. Willis has sold four fine yearling ewes to Mr. F. W. Hodson, Supt. of Farmers' Institutes for the Newfoundland Government.

HYRMANVILLE FARM ECHOES.

When you want new blood in your herd look for the best and don't allow five dollars to stand in the way of securing a superior animal, and, remember, some of the fellows who have small herds have good ones. When you have a few good animals in hand, breed from these good ones you have been buying. And, don't be afraid to advertise. Just tell what you have and let the people know it. Intelligent buyers have good memories.

I desire to call attention to the value of these columns—FARMING—weekly FARMING remember, not monthly or semi-monthly FARMING, but weekly FARMING, published four times a month and fifty-two times a year. As an advertising medium for reaching a class of buyers who themselves are breeders, and, when in want of an animal, are willing to pay a good price for what they want. For this reason you should not fail to keep your advertisement always before them.

A Western breeder says every man should be a moral man. Every man who isn't a moral

GLUBBING LIST

SAVE MONEY by ordering your newspapers and reading matter through us. We can furnish almost any book, newspaper, or magazine in combination with subscriptions and save you money in every case. The following are some of the leading publications we offer with FARMING.

	Regular Price	With FARMING
Canadian Magazine.....	\$2 50	\$2 50
Toronto Weekly Globe.....	1 00	1 45
Toronto Weekly Mail and Empire.....	1 00	1 40
Toronto Morning World.....	3 00	3 00
Farm and Fireside.....	1 00	1 40
Montreal Daily Witness.....	3 00	3 00
Montreal Weekly Witness.....	1 00	1 60
Family Herald and Weekly Star— with great premium picture.....	1 00	1 75
London Daily News.....	1 50	2 00
London Weekly Free Press.....	1 00	1 75
London Weekly Advertiser.....	1 00	1 40
Ottawa Semi-weekly Free Press.....	1 00	1 60
Ottawa Semi-weekly Journal.....	1 00	1 55
Ottawa Semi-weekly Citizen.....	1 00	1 50
Ottawa Morning Citizen (daily).....	3 00	3 00
*Hamilton Semi-weekly Times.....	1 00	1 60
*Hamilton Semi-weekly Spectator.....	1 00	1 60
Brantford Weekly Expositor.....	1 00	1 75
Brantford Weekly Coenecr.....	1 00	1 75
The Semi-Weekly Sun (St. John, N. B.).....	0 75	1 50
The Willand Tribune.....	20	1 50
The Halifax Herald.....	3 00	3 00
*Citizen and Country, Toronto.....	1 00	1 50
Hoard's Dairyman.....	1 00	1 75
The Breeders' Gazette.....	2 00	2 00
Rural New Yorker.....	1 00	1 55
The Gaelph Herald.....	1 00	1 70
The Jersey Bulletin.....	1 50	2 00
The American Kitchen Magazine.....	1 00	1 75

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

Address,

FARMING, Toronto, Can.

Save Your Rags

And work them up into beautiful hooked rugs and mats.

Send for a rug or mat pattern, the prettiest and best you ever saw, at about half the usual price. Size, 1 3/4 yds by 32 inches, 35c.; 1 1/2 yds by 30 inches, 30c.; 18 by 32 inches, 15c. each. Postage paid.

All colors of diamond dyes for coloring rags, 7c. package.

Send for these patterns on our recommend--when made up they are very fine.

THE FARMERS' CO-OPERATIVE STORE
THE PEOPLE'S WHOLESALE SUPPLY CO.

144-148 KING ST. EAST (Cor. Jarvis), TORONTO

R. Y. MANNING, MANAGER.



Persiatic Hen-House Spray

Vermin is the most persistent enemy of the feathered stock. Keeps the fowl in bad health, listless and drooping; destroying its good qualities for show, lay or breeding purposes. Not much use in deterring the fowl until the houses are in shape. Strike at the root of the trouble by keeping them in perfect sanitary condition with Persiatic Hen-House Spray. No insects or lice can live after its application and one thorough dose lasts a long time. Keeps the atmosphere pure and healthy, destroying disease germs and the bad effects of gases, vapors, etc. Makes up for insufficient ventilation in the winter months.

If your dealer hasn't it, write us direct.

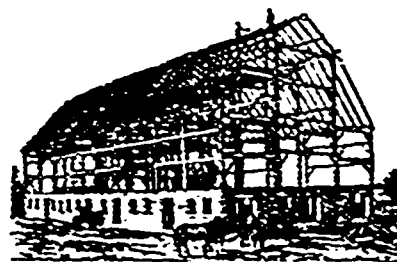
The Pickhardt Renfrew Co.

(LIMITED)

STOUFFVILLE, ONT.



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



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

Hagersville, Ont., July 1st, 1897.

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

BESWETHERICK BROS.

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

Estate of Jno. Battle Thorold Ont.

THE TORONTO ENGRAVING CO.

20 Bay Street, Toronto

Live Stock Engraving and Photographing a Specialty

Cuts for Newspapers, Magazines, Advertisements, Catalogues and Circulars supplied on short notice.

CANADIAN OFFICE SCHOOL FURNITURE CO. LTD. PRESTON, ONT.

FINE BANK OFFICE, SCHOOL, CHURCH, LIVERY, FURNITURE, HOUSE & STORE FIXTURES. SEND FOR CATALOGUE

BUY
Coleman's Salt
THE BEST

For Dairy or Table Use

IT IS UNEQUALLED.

Salt on the Farm

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

TRY IT.

R. & J. Ransford,
CLINTON, ONT

man should not pretend to be a breeder. Some say there are two kinds of morality—Bible and common real. I am inclined to think the first. "Bible" or rather spiritual morality, covers the whole ground. "Do unto others as you would that they should do unto you," is a good motto to live by—a good motto for a breeder.

Weekly FARMING is a real genuine Klondike for every Canadian breeder of fine stock. If you don't dig gold out of it, you can get out of it that which will bring gold dollars.

The men who have pluck and enterprise enough to launch out the first, only and original weekly agricultural paper in Canada deserve well of the Canadian farmers and breeders. Our Canadian farmers admire pluck and enterprise, as in touch with their own *fin de siècle* progress, and this is why weekly FARMING has been a success from the start.

The Canadian bacon hog, the Tamworth or "ladies' hog," will put as many or more of those good, round, bright, gold English guineas in the farmer's pocket as any other breed in existence to-day. If you do not believe it, try it and be convinced. Select a Tamworth with a good, smooth head, ears wide apart, snout moderately long and quite straight, and face slightly dished, long and straight back, fine slanting shoulders, sides long and deep, loin strong and broad, hams well let down and well set on good, strong, shapely legs, set well outside of body. Get a Tamworth of this kind, quit breeding the scrub, and will guarantee you money every time. *Sotto voce*. Canada is not quite free of breeders of scrub Tamworths.

While we can't all have blooded stock, let us all encourage the breeding of the same as much as possible. How much better the stock on the farm looks when it is well bred than the mongrels do. As we now have a weekly paper printed in the interests of all lovers of good stock, called FARMING, I should be pleased to see contributions from all breeders of purebred stock, and will agree to add my aid along with others in making the editor feel that his paper has the backing of lovers of fine stock. I also encourage the publishers by giving them a good yearly ad. For, be it remembered, it is by the advertisements that the editor can give us a real good paper. An ad. in FARMING is bound to pay. If you don't believe it, try it. Keep your ad. constantly before the people. It pays every time.

J. A. MACDONALD.

HORSE HURTS

As an effective healer for sprains, curbs, galls, splints, sore throat, coughs, swelling, soreness or inflammation in horses and cattle, Griffith's Liniment has proved a supreme success—as good for the horse as for his master! P. H. Ritchie & Co., ranchers in Vancouver-B.C., say: "We consider Griffith's Menthol Liniment unequalled for horses. One of ours had a bad swelling on the left leg, which was swollen to an immense size. We applied the liniment, and in two days the swelling had left him. We have tried many liniments but have found nothing to equal it."

Griffith's
VETERINARY MENTHOL
Liniment
 Relieves the instant applied
At all Druggists—75 Cents

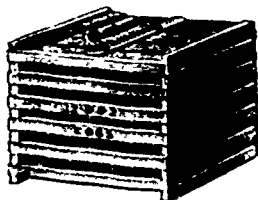
COLOR and flavor of fruits, size, quality and appearance of vegetables, weight and plumpness of grain, are all produced by Potash.

Potash,

properly combined with Phosphoric Acid and Nitrogen, and liberally applied, will improve every soil and increase yield and quality of any crop.

Write and get Free our pamphlets, which tell how to buy and use fertilizers with greatest economy and profit.

GERMAN KALI WORKS,
 93 Nassau St., New York.



Humpy-Dumpty Egg Crates

Save their cost to the Farmer many times every year..

BREAKAGE and DISPUTED COUNTS AVOIDED

CHEAP—CONVENIENT LIGHT—STRONG

When not in use folds compactly together
 Handiest thing—with fillers removed—for carrying Fruit or Vegetables.

THE DOWSWELL MAN'G CO LIMITED

Ask to see them or send for Circulars.

...Hamilton

BETTER BUTTER

Cleanliness, Ease and Money-making use tho

MAPLE LEAF CHURN

Circulars Free on application.

WILSON BROTHERS

Collingwood, Ont

Thoroughbred Poultry For Sale

Trio Dark Brahma Fowls for \$4.50.
 Trio Dark Brahma Chicks for \$5.50.
 A few Dark Brahma Hens at \$1.50 each.
 Two Partridge Cochins Cockerels at \$2 each.
 One White Cochins Cockerel at \$2.50.

White and Barred Rocks and White Wyandotte Cockerels for breeding purposes cheap. All from prize-winning stock. Write

A. J. GEORGE,
 Clarence St., - London, Ont.

SOLD ON TRIAL!



Buy no incubator and pay for it before giving it a trial. Many people have lost faith in incubators because they bought one that was never intended to hatch chickens—made merely to sell.

The Von Cullin Incubators are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc. sent on receipt of 25c. Von Cullin Incubator Co. 80 Adams St. Delaware City, Del.

INCUBATORS Our Machines are the best manufactured in Canada, both hot water and hot air. Surest, simplest, and best system of regulating. Every machine warranted. Prices \$10 up.

EGGS FOR HATCHING from Silver Golden, and White Wyandottes, Barred Plymouth Rocks, and Pekin Ducks only \$1.50 per setting. Stock unsurpassed.

Box M,
J. E. MEYER, Kananish, Ont

Patchall

THE Twentieth Century Mender bids goodbye to the needle and thread. Welcomed by thousands of women and praised by men. No more dirt in your home from mending bags. PATCHALL mends grain bags, binder canvas, and all kinds of cloth. It is a great saver for the farmer. Straw passing through small holes, winding on the rollers of the self-binding harvester breeds evil. A small piece of canvas and a little PATCHALL saves time and money. A great success in grain warehouses wherever tried. Thousands of bags are now patched by PATCHALL. Eight patches, two inches square, cost a cent. If you cannot obtain it from your hardware dealer, send 25 cents, and we will mail a can to your address prepaid. Manufactured by

Domestic Specialty Co.,
 Hamilton, Ont.



SEND US 15c. and we will send the best little **SKATE SHARPENER** ever invented—can be carried in the vest pocket—no wearout to it—no torn razor edge without removing skates from the feet. **Good Active Ag's Wanted.** They sell at sight. Here's a chance to make a little pocket money quickly. **Enterprise Mfg. Co.,** Toronto, Ont.

Pearce's Poultry Supplies

Green Bone Meal; Guaranteed No. 1..... \$7 00
 " " " " No. 2..... 10 00

"THE BEST" INCUBATOR AND BROODER

Are not only the best in name, but are also the best in simplicity of running, the best in economy of fuel, the best for a large percentage in hatching, and also "The Best" are the cheapest, being placed so low in price that farmers, amateur poultry keepers, etc. can afford to purchase. "The Best" Incubators are made throughout with thoroughly kiln-dried white pine, and are well put together. It is not got up for show only; it is as well made on the inside as it is without, and is built to hatch.

Incubators, 100 egg size, \$15.00; 200 egg size, \$21.00
 Brooders, 100 " 6.00; 200 " 8.00

Send for circular giving full particulars regarding application of heat, ventilation, moisture, nursery, etc.

Our 1899 Seed Catalogue now ready to mail. Address

JOHN S. PEARCE & CO., London, Ont.

Kindly mention this paper.

The Ontario Agricultural Gazette

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

FARMERS' INSTITUTES.

1898-9.

The meetings held during December have been unusually successful, and the delegates sent out have given excellent satisfaction. The attendance has been larger than heretofore and the general interest in the meetings greater.

The attention of institute officers is respectfully called to clause 6 of the Rules and Regulations governing Farmers' Institutes, which reads: "All memberships shall terminate on the 31st of December each year." Also to clauses 48 and 49 of the Rules and Regulations, which read: "On or before the 10th of January each year the Secretary shall send a revised list of members for the current membership year to the Superintendent, and on or before the 10th day of each succeeding month he shall forward the name and address of each additional person who has since the previous return become a member of the institute.

"Within one week after the close of each institute meeting or series of meetings the Secretary shall forward to the Superintendent a detailed report of said meeting or meetings, in which shall be stated the name of the place or places where sessions were held, the number of persons present at each session, the name and address of each person who read a paper or gave an address, the title of the address or paper, and a comment upon its value, whether good, fair or indifferent." ("Use Form A. of Secretary's minute book for making returns required by this clause.")

The attention of the Secretaries is respectfully called to the explanations to be found in each of the five books which comprise their Institute set. Lists of members for 1899 have already been received. Mr. C. W. Young, Secretary of the Cornwall Institute, has sent us a list of ninety-nine members. The same gentleman is also Secretary for Stormont Institute, and has sent us a list of forty-eight names for that Institute. Mr. Freeman Britton, Secretary of the South Leeds Institute, has also sent us a list of members for 1899 numbering eighty-six. We have also received from Mr. W. J. McNaughton, Secretary of the Glengarry Institute, a list of eighty-four members, and from Mr. J. P. Fox, Secretary of the Dundas County Institute, a list of one hundred and sixty-three members.

"Why is a chicken like a farmer?"
"Because it always expects to have a full crop."

AN ABRIDGED REPORT OF AMERICAN EXPERIMENTS WHICH ARE OF VALUE TO CANADIAN FARMERS.

(Continued from last issue.)

MOISTURE SUPPLY IN CHEESE CURING ROOM.

The best method of supplying moisture to cheese curing rooms has been under investigation at the Wisconsin Station. It was found that cloths hung up and kept moist answered best.

The cloths are supplied with water from a $\frac{3}{4}$ inch water pipe which runs along the top of the room. Very small holes were drilled, about six inches apart, on the upper side of the pipe. Strips of cotton cloth were hung over this pipe, and, when the water was turned on, it went through the holes, wet the cloths and flowed down through them. The flow of water through the pipe was regulated by a valve, so that it would drip slowly from the bottom of the cloths. Under the cloths was a tray one foot wide and four inches deep for catching the dripping water and carrying it off into a drain. After the valve was once adjusted, a steady flow through the sheets was carried on for two weeks. One hundred square feet of cloth was used in the experiment, the curing room containing 5,000 feet of space. Those in charge of the experiment considered that double that surface of cloth might have been used to good advantage.

FIELD CROPS—SEED CORN.

Several of the experiment stations have made tests of seed corn taken from different portions of the ear to see which were the most productive. At the Georgia station the tests went to prove that kernels from the tip were equal, if not superior, to those from the middle and butt of the cob.

At the Kansas station the butt kernels were taken from ears raised from butt kernels in 1895, and the middle and tip kernels from ears raised from middle and tip kernels respectively. Of the butts 85.9 per cent. germinated, of the middle 90.3 per cent., and of the tips 72.9 per cent.

The average for five years showed that there was not much difference, although the corn from the butt kernels was slightly higher, averaging 39.74 bushels per acre. That from the tip kernels averaged 39.04 bushels, and from the middle kernels 38.52 bushels.

The Ohio Station experiments, which covered a period of nine years, showed similar results, the difference in the crops of corn from different portions of the ear being immaterial.

YIELD OF CORN SOWN IN HILLS, DRILLS, AND BROADCAST

During 1895 and 1896 the Cornell Station devoted considerable attention to the comparative yields per acre of corn sown in hills, drills, and broadcast. The average for the two years is given as follows: Corn in hills, 17,070 pounds of stalks, 5,640 pounds of grain, or a total of 22,710 pounds. Corn in drills gave 19,815 pounds of stalks and 4,352 pounds of grain, or 24,167 pounds in all, while corn sown broadcast produced of stalks (no grain being formed) 29,585 pounds, the broadcast method of seeding thus giving the largest crop.

An analysis of the crop of 1895, however, made when the crop was in the best condition for forage, showed that the percentage of each food constituent—protein, fat, nitrogen—free extract and fiber was smallest in the corn which had been sown broadcast, and greatest in that grown in hills, with the single exception that the drilled corn contained a slightly higher percentage of fiber, which is the least valuable constituent.

The corn grown in hills thus ranked first in feeding value, although it produced the smallest weight of crop, while the absolute feeding value of the broadcast corn was, in view of its large yield, somewhat greater than that of the drilled corn.

A serious objection to corn sown broadcast is that it is quickly affected by drought. Cultivation of the soil is absolutely needed in order to keep it moist enough to supply the demands of the growing crop, and this cannot be done where corn is sown broadcast. Moreover, corn does best when the sunlight can permeate to every part of its structure.

MANURE FOR THE CORN CROP.

An annual test was made during six years of corn culture on the same land at the Massachusetts Station to compare the effect of applications of six cords of manure per acre and of four cords of manure together with 160 pounds of muriate of potash per acre. The manure, applied alone, gave the best results. In connection with these experiments hill and drill culture were tested. Drill culture produced the largest yield. As a green manure, where corn is grown continuously, white mustard sown in the standing corn when it was receiving its last cultivation was found worthy of recommendation.

ALFALFA.

The Colorado Station has been making exhaustive studies on the growth of the Alfalfa plant, its changes

in composition at different stages, its fertilizing value, the vitality of Alfalfa seed, etc.

The conclusions reached are that Alfalfa is a suitable and excellent crop for a large variety of soils and climates, the most trying and fatal condition to its growth being a cold, wet winter, and poorly drained or water-logged soils. Analyses made of the leaves at different stages of growth, from the time the plant begins blooming until after blooming, show that the air-dried stems contained about 6.35 per cent. of protein and about 28 per cent. of nitrogen free extract (carbohydrates), while the air-dried leaves, up to the time the plant ceased blooming, contained all the way from 22 to 25.5 per cent. of protein, and from 40 to 45 per cent. of nitrogen-free extract. The leaves are also much richer in fat, but the stems contained four or five times as much crude fibre as the leaves.

The amount of fat contained in the leaves must be borne in mind when considering the question of making Alfalfa into hay, inasmuch as the leaves being brittle they are readily broken off in handling, and a considerable portion of them are thus left in the field. As to the different crops of Alfalfa (three in number) in the test, the average percentage of protein did not differ very greatly, although the protein was somewhat higher in the crop first cut. It was found that the hay cut just at the beginning of bloom is richer in this constituent than that cut later. From the beginning of bloom to half bloom the amount of protein seems to be nearly stationary and the crop is probably at its maximum. The crude fibre of the whole plant gradually increases as the plant matures.

A comparison of Alfalfa hay with Clover hay showed that 100 pounds of Clover hay contained 47.5 pounds of digestible food, of which nearly 7 pounds is protein, while 100 pounds of Alfalfa contained 54.5 pounds of digestible food, with over 11 pounds of protein.

Such experiments were made at the Colorado Station in making Alfalfa into silage, with good results. Cows ate it freely even while on green pasture. It kept in good condition, and an analysis showed it to be nearly twice as rich in protein as ordinary corn silage.

The amount of fertilizing material removed from the soil, in a ton of Alfalfa hay, is given as 44 pounds of nitrogen, 3.27 pounds of phosphoric acid, and 50.95 pounds of potash. Over 40 pounds of lime are also removed. As regards the nitrogen, however, Alfalfa derives its supply largely from the atmosphere, so that the soil is not a loser to any great extent.

In respect to the vitality of Alfalfa seed, the indications were that it was not materially affected by keeping for six years. The strange claim is made that screenings, or the poorer seed, gave as satisfactory results as prime seed.



as good as any if not the best of his kind on the continent of America to-day. Also "ROYAL DUCHESS," a first-prize sow at the Royal Show, Birmingham, England, in 1898, together with a choice lot of other sows, young boars fit for service, and pigs eight weeks old, single or in pairs, not akin. Also choice young sows bred to "Look Me Over." We ship to order, prepay express charges, guarantee stock as described.

D. C. FLATT, Millgrove

Telephone and Post Office

3 Shorthorn Bulls 3

FOR SALE.

Two of them are over 14 months ; are good and fit for service. All are reds.

WM. MILLER,

Box 112, MARKHAM, ONT.

Railroad station: Markham G.T.R. 4 miles.
Laurel Hill, C.P.R. 3 miles.

W. D. FLATT

HAMILTON P.O. and TELEGRAPH OFFICE



.... OFFERS FOR SALE

TEN Choice Shorthorn Bulls, from six to twelve months, twenty five Cows and Heifers served by imported bull, Golden Fame #26050; also Large York Sires of choicest breeding and quality from Imported and Canadian-bred stock of True Bacon Type. Catalogue sent on application. Visitors met at G.T.R. or C.P.R. if notified.

Golden Link Herd of

Large English Berkshires.

Six choice young boars for sale, fit for service, among them the boar that won 1st prize for £1 under 6 mos. at Toronto, 1897, and 1st at the Western; also 2nd prize boar under 6 mos., at Toronto; 12 first-class young sows from five to eight months old. Twenty-five head of pigs, 6 and 8 weeks old, sired by Perfection, a boar that has never been beaten. Express charges will be prepaid to any part of Ontario on all orders received before January 1st.

T. A. COX, Brantford, Ont.

Chester Swine a Speciality ..

Stock for Sale of all ages and both sexes

EGGS FOR HATCHING from L. Brahmas, Buff Cochins, Partridge Cochins, P. Rocks, S. G. Dorkings, Black Minorcas, S. White, and Brown Leghorns, Rose Comb White Leghorns, B. J. Games, and Cornish Indian Games at \$1 for 12. Mixed eggs if desired; also Aylesbury, Rouen, and "ekin Ducks" eggs at \$1 for 9. A few grand cocks for sale of White and Brown Leghorns, Cornish Indian Game, Pyle Game and B. B. Game stock.

Geo. Bennett & Pardo, Charing Cross, Ont.

Summer Hill Herd Of Yorkshire Hogs

Large Lengthy English Type

Among them being the undefeated prize winning boar "LOOK ME OVER"—2002—acknowledged to be "ROYAL DUCHESS," a first-prize sow at the Royal Show, Birmingham, England, in 1898, together with a choice lot of other sows, young boars fit for service, and pigs eight weeks old, single or in pairs, not akin. Also choice young sows bred to "Look Me Over." We ship to order, prepay express charges, guarantee stock as described.

D. C. FLATT, Millgrove

Telephone and Post Office

C. M. SIMMONS, - IVAN, ONT.

Breeder of Shorthorn and Berkshires.

Farm 7 miles from Iderton Stn., G.T.R. Stock of all kinds for sale. Prices and quality sure to please.

Experienced Farm Manager

Wants engagement. Over twelve years' experience as manager of stock farms. Two years at O.A.C., Guelph, and three months training at Provincial Dairy School. Very highest recommendations and testimonials from well known farmers and stock-breeders, from the staff of the O.A.C., and former employers.

Address,

"MANAGER,"

Care of FARMING,

Toronto, Ont.

...FOR SALE...

8 SCOTCH SHORTHORN BULLS

From 10 to 18 months old. 1 BULL 2 years old, bred by O. & W. B. Watt, Salem. Also a number of

COWS AND HEIFERS

DAVID MILNE, - - - Ethel, Ont.

CHOICE AYRSHIRE BULLS

FROM IMPORTED STOCK.

We offer for sale Three (3) BULL CALVES from 9 to 13 months old, sire and dams imported; also 5 calves from 1 to 4 months, good individuals and from the very best milking strains of fair able in Scotland.

W. W. BALLANTYNE.

(formerly Thos. Ballantyne & Son)

"Neidpath Stock Farm," Stratford, Ont.
Farm adjoins city, main line G.T.R.

FOR SALE

FIVE AYRSHIRE BULLS

Ranging from six months to two years. First-class animals, fit to head any herd.

Also, **BIRDS**

of thirty varieties of land and water fowl

WILLIAM STEWART & SON

Monte, - Ont.

BRONZE TURKEYS.

FOR SALE—Fifty head of choice stock from the best strains in America. My Gobbler "Royal Tom" is the best and heaviest on the continent. Won 1st prize at the Kentucky State Fair, at Paris and Covington, Ky., with a score of 98 points; 1st and special for heaviest turkey at Guelph and London poultry shows, 1898. Weight 46 pounds. Prices right. Satisfaction guaranteed.

JAMES FORD,

DRUMQUIN, ONT.



HOW TO START

In the POULTRY BUSINESS and how to make it a complete success is the theme of our POULTRY GUIDE. Tells all about poultry houses, how to build, cost, &c., and how to breed, feed and market fowls. Treats also of the famous

CYPHERS INCUBATOR

which is delivered freight paid to every purchaser. This machine requires absolutely no artificial heat. Send 10 cents and get the book. Circulars FREE.

THE CYPHERS INCUBATOR CO. Box 69, WAYLAND, N.Y.



Incubators and Brooders, Self-Regulating. Special low price for first in any locality. Agents wanted everywhere. Eggs for hatching, by the hundred cheap. B. P. Rocks a specialty. Catalogue free. Address Geo. S. Singer, Cardington, O.

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Richmond street W., Toronto,

Dec. 26th, 1898.

Things are quiet in wholesale circles but retail trade is exceedingly brisk and merchants are having the biggest holiday trade they have had for years. The trade of 1898 is reported all the way from 10 to 20 per cent. better than that of 1897.

Wheat.

Wheat shows very little change from a week ago with the exception, perhaps, that the advance reported was proven to be of a very temporary character. The Chicago market has been irregular all week, though a firmer feeling prevailed at Ontario points towards the end. The fall wheat crop for 1899 is now being figured on by dealers, and reports show that the area sown was large and that the crop has entered the winter with the best of prospects of coming out well in the spring. This, together with the fact that only about one-third of the 1898 crop has gone into consumption and that the bulk of it is yet to be marketed, makes the prospects for any marked increase in prices very doubtful. Of course, should the rumblings in certain European quarters develop into a big war, prices would advance with a rush. But it is not safe to place any great dependence upon such contingencies, and it is much better to be governed in the marketing of grain or any other farm product by the law of supply and demand.

A special London cable to the *Trade Bulletin* of December 22nd reads: "Notwithstanding the advance at the close of last week, prices on the whole are lower than when I last cabled (Dec. 15th) but at the decline there is a steadier feeling." Prices at Montreal are purely nominal. Ontario millers and shippers complain of the scarcity of deliveries of winter wheat since the advance of last week. At G.T.R. and C.P.R. points east of Montreal 67c. has been the ruling figure, while a lot of No. 1 hard Manitoba is reported sold at 69c. at Fort William, May delivery. The market here is firmer, and quotations are from 68 to 69c. for red and white west. Manitoba is quoted at 81c. for No. 1 hard for grinding and 75c. Midland. On the local market red and white is quoted at 68 to 68½c., goose at 67c., and spring at 67½c.

Oats and Barley.

Canadian oats are in good demand in London, and an advance of 3d. per quarter is reported. Owing to the bad state of the roads, deliveries have not been heavy, though sales of oats have been made east of Toronto at 28½ to 29c. An improved demand has sprung up at Montreal and quotations are 30½ to 31½c. Oats are firm here at 27½ to 28c. for white, west. On the local market they bring from 30½ to 31c. per bushel.

The Montreal barley market is firm at 54 to 55c. for No. 1, but it is claimed that really choice quality cannot be had at these figures. Barley here is somewhat easier at 46 to 47½c. west. It brings 48 to 49c. on the local market.

Peas and Corn.

The Montreal market for peas is quiet and quotations are 70½ to 73c. laid down there. The market here is firm at 64 to 65c. west.

No. 2 Chicago mixed corn is firm at Montreal at 44 to 45c. The market is firmer here at 36 to 36½c. for Canadian yellow west, and 45c. for American, Toronto freights.

Bran and Shorts.

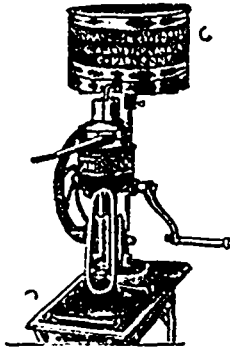
Ontario winter wheat bran is quoted at \$13.50 at Montreal, shorts at \$14.25 to \$14.75, and middlings at \$16. Millfeeds are reported scarce here at \$14 to \$16 for shorts, \$12 to \$12.50 for bran west. Toronto millers are charging \$13 for bran.

The same thing over and over again. Read what the AMERICAN has done this time.

WILL PAY ITSELF IN 4 MONTHS

BLYTHESWOOD, ONT., JUNE 8TH, 1898.

MESSRS. RICHARDSON & WEBSTER,
St. Mary's, Ont.



DEAR SIRS,—Enclosed find settlement for the Separator and oil received from you on May 28th. I placed the Separator on trial with Mr. S. D. Wilkinson, Leamington, and after 4 days he bought it. He is perfectly satisfied. I have tested the skim milk several times for him and it has never shown more than a trace of butter fat. I consider it a perfect machine in every respect and would like to act as your agent in this part of the county. Mr. Wilkinson is one of the most prominent dairymen around here. He says he will save enough in butter to pay for the Separator in 4 months. Yours truly, (Signed) F. A. LEAK.

Write RICHARDSON & WEBSTER, St. Mary's, Ont., for Catalogue and Prices. It will pay you to have a Separator as well as others.

W. G. GLENN, Agent for Owen Sound and vicinity

RICHARDSON & WEBSTER,

ST. MARY'S, ONT

Clover and Timothy Seed.

A short crop of red clover seed is reported in the United States, and it is expected that prices will be high. \$4 per bushel has been paid west of Toronto. Quotations at Montreal are \$5.40 to \$5.50. Timothy seed, on the other hand, is reported plentiful and about as low in price as it has ever been and is quoted at \$1.25 to \$1.75 per bushel at Montreal. Red clover is quoted here at \$3.50 to \$4; white clover, \$6 to \$9; alsike, \$4 to \$5; and timothy at \$1.25 to \$1.35.

Eggs and Poultry.

Canadian eggs continue to command good prices in the British markets and prices are firm. Shipments of eggs from Montreal show an increase of 41,810 cases over those of 1897. The Montreal market keeps very firm for strictly new-laid eggs, which bring from 25 to 26c. in large lots, and from 28 to 30c. in small lots. Straight candled eggs are quoted at 15½ to 16c. Eggs are in good demand here at 20 to 22c. for new laid, 17 to 18c. for held fresh, and 14 to 15c. for limed. A high as 30c. has been paid on the local market for strictly new-laid eggs.

The bad weather of the past week has had a depressing effect upon the dressed poultry trade. At Montreal good turkeys bring from 8½ to 9½c.; chickens from 6 to 7½c.; geese from 6 to 6½c. for good quality; and ducks from 7½ to 8½c. Chickens, wholesale, are quoted here at 25 to 40c. per pair; ducks at 40 to 60c.; geese at 6 to 6½c. per lb.; and turkeys at 8 to 9c.

Potatoes.

The firmer tone of last week's markets has been maintained and sales have been made at Montreal at 55 to 57½c. per bag, and 65c. in jobbing lots. Cars on track are quoted here at 55c., and potatoes out of store sell at 65c. They bring from 55 to 65c. per bag on the local market.

Hay and Straw.

More hay is being sold for export of late, principally in Quebec, where sales of clover have been made at \$3.50 f.o.b. or \$4.50 at Montreal. These prices are lower than the freight to Liverpool. Montreal quotations are \$6.50 to \$7.50 for No. 1; \$5 to \$5.50 for No. 2, and \$4.25 to \$5 for clover on track. Quotations here are the same as last week.

Fruit.

Montreal quotations are \$2.50 to \$3 in carlots for apples. Advices from England of sales net shippers \$2.84 to \$3.08 in Ontario. West of Toronto sales have been made at \$2.85 for spys, \$2.50 for greenings, and \$2.75 to \$2.85 for russets, f.o.b.

Cheese.

The cheese situation is a very healthy one, and much similar to that of two years ago, when there was a big shortage in the make. The total decrease in shipments from Canada to Dec. 17th is 238,472 boxes, a compared with the same period last year. The total decrease from Canada and the United States

for the same time has now reached 512,856 boxes. This, coupled with a shortage in the English make, makes the outlook for good prices very favorable. English dealers are beginning to wake up to this fact and orders are coming more freely. A further gain of 2s. is reported in London prices for finest stock, and Liverpool cables are also strong. The ruling figure for fine stock at Montreal is 10c. and holders are asking 10½c. for finest Westerns; finest Easterns are quoted at 9½ to 9¾c., but holders are asking 10c. for these. These are reasonable figures and the English dealer who fails to get in his supply at these prices will have to pay more after New Year's.

Butter.

Exceptionally high prices have been the rule on the English markets for the past few weeks and the drop of 3s. to 4s. in the London market on Thursday is not surprising. There have been large arrivals of Danish and Australian butter of late which have caused an easier feeling. Whether there will a further decline will depend upon future supplies from the Anipodes. Though a quieter feeling exists at Montreal owing to cable declines, sales have been made for export at 20½c. for choice creamery in boxes. What is wanted now is mild salted, light colored creamery, which will command from 20½ to 20¾c. Factories west of Toronto are reported to have contracted December make at 19 to 19½c. Buyers in Quebec are offering 20c. for January make, so that the butter situation is not in a very unhealthy state. Though the make in the winter creameries has been large factories are sold out pretty close, so that there is not likely to be much stored in the country. There has been an advance of 1½ to 2c. in the New York market. Prices here for creamery are about the same as last week. Western dairy brings 13½ to 15c. at Montreal, Choice dairy tubs are quoted here at 13 to 15c., and lb. rolls at 14 to 15c. On the local market lb. rolls fetch from 14 to 18c., and large rolls 13 to 14c.

Cattle.

Cattle have been a little quiet during the week, though the Chicago market has ruled fairly strong for good stock. There seems to be an extra supply of inferior stock coming forward. This is specially the case on some of the western markets where stuff is offering that should be fed three months longer. The soft weather has put a damper on the market for butcher meat.

Export Cattle.—The offerings have been light. Choice heavy exporters bring from \$4.25 to \$4.50, with extra fine lots fetching 10c. per cwt. more. Light exporters bring from \$3.85 to \$4.25 per cwt. Choice heavy export bulls are a little firmer and bring from \$3.65 to \$4.12½, and light ones from \$3.25 to \$3.40.

Butchers' Cattle.—The warm weather has seriously affected the market for these. Choice picked lots equal in quality to the best exporters and weighing from 1,000 to 1,150 lbs.

bring from \$4.00 to \$4.15 per cwt; good, from \$3.50 to \$3.80, medium, \$3.35 to \$3.45, common, \$3.00 to \$3.25, and inferior \$2.05 to \$2.85.

Stockers and Feeders.—This trade is good in the west. Buffalo stockers on Toronto market bring from \$3.25 to \$3.40 per cwt; the latter prices for choice herd steers of 600 to 700 lbs. Good heavy feeders of 1,000 to 1,150 lbs. each in weight are scarce and worth from \$3.50 to \$3.75 per cwt. Feeding bulls fetch from \$2.25 to \$2.75 per cwt.

Calfes.—These have been dull on the Buffalo market of late. Good veals of choice quality are wanted here and prices remain firm at \$3 to \$6 each or \$5 per cwt. for choice quality.

Milk Cows.—Prices for these range from \$25 to \$40 each. The quality of the cows offered has generally not been good of late.

Sheep and Lambs.

The demand for mutton sheep in the West has been slack of late, though supplies have not been large. The Buffalo market is also very quiet; enquiry is light, and buyers are indifferent. Prices here are about the same. Ewes bring from \$3.25 to \$3.40 for the bulk, with chance picked lots selling for \$3.50 per cwt. Bucks are worth from \$2.50 to \$2.75 per cwt. The bulk of the lambs offered bring from \$3.60 to \$4.10, while choice picked lots sell for as high as \$4.25 per cwt.

Hogs.

American markets have ruled somewhat dull during the week. The high price of lard, however, tends to keep up the price of heavy hogs in the West. The Montreal market is reported active. The Toronto market is practically the same as last week. Choice selected bacon hogs, weighing from 160 to 220 lbs. each, unfed and unwatered, off cars, bring from \$4.15 to \$4.25 per cwt.; heavy fat and light hogs about \$4 per cwt. Light hogs are not wanted.

Often, when the dairyman is rushed for time on account of the pressure of other work, he allows the fresh cow to go with the ordinary care and feed until the rush is over, expecting to make up for his neglect by good treatment when he is less hurried. It is a great mistake for him to do this, for if a cow starts with a low or moderate flow of milk and it is not immediately brought up, no amount of care or feed afterward will succeed in securing her best yield.

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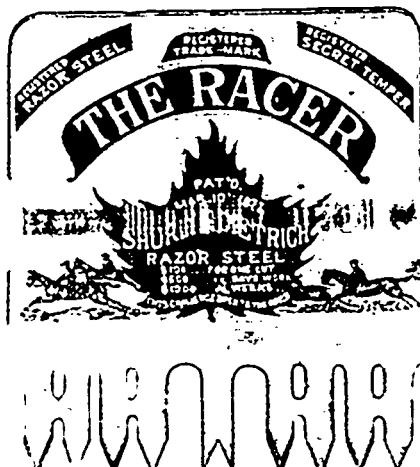
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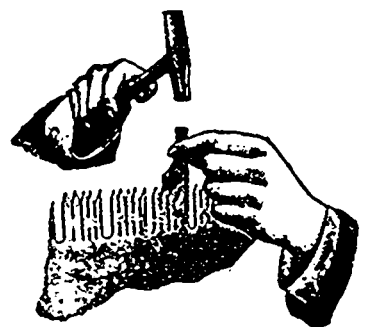
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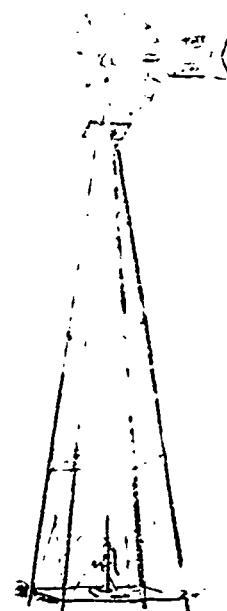
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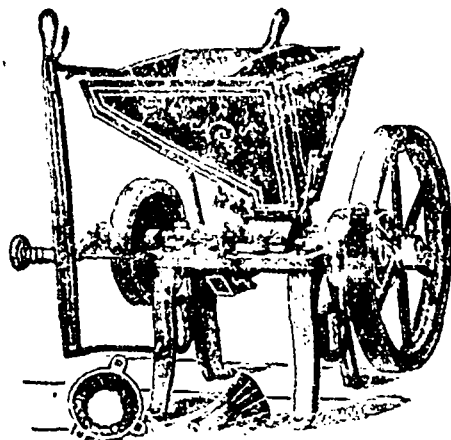
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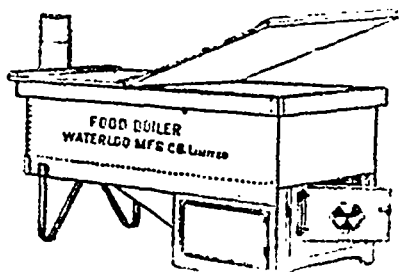
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December, 1897, page 732:

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times even under that of 'basic slag,' have been sold refuse materials of a very different
character, and having little or no manurial value. These have not been the product of the now
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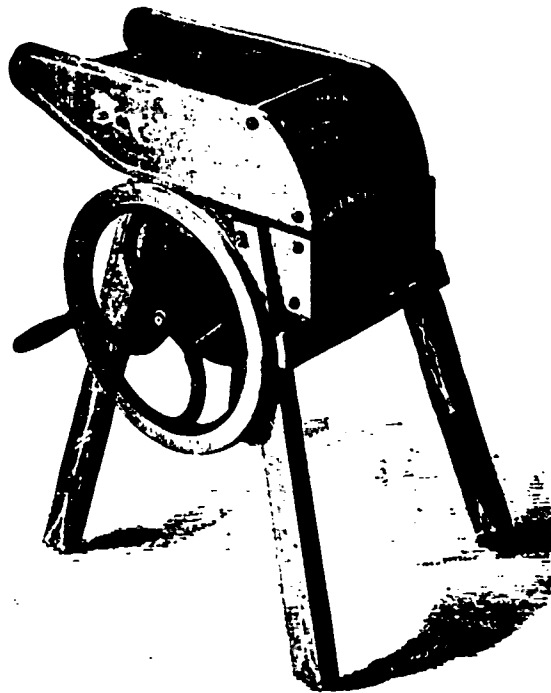
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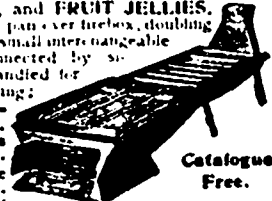
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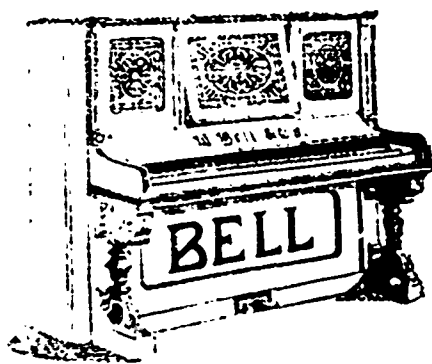


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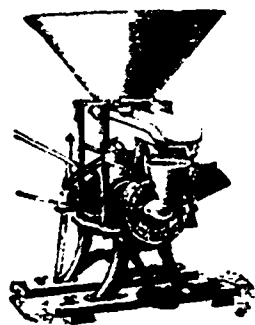
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