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# FARMING.

## Simmons & Quirie Shorthorns and Berkshires.

The herd is headed by the imported bull, Blue Ribbon 17095 (63706). He by Royal James (54992), dam, Roslentz, Vol. 38, p. 298, L. H. L., by Gravesend (92460). Among the females are representatives of the Strathallans, Minas, Golden Drops, Mysies, Flivras—all pure Scotch breeding, except the Liviras, which are Scotch crosses.

The herd of Berkshires includes many prize winners, and are an exceedingly choice lot.

Farm 7 miles from Elderton Station, G.T.R. Stock of all kinds for sale. Apply to

O. M. SIMMONS, Ivan, Ont., or  
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## Ingleside Herefords

Largest herd of choice-bred Herefords in Canada. Winners of both the first and second herd prizes at Toronto, Montreal, and Ottawa, 1895, 1896, and 1897; also silver medals same years for best bull and best female. This herd is of the up-to-date beef kind, combining early maturity and quality.

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Ingleside Farm,  
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Farm 2½ miles  
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## IMPROVED CHESTER AND TAMWORTH SWINE

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Pair of fowls, \$2.50; 8 pairs of chicks, April and May hatch, at \$2.50 and \$3.00 a pair.
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Twenty nicely laced DAY chicks at \$1.25 each, \$2.00 pair up.
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- Brown Leghorn and Blk. Minorca**  
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- Buff Pekin Bantam Fowls**  
One pair, \$2.50.

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HENRY CARGILL, M.P.

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

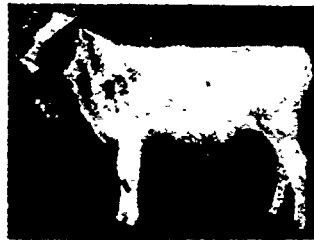
Beet-Root Sugar again. The Great Stock Farm of the World. Tuberculosis. Notes and Ideas. Market Review and Forecast. Shall We Wean the Calves? The Protection of Live Stock in Winter. The Value of Succulence in Fodders. Breeding and Rearing Dairy Stock. The Dominion Cattle Breeders' Association. The Wintering of Bees. Correspondence on Matters of Interest, etc.

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**Ayrshire and Guernsey Cattle.**  
**Improved Yorkshire Swine.**  
**Shropshire Sheep.** Our Shropshire sheep and Yorkshire Swine are unexcelled. We offer the choicest Stock of both For Sale at reasonable prices. Our herds of



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Ayrshires and Guernseys are also in first-class condition. We can fill orders from prize-winning and imported animals of the very best strains. Particulars furnished on application to

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Good young cows, two years old; yearlings and heifer calves, out of Imported and Home-bred cows, and the Imported bulls, Royal Member and Rantin Robin. Come and see them or write if you want something special. Station on the farm.

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Awarded first prize at Montreal for BREEDERS' YOUNG HERD. Young animals of MERIT for sale. Particulars and particulars to parties wishing to purchase. Address,  
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**\$10** For a machine to build the cheapest strongest and best fence made of wire. No royalties, no farm rights, machine easily and quickly operated by any farmer. Send for large circulars.

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and Miller's Ratchets.

## HELBon STOCK FARM.

Holstein-Friesians of the highest producing strains, founded on the best imported families of NORTH HOLLAND.



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Twenty females and a few young bulls, rising one year old. A rare chance to get the best stock at bargain prices.

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A Reliable and Speedy Remedy for Curbis, Splints, Spavin, Sweeney, Etc.

It can be used in every case of Veterinary Practice where Stimulating Liniments or Blisters are prescribed. See pamphlet which accompanies every bottle. It has no superior. Every bottle sold is guaranteed to give satisfaction. Price 75c. per bottle. Sold by all druggists. Invaluable in the treatment of Lump Jaw in cattle. See Pamphlet. Prepared by—

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**SIX BULLS FOR SALE**  
fit for service, at reasonable prices. Write for particulars.

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**W.J. BIGGINS** SHORTHORN BULLS AND HEIFERS  
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of Select Scotch Breeding at Low Prices



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SUTTON WEST, ONT.

Shorthorns of all ages bred from the best, and raised under the most favorable circumstances. Also young thoroughbred roadsters for sale. F. C. SIBBALD. J. CARSON, Agent, Yorkton, Assa.

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**JOHN MORGAN & SONS**

**CHERRY GROVE STOCK FARM**  
KERWOOD, Ont.



A Representative of the Herd

The attention of the public is drawn to the fact that we have on hand this fall a superior lot of young Shorthorn bulls and heifers for sale, sired by our famous stock bull "Vice Regent."

We claim that Vice Regent as an individual and stock bull has very few equals, if any, in Ontario, and an examination of his progeny is solicited.

Wm. Muxlow, Manager



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Patrons: Governor-General of Canada and Lieutenant-Governor of Ontario. The most successful Veterinary Institution in America. Experienced teachers. Classes begin on Wednesday, Oct. 13th, 1907. Fees, \$65 per session.  
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**Brookbank Holstein Herd**

Champions for milk and butter. 8 have won public test. No bull for sale at present. 13 Cows and Heifers due to calve from August to Jan., mostly with calf to Sir Paul De Kol Clothilde

a milk and butter prince, whose 19 nearest female relatives average 21 lbs. of butter per week, and 14 average 16,233 lbs. milk in one year. Increase of herd only for sale.

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MAPLE HILL

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A grand lot of cows and heifers of all ages now for sale: all bred to the milk and butter king, St Pieterje, Josephine Mechtildie, and the great show bull, Count Mink Mercedes.

No more bulls for sale at present. G. W. CLEMONS - St. George, Ont.

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

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**FOR SALE A CHOICE LOT OF**

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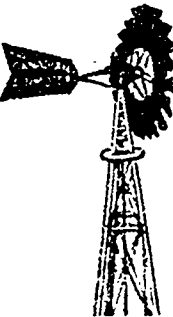
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Choice Young Tamworth Pigs ready to wean, sired by the prize-winning imported boar NIMROD. Write at once for prices. Also a few young sows ready to breed. **A. C. HALLMAN, - New Dundee, Ont.** Waterloo, Co.

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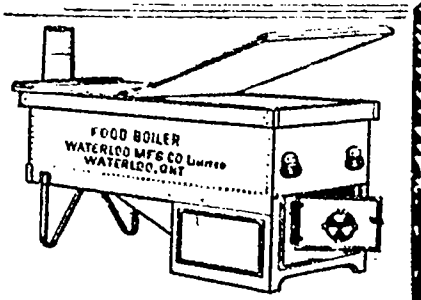
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Used chiefly by Farmers, Stock Feeders, and Butchers for Cooking Feed for Stock and Poultry for

You save fifty per cent. of the feed, and produce more than when fed dry and raw.

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**Windsor Disc Harrow**



The Machine that is attracting the attention of Dealers and Farmers throughout the Country. Ball Bearings, Double Lavers, Steel Frame, Perfect in every way. Is unequalled by any other machine in the market.

We also call the attention of Farmers to our very complete line of

**Harvesting Machinery**

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All Our Machines are Fitted with Roller and Ball Bearings.

Write for Complete Catalogue. Mention this Paper.

**FROST & WOOD, - Smith's Falls, Ont.**

# FARMING

VOL. XV.

NOVEMBER 2ND, 1897.

No. 9.

## FARMING

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

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## TOPICS FOR THE WEEK

### Two Reasons Why Every Farmer Should Take "Farming."

(1) It is the only weekly agricultural paper published in Canada, and is thoroughly up-to-date in every respect.

(2) It contains reliable and accurate information regarding the markets each week, and its pages are replete with practical information on every phase of farm work. Every question affecting the interests of the agriculturist is discussed in its columns. FARMING is the farmer's guide and the stockman's friend.

To all new subscribers FARMING will be sent from now till the end of 1898 for \$1. Remit at once and get the full benefit of this offer. We will advance the subscription of any of our present subscribers six months for one new yearly subscriber to FARMING, and for two new yearly subscribers sent in we will advance it *one year*. Is this not an excellent plan of paying for your subscription? Try it and we are sure that you will succeed in getting new subscribers. Everybody wants FARMING and you have only to mention it to your neighbors in order to get them to subscribe.

### Tuberculosis.

During the past week Colonel D. McCrae has been addressing a series of farmers' meetings throughout the province on the subject of cattle tuberculosis. Practical demonstrations are given at these meetings, showing the application of the tuberculin test. Mr. McCrae reports a good attendance, and that farmers are taking the keenest interest in the subject. In several instances, when the symptoms of the disease have been fully explained, owners of cattle have stated that the disease was prevalent in their herds. This goes to show that tuberculosis may be present in many herds of cattle and the owners entirely ignorant of it. If such is the case the sooner our farmers and cattlemen are made thoroughly acquainted with the nature and tests for detecting the disease and the remedies for it the better. The good work the Government is doing in disseminating information among our farmers in regard to this important subject cannot be too highly commended. Owners of cattle should make themselves thoroughly acquainted with the symptoms indicating the disease, so as to be able to detect cases in their own herds.

### The Great Stock Farm of the World.

In the recent "Report of the Bureau of Animal Industry," published by the United States Department of Agriculture, England is complementarily referred to as "the great stock farm of the world." English agriculturists are rightly enough pleased with this compliment; for, although the phrase expresses no more than the just truth, it is pleasant to have it expressed by a high authority in a country which has not always been too friendly to England. Some English journalists, however, are endeavoring to make out of the phrase a defense for a state of affairs which they wish to see continued, but which thoughtful persons think has continued long enough already. These journalists say that if English agriculture has won for the country the proud distinction of being "the great stock farm of the world," and has done so "without a penny of public money being spent" in government aid and direction for its development, therefore, the same policy should be continued, and no public money should be asked for now, or be spent now, in "the development of agriculture. This is the position taken by some journalists, though, not, of course, by all. This position, however, can be held only by those who are wholly blind to the conditions upon which modern international trade and commerce can be carried on. England owes its pre-eminence as a great stock-breeding country, among other things, to two principal contributing causes. The first cause is the fact that a great part of the development of live-stock breeding in England has been carried on by a class of farmers whose likes are to be found nowhere else in the world. Men with money and social distinction, who are willing to spend their money for the sake of maintaining their social distinction, and who know very well that there is no policy or line of conduct which will gain for them more credit with the rank and file of the English people than to live in country homes, and be the successful patrons of rural pursuits. To glance over an English stock show prize list, or to look through the advertising columns of an English live-stock paper, is sufficient to establish the fact that the great majority of the live-stock breeders of England, who are in the top rank, are *men of money and means*, who follow farming not as a business, but as a *fad*, an honorable and worthy fad though it be. The *ordinary* English farmer is like his mate anywhere else in the world—as slow to improve, as slow to give up grain growing and become a specialist in the raising of pure bred live stock, as any Canadian or United States farmer is. The second cause that has contributed to England's pre-eminence in the production of live stock is the fact that the English, from their natural fondness of live stock (for which let all honor be given them) were the first in the live-stock field. For years and years they had it all their own way. This is no longer so. Every progressive civilized country in the world is rapidly developing improved methods of live-stock breeding. England has come to Canada for some of her best short-horn blood and may do so again. Scotland is coming to the United States, even to-day, for better types of Clydesdales than she is able to find at home. The "old country" has no longer the distinction of being the "only stock farm in the world," though she still may rightfully claim to be the "great stock farm of the world."

The oft-repeated statements in the English public papers as to the sad condition of British agriculture, no less than the official findings of the British Agricultural Commission, emphatically prove that British agriculture, *as a whole*, needs just the sort

of government supervision and direction which is pushing forward the agriculture of Canada, of the United States, of Denmark, of Sweden, of Norway, of Australia, and of New Zealand. As the London *Live Stock Journal* remarks: "The rank and file of British horses, cattle, sheep, and swine, yet leave much to be desired in respect of quality, and there is no doubt great room for improvement in them." This is the plain truth of the case. Improvement is as absolutely necessary in England as it is in every other country in the world. In fact, it is needed in every country. And that country that recognizes the need of improvement soonest, and hustles hardest to effect it, will win in the race, the blind and the laggard will be left behind.

### Italy's Improvement in Horse-Breeding.

Italy with all its errors has a level head in some matters. It is bound to improve the quality of its live-stock, especially its horses. The Government maintains seven stallion depots, in which, last year, there were 557 stallions. These stallions, in the breeding season, were distributed over 378 stations, and served at these stations during the year, 20,797 mares. Besides the stallions of the Government depots, others are used; but these "outside stallions" must be "approved" or "authorized" before they can serve. They have to pass an examination before the "horse commission" of the district in which they are wanted to stand, and if they fail to pass the examination, they are not allowed to be used for stud purposes. During 1896 816 "outside" stallions were submitted for examination, and of these, 683 were passed. These 683 authorized "outside stallions" served 18,022 mares, making, with the 20,797 above mentioned, a total of 38,819 mares served during the year, all by approved stallions. This method of rapid improvement is not according to old-fashioned notions, but had the old-fashioned notions remained in force in Italy, her improvement in horse-breeding in a century would not be as much as she will now effect in five years.

### Canadian Horse-Breeding.

The government returns show that the number of unbroken horses in Canada for 1897 is 106,809, as against 123,482 for 1896, and 151,867 for 1895, or a reduction of nearly 17,000 as compared with 1896, and of 45,000 as compared with 1895. This is evidence how much the breeding of horses has fallen off. The number of breeding mares however, is put down at 69,940 for 1897, as against 66,883 for 1896, an increase of 3,000, which is some comfort. But unless we breed the horses that buyers want we cannot expect our horse breeding operations to prosper. Our principal market for horses is England, and an English buyer rarely finds on this continent the sort of horse he needs. The Americans are realizing this fact, and are waking up to its importance. Last year, out of the millions of horses raised by the United States, only 25,126 were exported, and only 13,984 the year before. This state of things the Americans are determining to improve, the Government Department of Agriculture are instructing the people everywhere what sort of horses are needed for export, and are determined that the supply shall be forthcoming. In their own language "America is competing with the world for the English trade, and in order to hold a share of it we must produce what the English want." This is precisely how the case stands with Canada also.

### Japan is Falling into Line.

We have often chronicled the enterprise of modern go-ahead governments in building up and improving agricultural trade and industry. The latest nation to fall into the line of progress is Japan, but this nation, as we all know, is now as enterprising as any, and that it should endeavor to improve its agricultural conditions by the quickest methods possible need not surprise us. Three commissioners from Japan have lately been in Europe and in the United States purchasing stallions for the Japanese Government stud farms. In the United States they proposed to purchase thirty or forty stallions. The stallions desired were those that could breed good cavalry horses; runners, not trotters. Now surely this is a sort of horse that Canada could have supplied as well as the United States. If we had had a good enterprising, sharp-eyed live stock commissioner, he would have got hold of these gentlemen, brought them to Canada, and introduced them to our horse breeders. How long have we to wait? It seems very long.

### Denmark and Her Swine Industry.

This is what Denmark has accomplished in one line of industry only since it began its system of government encouragement and supervision of agriculture. Before 1888 the whole export of swine and swine products from Denmark was confined to living swine, which were exported principally to Germany, where they were bought by the bacon curers there. But in the autumn of 1887 swine-fever attacked Denmark, and the export of swine, which in 1887 had been 230,000, fell in 1888 to 16,000. This was a terrible loss of trade. The Danes, however, then set to work under government assistance and direction, and determined to do their own bacon-curing and to build up a great pig-rearing industry. This has been so successfully accomplished that from an entire swine export in 1887 of 230,000 (or 16,000 in 1888) there has been built up a business which now amounts to an annual export of *cured products* equivalent to 1,250,000 swine in 1895, and probably to 1,500,000 in 1897. The annual government expenditure for agriculture is \$550,000, of which, however, a large sum goes for education and the payment of salaries to instructors, superintendents, etc.

### Beet-Root Sugar Again.

Here are a few items of practical interest concerning the newly established beet-root sugar factory at Rome, New York.

The factory has just begun operations. It is called "The First New York Beet Sugar Factory." It is the pioneer factory in the Eastern States. The factory nearest to it is one located in Illinois. Its capital stock is \$300,000. About 860 farmers have taken stock in it. The buildings cost \$10,000. The machinery cost (originally) \$253,000. One hundred men are now employed. The factory will run this year for three months; when in full operation it will run seven months each year. The price paid to the farmers for the beets is fixed by the charter of incorporation at \$5 a ton. In consideration of this minimum price the State of New York grants a bounty of 1 cent a pound on all sugar manufactured from New York beets. The seed this year is furnished to the farmers free. Next year the farmers will pay for it at cost. About 860 farmers are furnishing roots this year, that is, all the farmers who have taken stock in the company are growing roots. About 20,000 tons of roots will be delivered at the factory this year. These will make 16,000 barrels of granulated sugar. About 200 barrels will be made a day during the working days of the running period. About 100 lbs of white beets will make 15 lbs. of sugar. It takes 24 hours to convert the beets into sugar. The factory was opened Sept. 25th, and the first run was made Oct 8th. The present output is described as simply A1. For the production of beet-roots, this year (1897) has been only an average one,

the early part of the season being bad, though the latter part was good. New York State is said by the promoters of the factory to be peculiarly well suited to the growth of the sugar beet root. The white beet roots so far received at the Rome factory have from 14 to 20 per cent of sugar; the red beet roots, however, have not been nearly so good. Though, by the terms of incorporation the farmers must be paid \$5 a ton for their beets, it is claimed that the roots can be grown in New York at a profit of \$4 a ton, when once the methods of cultivation are thoroughly understood. The pulp is sold back to the farmers at \$2 a ton. From three tons of roots is extracted 700 lbs. sugar and 3,300 lbs. water, the rest (or one ton) going back to the farmer as pulp. This pulp is claimed to be an excellent feeding stuff, rich in nitrogenous matter. It is calculated that the pulp at \$3.40 a ton is as cheap as hay at \$10 a ton. From 8 to 30 tons of beet roots per acre have been raised by the farmers supplying the Rome factory this year, but the average has been 15 tons. The farmers are enthusiastic, and next year a great deal more land will be put under beet-root cultivation, than has been this year. The manager of the Rome factory says that the soil required to raise beet roots properly is one that will permit the beet roots to grow and expand, the preferred soils being a sandy loam, a gravelly loam, and a clay loam, and the objectionable soils being heavy clays, and wet muck or stony ground. This year 1,150 acres are under cultivation, and 20,000 tons of beets are expected to be got. Next year the factory proposes to contract for 6,000 acres of roots, and to be able to put out 500 tons of sugar a day, running for seven months, that is from Sept. 1st to April 1st. By terms of incorporation the farmers must be paid cash for their roots, not stock or scrip; but any farmer may become a stockholder in the company whether he grows roots or not.

This sugar beet factory at Rome is one that has been incorporated as the result of a bill introduced into the legislature of New York by Assemblyman Charles F. Tupper, of Broome County. The whole business of making beet root sugar in this part of the world is in such an elementary stage, while the good results to flow from it, should it be successfully established, will be of such immense importance to the farmers of the country, that it was felt that some definite financial encouragement should be given by the legislature; and this is provided for by the terms of Mr. Tupper's bill, which authorizes a bonus of one cent a pound to be given for all sugar manufactured in the State of New York from beet-roots grown in the State of New York, for which a cash price of not less than \$5 a ton is paid. We are not certain, however, that the factory at Rome has been started under the best auspices. The machinery which has been put in is machinery obtained from a factory formerly started and run unsuccessfully at Larnham, Quebec. The capital of the Rome factory does not seem to be large enough. The great factories of the Western States have been brought to their present successful condition largely because of the ample capital behind them. The very successful Watsonville factory of California is owned by Carl Spreckels, the millionaire sugar king of the Sandwich Islands. The factory in Utah cost \$700,000. A new factory is just being established at Denver, Colorado, with a capital, it is said, of \$1,000,000. Of course capital in such amounts as these will never be forthcoming until it is established beyond peradventure that the climate of a district where it is proposed to locate a factory can be depended upon for the growth of the beet root to perfection. So high an authority, however, as Professor Roberts, of Cornell Experiment Station, thinks there is not a particle of doubt but that New York State can furnish the beet root in as great perfection as any other part of the Union.

The bonus, therefore, of one cent a pound which New York State grants to sugar manufactured from beet roots grown in the State seems to be necessary to get the certainty of the fitness of that State for the growth of the roots com-

mercially established. But we may add that the fixing of a price like \$5 a ton for all sorts of beets, no matter what their percentage of saccharine matter may be, though perhaps it was necessary to assure the State that its bonus would not be misapplied, is not commercially sound. In the Grand Island factory of Nebraska, which has been run successfully for ten years, a scale of prices is adopted. For beets averaging 12 per cent. sugar, and 80 per cent. purity or better, \$4 a ton is given. For beets of 11 per cent. sugar and 75 per cent. purity, \$3.25 a ton; for beets of 10 per cent. sugar and 70 per cent. purity, \$2.50 a ton. And yet under the influence of prices such as these, which it will be noticed are very much lower than that which must be paid under the New York Beet Sugar Bill, the value of land suited for beet root growing near Grand Island, Nebraska, has gone up from \$20 an acre to \$100 an acre.

There is no doubt at all that the growth of beet roots for the manufacture of sugar is an industry which the farmers of this continent are entitled to, and the farmers of Canada no less than the farmers of the United States. It happens to be one of those industries which modern science has quickly brought to the front, not the accumulated experience of hundreds and thousands of years. Therefore it has to be developed by modern methods. The old method of allowing the individual farmer, with his limited capital and his limited resources, to go on experimenting blindly for generations, will not do in this matter. A nation's resources and a nation's command of knowledge and skill are required to develop such an industry as the beet-root sugar manufacture, and to make it a practical success. The whole of Southern Ontario and Southern Quebec, not to speak of the other provinces of Canada, lie within the theoretical sugar beet-root belt. This is positively known. What is wanted now is a systematic and persistent system of experiments, made under the authority and supervision of the Provincial and Dominion Governments, with the view of establishing the fact that the sugar beet-root can be grown here in sufficient excellence and with sufficient certainty over sufficient areas to warrant the opinion that the beet-root sugar industry can be commercially successful here. That is the first step to be taken. *Individual* experiments have established this fact, so far as it can be established by individual experiments, again and again. It is now time for the Governments to step in and establish the fact generally—high time. Then when *that* fact has been established, the next step will be for the Provincial and Dominion Governments to devise some practical and sensible plan for encouraging capital to come in and take up the work. When it is remembered that for even one factory, a capital of \$500,000 is required, it will be acknowledged that a good deal of preliminary work has to be done, which the Governments alone can do. But the game is worth the candle. We are spending \$10,000,000 a year for imported sugar, every dollar of which should be spent at home.

### The Decadence of the Fair System.

It looks as if the old-fashioned agricultural fair—a fair in which the gate receipts, together with an equitable grant of public money, are sufficient to pay for the prize list and defray running expenses—will have to go. Too many fairs, too great a straining after attendance, too much competition to keep up with the standard as to prize lists set by the few successful fairs, etc.—all this is having a tendency to make fair managers resort to "outside attractions" to secure a revenue. How hard it is to obtain attractions that will "draw the crowd" and yet be unobjectionable, the fair managers only too well know. The boards of management of several State fairs have this year, in their enthusiastic desire to be successful, furnished large prize lists and have tried hard to secure large revenues. The prize lists they easily promised, the revenues they hoped to get from "attractions." The results, in some instances,



have, by no means, been satisfactory. The "attractions" provided by the authorities of the State fair of Wisconsin were universally condemned. The "attractions" of the State fair of Iowa, while not so strongly condemned, were universally voted a sad detraction from the educational value of the fair. The greatest attempt of all to secure "drawing attractions" was made by the authorities of the State fair of Illinois. And *their* attractions have been condemned more strongly than any other. This is what the *Farmers' Voice*, of Chicago, has to say in regard to them.

If the public sentiment of our people is not strong enough to put down such scandalous exhibitions; if the decent men and women of the state, brought together to witness what education and science and art and agriculture are doing for the world's uplift, are each year to be insulted by the presence of these aiders and abettors to prostitution and crimes unspeakable, then it were better to raze the buildings to the ground, plow up the soil and sow it to salt, than ever again attempt to hold such an exposition in the name of agriculture.

This is strong language, which can be justified only by strong provocation; but the *Farmers' Voice* is a level-headed journal, one that does not get into hysterics, and knows what it is talking about. The truth is, when a fair with decent management doesn't pay, it is a sign that its usefulness is gone. A further truth to be well pondered over is this: The day of usefulness for fairs is largely past. Only such as are unmistakably successful should be kept alive; all others should be allowed to die their natural death. Public money can be better spent than in keeping up institutions that the public themselves take no particular interest in. We shall return to this subject again.

#### Fixed Standards for Butter and Milk.

There is an agitation now in the States in favor of a national butter standard, that is, a definition by law as to precisely what legal butter shall contain and shall not contain; in other words, a law prescribing how much butter fat there shall be in legal butter, and how much water, and prohibiting the use of any ingredients not put into the milk by the cow excepting common salt. The fixing of a general standard for both milk and butter would be a good thing. In New York State there is a government standard for milk, and over sixty inspectors are employed, devoting their entire time to the taking of samples of milk and prosecuting those who adulterate. The adulteration most common is watering and skimming. The practical result of this system of inspection is a great protection to the consumer; for this year by the whole sixty inspectors only 400 cases were reported. In 1895 there were 600 cases in the year. The inspection is also a good thing for the farmers, although it bears hard on those who will persist in keeping "skim-milk cows." No matter how good the system of inspection may be the "standards" should be fixed by law. When the standard is not fixed by law the analysts often adopt too low a standard, and so become, as it were, a party to fraud. In London (England) the intention is to proceed somewhat severely against adulterators, but no legal standard has been fixed. As a consequence of this the analysts themselves have had to fix upon a standard. This is so low that one analyst acknowledges (in the government report) that when he reports an adulteration of 3 or 4 per cent. of water, the actual adulteration is probably 15 or 20 per cent! How important it is to farmers that a fixed standard should be instituted and adhered to is evident from the fact that the people of London pay no less a sum than £7,520,000 per annum for water sold to them as milk. This is money wrongfully held by the milk vendors which should go to the farmers that produced the milk.

#### The Dingley Bill and the Poultry Trade.

Our excellent contemporary *The Pennsylvania Poultry Keeper* in commenting on our article entitled "Our Egg Trade," which appeared in a recent number of *FARMING*, expresses its opinion that the

American tariff on imported eggs is a delusion so far as American interests are concerned. It is forcing Canada to send her eggs direct to England by her own cold storage facilities, whereas, formerly she sent them by way of New York, so that the New York shippers made a profit in handling them. By depriving Canadian poultrymen of the United States market the Dingley tariff is forcing Canadian poultrymen to send their whole surplus to Britain, and thus the English price of imported eggs is brought down to the Canadian level, and the United States exporter in order to make a sale of his eggs in England has to meet the Canadian price. In this way, *The Poultry Keeper* says: "we are losing our trade with Canada for a mess of pottage in the shape of a duty on a few eggs along the border line." This criticism is quite borne out by the facts. Every prohibitory tariff reacts in evil influence on the country that imposes it. It is always simply a case of cutting off one's nose to spite one's face.

### NOTES AND IDEAS.

Professor Roberts, of Cornell, estimates that the actual loss that the farmers of New York incur by their waste of the natural manure of their farms, is not less than fifty millions of dollars per annum. Professor Henry Stewart estimates that the total loss of the farmers of the United States incurred in this way, is not less than five hundred millions of dollars.

Canada just now is suffering from tuberculosis in a few places; but we are fortunate as compared with England. Tuberculosis is a manageable disease, and is by no means to be dreaded. The case is different, however, with pleuro pneumonia, and it is this latter disease that they have to struggle with in England just now. Pleuro pneumonia is breaking out in several parts about London.

The Danish Minister of Agriculture is introducing a bill which provides (1) that all imported cattle must be placed in quarantine and tested with tuberculin before being allowed entry into the country; (2) that any home cattle owner may have his herd tested with tuberculin at government expense; and (3) that all milk sold from co-operative dairies must be pasteurized.

We regret to see that while our shipments of cattle to England are increasing our shipments of sheep are decreasing. For the first nine months of this year our shipments of cattle from Montreal were (in round numbers) 93,000, as against 77,000 for the same period in 1896, 79,000 in 1895, and 71,000 in 1894. Our shipments of sheep, however, were only 52,000 as against 62,000 in 1896, 131,000 in 1895, and 100,000 in 1894.

There is a growing impression that township fairs don't pay, either financially or educationally. There is little doubt as to the fact that most of them don't pay educationally. They have served their time. A very different sort of education is now needed. The education that is needed now-a-days is education that is *direct* and *special*; that bears immediately upon tilling the soil and reaping its products by the most productive and economical methods possible, and then, again, that bears upon getting these products to market economically and profitably. We notice that some township fairs are being abolished. This is all right. A better use can be made of public money and public energies.

New York is now reaping the firstfruits of the efforts made to introduce the beet-root sugar industry within its borders. The "First New York State Sugar Factory," located at Rome, N.Y., has begun operations, and is now turning out "ten tons a day," of "clean, white granulated sugar made from beets," "said by experts to be equal to anything manufactured anywhere." As the *Farmers' Voice* says, "a new era is opening for the Amer-

ican farmer. The possibilities of the expansion of the sugar industry in the United States seem almost limitless." This new enterprise, which is destined to do so much good for the American farmer, is wholly due to the energy of the national and state Departments of Agriculture in working for it.

The United States Department of Agriculture has been trying to develop flax growing in the State of Washington. A ton of flax straw grown in 1895 a few miles south of the boundary line was sent to the famous Barbour flax mills in Ireland to be tested. The report is very satisfactory. The Puget Sound district can grow flax equal to the best European flax districts. The superior quality of the straw produced resembled the straw of the famous Courtrai district in Belgium. Mr. Barbour closes his report with this strong statement: "If the flax is grown and manipulated under proper conditions, and by people who thoroughly understand the business, we are convinced that the cultivation would be of the greatest importance to the country, and in a short time would rival the great Belgian region of Courtrai." While this is the report upon flax straw grown south of the boundary line, it will apply equally well to flax grown north of the boundary, for the climatic conditions are practically the same. The British Columbia Government should follow up these tests with some practical work for the people in the districts where the flax can be grown.

### CANADA'S FARMERS.

#### VII. Henry Cargill, M.P., Cargill.

Mr. Cargill, while he has not devoted his business energies entirely, or even mainly, to farming, may yet be called one of "Canada's farmers"; for in the district in which he lives no one has done more, or is doing more, to promote by precept and by example, good agricultural methods, and to further modern ideas as to farming, than he. Mr. Cargill's principal business, as is well known, is the manufacture of lumber, and besides he is a general merchant and a postmaster. But in addition to discharging the duties of all these vocations, he finds time to manage successfully the farm of 400 acres which he owns, and to keep on it one of the best herds of Shorthorns in western Ontario, and besides an excellent flock of purebred Oxford sheep. The Cargill Shorthorn herd, we may say, have rarely been put into the show ring, but when they have been shown they have taken good places in the prize lists; as for example, in Toronto and London in 1894, when they were second in each case.

Mr. Cargill has for some years represented the constituency of East Bruce in the House of Commons. In Parliament he always takes a keen interest in all matters relating to agriculture, and is especially desirous that public money shall be spent only where it will do unmistakable good. A Canadian born and bred himself, and one who has obtained his present business position by his own efforts, Mr. Cargill is a thorough believer in each man standing on his own feet, and relying on his own energies. And he is of the same opinion as regards the country as a whole. He believes that Canada has within her own borders the potency of a great nation; and that with a wise and thoughtful direction of her destinies on the part of her government, she rightfully will take her place in the world as a strong and self-reliant nationality, a leading member in that great federation of nationalities to which she belongs.

Mr. Cargill is the sort of man farmers ought to send to Parliament (we are speaking now apart from politics, for as to party politics each reader of *FARMING* must judge for himself). As a man of character, as a man with a stake in the country, and one who has acquired that stake by his own unaided efforts, and especially as a practical farmer who is directly interested in agricultural pursuits, he is, we repeat, the sort of man that farmers ought to return to Parliament. There are at present 213 members in our Dominion House of Commons. Of these only 39 are either directly or indirectly connected with farming as an occupation. There are besides 81 Senators in our Dominion Parliament, supposing every vacancy filled. But of these only 18 are either directly or indirectly connected with farming as a pursuit. That is, out of 294 members of our Dominion Legislature, only 57 in all, or a little over one-sixth, are connected with farming as an occupation even indirectly. Now, the farmers of Canada number about seven-tenths of the whole population. Were they represented in Parliament in proportion to their number, they would have 206 representatives. Instead of that number, however, they have only 57 representatives. That is to say, the farmers of Canada have 149 representatives less in Parliament than they should have. Or, to put it in another way, for every farmer now in Parliament there should be three others additional. It is plain, therefore, that we should have more men like Mr. Cargill to be our representatives in Parliament.

## BREEDING AND REARING DAIRY STOCK.

By GEORGE RICE, Curries, Ont.

The time to start feeding and caring for a dairy heifer is some months before she is born, for I believe much of the success in rearing dairy stock depends upon the condition of the cow before calving. She should be in the very best trim for good dairy work. She should not be poor, and a good dairy cow is not likely to be too fat. Indeed, we might go even further and take into consideration the condition of the bull at the time of service. I believe too many of us are making a mistake, by not giving sufficient attention to this point. I know some farmers who try to improve their stock by buying a good bull, and having done so, they appear then to think that they have done all there is to do. The bull may be fed in such a way that he looks like a scrub, and his calves are probably allowed to raise themselves. Then, because good results do not follow such treatment, the cry is raised that there is nothing in the breed. That kind of a farmer wants more *sand*, more *common sense*. It is to my mind not a question of breed or feed, but one of breed and feed.

Having then a good foundation to build upon (*i.e.* a good dam and a good sire and both of them in good vigorous condition) our work is just nicely commenced. My idea in the training of a heifer calf is to cultivate in her a good appetite, and to develop a robust constitution. Not to see how *little* food the calf can live upon, but rather how *much* food she can be trained to assimilate. The food of support, like friction in machinery, has first to be provided for, then our profit comes from what a cow can eat and digest over this. I don't believe in keeping two cows to do the work of one.

I have the best results in raising calves from the following treatment. I allow the calf to suck for two or three days. If you don't like a calf to suck, then don't, that's all, I do. For the first two or three weeks give the calf new milk. I milk three times a day, therefore, prefer to feed the calf a little three times a day. Then I add sweet skimmed milk gradually until at a month old the calf is getting all sweet skimmed milk. As I withdraw the new milk I add flaxseed jelly. I prepare this jelly by allowing the flaxseed to soak in a pot for twelve hours before I want it. It is only necessary then when I want it to warm up the water. If treated this way the oil is freed from the seed more quickly and there is less danger of burning it. Don't feed too much milk, and let it always be fed sweet for the first two or three months, at least. If the calf does look a little thin at two or three months old, have patience and keep on feeding. Let the calf's stomach grow. You will find at the end of four months that your calf can handle more skimmed milk and that she will come along amazingly well. The calf now, at four or five months old, can take twice as much skimmed milk if you have it to spare. If the milk should become sour now, you need not be particular about it as the calf's stomach has become stronger and she has learned to eat bran, oat chop, and hay. This is how I raise

my calves, whether for show purposes or for anything else. I think this plan gives the most growth without any danger of getting the heifers too fat. It is also a very cheap way, and I have a calf that has grown every day since she was born.

I breed my heifers when they are from fourteen to sixteen months old, so that they may have a calf as early as possible without stunting their growth. A heifer so raised will have grown to a good size by the time she is two years old, when I expect her to drop her first calf. If well cared for, she may be kept growing, and can be bred every year, or you may make a break of from sixteen to eighteen months between her first and second calves. This will help develop in the heifer a long milking period, and at the same time allow her to obtain her full growth. She will be all the stronger for the rest in future years, though I do not believe it is necessary if she is well fed and cared for.

One of the most common errors with many farmers is that they do not feed the heifers enough food when they are from three to six months old. We see many good, thrifty calves until they are from two to three months old. After this age they probably get no more milk, and too often but little care as well, the result is that many calves are no larger at seven or eight months than they were when four months old. If such calves are not extra well wintered they will be undersized at a year old, and not fit to have a calf before they are three years old. They may be "hardy," but we want them *thrifty*. In such poor stock the ability to assimilate food has not been developed, consequently the food of support bears too large a ratio to the food consumed. They have not the ability either to give as large a flow of milk when fresh, or, what is even more important, to keep up the flow throughout the year.

I believe that better care of the calf for the first six months means a clear gain of a year, besides having a stronger, more useful animal. Breed up, certainly, but *feed up also*. Work with nature, and a sure reward for intelligent, continuous and well directed effort will be yours. Bull calves should receive the same care and treatment as heifers. Keep them always growing so that they may be vigorous and prepotent.

## THE KINGSTON DAIRY SCHOOL.

By J. A. RUDDON, Superintendent.

The Kingston Dairy School will begin its fourth session on Nov. 25th.

The date of opening is earlier than usual, but we think it will be better because it gives four weeks before the Christmas holidays. Heretofore there has only been two weeks' school before the holidays, and as the majority of students wish to remain at least four weeks the result was that our first class was always small. The first course will now be more satisfactory. There will be no better time to attend.

During the vacation a large addition has been made to the building, allowing for a general rearrangement of the rooms. There are now two rooms for butter-making divided by a glass partition. One room is for separating only, while the other is for churning, working butter, etc.

A new combined churn and worker, an oil test churn and other things have been added to the equipment.

A large quantity of milk will be handled this year, and butter made on a scale equal in amount to most winter creameries. As everything is laid out on the lines of an ordinary creamery there can be no better place for cheesemakers to learn the art of butter making. We have never been able to supply the demand for good men who can make both cheese and butter.

A press-room and a store-room, and three new curing rooms have been added to the cheese department. The milk testing room is also larger.

We expect now to have room for all those that apply for admission, although, judging by the number of applications already received, we will have a larger attendance this year than ever before.

## THE VALUE OF SUCCULENCE IN FODDERS.

Editorial in *Hoar's Dairyman*.

Every farmer is delighted with the growth that the young cattle and colts make from May until mid-summer. He turns out a lot of young steers and finds that in a month or six weeks he would scarcely know them unless they are branded or have some special mark. He has no difficulty in knowing them in the winter time, even if he should not see them for a month. Why this growth? It is easy to see that they have good grass, plenty of it, salt and water, and there are no flies to torment, and the weather is reasonable. Nevertheless, why is it that grass alone makes such an astonishing growth in cattle? There are two reasons apart from all bad weather and flies. One is that the cattle are fed a balanced ration. Nature provides in a mixed pasture of young grass as nearly a perfect balance for growing stock as the skill of the chemist can make, and this is the model for all feeding rations for milch cows and for young and growing stock of all kinds. When the farmer intends to fatten his cattle, put on a thick fat, he adds corn, because this grass is not a balanced ration for the fattening steer. It does not have sufficient carbohydrates, and the gathering of it involves a little more exercise than the animal that is being finished for market requires.

The second reason is that this feed is given in a succulent state. Dry feed and water do fairly well, but feed with the natural water content of green grass does better. Nature mixes the water with the feed in a way that no art of man can equal. Hay and water have about the same relation to green grass that dried apples have to the fully ripe juicy apple. Canned fruit is the next best thing to fresh fruit, and here again man imitates nature by using ensilage, which is simply canned corn and fodder, during the winter season.—*Drainage Journal*.

Now let us take the foregoing excellent statement of fact and apply it to the production of milk. Every farmer knows that the green, succulent grass produces milk most abundantly, just as it produces flesh and growth. The great secret of it is that the grass is in a juicy, succulent state. It is easily and quickly digested. Its mechanical condition is perfect for the best possible result in milk.

Now, how well does the farmer keep this lesson in mind when he comes to cut his hay? He knows that dry, hard, woody stalks of grass will not produce milk like the same stalk in its juicy stage. If he knows this, and wants his cows to give milk abundantly in the winter time, why doesn't he cut his hay when it has the most milk power in it? Why doesn't he keep this principle in mind when he cuts his corn? He knows that the fodder will be worth a great deal more to his cows if the corn is cut early, and the ear left

to fill out and ripen in the stook. The utter failure with so many to carry what they know about grass into what they do with hay and corn fodder, has filled us with wonder for years. As much, if not more, right practice in this direction is had in the vicinity of Fort Atkinson as in any other section we know of. The farmers in this vicinity have had more dairy education than almost any other dairy community in the nation. But with all this, it is hard to find on our hay market one load of hay in fifty that is cut green enough for profitable milk feeding. Farmers excuse themselves on this point by saying the riper hay will go farther. That is true, and so would straw and coarse marsh grass. The poorer the hay the longer it will last. Do we want time, or do we want milk?

All there is to the science of agriculture is to study out the laws of nature and apply them in our practice. A great many men carry a lot of erroneous notions about farming in their heads, and honestly think, all the while that they are true to nature.

A cow weighing 1,000 pounds will crop about 80 pounds of short, succulent grass in 24 hours; 60 pounds of this is water or juice. On this ration she will exercise vigorously in travelling about, and give more milk and butter than if fed 30 pounds of ordinary hay and 8 pounds of grain. Can we afford to make such expensive, "go farther" hay?

We waste a good deal more than we save by such adherence to false notions. Can we afford to punish ourselves, as many of us are doing, by farming with false ideas? Can we afford to go along year after year and pay such tremendous taxes to our folly, because we have not enterprise enough to learn better? Maybe it will cost us a little money and time to read up on this question and study out the truth. What of it? Are we not paying fifty dollars for our lack of knowledge where we spend one for wisdom?

This is one of a lot of such wastes and leaks which intelligence and study would correct. An old German once said to us: "Ven der hay is too old it last longer and der cows waste more, and it make not much milk. Ven der hay is young, den der cows eat it all, waste none, and make plenty more milk. Der young is der best."

## THE PROTECTION OF LIVE-STOCK IN WINTER.

By DIRECTOR C. S. PLUMB, Indiana Experiment Station.

Food is fuel to the animal body. It requires more fuel to keep up steam in a boiler when the weather is intensely cold than it does when it is mild. In the same manner, other things being equal, it requires more food to sustain an animal freely exposed to the chilling blasts of winter, than it does for one given protection.

In experiments conducted at the Indiana station, milch cows exposed to all sorts of weather in winter but provided with night shelter made a very unfavorable showing as compared with those given the shelter of the stable, excepting for a brief airing when the weather was suitable. The exposed cows ate the most food, lost

slightly in weight and also in milk yield. The sheltered ones gained in weight, and otherwise made a better showing than the exposed lot.

At the Kansas station, hogs kept in conditions of winter exposure did not produce pork so economically as those given reasonable shelter, although the same kind of food was fed to each lot. In reporting the feeding experiments with steers at the same station, Prof. Georgeson says that steers, to give the best returns when being fed for beef should be provided with shelter. Warm, low, open sheds in the feed lot give comfortable shelter to steers.

While live stock should be protected from the inclemency of the weather, it is important that the stable should be well ventilated and not too warm. Disease propagates easiest where the air is stagnant and impure, hence special efforts should be made to keep the stable air pure. Without doubt, tuberculosis is more prevalent among cattle closely confined in stables where the ventilation is bad, than it is where the air is good. Live stock should certainly be allowed out door exercise when the weather is mild and comfortable, but if it snows or rains and the air is chilling, the animals should be given stable protection.

It is also important that the stable should not be too warm in winter. A temperature of 40 degrees is a very satisfactory one. When it is as high as 60 degrees in the barn, stock turned from this into a freezing atmosphere to water, are very apt to be severely chilled and take cold. If the stable is at 40 degrees, animals are not so easily chilled when turned from the stable. Every stable should have a thermometer as a guide in keeping the temperature of the room as uniform as possible.

**FALL AND WINTER CARE OF THE MEADOW.**

Any person travelling through the country at this time of the year cannot help noticing how bare many of the meadows are. The farmers have allowed the stock to pasture on the field until the grass is cropped so close that the crown of the root has been exposed. When this takes place late in the fall there is no possibility of any growth being made to cover that crown before winter comes. The inevitable result is that a lot of the plants will die before spring.

As all farmers know, there is at the root of each stalk of timothy a tiny bulb. After the hay is cut other little bulbs form beside the old ones which die. These new bulbs are the ones from which the next year's crop of hay will grow. There is a very light aftermath from timothy, and this grows up from these new roots or bulbs as they are forming and growing. They are close to the surface of the ground. It is, therefore, very important that this aftermath and root development should be allowed to proceed to the fullest extent possible in the fall. Without there is a good root development there cannot be a good crop the following season. If the growth of the aftermath has been kept down by excessive cropping in the fall the growth will be small and the crop next year will be light. This is because the cattle tramp

on the bare bulbs and injure them, and what the cattle leave the frost kills. When we understand the true nature of the growth of the timothy plant it is easy to see how excessive pasturing late in the fall will do it untold harm, and deprive us of a full crop the following year. Is it any wonder then that our meadows run out so soon?

The remedy lies in our own hands. Keep the cattle off the field. Leave sufficient covering for the protection of the roots during the winter. For similar reasons don't turn on the pastures too early in the spring.

Where pastures have been cropped so close that there will be danger of the young bulbs being frozen out it is a good plan to top dress the meadows before the snow comes. A good dressing of manure spread over the

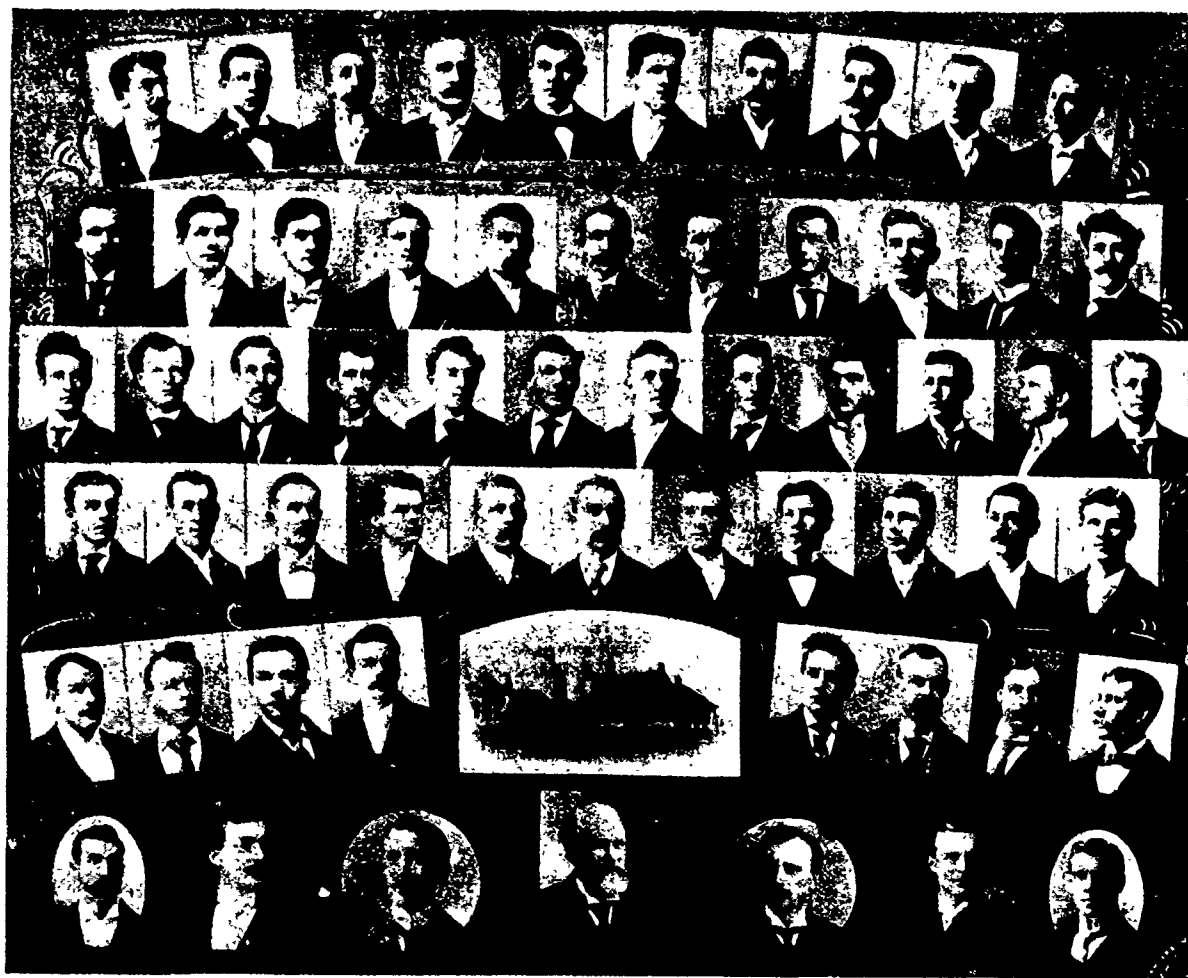
full value for manure applied to the soil than by putting it on grass land.

**THE WINTERING OF BEES.**

By FRANK BENTON, M.S., Assistant Entomologist, Department of Agriculture, Washington, D.C.

Cold and dampness are the great winter enemies of bee life. A single bee can withstand very little cold, but a good cluster, if all other conditions are favorable, can defy the most rigorous winters of our coldest States. But if not thoroughly dry, even a moderate degree of cold is always injurious, if not absolutely fatal. Dampness in winter is therefore the most dangerous element with which the bee-keeper has to contend. The matter would, of course, be quite simple if only that dampness which might come from the outside were to be considered, but

same time to prevent the accumulation of moisture in the hive. A simple opening at the top of the hive would permit much of the moisture to pass off, but of course heat would escape with it and a draft would be produced. Absorbent material about the cluster creates, without free ventilation, damp surroundings, and again the temperature is lowered. It is only necessary, however, to surround the bees with sufficient material to protect them fully against the greatest cold liable to occur, and to take care also that this enveloping material is of such a nature and so disposed as to permit the free passage of the moisture which would otherwise collect in the interior of the hive, and to permit the escape into the surrounding atmosphere of such moisture as enters this material from within. This packing should also be fully protected



Staff and Students of the Kingston Dairy School, during the session of 1898-97. (See page 69.)

meadow will make a rough surface to catch and hold snow and protect the roots. In the spring the manure will assist the young plants in making a good start, and a very much heavier crop of hay or pasture will be the result. A stroke of the harrows before the meadow is rolled will spread the manure evenly in the spring and do the grass good as well.

The best time to top dress a meadow is immediately after it is cut. The manure then helps the formation of many new bulbs, thus thickening the grass and developing a strong growth that will stand some pasturing, and also leave sufficient for winter protection. The manure holds the rain and dew around the roots of the grass, is readily rotted itself, then forms a fine mulch on the surface of the ground. Try a small piece next summer. Try it this fall, and be convinced that it is a good thing even if applied late in the fall. There is no more certain way of getting

when the air of the hive, somewhat warmed by the bees and more or less charged with the moisture of respiration, comes in contact with hive walls or comb surfaces made cold by outside air, condensation takes place, and the moisture trickles over the cold surfaces and cluster of bees, saturating the air about them or even drenching them, unless by forming a very compact cluster they are able to prevent it from penetrating, or by greater activity to raise the temperature sufficiently to evaporate the surplus moisture, or at least that portion near them. But this greater activity is, of course, at the expense of muscular power and requires the consumption of nitrogenous as well as carbonaceous food. Increased cold or its long continuance greatly aggravates conditions.

The problem then is: *To retain the warmth generated by the bees, which is necessary to their well-being, and at the*

from outside moisture.

In the severest climates protection on all sides of the colony is needed, and packing with chaff or other soft material is decidedly the best plan. The thickness of this surrounding packing should be from 2 inches to 8 or 10 inches for single colonies, according to the severity of the climate, but if four or more colonies are grouped for the winter, so as to make the natural warmth generated mutually advantageous, somewhat less packing will be sufficient. A most important point is to have the soft warmth-retaining packing come in close contact with the edges of the combs, and, above all, *not to have a hive wall, either thick or thin, between this material and the bees.* A good plan is to construct an open framework or skeleton hive of laths, cover it with sacking, or, preferably, some less fuzzy cloth, which the bees will not gnaw, and, after placing it in an outer wooden case large enough



every way to admit of the necessary packing about the colony, to fill in on all sides with some dry, porous material. If the frames are shallow, like the Langstroth, it is better to construct the inner case so as to place them on end, and thus give a deeper comb for the winter. Layers of newspapers may come next outside the cloth covering of the framework. Wheat chaff answers well to complete the packing. Wool is to be preferred, but is, of course, too expensive unless a waste product. Ground cork, waste flax, hemp, saw dust, etc., in fact, any fine porous material, if thoroughly dry, may be used.

A board passageway three or four inches wide and three-eighths of an inch high should connect this inner apartment and the flight hole of the outer case, thus affording an exit for the bees whenever the weather may permit them to fly. When these preparations have been completed, the hive is ready for the combs, which, with adhering bees, are taken from the summer hive and inserted in the winter hive. A quilt is then laid on the frames and the top packing put on. This, for convenience, may be held in a cloth-bottomed tray. It is quite important, as already mentioned, that air be allowed to circulate freely above the packing. The outside case must be quite rain-proof or else wholly protected from the rain by a roof.

All other necessary conditions having been complied with shortly after the gathering season closed, the combs may be lifted from the summer hives and placed in these specially arranged winter cases before cold weather wholly stops the bees from flying out. Thus prepared for the winter the colonies will need but slight attention from October until March, or, in the North, even later, and the losses will be limited to the small percentage of cases due to failure of apparently good queens.

## CORRESPONDENCE

### FEEDING CALVES FOR THE DAIRY.

EDITOR OF FARMING:

SIR,—Our system of feeding and raising calves for the dairy is as follows: For the first week the calf gets her own mother's milk, the second week one half of the milk is separated milk. The third week the milk is all separated milk fed with its natural warmth, about one and one half gallons night and morning. We continue this for about three months. When the calves are six weeks old we give them at noon a pint of a mixture of equal parts bran and ground oats. We always feed it dry. Nice clover hay is also put before them at about the same age so that they may learn to eat it.

We never feed young calves any slop feed, such as boiled linseed, mixed with milk or water, as it is so hard to get it at the same temperature every time. It will cause scours, and is very apt to cause the calves to bloat. When the turnips are ready in the fall we pulp them and feed the ground feed on them. We keep increasing the quantity of turnips as the calves get older, but never the amount of bran and oats.

The second winter we always have plenty of turnips for the young things when they come in from the pastures. We feed them fifteen pounds of pulped turnips and what straw they will eat. This constitutes their morning meal and they get the same for the evening meal. The mid-day meal consists of hay and whole turnips.

All our heifers are served to calve when they are from two years and nine months to three years old. Consequently, during the third winter we change our system of feeding somewhat so as to prepare them for the next winter's work at the milk pail. The morning feed consists of pulped turnips and straw. The

noon feed is made up of mangels and a quart of ground oats with a good feed of hay. The evening meal is a mash of boiled turnips and cut straw mixed with all the straw they can eat and leave plenty for bedding.

The reason I feed so many turnips is to attain plenty of growth and muscle. Ground grain will give you beef but not size.

All our cattle are carried and brushed every day during the winter, and are never out of the stable from the time the snow comes until the spring. It pays to curry and brush the cows even if you have to pay a man \$10 a month and board him to get it done. Wishing you every success I am, yours truly,

JAMES BODRY.

St. Annes de Bellevue, Que.

### RAISING HEIFERS FOR THE DAIRY.

EDITOR OF FARMING:

SIR,—We never allow a calf to suck if we can help it. To prevent this we put the cow in a box stall for a week or two before calving. One corner of the box stall is boarded up about three feet high. If we are present when the calf is dropped we throw a salt bag round the calf and lift it into this corner. The cow can lick the calf as long as she pleases, but the calf cannot suck the cow. We feed the calf all the new milk it will drink until the milk is fit to use. As soon as the milk is fit to use we mix a little separated milk with the new milk, and commence feeding a little flax seed meal to make up for the butter fat that has been removed. We prepare the flaxseed for feeding by steeping one teaspoonful of it either ground or unground in a quart of warm water for twelve hours and give the calf only the tea off of it, but not the seed.

As soon as the calf will nibble hay (that will be when it is about ten days or two weeks old) a bunch of early cut, well saved clover hay is placed where she can reach it. If any of it is left over remove it and give a fresh lot at least once a day.

As soon as the calf will lick meal we give it a little meal composed of the following mixture: 4 lbs. bran, 4 lbs. oats, 1 lb. peas and 1 lb. barley. The peas, oats, and barley should be ground fine. By the time it is three or four weeks old a good thrifty calf should not be getting any new milk. Great care and judgment must be exercised in feeding. The feeder must study the digestive power of each calf. Just feed each calf what it will digest properly and no more. Regularity is another important matter in feeding calves.

We try to have our calves come in October or November and feed them along in the way outlined until the grass is good in the spring, when they are turned out on the grass and remain there until autumn. Next winter they are fed a poor quality of hay and about ten pounds ensilage. We want a well matured heifer to drop her first calf when she is two years old. If they are not very well matured they had better be two-and-a-half years old before they have a calf.

We feed our bull calves the same as the heifer ones, but in larger quantities, and in spring, when the heifers are put on grass the bulls are kept in the stable. If we have a pasture field near the barn we find it a great advantage to have them out a part of each day. We have no desire for any undue fat. All we want, if we cannot make them grow a little every day, is to watch that they do not lose what they gained the day before. We are, yours truly,

JOS. YUILL & SONS.

Carleton Place, Ont., Oct. 25th.

### CALF REARING.

EDITOR OF FARMING:

SIR,—As soon as the calf is dropped it is taken into a loose box and fed its mother's milk for the first ten days—as much as it can take, say 10 lbs. daily, after the first three days—when we begin to gradually add a little separated milk, and continue giving more separated milk until the calf is a month old, when it is entirely fed on the separated milk. As soon as the calf begins to get the separated milk a little linseed jelly is mixed with its milk, in order to keep up the fats extracted by the cream being taken off the milk. When the calf is a fortnight old we begin to teach the youngster to eat turnips, cutting them in finger lengths in slices, and holding a piece in its mouth until it acquires a taste for them, which it soon does; a little bran and ground oats,  $\frac{1}{2}$  of a lb. to start them, is put on the top of the roots, and both increased as the

calf grows older and according to its appetite, until by the time they are three months old they should be eating one lb. of bran and ground oats and one-half lb. linseed meal, besides roots and cut hay *ad libitum*. The bull calves are raised in the same way. When the calves are three months old they are weaned gradually from the milk, until at four months old they stop getting milk altogether. When weaned in this gradual way they do not miss their milk so much as stopping it suddenly. The calf being now weaned, it is fed one-half lb. ground oats, one-half lb. bran, three-quarter lb. linseed meal, with 15 lbs. roots—or more if it can take them—daily, with as much hay as it can eat; these foods are increased as the youngster grows older. When the heifer is twenty-one months old she is put to the bull, so as to get her to calve by the time she is two and a half years old; but I am inclined to think it would be better to let the heifer run up to two years and three months before service, so as to allow her to come to her full growth before becoming a mother. The early service of heifers causes them to stop growing, and anything that stops the development of the body must have the tendency to stop the formation of the udder. It is a heavy strain on young heifers to be in calf and grow at the same time. Ten days before the heifer is due to calve she should be brought into the stable and fed sparingly, so as to avoid the risk of milk fever, and on dropping her calf should have a lukewarm drink with some saltpetre in it to cool her blood. She should be kept free from draughts. I have been in the habit of giving a bran mash with some molasses for the first feed after calving.

Nothing but the best heifers from the best milkers should be kept, and they should not be kept in a pampered state, but in good growing and thriving order. It is a common practice for farmers to keep anything for a cow that is a heifer, no matter what the mother may be.

The bull calves are in every way treated the same as the heifer calves until they attain the age of six months, when they are allowed a box to themselves, or, if the box is large enough, two will do well together until they are nine or ten months old, when they are better single. They should be allowed exercise in the yard daily for a short time, and be taught to lead with the halter. I consider it best not to put the ring in their nose until they are well over the year old, unless they prove unmanageable, as once the ring is in they lose the calf look.

I am, sir, yours truly,

JAMES H. MACLELLAND.

Laurentian Stock and Dairy Farm,  
North Nation Mills, Que., Oct. 26th.

### THE WINTER CARE OF DAIRY COWS.

EDITOR OF FARMING:

SIR,—The cows at Maple Hill are all purebred Holstein-Friesians, and as most of them are fresh in July, August, and September, we find them giving a heavy flow of milk at this season of the year. The October pastures are quite bare as a rule, and it is necessary to feed considerable grain in order to keep up the flow. We feed oats, peas, and bran almost exclusively, but we do not claim to be scientific feeders, and have no fixed ration for the cows. We try to feed according to the capacity of each individual, and to keep each one in good condition.

As soon as the nights become cold enough to cause a decrease in the amount of milk we allow the cows out only in the day time, and when snow comes we stable them at once and start feeding silage, giving each one about forty-five pounds per day. Their grain feed is ordinarily from five to ten pounds per day, but as both the kind and the amount are frequently changed I really could not give the average ration. We feed all our coarse grains, and do not buy much feed except bran, so that like most farmers we have to cut our coat according to the cloth. In the future we expect to pay more attention to scientific feeding and the compounding of balanced rations than we have done in the past.

The cows are tied with the ordinary sliding cow chains, and are out of the stable only to drink, and for an occasional hour on sunny days. They do not care to remain out long, and we think it pays to consult their comfort.

Our supply of silage generally lasts till pasture comes, so that there is no sudden change from dry to succulent feed. Most of the cows are by that time nearing the end of the milking period, and, consequently, are gaining in flesh, so that the change to good pasture

brings them up in good condition by June and July, when we dry them off if possible.

I give my experience for what it is worth, and am fully aware that it is too indefinite to be of much value to your readers, the majority of whom are probably as good or better feeders than myself.

G. W. CLEMONS.

Maple Hill, St. George, Ont.

### QUESTIONS AND ANSWERS.

HARD MILKING COWS.

I. A. B.—I have a cow that is very hard to milk. Is there any remedy, or is there any successful milking device that can be used?

ANS.—A hard milker is hard to cure. The cause is often a stricture of the muscle at the end of the teat. The muscle contracts so firmly that it takes more power to force the milk through the opening. There is no reliable remedy. A good plan is to lance the opening by pushing up into it a three cornered lance. A guard should be put on the lance so that it will not enter any further than is intended. Another plan is to distend the opening by inserting a plug of hard rubber or bone. This plug is left in from one milking to another. The best time to begin this is just after calving. Hard rubber milking tubes are also used sometimes, but as the cause is probably a stricture of the muscle it is hard to cure unless it should arise from some temporary obstruction.

### Stock Notes.

A. C. HALLMAN, New Dundee, Ont., states that his herd of purebred Holsteins was established in 1833 and now numbers some twenty-five head of the choicest breeding and best strains. His herd of Tamworths was started in 1892, and he has now about seventy head. At the head of his herd is an imported prize-winning boar, Nimrod. He has a grand lot of young pigs, sired by Nimrod, almost ready to wean.

THE Sherbrooke (Que.) Plowmen held their eighteenth annual plowing match on the 20th of October. The attendance and the number of competitors were the largest in the history of the association. The plowing would compare favorably with that of other associations, but the soil, which was a clay loam, was just a little dry for nice work. There were four matches and a number of special prizes. In the evening the prizes were awarded and new officers elected for the ensuing year.

DAWES & Co., Lachine, Que., report their stock as doing well, and having made good winnings at the shows where they were exhibited this fall. An imported cow, Craig of Auchenbrain, recently had a fine bull calf by Jerry of Lachine, who is at the head of their Ayrshire herd, and is out of an imported cow and an imported dam. Yellow Bess of Jorgside, another good cow, had a bull calf also. The Jerseys are doing well also. So are the Berkshires, for which there has been a good demand.

DAVID BENNING, Williamstown, Ont.: A famous son of Silver King, Saladin, is at the head of Mr. Benning's well-known herd of deep, profitable, milking Ayrshire cows. His stock bull is proving a sure breeder, and is throwing most excellent stock—straight, smooth, strong-boned, strong-constituted animals. So good are his young things that he has great difficulty in keeping them. Two very nice heifers coming three years old are going to make grand milkers, for they possess all the points of a good dairy cow, with well set udders, and are backed by breeding that has milking power in abundance. A number of two year olds are also typical animals, and one of them particularly is a perfect model of an Ayrshire. The older animals are milking well.

A. & G. RICE, Curries, Ont., have added to their already large herd (45) seven more Holsteins, purchased by Mr. Geo. Rice, who recently visited herds in New York, at Syracuse, Utica, Little Falls, Yorkville and Sandy Creek. They are all bred in the "purple," as their names indicate. Shadeland Ruby's Queen, a fine four-year-old, with calf to Pieterje Hengerveld Paul De Kol, who is backed by the largest official butter test. Also a son of his, seven months old, Homestead Albino De Kol, dam Shadeland Angie; milk record 57 lbs. at three year old, 66 lbs. 6 oz. this year at two milkings a day. These Shadeland Angies are descendants of the Shadeland Moon family, so noted for large records. Joan of Arc Beauty is a handsome two-year-old of rich breeding. Jewel Inks Mechtild, a daughter of Lily Korndyke Artis, is, as the names show, a combination of many noted strains, and is with calf to Manur De Kol, whose dam, Lady Hengerveld, has the largest official butter test yet made. Nicolo Belle's Prince De Kol is a handsome ten months old bull that is going to be the makings of a great show bull. Either or both these bulls will be used on the herd. Agnes De Kol's De Kol is a three months old bull, very strongly bred in the noted De Kol blood, having three crosses of it through different families. Utica Belle is a promising heifer calf from a great milker. These additions add variety, and keep the Brookbank Holsteins at the front. Mr. Rice had a rather exciting time, as several cars were smashed on the same train by a smash-up. The arrangements for importing cattle are considered by Mr. Rice as very unsatisfactory; the tuberculin test he declares is a farce, and an expensive one, too. Whether importing or exporting, the regulations are such as to put breeders to all the trouble possible, and they are bred at every point. A. & G. Rice have sold Jane's Pauline, the handsome and promising heifer calf exhibited by them this fall. She is a daughter of Calamity Jane, so well known to dairy men as a high tester. The calf goes to Hon. W. A. Matteson, Utica, N.Y., one of New York's leading lawyers, who finds recreation and pleasure in breeding fine cattle. It is something new for Holsteins to be exported from Canada, and shows that our breeders have the right class of them to please the most particular.

# The Ontario Agricultural Gazette

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

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

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

### BENEFITS OF MEMBERSHIP.

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

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

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

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

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

The list of Cattle Breeders will be published in the first issue of each month, of Sheep Breeders in the second issue, and of Swine Breeders in the third issue. Members having stock for sale, in order that it may be included in the BULLETIN, are required to notify the undersigned, by letter, at least seven days before the date of issue, of the number, breed, age and sex of the animals. Should a member fail to do this, only his name and address will appear in the next monthly issue. The data will be published in the most condensed form.

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

## THE DOMINION CATTLE BREEDERS' ASSOCIATION.

### Shorthorns

Barelay, I.	Port Hope	1 grade cow, 1 bull calf, 9 months, 5 heifers, 7 to 21 months.
Biggins, W. J.	Clinton	
Burrell, D.	Greenwood	
Honnycastle, F.	Campbellford	1 bull calf, 7 months, 14 cows; heifers and heifer calves.
Brown, A. & D.	Iona	
Burnett, L. G.	Greenbank	
Cooper, J. V.	Pictou	1 bull.
Davidson, J. I. & Son.	Balsam	
Douglas, J.	Caledonia	6 bulls, 6 to 14 months, 4 young cows and heifers.
Gardhouse, J. M.	Highfield	3 bull calves, 7 to 9 months, 2 heifers, 2 years.
Gibson, R.	Delaware	
Gibson, J.	Denfield	3 bulls, 8 to 12 months; females all ages.
Granger, W. & Son	Londesboro	3 bulls, 8 months; 4 yearling heifers; 2 heifer calves.
Jeffs, E. & Son	Band Head	3 young bulls, 6 heifers, 2 years, 5 yearling heifers.
Johnston, A.	Greenwood	
Leask, J.	Greenbank	
Linton, W.	Aurora	
Martindale, F.	York	
Martyn, J. W.	Canton	1 cow, 4 years, 3 yearling heifers, 1 bull calf, 3 heifer calves.
McCaum, J. R.	Iona Station	3 bulls, 10 to 13 months, cows and heifers.
Miller, R.	Brougham	
Rusnell, D. H.	Stouffville	
Shaw, A. J. C.	Thamesville	3 bull calves, 6 to 8 months; 3 heifer calves; 3 yearling heifers; 1 heifer, 2 years.
Sibbald, F. C.	Sutton West.	30 cows; 23 heifers and yearlings; 2 yearling bulls; bull and heifer calves.
Smith, A.	Trowbridge	
Smith, J. S.	Maple Lodge	6 bulls, 5 to 9 months; 1 bull, 28 months, cows; heifers, 1 and 2 years.
Smith, H. & W.	Hay	5 young bulls; 5 heifers.
Tolton, J.	Walkerton	

### Herefords

Rawlings, A.	Forest	
Stone, A.	Guelph	15 bulls.
Stutt, R.	Forest	

### Galloways

McCrae, D.	Guelph	Car young bulls; car young heifers.
Shaw, A. M. & R.	Brantford	6 bulls and 3 heifers, 6 months to 2 years.
Sibbald, J.	Annan	

### Devons

Harper, S.	Cobourg	
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### Aberdeen Angus

Hoxman, J.	Guelph	
Jameson, W. S.	Dutton	
Murison, J.	West Lorne	1 bulls, 6 months.
McGregor, J. D.	Brandon, Man.	
Robertson, T.	Dunsford	1 bull, 2 years; 2 bull calves; 4 cows; 2 heifers; grade cows and heifers.
Sharp, J.	Rockside	4 bull calves, 7 to 12 months, 4 females, 2 to 8 years.

### Sussex

Stone, A.	Guelph	4 heifers.
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### Ayrshires

Anderson, J. A. R.	Hamilton	4 heifers, 1 and 2 years; 2 bull calves, 2 and 7 months.
Balfantyne, T. & Son.	Stratford	4 bulls; 1 Feb. and 4 Aug. bull calves.
Caldwell, Bros.	Orchard	7 bulls, 5 months to 2 years; 4 heifers, 1 and 2 years.
Clark, J. G.	Ottawa	1 bull; 3 bull calves.
Davies, R.	Toronto	
Dyment, N.	Clappinson's Cor.	
Guy, T., Estate of.	Oshawa	
Jamieson, R.	Perth	1 cow, 8 years, 2 cows, 7 years; 2 heifers, 20 months; 3 heifers, 8 months.
McCormack, J. & Son.	Rockton	
Peterson, C. W.	Calgary, Alta.	
Smith, W. M. & J. C.	Fairfield Plains	1 bull, 3 years; bull and heifer calves, 1 and 2 months.
Sorby, D. & O.	Guelph	
White, R. E.	Perth	1 bull, 4 years; 2 bulls, 1 and 11 months.
Yuill, J. & Son.	Carleton Place	3 bull calves, under 2 months; females, all ages.

### Holsteins

Clemons, G. W.	St. George	Cows and heifers, 4 bull calves; 8 heifer calves.
Hallman, A. C.	New Dundee	2 bulls, 2 and 4 years; 1 heifer, 2 years.
Rice, A. & G.	Curries	

### Jersseys

Elie, L. & F.	Boxall	1 bull calf; grade heifers, 1 to 2 years.
Gibson, R.	Delaware	
Jamieson, R.	Perth	1 cow, 3 years; 3 bulls, 4 months, year and 2 years.
O'Brien, J.	London West	
Silcox, E.	Shedden	
Snell, J. C.	Snelgrove	
Wood, W. J.	Cornwall	

### Guernseys

Butler, W. & Sons.	Derehem Centre	
McNish, C. H.	Lyn	

### Miscellaneous.

Wade, Henry	Toronto	Registrar of Live Stock.
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## DOMINION SWINE BREEDERS' ASSOCIATION.

A list of the members of the Dominion Swine Breeder's Association, together with a list of the animals each one has for sale, will be published on November 16th. In order that a list of the stock may be included in the bulletin, it is necessary that data reach the Secretary not later than November 9th.

## ONTARIO FAT STOCK AND DAIRY SHOW

To be Held in Brantford, December 7th to 9th.

HALF-FARE PASSENGER AND FREIGHT RATES, GOOD FROM DEC. 3RD TO 13TH.

PASSENGER RATES.—Those desiring to attend the Ontario Provincial Fat Stock and Dairy Show, to be held in Brantford, December 7th to 9th, can secure reduced rates by purchasing a first-class one-way ticket to Brantford, and securing from the ticket agent at the starting point, a *Standard Convention Certificate*, duly signed by him. On the return trip, the certificate, on being signed by F. W. Hodson, and surrendered to the ticket agent at Brantford at least ten minutes before the train is due to start, will entitle the passenger to free transportation to the starting point. These reduced rates commence December 3rd, and continue until the 13th. Should any agent of the G.T.R. or C.P.R. refuse to furnish a passenger with a *Standard Convention Certificate*, said passenger is requested to purchase a regular ticket to Brantford and return, and obtain a receipt from the agent for the money paid for the ticket, and at once report the matter to F. W. Hodson, Parliament Buildings, Toronto. A rebate for the amount paid for said ticket, in excess of the excursion rate, will be forwarded to the applicant. When passengers have to travel over more than one railway to reach Brantford they will require to purchase a ticket and obtain a certificate from each of such railways. The return tickets are good for continuous passage only, but the going tickets may be either limited or unlimited.

FREIGHT RATES.—All live stock, merchandise, implements, etc., intended for exhibition at above show will be conveyed on the lines of the G.T.R. or the C.P.R. to Brantford at single tariff rates, and returned free to the G.T.R. or C.P.R. station or junction point from which they were shipped, provided they remain the property of the original owner. Shipping bills and car labels must plainly show the property "For Exhibition." All charges, including cartage at cartage stations, must be prepaid and receipts obtained for the same. Such receipts, with a certificate from F. W. Hodson, to the effect that the property has not changed hands, must be produced on the return journey to entitle the owner to have property returned free. A release must be executed, relieving the company from

liability on the return journey in consideration of free transportation.

The Grand Trunk and the Canadian Pacific Railways only, have as yet granted the above reduced rates, but it is expected all other lines operating in Ontario will grant similar privileges.

## Farmers' Institute Department.

Reports concerning the work of the Farmers' Institutes in Ontario will be published weekly under this head; also papers prepared for this department by Institute workers. Secretaries and officers having announcements to make are invited to send full particulars to the Superintendent.

## Ontario Agricultural College.

Announcements concerning the College work will be published weekly under this head.

## BACTERIOLOGICAL DEPARTMENT.

By F. C. HARRISON, B.S.A., Bacteriologist.

There are quite a large number of applications for tuberculin coming in. The Bacteriological Department has a fair supply on hand, and the tuberculin is giving good satisfaction.

A series of experiments are in progress in order to find out if a tuberculin can be made which will give the usual fever reaction in animals *far advanced* in the disease, and also for animals that require to be retested, *i.e.*, tested a second time. It is likely that this new tuberculin will be successfully made, and will then be supplied on demand.

## DEPARTMENT OF PHYSICS.

Notes by J. B. REYNOLDS, B.A., Lecturer in Agricultural Physics.

Four years ago the instruction given in this department at the college occupied three months of the second year course. This year, the work in physics extends over the whole three years. The growth has been gradual. The first extension was over the eight months of the second year. In 1895 and 1896 physics was made a part of the special course with chemistry in the third year work. During this present term the first year students are receiving a course of weekly lectures, bearing principally upon the physical properties of the soil, how to preserve the soil moisture, and prevent evaporation, leaching, baking of the soil, etc. Drainage and methods of cultivation come in for a share of attention. This part of the work has especial reference to practical results.

The second year course comprises three lectures a week, throughout the year, from October to June. This fall we are considering principally machinery, surveying, measuring lands, taking levels for drains, and kindred topics. The students are given as much practice in these matters as time allows. They are expected to be able to *do* these things, and they learn to do by *doing*.

The third year specialists in agriculture and chemistry are following out some advanced researches in agricultural physics, with one lecture and one afternoon in the laboratory per week throughout the year. The

most important question in agricultural physics is that of soil moisture. Hence the researches are principally along that line.

Last summer, during the months of June and July, this department made some investigations with a view to determining a relation between the factors, temperature, rainfall, soil-moisture, and the growth of crops. The results would occupy too much space to be given here, but may be given in a later issue.

**MARKET REVIEW AND FORECAST.**

Office of FARMING,  
Nov. 1st, 1897.

There is a more hopeful feeling in the wheat trade that good prices will continue for some time, at least until the Argentine crop is harvested, which will not be for some time yet. The demand for good cattle and sheep for feeding is still strong, though export trade is dull.

**Wheat.**

The English farmer has marketed some of his wheat and feels easier. He has taken stock, so to speak, of the state of the wheat trade, and as a result is now disposed to hold for higher price. This state of affairs has stiffened the demand, as the English millers are more dependent on foreign shipments. There has also been a very strong demand from France, also from Mediterranean ports. Consequently the steady demand has made advances in the price possible.

At Montreal the prices for export have risen to 89c. for Ontario red winter wheat, and \$1.03 to \$1.04 for Manitoba wheat. At Toronto exporters are paying 84c. middle freights, and 83c. north and west. As high as 85c. has been paid, but the Chicago market is a little easier at present, and prices may drop. Goose wheat is bringing 75c. and spring wheat 80c. east. Manitoba wheat is firm at \$1.08; for No. 1 hard, grinding in transit, \$1.10 at Fort William, and \$1.02 to \$1.03 Goderich and Midland. On the farmers' market at Toronto, 87½c. was given for white and 80½c. for red.

**Barley and Oats.**

The barley trade is quiet, both for feeding and malting purposes. At Montreal barley is quoted at 32½c. to 35c. for feed, and malting grades from 40c. to 45c. At Toronto it is quoted at 24c. outside for feed, No. 2 30c. to 31c.

There has been a slight rise in the oat market. White oats 22c. middle freights, and 21½c. north and west at Toronto. Montreal quotes a few cents higher.

**Peas and Corn.**

The market for peas has been steady at 42c. north and west.

Corn has advanced a little in sympathy with wheat, being 30c. to 31c. at Chicago. At Toronto it is only quoted at 28c. and 29c.

**Potatoes.**

The October report of the Department of Agriculture at Washington contains the following in regard to the potato crop as indicated by the October returns:

The conditions indicate less than half a normal crop in Maine, New Hampshire, Vermont, Ohio, Indiana, Illinois, and Missouri, but little more than half a crop in Massachusetts, Rhode Island, Connecticut, Georgia, Tennessee, Kentucky, Iowa, and Kansas, and less than two-thirds of a crop in New York, Pennsylvania, Arkansas, and West Virginia.

The highest averages are on the Pacific Coast, but a fairly favorable showing is made in the Northwestern and Intermountain States.

The crop in the Maritime Provinces has been a good one, but in many districts of Ontario and Quebec it has not been up to the average. On the whole Canada has not an average crop of potatoes, and there is also a shortage in Europe. Prices at Montreal are about the same as last week, 47½c. to 50c. a bag off the car.

**Eggs.**

There has been a slight decline in the price owing to large quantities of fresh stock coming in. Fresh eggs at Montreal are worth 16c. to 17c. and at Toronto 15c. to 15½c.

**Apples.**

The demand for apples is somewhat limited. People have not got used to the high prices of this year. With strong markets in the west and in Europe there should be a stronger market with advancing prices. No. 1 apples are quoted in Montreal at \$3.50 to \$5 per barrel; No. 2 at \$1.50 to \$3.

**Honey.**

Choice white clover honey is scarce and firm in price at 14c. to 15c. per section. Extracted honey has sold at 8c. to 8½c. for white, and 6c. to 7c. for dark.

**Cheese.**

The local cheese markets have been dull during the week and very little business done. Especially is this so in reference to the Western Ontario markets and one or two east, most of them reporting no sales. Salesmen seem inclined to hold for a time. At any rate they do not seem anxious to sell at present prices. After the exceptionally good season they have had up till the past few weeks both as regards prices and the quantity made they should not complain if they have to let Septembers and Octobers go at from 8½c. to 8¾c. Stocks have accumulated very fast in Britain during the last two months, and there is really not much hope for present prices advancing any higher than they are at present. If such be the case it would be the height of foolishness for factorymen to hold their fall make any longer than is necessary for them to cure properly. With many of the curing-rooms totally unsuited for keeping cheese properly during the cold weather, factorymen will run the risk of having their fall goods deteriorate very much in quality if held too long.

Canada has already exported 307,357 boxes more than she did last year for a like period, and with the large stocks reported to be held on this side we fail to see any prospect of prices advancing. The ruling figures just now seem to be from 8¼c. to 8½c. for Septembers and Octobers.

**Butter.**

The creamery butter market has ruled very quiet during the week. Factorymen have been selling October make at about 18½ cents, with most holders refusing to sell at less than 18¾. American creamery held here in bond is going forward to New York, where the demand is still good. If prices there continue to go up, dealers here will be able to send over Canadian at a profit.

The winter creameries will soon be starting, when a largely increased make of winter creamery butter over other years is expected. Holders of summer creamery would be wise to keep this in view, and not hold their stocks too long.

Good dairy farmers' butter continues scarce, and prices at Montreal range from 15 to 16 cents. 15½ to 16 cents are quoted at Toronto for choice dairy pails and tubs. Common and medium selling for from 12 to 13 cents.

**Cattle.**

Cattlemen of the Western States are seriously wondering where they are going to get their young stock to replenish their herds next spring. The available supply has been getting shorter each year. The *Chicago Drover's Journal* says there probably has not been a time since cattle raising became a regular industry that the rangers, both north and south, have been so thoroughly cleaned up of everything that would make beef.

The demand for export cattle continues dull, and the reports from the English market are discouraging. At Toronto it takes the best to bring 4c., average \$3.85 to \$3 per cwt. Good butchers' cattle are still in good demand at a slight advance. The average of prices being about \$3 to \$3.50 per cwt., with a few good ones going to \$3.75. Stockers and feeders are scarce, not enough good ones to meet the demand. The prices are about \$3 to \$3.40 for feeders and \$2.75 to \$3.25 per cwt. for stockers. Good milch cows are in demand at from \$25 to \$40. The Buffalo markets continue firm and steady, although prices have declined from 10 to 25 cents a cwt.

**Sheep.**

Good lambs are wanted. Prices have been a little higher in Buffalo. Consequently rams have brought from 4c. to 4½c. at Toronto for shipment to Buffalo, where they bring from \$5 to \$6.75. Butchers' sheep are dull at \$3.50 to \$3.75 each. Heavy shipments to the Buffalo market will, of course, bring down the price.

**Hogs.**

There is a decided weakness in this line, and prices have declined another 25c. or 50c. since last week, choice hogs now bringing only 4½c. to 4¾c. per lb. weighed off the car. Thick fat hogs, store hogs, and light weights bring about 4½c.

Buffalo reports show that choice hogs have advanced 10 or 15 cents. Best prices are still 35c. to 50c. per cwt. below Canadian prices.

**Hay.**

Market is dull at \$8 to \$8 50 per ton.

**Publishers' Desk.**

**Oxford Fat Stock Show.** - The directors of this show will hold their next annual fat stock show in the stock yards of the Dereham House, Ingersoll, on the 16th of December. A very liberal prize list is being prepared.

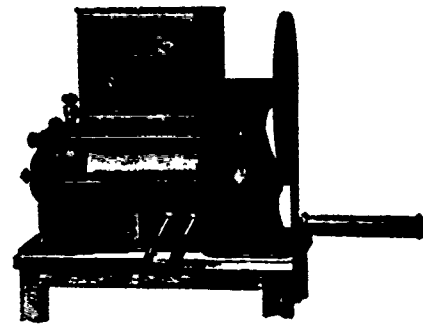
**The Ertel Victor Hay Press.** - It will take four months to tell about the Ertel Victor Hay Press, manufactured by The Stevens Manufacturing Co., London, Ont. In an-

other column very week will be given important facts about it, to which we call the attention of those interested in hay presses. If you wish to consider these points faster, and have hay to press, press them to express or mail all the facts at once, which they will do with pleasure. Reprint no desire you may have for information about this hay press.

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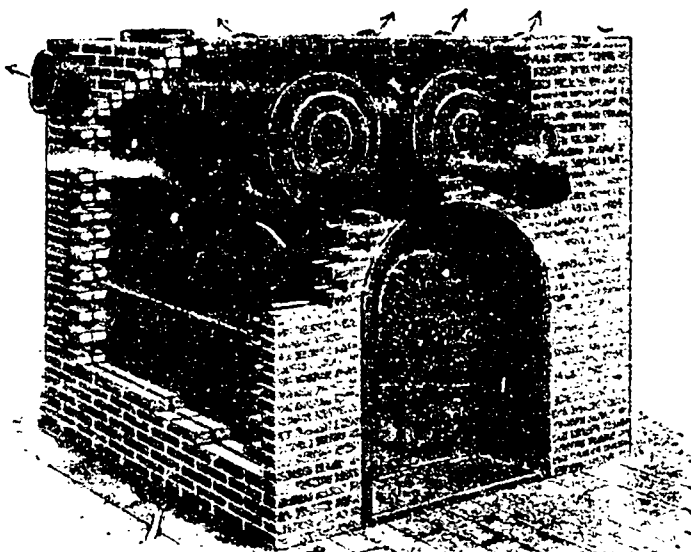
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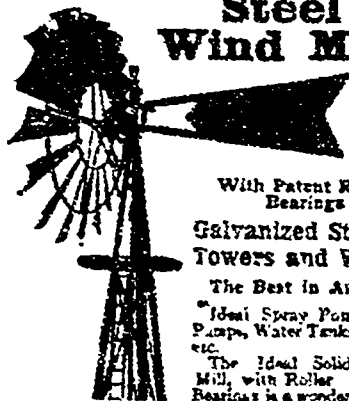
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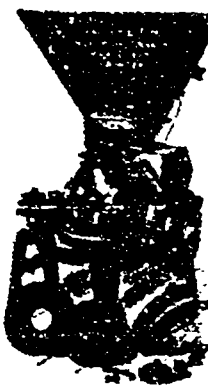
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In the United States four times as much money is expended for education as for the military. Brain is better than brawn. By our educational facilities we have become a great nation. We, the publishers of Woman's World and Jeannette Miller Monthly, have done much toward the cause of education in many ways, but now we offer you an opportunity to display your knowledge and receive most generous payment for a little study. The object of this contest is to give an impetus to many dormant minds to awaken and think; also we expect by this competition of brains to extend the circulation of Woman's World and Jeannette Miller Monthly to such a size that we shall be able to charge double the present rate for advertising in our columns. By this plan of increasing the number of subscriptions and receiving more money from advertisers of soaps, pianos, medicines, books, baking powders, jewelry, etc., we shall add \$50,000 a year to our income, and with this unmathematical deduction before us, we have decided to operate this most remarkable "missing letters" contest.

## HERE'S WHAT YOU ARE TO DO.

There are thirty words in this schedule, from each of which letters have been omitted and their places have been supplied by dashes. To fill in the blank spaces and get the names properly you must have some knowledge of geography and history. We want you to spell out as many words as you can, then send us with 25 cents to pay for a three months' subscription to WOMAN'S WORLD. For correct lists we shall give \$200.00 in cash. If more than one person sends a full, correct list, the money will be awarded to the fifty best lists in appearance. Also, if your list contains twenty or more correct words, we shall send you a beautiful Egeria Diamond Scarf Pin (for lady or gentleman), the regular price of which is \$2.25. Therefore, by sending your list, you are positively certain of the \$225 prize, and by being careful to send a correct list you have an opportunity of the \$200.00 cash award. The distance that you may live from New York makes no difference. All have equal opportunity for winning.

## PRIZES WILL BE SENT PROMPTLY.

Prizes will be honestly awarded and promptly sent. We publish the list of words to be studied out. In making your list of answers, be sure to give the number of each word:

- |  |  |
|--|--|
| 1. - R - A - I - A Country of South America.                 | 16. B - S - M - - - K A noted ruler.                           |
| 2. - A - I - I - Name of the largest body of water.          | 17. - - - C - T - O - I - Another noted ruler.                 |
| 3. M - D - - - E - - - A - E - - - A sea.                    | 18. P - R - U - A - Country of Europe.                         |
| 4. - M - - - O - A large river.                              | 19. A - S - T - A - I - A big island.                          |
| 5. T - A - - - S Well known river of Europe.                 | 20. M - - - I - N - E - Name of the most prominent American.   |
| 6. S - - - A - N - A - A city in one of the Southern States. | 21. T - - - A - One of the United States.                      |
| 7. H - - - - - X A city of Canada.                           | 22. J - F - - - R - - - N Once President of the United States. |
| 8. H - A - A - A Noted for display of water.                 | 23. - U - - - N A large lake.                                  |
| 9. - E - - - E - - - E - One of the United States.           | 24. E - E - S - N A noted poet.                                |
| 10. - A - R - I - A city of Spain.                           | 25. O - R - A A foreign country, same size as Kansas.          |
| 11. H - V - - - A A city on a well known island.             | 26. B - R - - - G A large island.                              |
| 12. S - M - E - A well known old fort of the United States.  | 27. W - M - - - S W - R - D Popular family magazine.           |
| 13. S - - - R - L - A - Greatest fortification in the world. | 28. B - H - I - G A sea.                                       |
| 14. S - A - L - E - A great explorer.                        | 29. A - L - N - I - An ocean.                                  |
| 15. C - L - F - - - I - One of the United States.            | 30. M - D - G - S - A - An island near Africa.                 |

In sending your list of words, mention whether you want prize money sent by bank draft, money order or registered mail; we will send any way that winners require. The Egeria Diamond is a perfect imitation of a Real Diamond of large size. We defy anyone to distinguish it from real except by microscope test. In every respect it serves the purpose of genuine Diamond of finest quality. It is artistically mounted in a fine solid-plated platinum warrant to wear forever. This piece of jewelry will make a most desirable gift to a friend if you do not need it yourself. At present our supply of these gifts is limited, and if they are all gone when your set of answers comes in, we shall send you \$2.25 in money instead of the Scarf or Shawl Pin, so you shall either receive the piece of jewelry or the equivalent in cash. In addition to your participative interest in the \$200.00 cash prize, this entire contest is an honest one, made by a responsible publishing house. We refer to mercantile agencies and any bank in New York. We will promptly refund money to you if you are dissatisfied. What more can we do? Now study, and exchange right brain work for cash. With your list of answers send 25 cents to pay for three months' subscription to our great family magazine, Woman's World. If you have already subscribed, mention that fact in your letter, and we will extend your subscription from the time the present one expires. To avoid loss in sending silver, wrap money very carefully in paper before including in your letter. Address

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We take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which gives and retains the steel, gives a keener cutting edge and holds it longer than any process known. A Saw is cut fast, most of a keen cutting edge. This secret process of temper is known and used only by ourselves. These Saws are cut to order and the best of the kind. They are now made, perfect temper, in fact, to be used. Now, we ask you, when you go to buy a Saw, to ask for the **Maple Leaf, Razor Steel, Secret Temper Saw**, and if you are told that some other Saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best. Razor steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand. It does not pay to buy a Saw for one dollar less, and lose 25 cents per day in labor. Your Saw must hold a keen edge to do a large day's work. Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.



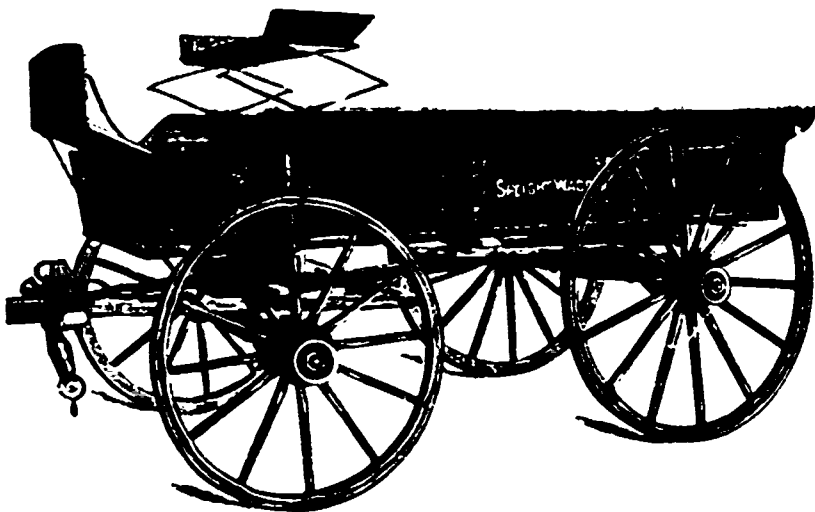
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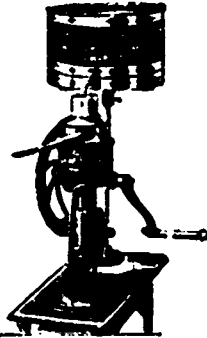
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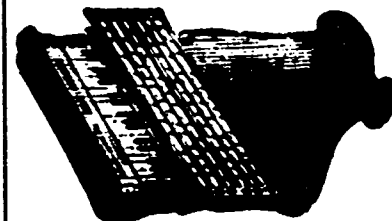


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Retail Branches:	Telephones	Telephones
27-24 Queen St. W.	213 and 2701	794 Yonge St. (cor. Bloor) 4417
56-56 Queen St. W. (near Bathurst St.)	1668	772-773 Queen St. E. (across Don) 2926
1408 Queen St. W. (Parkdale)	5173	1094 Queen St. W. (cor. Devonport Rd.) 5409
278 Queen St. E. (cor. Ontario St.)	2556	444-446 Yonge St. (opposite Carlton St.) 308
454 Spadina Ave. (near College St.)	1864	210 Queen St. W. (near Beverley St.) 2503

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**Good Cheer Stoves Ranges**

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