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...LEADING TOPICS FOR THE WEEK...

First issue of "The Ontario Agricultural Gazette." New Brunswick Enterprise. The United States Department of Agriculture. Sheep-raising in Ohio and Canada. Hog-Cholera as a Schoolmaster. The Farmers' Free Mail Again. Agricultural Depression in England. Feeding Work-horses and Colts. The Care of Dairy Utensils. Winter Dairying. The Growing and Marketing of Alsike and Red Clover Seed, etc., etc.

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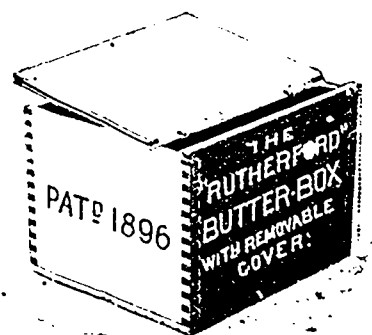
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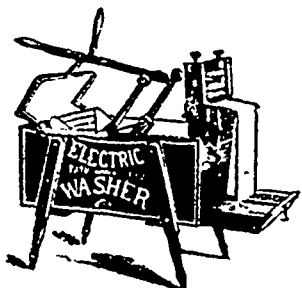
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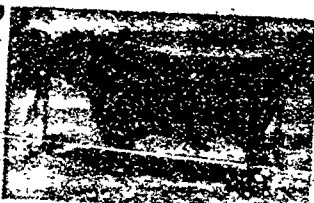
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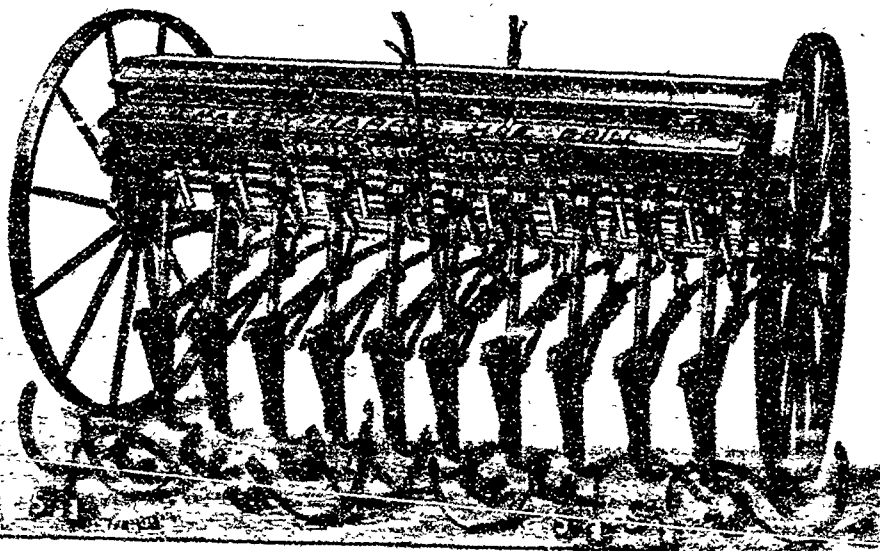
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FARMING

VOL. XV.

OCTOBER 12TH, 1897.

No. 6.

FARMING

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

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TOPICS FOR THE WEEK

New Brunswick Enterprise.

The Government of New Brunswick have been displaying commendable enterprise in respect to the improvement of the live stock industry of their province. They have been purchasing purebred cattle and sheep of the best types they could obtain, putting the selection in the hands of men of ability and experience, and then selling these purchases again by public auction on favorable terms to breeders in the province. The object is, of course, to effect a better selection than could be made by private enterprise, and to give the local breeders the advantage of getting good stock at prices that might be considered wholesale without being put to the trouble and expense of going far away from home to obtain it. The commissioners appointed by the government were Hon. Mr. Farris, of White's Cove, Mr. Smith, M.P.P. for Carleton Co., and Mr. Peters, the newly appointed Secretary for Agriculture. These commissioners visited Quebec and Ontario and made their selections and purchases. The stock was then taken to Fredericton and sold at a two-days' sale, and the affair was made the occasion of a grand public meeting or two in the interests of live stock.

By instruction the cattle purchased by the commissioners were principally of the dairy breeds. A few Jerseys and Guernseys were got, and a somewhat larger number of Holsteins; but the bulk of the dairy cattle obtained, however, were Ayrshires, and these mostly young bulls. Some of the cattle were purchased in Quebec, but for the most part they were purchased in Ontario.

When the sale came off it was found, somewhat unexpectedly, that the more active bidding was for the beef breeds, especially for the Shorthorns and Herefords; and a very keen enquiry was also made for Polled Angus and Galloways, the belief being general that these last-named breeds were peculiarly adapted to the pastures of New Brunswick. The Shorthorns sold quickly and brought good prices. So also did the Herefords. With respect to the Ayrshires it was noticeable that the old type of Ayrshire, with dark colors and small, crooked horns, were decidedly the favorites with the buyers. The commissioners had purchased a few of the modern type of Ayrshires—nearly all white, with big horns; but these, when sold, brought prices much below what they would have brought in Ontario. Our Ayrshire men should remember this preference when catering to the New

Brunswick trade. It should be mentioned that the commissioners received great praise from the breeders present in regard to the excellence of their selections of cattle.

The sheep obtained by the commissioners were equally well selected, but, unfortunately, they did not realize good prices when sold. Evidently the New Brunswick farmer has not wakened up to the fact that his country is exceedingly well fitted for sheep-raising, and that the sheep industry will be, in the near future, one of the very best branches of farming he can go into. Being so much nearer the English market than his Ontario brother, and having easy access, too, to the Boston market, the raising of good mutton sheep and lambs ought to be one of New Brunswick's best industries. In the sale the Shropshires sold best; the Cotswolds next; and then the Leicesters. The Shropshires were rather thin in flesh, though of good quality. The Cotswolds and Leicesters were in better condition, and cost more, but they did not realize up to cost by several dollars per head. The Dorset Horns and the Lincolns were the worst losers of the lot. All of which goes to show that the New Brunswick sheep-breeder has lost a good chance of bettering himself, for which, we doubt not, he will be kicking himself all around his pasture-field before a year is over. But the sheep sold were good ones, and are destined to be of great benefit to the sheep raising industry of the province.

The whole undertaking was exceedingly creditable to the enterprise and forethought of the New Brunswick Government. New Brunswick is fitted by nature to be a great stock-breeding country, and the sooner the people get established in the industry the better for the material interests of the province in every respect. The sale was well attended. Many of the purchasers were private breeders, but the bulk of the purchases were made by local agricultural societies scattered throughout the province. It will thus result that the stock purchased will effect a much larger range of good than if it had all been purchased by private individuals.

A regrettable feature of the sale, but one which will serve as an object lesson to breeders generally, was a matter connected with the Jersey importation. There were only thirteen Jerseys, but of these ten were purchased from one breeder in Quebec. By agreement with the seller these ten head were to be tested with tuberculin. Unfortunately the owner omitted to attend to this and the animals had to be tested at Fredericton, and some of them were found to be suspicious. The whole lot were therefore withdrawn from sale and they are now being kept isolated. As they were all brought down in one car by themselves, and as they had never in any way come in contact with the other cattle, the matter did not effect the sale of the rest of the stock in any way.

A very pleasing and beneficial incident of the sale was the public meeting held on the evening of the first day. This meeting was presided over by the Hon. the Minister of Agriculture, Mr. Labilloy, of Dalhousie, and the Lieutenant-Governor of the province also graced the gathering by his presence. The principal feature of the meeting was a lecture on "Tuberculosis" given by Mr. David McCrae, of Guelph. The meeting was well attended, and Mr. McCrae's lecture was much appreciated. Subsequently Mr. McCrae was asked by the authorities to hold a series of similar meetings in different parts of the province, for the purpose of instructing the people in regard to tuberculosis and the use of the tuberculin test. This movement is in accord with the line of action adopted by the Hon. Mr. Dryden in Ontario.

Agricultural Depression in England.

The English Royal Commission on agricultural depression, which was appointed in 1893, has just finished its labors and published its report. It sat for 177 days, examined 191 witnesses on 117 days, and took the remaining 60 days for the consideration of its report. The commission also, either in the persons of its members or by deputies, visited and examined many agricultural districts for the purpose of getting information at first hand. The report finds that the depression has been greatest in districts where grain growing has been the principal occupation of the people. In districts "suitable for dairying, market gardening, poultry rearing, and in the neighborhood of mines, quarries, and large manufacturing centres, there has been a relatively less depression." Rents have depreciated about 22 per cent. But the capital value of land has decreased 50 per cent! This in twenty years. During the same period of twenty years, there has been the following fall in prices: In the three staple cereals, wheat, barley, oats, 40 per cent. In wheat alone, over 50 per cent. In beef, from 24 to 40 per cent., according to quality. In mutton from 20 to 30 per cent. In wool, 50 per cent. In dairy produce, taking milk, butter and cheese as a whole, 30 per cent. In potatoes, from 20 to 30 per cent. The commissioners see no prospect of an improvement in prices, and they strongly recommend the British farmer to adjust his affairs to the new condition of things. They are of the opinion that the fall of prices is principally due to the intensity of foreign competition, and they see no way by which this competition can be lessened. A large minority of the commission were of the opinion that the exclusive use of gold as a standard of value has had the effect of disproportionately depreciating the prices of farm products, as compared with other values, as for example, the rate of interest; but this opinion was not endorsed by the members of the commission as a whole, although the importance attached to this matter by so representative a body as this minority happened to be, is one of the signs of the times.

With respect to the above findings it should be remarked, first, that it is very noticeable that the depreciation of values has occurred mainly in those farm products that are subject to the widest competition. Wheat, for example, which is now grown in almost every semi-civilized country in the world, has depreciated 50 per cent.; and wool, which is similarly widely produced, has also depreciated 50 per cent.; whereas dairy products have depreciated only 30 per cent., and the best beef only 24 per cent. The inference is, that the farmer who wishes to sell on a steady and not on a falling market, must devote himself principally to the raising of products like milk, butter, beef, that require brains and intelligence, and not spend his time and capital in the exclusive raising of products that can be grown the wide world over. Second, it is evident that wherever the British farmer has been able to take advantage of markets demanding the higher products—fine beef and mutton, butter, eggs, cheese, poultry, etc.—he has done better than his fellow, who has thought of nothing save raising grains and pasturage. The inference therefore is, that wherever possible every farmer should have recourse to the farming that is concerned with the higher products of the farm.

As to the depreciation in the capital value of farms, said to be 50 per cent., that is a matter which the Canadian farmer need not worry over,

nor for that matter the British farmer either. The British farm for years has had to bear a rent out of all proportion to its earning value. That rent was fixed in days gone by when the classes enjoyed what seemed to be a prescriptive right to live upon the masses. Foreign grain was excluded from the country by prohibitory duties that the price of home grown grain might be kept unduly high; and what the farm seemed to earn by its sale of wheat at an inflated price went to the landlord as good fat rent. The fall in the capital value of English farm lands is only the natural settling of the water to its true level when the artificial dam has been taken away.

United States Department of Agriculture.

The activity of the United States Department of Agriculture, under the presidency of Mr. Secretary Wilson, is extraordinary. We revert to it again and again, as we do, not so much as matter of news (though even in that respect we should think it extremely interesting to our readers) as to point to it as an object lesson—both to incite our own departments of agriculture to continue any similar lines of policy which they may have adopted for the promotion of agricultural trade and industry, and to encourage our people to be generous and hearty in their support of their governments whenever they are seen to be earnestly trying to follow out such lines. For we may as well open our eyes to the fact at once: the business of the world is getting to be more and more an affair of governments; and competition in the future will not be so much between individuals as between nations. That nation or state which is most enterprising in securing for its people the best possible facilities for a thorough industrial education, the best means for the safe and cheap transportation of its products, and the best advantages for the sale of its products in profitable markets, will forge ahead, and leave its competitors far behind.

Mr. Wilson expresses himself as pretty well pleased with the results of his efforts to introduce American butter into the English market. Previous to the beginning of his efforts the sale of American butter to England amounted to only one per cent. of England's total import. The importation this year, however, from the United States will be much heavier than ever before. Mr. Wilson has had to contend with the very poor reputation which American butter had acquired for itself in England; but he has partially overcome this difficulty, and he says that he will overcome it wholly: for he intends to keep on shipping fine butter to England until the English people are thoroughly satisfied that American creamery butter is as good butter as can be obtained anywhere. As soon as he gets the way opened up for American butter, he intends to take up the introduction into the English market of American cheese. And soon as he has made the British people familiar with American cheese and butter, he proposes "to get them into the markets of continental Europe." When this is done, he says, his next step will be to make use of the Mississippi and the Gulf route to get all perishable food products, not only butter and cheese, but meats, fruits, vegetables, etc., as well, into Europe by means of cold storage.

The above is a big programme, but we have little doubt that Mr. Wilson will carry it out. His objects are wholly in harmony with modern political economy. The good sense of the people of to-day demands that governments shall prove themselves useful.

British versus Canadian Agriculture.

The British farmer is in a bad way; and though he has had a Royal Commission to investigate the causes of his distress, he is still far from comforted. The trouble is that he will persist in following a line of agriculture in which he is now and ever shall be hopelessly beaten. Like many a Canadian farmer, he thinks that his mainstay is wheat, and his spirits are accustomed to rise and fall as the wheat price moves up or down. But inasmuch as

on the whole the wheat price is ruling lower and lower year by year, he has become utterly discouraged. The truth is that so much is he out of the race in the growing of wheat that his own crops scarcely affect wheat prices at all; and as likely as not he finds prices lowest when his crop are shortest. And yet the very best market in the world for the things he can raise profitably (as compared with other farmers) lies at his very door. Britain imports \$200,000,000 of milk, butter, cheese, cream, fruit, poultry, eggs, and vegetables, and yet the British farmer produces only the smallest fraction of these products. So far away is he from being an important factor in the supply of these commodities to his own markets, that to produce only ten per cent. of the quantity of these commodities which is annually imported into Britain from other countries, would mean an entire change in his system of farm management. Why he does not thus take advantage of his own unequalled home market for specialized products seems to us Canadians wholly inexplicable. It certainly is a little amusing to read that the British farmer should need to be given such advice as this:

"In the multiplication of agricultural colleges, of dairy schools, creameries, and factories, in the proper marketing of perishable goods, in the improvement of live stock, and by seeing that every grain of seed of every variety, every plant of every kind, every animal of every species, is of the best possible type for propagation and reproduction, lies the hope of the British farmer."

And yet this is the advice which even to-day has to be given him by the ablest and wisest counsellors. What seems strange to us is that the necessity of this advice has not been generally recognized long since! for the principles of action laid down in it have been the common-places of action in the work of bettering the condition of the Canadian farmer for years.

An Irish Department of Agriculture.

The Irish Homestead, and other popular organs in Ireland are advocating the establishment of an "Irish Department of Agriculture." They are constantly pointing to what Canada has achieved by means of its Provincial and Dominion Government agricultural bureaus. The competition which Irish farmers are meeting from Canadian farmers in the London market and other large markets of England is arousing them to a sense of their own lack of public and national encouragement. The efforts recently made by the Government of Canada to provide cold storage transportation across the Atlantic have been especially efficacious in inciting them to ask for a department of agriculture of their own. *The Homestead* has this to say of Canadian enterprise, and its bearing on Irish agriculture:

Canada's appearance in the field within the past four years is directly and entirely due to the action of the Dominion Ministry of Agriculture. We showed this several weeks ago. The information which we published then as to the latest move of the Canadian Department of Agriculture (the cold storage project) proved the fact most forcibly. Without such machinery in modern times Irish industry is as a sailing ship racing with a steamer. As the loss which our own country suffers, and the corresponding gain of the foreigner, is going on increasing all the time, such a department of government for Ireland is not only a great need but an urgent one. What are all those state-subsidized and state-equipped refrigerating steamers, coming over from Canada for, but to take money from the pockets of the Irish farmer—to shove his produce down lower and lower in the market? While we wait, undefended, our position is being captured from us by these armor-plated, quick-firing competitors with all their modern equipment. Their trade with the British market is increasing month by month, and increasing by leaps and bounds. Canada's export of butter to Great Britain, as we mentioned above, has quadrupled in four years. All this progress is at the expense of Irish agriculture. As the value of the Canadian sales goes up the value of the Irish sales goes down. As we put it last week, every additional pound of foreign butter or bacon or other kindred produce sold in the British market means a pound of Irish produce displaced. If this process goes on unchecked for five or six years longer Ireland will be squeezed out of the market altogether, and it will be almost impossible for her to recover the lost ground. To help to check it we want a Department of Agriculture and Industry of the most approved type, like those of our go-ahead, co-operative competitors abroad, and we want it without delay. While there may be other measures of reform for Ireland which can wait, this is one which cannot.

Jerseys at Home.

Mr. Plumb, of the Indiana Experiment Station, has been visiting the Island of Jersey, seeing the far famed Jersey cattle in their native home. In an interesting letter to a recent number of *The Jersey Bulletin* he has been giving an account of his visit and of his impressions. In the island altogether there are 9,000 cows and 12,000 heifers, bulls, and steers, a total of 21,000. The population numbers about 60,000. The herds are small and distributed generally over the island. Mr. Plumb thinks that about six animals to a herd is the average size. The farms are very small. The land is cultivated like a garden. A few acres constitute a farm. Potatoes are the principal crop, almost the sole export crop. The potatoes are sent to London. They are planted in February and in three months are harvested, and then the land is fitted for some other crop.

Mr. Plumb thinks the native Jersey superior in constitution and udder formation to the average American Jersey. Thin, narrow chests are decidedly the exception, while the fore udder is certainly better developed than in America. He says that on the island one does not see so many "refined" looking animals as will be found in the States. The native stock is certainly more robust in appearance at any rate than the Jerseys we see on this continent. The reason for this is that on the island the cattle pasture out all the year long.

White spots are very common, some cows being marked very strikingly. This is not considered an objection. White noses and tongues are found even in the best animals. One cow, the daughter of the first prize aged cow at the Manchester "Royal" this year, had a "red nose." This affects her value for sale; yet her owner refused \$425 for her, and holds her at \$500. The English and American fanciers demand solid colors, black tongue and switch, etc.; but the island breeders think this is a craze and that pining to it has been detrimental to the physical development of the stock. Fancy points are more disregarded on the island than ever before.

The bulls used are mainly one and two year old bulls. Mr. Plumb saw no bull over three years old. The heifers are bred so as to drop their first calves at about two years old. The calves are taken from their dams at once after birth and are fed on new milk for a week or so. Then they are changed gradually to skim-milk, and this is used as their staple growing food.

Grain is scarcely ever fed. Pasture is relied upon mainly, and then hay and roots. A wide variety of roots is seen, but mangolds are mostly used. Parsnips however are very popular, and the islanders esteem their nutritive properties very highly.

Sheep Raising in Ohio and Canada.

Secretary Wilson, in a recent speech at the Ohio State Fair, strongly advised the Ohio sheep husbandmen to be sure to raise sheep that were good for mutton as well as for wool. While the fleece of a fine-wooled sheep sold more per pound than the fleece of a good mutton-producing sheep the total value of the fleece of the one differed little from the total value of the fleece of the other, while the difference in the value of the mutton produced was very considerable. He also strongly advised the keeping of sheep that mature early and the preparation of a portion of the yearly production of lambs for market before they were a year old. He asserted that the conditions for raising good mutton sheep were as favorable in Ohio as in any part of the world. This advice of Secretary Wilson is right to the point, and fits the case of the Canadian sheep-raiser quite as well as that of the Ohio sheep-raiser. And it is some satisfaction to know that the conditions for growing good mutton sheep in eastern Canada are just as favorable as they are in Ohio.

The Hog Cholera as a Schoolmaster.

The dreadful epidemic of cholera which the swine industry of the Middle States has experi-

enced during the past year has been a tremendous object lesson. It is estimated that in Indiana 670,000 head of swine have succumbed to the disease in twelve months, and in Iowa nearly 1,200,000. In other States the losses have been almost equally great. The general opinion is that the prevalence of the plague and the rapidity with which it spread were due mainly to the fact that the hogs in the districts infested were fed on a too soft, a too unvarying diet. The animals were principally *corn fed*; and they had not stamina enough to resist the attack of the disease. A more varied and a stronger diet is recommended. In this there is a consolation and also a lesson for our own swine men. Fortunately our own corn crop is never so large that there need ever be a temptation to our swine-raisers to use it exclusively or even mainly as a swine-fodder. But lest the temptation *should* occur at any time to use it or any other feeding stuff as an exclusive ration, let the terrible losses suffered by the Western swine-men in the year 1896 be a warning of the evil effects sure to follow from such an imprudence.

Lamentable as the calamities above described are, the breeder of pure-bred swine, whether American or Canadian, will, without doubt, reap benefit therefrom. Hogs are scarce. Old herds have to be built up anew, and entirely new herds will have to be founded. But in this re-organization of the swine industry a change will be made. The old fat-making machine will be discarded, and the modern, up-to-date, fat-streaked-with-lean bacon hog will be taken on in his place. The foundation stock for herds of this sort of hog will have to be bought from men who have it; and of such men we believe there are more in Canada to-day than in the United States.

Sugar Beets in the United States.

We have remarked once or twice on the energy the United States authorities are displaying in their endeavors to establish beet-root sugar manufacture as a general industry of the country. Secretary Wilson says that the United States people are paying \$100,000,000 a year to German beet-root sugar manufacturers for sugar which could just as well be manufactured at home if the American farmers only grew the beet roots. To test whether the beet roots can be grown profitably in the United States, and in what parts they can be most profitably grown, he has imported this year eight tons of sugar-beet seed and has distributed it for trial among 22,000 farmers in different parts of the Union. In the fall he purposes to publish in bulletins the information which all this experimenting will furnish, and he will distribute these bulletins among the people generally. He has full faith that the beet root can be grown successfully and profitably in many parts of the States, and that the manufacture of beet-root sugar can be established as a native industry, so that the American farmer can have the advantage of the business of supplying the necessary beet roots. What is more, he says that the pulp obtained from the beet roots after the saccharine matter has been extracted is a highly nitrogenous feeding stuff of the best value as a food for dairy or beef cattle.

The Export of Corn.

The time was when American corn could scarcely find a market in Europe. This year, partly owing to the scarcity of home-grown cereals in Europe, partly owing to the growing taste for maize as an article of human food, and to the growing use of maize as a valuable feed-stuff for animals, the importation of American corn into Europe for the first seven months of the year has been nearly 116,000,000 bushels, as against 64,000,000 bushels last year. In the meantime, the price of corn has gone up. This is partly in sympathy with the advancing price of wheat; but it is also partly because of the growing determination all through the corn-growing American States to go again into stock-feeding and stock-raising—occupations which had been largely abandoned. Hogs and cattle are again occupying their old

time position of supremacy with the Western farmer. This, of course, means to the Canadian stockman an enlarged market for his purebred cattle and swine. All along the line the look of things is brighter for the farmer than it has been for years.

The Farmers' Free Mail Again.

In our issue for Sept. 21 (page 19) we described the experiment of "free rural postal delivery" now being made in some districts by the United States government. *The Rural New Yorker* has been obtaining the opinions of farmers living in districts where this experiment has been tried. We subjoin short extracts from some of these opinions (it will be noticed that they are from widely different sections) for we believe the readers of FARMING will be interested in them. Canadian farmers are business men, and need free mail delivery as much as their fellow-traders in towns and cities:

"I think it a grand success. I do not see why farmers should not receive their mail at home daily as well as city people." M.S.L., Loveland, Colorado.

"All are just perfectly happy over it, and will not be satisfied to lose it. In this community it is a big success." A.W.F., South Deerfield, Massachusetts.

"I would rather be taxed \$10 a year than return to the old way." J.E., Somerville, Ohio.

"It is a great convenience and a blessing to the farming classes." D.M.B., Opelika, Alabama.

"The more progressive farmers are radically in favor of the scheme." M.B., Farmington, Minnesota.

"The farmers are benefited by it in numerous ways, and will be very glad if it can be continued." J.M.S., Uniontown, Maryland.

"The free delivery of mail in rural districts is giving perfect satisfaction." R.E.S., Vermont.

The Rural New Yorker declares itself in favor of free mail in rural districts. So does FARMING.

NOTES AND IDEAS.

States and provinces acquire good business methods and others bad ones, just the same as individuals. Missouri is one of the most prosperous agricultural States in the Union. The reason of this is because she sells her grain in the finished product, and not as raw food. Her corn crop last year was 176,000,000 bushels. But of this enormous quantity she hauled to market only 9,600,000 bushels, scarcely a nineteenth part. The rest she kept in her own cribs to feed her live stock. In the same year her farmers sold 1,016,760 head of cattle and 3,142,074 hogs.

The improvement in the outlook for sheep growers in the United States is resulting in a very great development of the sheep-raising industry on the ordinary American farm. Many districts are taking up the industry throughout their whole length and breadth, especially in Eastern Ohio, Western Pennsylvania and West Virginia. But the demand for stock with which to do this stocking is almost altogether for mutton-producing sheep. These the ordinary sheep-raisers of the United States are not able to supply, at least in sufficient quantities to meet the demand. The prospects are, therefore, that there will, for a few years at any rate, be a very decided demand for Canadian ramlambs of the mutton producing breeds.

England keeps 27,000,000 sheep on land three or four times the price of Canadian land. France keeps 20,000,000 sheep on land that is even held in higher value, because it is all in small farms. Holland keeps several millions of sheep on land that is almost priceless. It is not the low price in the value of the land that determines the profitability of sheep-raising, but the excellence of the shepherding and feeding.

We have said a great deal lately on the advisability of the Canadian farmer "keeping more sheep," but we find that our words of advice are only weak compared with the strength of the words

of American friends of sheep in the same direction. This ought to be encouraging to our sheep raisers rather than the reverse, for the more the American farmer goes into sheep-raising the more he will want our pure-bred rams and our high-grade ram lambs. But we must be sure to be able to supply him with the best mutton-producing breeds. He wants none other.

Irish butter, since the introduction of dairy instruction into Ireland, is beginning to recover the position it had lost because of inferiority. It is now finding a good sale in England, but owing to its bad reputation it is sold as "Danish butter." How well this fact illustrates two economic truths: (1) that instruction, if practical, does really help the producer; (2) that a reputation for the production of good products is an easy thing to lose, a hard thing to get back, and a good thing when it is got back. In some districts of Ireland the average price of butter made in the districts has improved 3d. a pound because of dairy instruction.

The Ontario Department of Agriculture reports the number of sheep kept in the province in 1895 to have been 2,022,735, and the number kept this year to be 1,690,350, a decrease of 332,385. The English *Live-Stock Journal*, commenting on these figures, says that "the small number of sheep kept in a province much larger than the United Kingdom, seems remarkable." England alone keeps nearly seventeen times the number of sheep that Ontario keeps.

Some time ago (Sept. 7, p. 2), we commented severely upon the proposition put forward by Mr. J. H. Monrad, the well-known American dairy expert and writer, that American butter-makers should use "preservative" in the butter they make which is intended for "English cousins." We are glad to see that ex-Governor Hoad, in *Hoard's Dairyman*, comes out as strongly as we did against the proposition, and condemns it as being both wrong and foolish. His words are:

"We have already suffered too much from the tricks of trade, whereby the inferior grades of butter and cheese were made to resemble and pass for what they are not, to justify further experiments in similar directions. Let us endeavor for the future, to establish a reputation for honest goods that will conform in every particular to the representations made concerning them, and which can be guaranteed free from any foreign ingredients or chemicals of any kind."

CANADA'S FARMERS.

V. Lieut.-Col. McCrae, Guelph.

Among "Canada's Farmers" there are none who deserve to have higher mention or greater public recognition than Lieut.-Col. McCrae, of Guelph, or David McCrae, as he is more generally called. Inasmuch as we gave a somewhat extended account of Mr. McCrae's life and work as a farmer in FARMING for November last (see page 145), we need not here mention any biographical facts concerning him. But we wish to call attention to one other fact, namely, that for some years past Mr. McCrae has been most indefatigable in his endeavors to persuade his brother farmers to "keep more sheep"; and the general movement which is now noticeable in Ontario towards the "keeping of more sheep" on the ordinary farm is largely due to his efforts. In his addresses at Farmers' Institutes, and in the public press, he has time and time again demonstrated the unwisdom of the Ontario farmer in neglecting to avail himself of the great natural advantages which our province affords for sheep-raising. And, being a practical and successful sheep-raiser himself, and in addition one of the best informed men in Canada on the market values of muttons and wools, his advice is all the more deserving of being listened to. We are glad to say that Mr. McCrae thoroughly approves of the course FARMING is pursuing in urging the "keeping of more sheep," and in a recent interview he expressed to the editor the opinion that the matter could scarcely be urged too strongly.—As is well known, Mr. McCrae is an authority in regard to cattle tuberculosis, and he has been appointed by the Ontario Government to give lectures and practical demonstrations in regard to tuberculosis and the application of the tuberculin test before Farmers' Institutes and other gatherings of farmers whenever and wherever his services are desired. This is an excellent move on the part of our Government, for it is of the utmost necessity to our cattle-breeding industry that all herds from which cattle are sold for breeding purposes shall be known to be perfectly healthy.

FEEDING WORK HORSES AND COLTS

(Prepared for the Farmers' Institute System.)

By W. C. EDWARDS, M.P., Rockland, Ont.

Some years ago we adopted a method that was in a measure new to us, but it has proved highly satisfactory and profitable, and nothing would induce us to return to the old system. We employ, say forty horses about our mills here in the summer season. In the rear of our stable we have a feed-room where our cut straw for bedding and our cut hay, oats and ground feed are kept; and here we have two mixing-boxes where the rations for the horses are mixed before feeding. The cut hay is put into these boxes and is thoroughly soaked with water twelve hours before it is fed. The ground feed is mixed dry, and before feeding is thoroughly mixed with the wet hay. The ration we started out with was 4 pounds cut hay, 1/2 pound bran, and 5 pounds ground oats and barley to each horse night and morning, and 4 pounds dry oats only at noon. Our horses are generally of large size and are doing excessively hard work, and we found this ration too small for them, and we gradually increased it until we have settled down to this: 5 pounds hay, 5 pounds ground grain, and 1/2 pound bran to each horse morning and night, and 8 pounds dry oats only at noon (no hay), and this we find ample for the largest class of horses doing the most excessive work. Our saving is at least 10 pounds hay per day for each horse, and 6 pounds grain for each. Not only is this the case, but our horses are healthier and better in every way. Under the old system it was a common thing for us to lose from one to five horses every summer, and sometimes even more, with colic and inflammation; but in the past seven summers, under our new system, we have not lost as many horses altogether as we formerly lost in one season, and we have not had a sick horse. A much less ration than we feed would be ample for farm horses or for any horses doing ordinary work. We add also, that with this system of feeding hay, together with the free use of wheat bran and a little ground oats mixed with it, we find we can develop colts in a manner that we have never seen them developed before. The farming industry of Canada is truly passing through a most trying crisis. That our good farmers will survive all their difficulties, I have no doubt, but new and improved methods must be resorted to, and I can assure you that in the method of feeding horses that I have given you, as compared with the old and usual method, there is the difference between success and failure in the matter of raising colts for sale, and if what I have said is of assistance to any of our horse breeders or feeders, I shall be greatly gratified. Through the many agricultural journals and bulletins published in Canada and the United States, I am almost daily getting some new idea as to general farming or the care and management of stock. These ideas come not only from the editorial pens of the several papers, but many of them from practical and experienced farmers all over the land, and had I the time and capacity to do something in return it would give me very great pleasure to do so. I am a firm believer in reciprocity. If, in a national sense, we

cannot have this with our neighbors to the south of us, let us do the next best thing, and through the interchange of ideas among ourselves, build up a thoroughly advanced and progressive agricultural country. Our farm journals are doing much, and our Farmers' Institutes are also assisting; but there is much more to be done, and every Canadian who wishes well for his country should do what he can to promote the improvement and advancement of our agricultural interests. In them are the foundation and very backbone of our country, and with few exceptions, indeed, will all our other industries prosper just in proportion as our agricultural interests prosper.

WINTER DAIRYING.

By PROFESSOR H. H. DRAN, O.A.C. Guelph.

(Prepared for the Department of Farmers' Institutes.)

The following extract from a letter of a leading institute worker fairly describes the position of many farmers in reference to the winter dairy: "Many of our buttermakers are almost professionals in the summer, but in the winter we are almost beaten—sometimes we have to churn nearly all day, and then if the butter does come, it is of very poor quality. The cream gets bitter, and I do not like the butter myself. I feel ashamed to offer it on the market. Many others are in the same fix. Dairying all the year round has been strongly recommended at our meetings, but how to handle the cream and make the butter has been neglected." To meet these difficulties is the object of this paper. I will say at the beginning that it is difficult to tell another on paper how to do a practical operation such as churning. The most satisfactory way is to do the work under the guidance of a skillful operator. The hand then becomes the servant of the trained mind, and good results follow. To obtain this training I know of nothing better than the opportunities offered at our dairy schools. The Provincial school at Guelph will open January 4th, 1898, for both factory and home dairy classes. The home dairy course will be specially suitable for workers in the farm dairy. A lady instructor has been placed on the staff so that farmers' wives and daughters may feel more freedom in attending. Special instruction will be given to the home dairy class in poultry farming. The expense will be nothing but railway fare and board, which costs from \$2.50 to \$3.00 per week. However, if you cannot attend the dairy school, you may be able to obtain some useful hints in the various publications sent to the members of the Farmers' Institutes.

General Notes.

The average farmer of Ontario finds himself in about the following position: *Expenses which must be met all the year round: income but half the year.* Can this be improved upon? Yes, by a proper use of the winter dairy. There are two methods of conducting the winter dairy business—creamery and private dairy. We have no hesitation in recommending the creamery to all winter dairymen wherever it is at all practicable. It is not practicable in places where it is impossible to obtain at least 5,000 lbs. of milk every other day for four to six months. This milk

should be obtained within a radius of five miles from the creamery. The main advantages of the creamery are:

(1) A better and more uniform quality of butter can be made.

(2) All the butter is got from the milk by the use of a separator, whereas by setting the milk nearly one-quarter of the cream is lost.

(3) The skim-milk may be returned to the farm in a warm, sweet condition.

(4) More money is obtained for the labor and feed given to the cows.

The extra butter got from the milk by means of the separator will nearly, if not quite, pay the cost of manufacturing (which is usually 3c. per lb. of butter). The extra price obtained for creamery butter will leave a handsome profit on the winter's work. The extra quality of the skim milk will about pay for hauling. The labor saved at the farm house will add to the peace and comfort of the home.

Winter Butter-Making in the Private Dairy.

Whether the winter dairy be private or co-operative there is need of a certain number of fresh cows, which enables the maker to cream the milk easier and to get the butter with less trouble. There is also more profit in feeding fresh cows than "strippers." The feed should be of a succulent or juicy nature. Mangolds or carrots or silage are all good for a winter flow of milk. We feed at the dairy stables of the Ontario Agricultural College both mangolds and silage. Swede turnips should not be fed if a fine quality of butter is desired. To make a success of the winter dairy the cows and stables should be kept clean. The hind-quarters, udder and tail should be clipped in the fall. Use plenty of bedding under the cows. Sawdust makes excellent bedding and keeps the stalls and cows cleaner than straw unless it is cut. The udder should be brushed before commencing to milk. The milk should then be strained, and either be set in pans or in deep pails, or creamers, or be run through a separator. If ten to twenty cows are milked it will pay to use a cream separator. This separator may be put in a convenient place at or in the stable, and be run with tread power furnished by horse or bull.

Shallow pan setting needs much space, pure air, a moderate to cool temperature, and skimming at from 24 to 48 hours—before the milk becomes thick.

For deep setting it is important to cool the milk to a temperature of 45° or below, before skimming. Skim at the end of 24 to 36 hours in winter. The cans may be submerged, or surrounded by water as high as the milk in the cans. They may be skimmed from top or bottom. Where the separator is used, have the temperature of the milk from 85° to 95°, the speed of the machine full and constant, and the feed regular. Test the skim-milk and note if there is any loss of fat. Secure the cream quite thick, and cool immediately to about 50°. Keep all cream at about this temperature until sufficient is obtained for churning, then warm to ripening temperature by means of a water bath. Stir the cream while it is being warmed by the use of a tin stirrer. Heating the cream to 160° F. for twenty minutes is a good plan in winter as it drives off stable

and feed flavors. Use a starter to ripen the cream.

RIPENING CREAM—The ripening temperature will vary with the seasons, cows, and kind of cream. The temperature should be such that the cream will ripen in 24 hours with or without a "starter." A "starter" may be made by heating some skim-milk from a fresh cow to 90° the day before the cream is ready to be set to ripen. Throw away the top portion of the thick skim milk and add to the cream from 2 to 10 per cent. of the finely broken starter. Stir it well into the cream, and leave it undisturbed until 20 to 24 hours after, when it should be ready to churn. The buttermilk may be used for a "starter" so long as it is of good flavor. Give the cream a good stirring before putting it in the churn.

CHURNING.—A simple box or barrel churn we find the best. To prepare it for churning, first scald and then cool. Strain the cream into the churn and it will prevent white specks in the butter. If coloring is used, it should be put in the cream before commencing to churn. The churning temperature will vary a great deal. Thick separator cream may be churned at 50°. Thinner cream may be churned at 56° to 60° in summer, and higher, up to 70° as the season advances. Have the temperature such that the butter will come "firm" in from 30 to 40 minutes. Close covered churns must be ventilated two or three times during the first ten minutes of churning. When the butter "breaks" add a quart or more of water to the churning for each pail of cream. The temperature of the water added at this stage should be varied according to season—cold in hot weather and warmer in cool weather. The object is to assist separation of butter from the buttermilk, and to temper the granules of butter. If the water is too cold in winter, it will prevent the grains from forming the proper size. The churn should be stopped when the grains of butter are about the size of small wheat kernels. The buttermilk may then be drawn off through a strainer, or the granular butter may be dipped out of the buttermilk by means of a sieve, which is the Danish practice.

MY BUTTER DOES NOT COME.—The chief reasons are:

1. The temperature is not right—usually the cream is too cold in the churn.
2. The cream may have been kept too long.
3. The cream of a "farrow" or "stripper" cow may be causing the trouble.
4. The cream may be too thin—get rid of some of the skim-milk.
5. The cream may be too thick—add a little skim milk or water.
6. The churn is too full.
7. The maker is incompetent.

The process of churning is the packing together of tiny fat globules, and anything which hinders this tends to prevent churning.

WASHING BUTTER—Where a highly-flavored, short-keeping butter is wanted do not wash at all. For prints to be eaten in a week or two, wash once, and for tub butter, to ensure keeping quality, washing twice or until the water comes away "clear," is a safer practice. Do not leave the butter standing too long in the water as it will spoil the flavor.

SALTING AND WORKING.—Fine butter salt (the use of coarse, lumpy salt is not advisable) at the rate of one-half ounce to one ounce to the pound of butter may be sprinkled on the granular butter in the churn or on the worker. (Some persons salt with strong brine.) If salted in the churn, a portion or all of the working may be done by revolving the churn slowly after allowing the salt time to dissolve. Expert buttermakers may work butter once. Others will succeed better by working twice. Work by pressure and avoid a sliding or grinding motion. When the "streaks" have disappeared and the butter is firm and waxy in texture, and the excessive moisture is removed, it is then worked sufficiently.

PRINTING AND PACKING.—For immediate use, the "print" of various sizes is a desirable package. It should be wrapped in good parchment butter paper. The square package, lined with paraffine wax, is best to pack butter in for export. The butter should be solidly packed in the box, then be covered with butter cloth or parchment paper.

MARKETING.—Do not trade butter for dry goods and groceries at (for you) starvation rates of exchange. If possible, secure customers in a village, town or city, and send them your best make regularly. Selling to a reliable commission house or groceryman (for cash) is a good way to market. Have a brand for your butter and sell none but the best with your brand on it. If a churning goes wrong sell it for what it is worth and not on account of its reputation.

THE GROWING AND MARKETING OF ALSIKE AND RED CLOVER SEED.

By HENK GLENDINNING, MANILLA, ONT.

(Prepared for the Department of Farmers' Institutes.)

Alsike.

Alsike clover is regarded as a cross between the red and broad-leaved clover and white or Dutch clover. It was first introduced into Britain from the south of Sweden about fifty years ago, and began to attract attention in this province about twenty years later as a valuable crop for its seed, which commanded a high price. It was also discovered that Canadian seed was superior to that imported into Britain from any other country. The plant is a perennial, but in this country it is generally treated as a biennial. It will grow upon almost any kind of soil, but the best results will generally be obtained when grown on clean, rich, clay loam, well underdrained. I wish to emphasize the word "clean," as this crop differs much from red clover, as it makes a very poor cover crop to smother back any weeds that may grow in the land. Therefore, it is necessary to have the land as clean as possible to produce the highest grade of seed. The farmer should be careful to get the best seed possible to sow; it should be large and plump, free from all other kind of seed, and particular care should be taken to see that it contains no white clover, as much of the seed offered for sale has a considerable mixture of the latter. So far, no machinery has been invented that will wholly separate those two kinds of seed, being of the same shape, weight, and nearly of the same size. The seeding is usually done in the spring, sowing the seed along with

some kind of grain, or early in the spring on fall wheat or rye, then harrowing it in with a light harrow. It will be found an advantage to keep stock off the fields after harvest as it usually does not get a very heavy top the first season. The following spring the land should be rolled as soon as dry.

When the clover is in full bloom, it will be found profitable to go through the fields with a sharp scythe and cut off the heads of any timothy or high growing weeds that may be found. The proper time to cut the crop is when a majority of the heads will strip easily of the stalk between the finger and thumb. A table is attached to the mower, covered with a false bottom raised a few inches, made of strips to allow the shelled seed and chaff to fall through to the true bottom below, while the bundles are being raked off by hand. When the space below the slats is filled up the chaff and seed are removed into bags. The seed obtained from this chaff will be found to be of the finest quality. After the crop is cut it should be allowed to lie until thoroughly dried. If it should get wet with rain, do not attempt to turn the bundles as the heads will fall off the stalks and the seed will be lost. The wagon rack used for hauling to the barn should be closely covered with boards or strong canvas. The bundles should be picked up carefully with barley forks and placed on the wagon. Do not attempt to use a horse-rake to put it in win-rows or the bulk of the seed will be shelled off and left in the field.

If two or more qualities of seed are grown, such as may result from winter-killing which allows weeds to grow up in such places, it will be found advisable to harvest the crop in such a way that the different qualities can be threshed separately. The reason for this will be obvious, as the best seed will be easily cleaned if the foregoing conditions have been attended to, but where it has been winter-killed, foxtail and other weeds are likely to grow up amongst the clover. It will be found much easier to clean the foul seeds out of a few bushels of seed than clean the same amount of foul seeds out of the whole lot. When the seed is cleaned and nearly all of the same quality, it should be all placed in a pile upon the floor and thoroughly mixed before offering it for sale. But if one part is pure and another mixed with foreign seeds, such as white clover or hulled timothy, these lots should not be bulked together, but each offered for sale upon its merits. If mixed the whole lot will likely be reduced a grade or two and the price correspondingly lowered. The ordinary fanning-mill will generally be found to clean seed sufficiently well for market, providing it is properly managed. Plenty of wind should be used, with a top wire sieve 18x18 meshes to the inch, and a bottom wire screen 24x24 meshes to the inch. These are the usual sizes used. Some years the seed may be larger or smaller and it will be found necessary to vary the size of mesh in the sieves and screens. In many sections of the country, there are men who make a specialty of cleaning, and as a rule the best results will be obtained by having it cleaned by them. The ordinary farmer may do

just as good a job, but experience is worth a good deal in cleaning alsike seed. Self-catches on the land that has been in seed the year previous, may give a good crop, but as a rule, self seeding should be avoided as white clover is pretty sure to get into the land and destroy future crops of alsike. As soon as the first crop has been harvested, the land should be plowed, as it does not produce much aftermath. To keep it for a second crop of seed the following year, usually results in a failure.

Common Red Clover.

Common red, or broad-leaved clover is a native of Europe. It is supposed to have been introduced into England from the Netherlands about the time of Queen Elizabeth, but it was not until the close of the last century that it found its way into Scotland and became generally cultivated in Britain as a forage crop. The plant is perennial, but in this country is generally treated as a biennial. Owing to the severe frosts the plants usually die at the end of the second year. Up to about fifteen years ago there was but little trouble experienced by the farmers of this province in cutting the first crop for hay and obtaining a good crop of seed from the second cutting, but unfortunately this cannot now be done owing to the introduction of the clover seed midge, which was discovered in the State of New York in the year 1877 and in this province in 1882, since which time it has spread over the entire clover growing section causing great loss to the farmers who were engaged in raising seed. The ravages of this insect can be guarded against to a considerable extent and a good crop of seed secured by pasturing the clover fields and turning off the stock from the first to the fifteenth of June, according to forwardness of the season, and earliness or lateness of certain sections of this province.

Red clover is so well known that to go into a detailed account of the harvesting and threshing of it would be superfluous, but one matter I would like to impress upon my fellow farmers is the danger of purchasing the seeds of weeds along with clover seed, that were unknown to the majority of farmers a few years ago. Such weeds as the curled dock, English plantain, ox eye daisy. These seeds, with the exception of the latter, are difficult to clean out of red clover. Fortunately, large sections of the province are free from them, but farmers cannot be too careful in procuring seed to sow on their farms.

Marketing.

As to marketing, I would say that Britain, and the continent of Europe, are the markets for our surplus alsike and the best sample of red clover. The margin between the price paid the farmer here, and that obtained in London or Liverpool is comparatively small when the amount of money invested and risk involved is considered. Usually the farmer will do as well, or better, with some local dealer in his own section than looking for a market a distance from him. If a united effort were made by all farmers growing either red or alsike clover seed to produce only the best, and in that way improve the standard of the seed exported, a better demand would be created and better prices obtained for Canadian clover seed.

BOOKS AND BULLETINS.

Nearly all "Bulletins" mentioned under this heading can be obtained free on application to the Directors of the respective Stations or Colleges. In case of doubt as to address write to FARMING.

Relative Digestibility of Cheat and Clover. Bulletin No. 47, Oregon Agricultural Experiment Station.

Composition of Commercial Fertilizers. Bulletin No. 49, Maryland Agricultural Experiment Station.

Prunes in Oregon. Bulletin No. 45, Oregon Agricultural Experiment Station. 128 pp., profusely illustrated.

Kansas Weeds: Their Fruits and Seeds. Bulletin No. 60, Kansas State Agricultural College. Profusely illustrated.

Lime and Draining. By H. J. Wheeler. Bulletin No. 46, Rhode Island Agricultural Experiment Station, Kingston, R.I.

A Record of the Sydney Stud Sheep Sales and Annual Sheep Show. Edited by Robt. McMillan, Sydney, N.S.W. Price 1s.

Some Strawberry Insects. Bulletin No. 42 of the Florida Agricultural Experiment Station. By A. L. Quaintance, Assistant in Biology.

The San Jose Scale in Ohio. Being Bulletin 81 of the Ohio Agricultural Experiment Station. By F. M. Webster, Entomologist. Illustrated.

Turnips. Bulletin No. 84. Also, Japanese Plums. Bulletin No. 85, Alabama Agricultural Experiment Station. From F. S. Earle, horticulturist.

The Soy Bean as a Forage Crop. Farmers' Bulletin No. 48, United States Department of Agriculture. By Thomas A. Williams, assistant agrostologist.

Methods of Curing Tobacco. Being Farmers' Bulletin No. 60, United States Department of Agriculture. By Milton Whitney, Chief of Division of Soils.

The Worst Weeds of Wyoming; and Suggested Weed Legislation. By the Botanist, Wyoming Experiment Station, Laramie, Wyoming. Being Bulletin No. 31.

Field Experiments with Wheat. Comparison of Varieties and Cultural Investigations. Bulletin No. 82, Ohio Agricultural Experiment Station. By J. F. Hickman, Agriculturist.

More about the San Jose Scale. A Sweet Potato Pest. Regarding Carbon Bisulphide Insecticides and Pumps in General. Bulletin No. 86, Alabama Agricultural Experiment Station.

The Maintenance of Fertility and Field Experiments with Fertilizers. Being Bulletin No. 80, Ohio Agricultural Experiment Station. By the Director, Vice Director, and Agriculturist.

The Infection of Milk by Microbes. A lecture illustrated by 36 magic lantern slides. By E. Castel, secretary of the Dairymen's Association of the Province of Quebec. 20 pp. With many illustrations showing magnified views of the bacteria peculiar to milk and milk operations and processes. Published also in French. From the author, St. Hyacinthe, Quebec.

Lamb Feeding. Fattening Range Lambs—Raising Lambs on Separator Milk. Hog Cholera and Swine Plague. Diseases of Sheep Observed in Iowa. Quick and Slow Ripening of Cream. Being Bulletin No. 35 of the Iowa Agricultural College Experiment Station. The above articles are all by the officers of the station. The bulletin comprises 108 pp., and is profusely illustrated.

The Veterinary Profession: Its Relation to the Health and Wealth of the Nation, and what it offers as a Career. Comprising several short articles by officers of the University of Pennsylvania and alumni of its Veterinary School. 88 pp., profusely illustrated. This is a most beautiful publication, and will, no doubt, be very interesting to every young man looking forward to a career in veterinary practice. From Professor E. M. Michener, V.D.M., secretary of the Department of Veterinary Science, University of Pennsylvania, Philadelphia, from whom copies may be had on application.

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 BREEDERS' ASSOCIATION.

Annual Membership fee, \$1.00.

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association during the year in which he is a member.

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.

The list of cattle breeders will be published in the first issue of each month. 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. HOBSON, Secretary,
Parliament Buildings, Toronto, Ont.

Shorthorns

Barclay, I.	Port Hope	Stock all ages.
Biggins, W. J.	Clinton	2 bulls, 12 months; calves from 5 to 9 months.
Douglas, J.	Caledonia	1 bull, 2 years; 7 bulls 9 to 13 months; young cows and heifers.
Gibson, R.	Delaware	1 bull calves; young cows.
Grainger, W. & Son	Londesboro	4 bulls, 5 to 7 months; 8 heifers, yearling and calves.
Jeffs, E. & Son.	Bond Head	7 heifers, 2 years; 5 yearling heifers.
Johnston, A.	Greenwood	20 aged cows; 10 heifers, 2 years; 12 yearling heifers; 28 bull and heifer calves.
Linton, Wm	Aurora	Bulls and heifers, yearlings and calves.
Martin, J. W.	Canton	Stock all ages.
Muller, R.	Brougham	12 young bulls; 6 heifers.
Rusnell, D. H.	Stouffville	4 bulls, from 5 to 12 months.
Shaw, A. J. C.	Thamesville	Heifers, 1 and 2 years.
Smith, A.	Trowbridge	1 stock bull; 1 bull, 1 to 8 months; 1 cow, 3 years; 1 heifer, 1 year.
Smith, J. S.	Maple Lodge	6 bull calves, 5 to 10 months; 6 heifers, 2 years.
Tolson, J.	Walkerton	4 heifers, from 20 to 22 months; 5 heifer calves, 4 to 11 months.

Herefords

Stone, A.	Guelph	15 bulls.
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Galloways

McCrae, D.	Guelph	1 bulls, 2 years and over; 6 yearling bulls; 4 bull calves; 20 cows and heifers.
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Devons

Shaw, A. M. & R.	Brantford	1 yearling heifers; 1 bull, 2 years; 2 bull calves.
Harper, S.	Choung	Young stock, all ages, both sexes.

Aberdeen Angus

Bowman, J.	Guelph	2 heifers, 1 and 2 years.
Murison, J.	West Lorne	1 bull calf.
Sharp, J.	Rockside	5 bull calves, 4 to 9 months; 4 females, 18 months to 3 years.

Sussex

Stone, A.	Guelph	4 heifers.
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Ayrshires

Anderson, J. A. R.	Hamilton	1 bull, 6 months; 1 heifer, 2 years; 1 heifer, 9 months.
Ballantyne, T. & Son.	Stratford	7 bulls, 5, 9, 10, and 15 months.
Caldwell, Bros.	Orchard	8 bulls, 3 months to 2 years.
Clark, J. G.	Ottawa	Females, all ages.
Dyment, N.	Clappinson Cor.	2 bulls, 10 and 11 months; 2 heifers, 2 and 3 years.
Guy, T.	Oshawa	Entire herd of 30, all ages.
Jamieson, R.	Perth	1 cow, 8 years; 2 cows, 2 years; 5 heifers, 4, 5, and 16 months.
McCormack, J. & Son	Rockton	2 yearling bulls.
Sorby, D. & O.	Guelph	Young stock, both sexes.
White, R. E.	Perth	1 bull, 1 and 4 years.

Holsteins

Clemons, G. W.	St. George	40, both sexes, all ages.
Hallman, A. C.	New Dundee	Bull, 2 years; also heifers and cows.
Rice, A. & G.	Curries	Yearling heifers; bull and heifer calves.

Jerseys

Else, L. & F.	Hoxall	1 heifer, 2 years; grades, from 1 year to 2 years.
Gibson, R.	Delaware	1 bull, 3 years; 3 bull calves.
Jamieson, R.	Perth	1 cow, 3 years; 3 bulls, 1 and 2 years; grade cow and heifer.
O'Brien, J.	London West	Bulls, all ages.
Silcox, E.	Shedden	1 bull calf.
Wood, W. J.	Cornwall	4 bulls, 6 months to 2 years; 6 heifers, 6 months to 3 years.

Guernseys

Butler, W. & Sons	Dereham Centre	1 bull, 14 months; 1 bull, 8 months; 1 bull 5 months.
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THE DOMINION SHEEP BREEDERS' ASSOCIATION.

Annual Membership Fee, \$1.00.

BENEFITS OF MEMBERSHIP.

Members are allowed to register animals at 50c. per head; non-members are charged \$1 per head. Each member receives a free copy of each publication issued by the Association during the year in which he is a member.

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.

The list of sheep breeders will be published in the second issue of each month. 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. HOBSON, Secretary,
Parliament Buildings, Toronto, Ont.

Lincolns

Gould, G. & Son	Rutherford	1 ram, 2 years; 6 ram lambs; 1 ram, 1 year.
Parkinson, E.	Eramosa	60 ram lambs.
Stevens, R. W.	Lambeth	4 shearing rams; 14 ram lambs; shearing and older ewes.

Cotswolds

Bonnycastle, F. & Son	Campbellford	1 ram, 2 years; 3 shearing rams; 15 ram lambs; 25 ewes and ewe lambs.
Honey, R.	Brickley	Ram lambs and ewe lambs.
Linton, W.	Aurora	20 rams, yearlings and lambs.
McCrae, D.	Guelph	6 shearing rams; 10 ram lambs; 22 shearing ewes.
Shore, J. H.	Glatworth	25 yearling and lamb rams; 25 yearling and aged ewes; ewe lambs.
Slater, J.	Huttonville	10 yearling rams; 15 yearling ewes.
Thompson, J.	Uxbridge	Yearling rams; ram lambs; ewes.

Leicesters

Armstrong, G. H.	Teeswater	8 ram lambs.
Currelley, T. & Son	Fullarton	1 ram, 3 years; 8 yearling rams; 15 ram lambs; 30 aged and young ewes.
Smith, J. S.	Maple Lodge	6 shearing rams; 6 rams, 2 years; 30 ram lambs; 20 ewes, 1 to 4 years; 20 ewe lambs.

Calder, C.	Brooklin	10 ram lambs; yearlings and aged ewes.
Ewing, J. B.	Dartford	Shearing rams; ram lambs; ewe lambs.
Ganton, D. G.	Saurin	10 ram lambs.
Gibson, R.	Delaware	21 shearing rams; 45 ewes, all ages; 20 ram and ewe lambs.
Hammer, D. G. & Sons	Burford	100 ram lambs; 60 ewe lambs.
Miller, R.	Brougham	50 yearling rams; 50 yearling ewes; 25 ram lambs; 15 ewe lambs.
Sorby, D. & O.	Guelph	Number of ram lambs.
Wren, C.	Uxbridge	20 head, including ram and ewe lambs, ewes, 1 and 2 years; 1 aged ewe.

Shropshires

10 ram lambs; yearlings and aged ewes.
Shearing rams; ram lambs; ewe lambs.
10 ram lambs.
21 shearing rams; 45 ewes, all ages; 20 ram and ewe lambs.
100 ram lambs; 60 ewe lambs.
50 yearling rams; 50 yearling ewes; 25 ram lambs; 15 ewe lambs.
Number of ram lambs.
20 head, including ram and ewe lambs, ewes, 1 and 2 years; 1 aged ewe.

Oxfords

Birdsall, F. & Son	Birdsall	8 ram lambs; 30 grade ram lambs.
Cousins, J. & Sons	Harrison	4 shearing rams; 40 ram and ewe lambs, shearing ewes.
Dickson, W.	Mildmay	10 ram lambs; 10 aged ewes; 6 ewe lambs.
Elliott, A.	Pond Mills	25 lambs, shearing and aged ewes.
Evans, S.	Gourock	1 ram, 4 years; 1 ram, 2 years; 30 ram and ewe lambs; aged and yearling ewes.
Hine, R. J.	Dutton	6 yearling rams; 30 ram lambs.
Jull, J. H.	Mt. Vernon	Ram lambs.
Lemon, S.	Kettleby	4 yearling rams.
Terrill, A.	Wooler	Ewes, ewe lambs and ram lambs.
Tolson, J.	Walkerton	2 aged rams; young rams.
Wright, H.	Guelph	100 ram and ewe lambs; 10 yearling ewes; 25 breeding ewes.

Southdowns

Baker, G. & Son	Simcoe	18 yearling and lamb rams; 25 aged and yearling ewes, 6 ewe lambs.
Jackson, J.	Abingdon	A few rams; 25 ewes and ewe lambs.
Lemon, S.	Kettleby	4 shearing rams; 4 ram lambs.
Martin, W.	Hinbrook	Rams and ram lambs; 12 ewe lambs; 12 yearling ewes.
Telfer, A. & Sons	Paris	Shearing and lamb rams; 1 ram, 2 years; ewes and ewe lambs.

Dorset Horns

Bowman, Jas.	Guelph	Pair ewe lambs; 1 aged ewe; shearing ram.
Hunter, J.	Wyoming	Ewes and rams.
Lea, H. F.	Consecon	6 yearlings and lambs.

THE DOMINION SWINE BREEDERS' ASSOCIATION.

Annual Membership Fee, \$2.00.

BENEFITS OF MEMBERSHIP.

Members are allowed to register animals at 50c. per head; non-members are charged \$1 per head. Each member receives a free copy of each publication issued by the Association during the year in which he is a member; this includes a free copy of a volume of the Dominion Swine Breeders' Record.

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.

The list of swine breeders will be published in the third issue of each month. 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. HOBSON, Secretary,
Parliament Buildings, Toronto, Ont.

Berkshires

Bowman, W. R.	Mount Forest	Stock all ages for sale.
How Park Co., Limited.	Brantford	150 pigs, all ages up to 1 year, both sexes.
Caldwell Bros.	Orchard	Stock all ages for sale.
Decker, C. R.	Chesterfield	Boars and sows all ages for sale.
Dorrance, J.	Seaford	Stock all ages, both sexes.
Ewens, J. M.	Bridge Creek, Man.	1 boar and 1 sow, 2 years; 6 boars and 5 sows, 4 months.
Ewing, J. B.	Dartford	Summer and fall pigs, both sexes.
Fahner, C.	Crediton	A choice lot, both sexes, 5 months.
Green, G.	Fairview	4 boars, 6 months; 1 yearling boar; 1 boar, 11 months; 5 sows, 7 months; 2 sows, 12 months; 10 sows, 6 months.
Hawkins, D.	Woodville	20 young boars and sows; 1 yearling boar.
Hodson, F. W. & Co.	Myrtle	40 head, both sexes, all ages.
Hyde, G. A.	Shakespeare	3 pigs, 7 months.
Jeff, E. & Son	Bond Head	Stock all ages.
Johnston, A.	Greenwood	16 young boars; 15 young sows.
King, W.	Carnduff, Assa.	1 aged boar; 1 aged sow; 5 boars and 4 sows, 5 months; 3 boars at 4 sows, 4 months.
Kitching, J.	Corwin	7 pigs, about 3 months.
Linton, W.	Aurora	Boars and sows from 2 to 6 months.
Lloyd, E. A.	Stouffville	Boar and sow, 8 months.
McLeth, R. S.	Oak Lake, Man.	2 boars, 3 months.
McDonald, R. W.	Morganston	Boar, 2 years; boar, 1 year; also young stock.
McEwen, J.	Kerch	3 boars and 3 sows, 5 months.
Martin, E. E.	Canning	2 sows and 1 boar, 9 months; 7 sows, from 4 to 6 months; 1 boar, 4 months; 3 sows, 2 months; aged boar.
Parlee, M. H.	Sussex, N.B.	2 boars, 1 and 2 years, 2 sows, 1 and 2 years, young stock, both sexes, all ages.
Reid, R. & Co.	Hintonburg	Stock all ages for sale.
Ross, A. W.	Douglas	8 pigs, 6 to 10 weeks.
Semple, J. R.	Brule, N.S.	3 boars and 1 sow, 6 months; young stock.
Shibley, W. J.	Harrowsmith	3 sows, 7 weeks; 2 sows, 1 1/2 months; 2 young boars.
Teasdale, T.	Concord	1 boar and 1 sow under 1 year; 1 yearling sow; 6 sows and 6 boars, under 6 months.
Thomson, G.	Bright	Stock all ages, both sexes.
Webster, R. A.	Andrewsville	1 aged boar; 1 aged sow; 1 sow, 7 months.

Yorkshires

Bowman, W. R.	Mount Forest	Stock all ages.
Clark, J. G.	Ottawa	Young boars and sows.
Cousins, J. & Sons	Harrison	7 sows, 3 to 4 months.
Day, N.	Powles' Corners	1 aged sow; 1 boar, 9 months; young stock.
Dool, E.	Harrington	2 boars, 10 and 15 months; 2 boars, 4 months; 3 sows, 4 months; 3 boars and 10 sows, 2 months.
Edwards, E.	North Westshire, P.E.I.	4 sows, 6 months; 5 sows, 3 months.
Featherston, J. M. P.	Streatsville	10 boars, 3 to 6 months, 6 sows, 3 to 6 months; some young pigs.
Gibson, R.	Delaware	20 pigs, 6 to 8 weeks; 5 young sows.
Hawkins, D.	Woodville	Stock all ages.
Hood, G. B.	Guelph	1 boar and 5 sows, 3 months; 2 boars and 5 sows, 2 months.
House, W.	North Bruce	2 boars, 5 months; 1 boar, 15 months.
Hyde, G. A.	Shakespeare	2 pigs, 7 months.
Isaiah Grange Farm	Danville, Que.	Stock all ages.
Mayhew, F. A.	Chapeau, Que.	4 boars and 6 sows, 3 months.
Parlee, M. H.	Sussex, N.B.	1 boar, 3 years; 2 sows, 4 months; 1 boar, 4 months.
Pike, J.	Locust Hill	6 young pigs.
Ross, A. W.	Douglas	11 pigs, 2 months.

Poland-Chinas

Clark, W.	West Lorne	2 sows, 3 months; 3 boars and 2 sows, 2 months.
Evoy, W. H. & Son	Bar River	7 pigs, about 4 months; some young pigs.
Herron, H.	Avon	Stock all ages.
Jones, W. & H.	Mt. Elgin	Stock, both sexes, under 5 months.
McIntosh, A.	Winchester Springs	8 sows and 7 boars, all ages.
McMullin, R. H.	Blytheswood	2 pigs, 5 months; 13 pigs, 3 months.
Stirrainger, F. H.	Fenwick	1 sow, 3 years; 2 sows, 11 and 13 months; 2 boars, 1 and 2 years; stock from 4 to 6 months.
Webster, R. A.	Andrewsville	2 aged boars; 1 aged sow; 1 sow, 15 months.
Willis, K.	Glen Meyer	Stock all ages.
Young, Capt. A. W.	Tupperville	3 spring boars; also sows.

Butler, W. & Sons Christie, J. Chute, H. J. DeCoursey, D.	Dereham Centre Winchester. Somerset, N.S. Bornholm	Chester Whites. Boars and sows, 2, 4, and 6 months. 24 sows and 5 boars, all ages. 2 boars, 4 and 2 months. 2 boars, 9 and 10 months, 4 sows, and 10 months; 10 boars and sows, 3 to 6 months. 1 boar and 4 sows, 5 months. 10 pigs, 3 months; 6 pigs, 2 months; 7 pigs, 1 month
Golding, H. Herron, H.	Thamesford Avon	Tamworths Both sexes, all ages. Stock all ages. 1 aged sow; 1 sow and 1 boar, 5 months. Boars and sows, all ages. 2 young sows, 1 aged boar. Young stock, both sexes. 1 yearling boar, stock all ages. 2 boars and 4 sows, 6 months; 2 sows, 2 months; small pigs 2 to 11 weeks
Bell, J. Caldwell Bros. Golding, H. Hallman, A. C. Laurie, R. J. & A. McDonald, R. W. Nickel, J. C. North, G.	Amber Orchard Thamesford New Dundee. Oak Hill Morganston Hubrey Marden	Duroc-Jerseys 25 pigs from 2 to 5 months, both sexes, 1 sow, 2 years, 1 aged boar. Boars and sows, 4, 6, and 8 months. 5 boars and 6 sows, 4 months; 3 boars and 5 sows, 3 weeks. 8 boars from 4 to 10 months; 5 sows, 2 months; young stock.
Odell, M. H. Reil, R. S. Co. Revell, R.	Belmont Hintonburg Ingersoll	Victorias Stock, 3 months
Berden, A. McNeill. Butler, W. & Sons. McCutcheon, H. Lape Bros.	Strathburn. Dereham Centre Glenoe Ridgeway	
Lahner, C.	Crediton	

for a few minutes. Never use the dishcloth to dry tinware used for handling milk. Then lay them on their sides while the tin is hot, on a table or shelf in a clean, well ventilated room, or better, outside in the light of the sun, where they are surrounded by plenty of fresh air. The shelf should be made with a little incline so as to drain the cans and pails, also to prevent rain or dust from falling into them. I prefer steaming the cans after they are rinsed in the hot water, if convenient to do so. Some steam the cans after they are washed, without rinsing in the hot water, but I do not like this way; as I have seen some very unclean looking utensils after being so treated. Rinsing in clean, hot water after washing removes the possibility of white spot drying on the surface of the tin.

Then put in some warm water and use a cloth or brush to clean it properly. Then scald it with as hot water as can be got, and repeat the scalding a second time with hot brine. Then remove the lid, draw the plug, and allow the churn to get all the fresh air possible. I scour the inside of the churn occasionally with salt. Do not cool the churn with cold water, as it will not dry so quickly and would encourage mould if left standing in a damp room. Wipe the outside of the churn with a clean cloth to remove any drops of cream or milk that may be on it. If the churn is not used every day and the room is warm, it is better to put it in a clean cellar after it is perfectly dry to prevent it from shrinking, or it may leak the cream when used again. If the churn is steamed for ten minutes after it is scalded with the hot water, it will keep it in better condition as the steam is hotter and will penetrate corners and cracks where the hot water fails to clean out. In ten minutes after steaming remove the lid. When using it again rinse out with hot water and cool with cold water before putting in the cream. A coat of varnish once a year will keep the churn nice looking. White spots on varnished appliances can generally be removed by rubbing hard with a piece of oily waste or cloth.

LIVE STOCK FOR MANITOBA AND WESTERN CANADA.

The Dominion Cattle, Sheep, and Swine Breeders' Associations wish to send a car load of purebred live stock to Manitoba and Western Canada on or before the 25th of this month. Seven cattle, or a proportionate number of sheep or pigs, are still required to complete the car-load. Have any readers of this paper animals they wish to send? Purebred animals may be shipped from any point in Ontario to any point in Manitoba or Western Canada at one-half regular car-load rates, to which must be added the legitimate expenses of a man in charge of the shipment, and other necessary charges. All such expenses are equitably divided between the various shippers. For full particulars apply to the Secretary of the Associations.

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.

CARE OF DAIRY UTENSILS.

By T. C. ROGERS, Instructor in Buttermaking, O.A.C., Guelph.

Cleanliness is the virtue that is always in demand in the care of dairy utensils.

Certain appliances and conveniences are necessary in order to aid the dairyman or the one engaged in practical dairy work to keep everything clean and in good condition without waste of labor. Any person engaged in dairy work knows how difficult it is to keep everything neat and clean in the dairy at all times, even when everything is favorable for doing so; but what must the work be in the dairy when the supply of hot water is insufficient, and where no brushes, washing sink, or other conveniences for doing work quickly and well are to be had! A good supply of hot water (and steam

in large dairies) washing soda, suitable brushes and a washing sink are necessary in every dairy or creamery. The hot water supply should be arranged so as to save fuel and labor. The supply should be equal to the demand.

A washing sink made after the following plan will be found very convenient and useful. Length 30 inches, width 18 inches, depth at the sides 10 inches sloping down and in from the sides until the sink is 15 inches deep in the centre, and six inches wide at the bottom, with a gate tap at one end. Less water will be required in a bottom like this than if it is flat. A smaller sink would be suitable for small dairies. It is light, easy to handle, movable, can be placed wherever most needed, and would be a useful appliance in every farm house. The inside of this sink should be made of heavy tin or galvanized iron, and the outside of wood with legs long enough to make the top of the sink 36 inches high.

WASHING.—The sooner dairy utensils are washed after using the more easily they will be cleaned. When ready for washing up, gather all the dirty pails, cans, and other utensils around, and put a pail of warm water (not too hot for the hands) and a teaspoonful of washing soda into the sink. The washing soda will take off the grease quicker and help to keep the tins brighter. If the tin is rubbed hard with the cloth or brush each time they are washed, they will keep bright and less scouring will be required to keep them looking well. Then with a cloth or brush wash all parts of the tins thoroughly, being particular about the seams and corners. The seams in all tinware made for use in the dairy should be filled with solder to prevent the accumulation of dirt where it is difficult to remove with a cloth or brush. As each utensil is washed turn it upside down to drain. When all are washed in the first water, empty the water and rinse out with a little hot water, then put in sufficient boiling water to scald all the utensils thoroughly, this will remove all taints. Turn them upside down again to drain

The chief points to observe in the cleaning of dairy utensils are to wash clean, drain properly and place in such a position that they can get plenty of fresh air. It is a bad practice to turn pails or cans upside down while not in use, as they are more liable to rust and they generally smell foul when needed, even after they have been cleaned properly. Better lay them on their sides. Hang all dippers, strainers, and small utensils in order in a convenient place. *Have a place for everything and have everything in its place.* Before emptying the water that the tins were scalded in wash the dishcloth clean, wring it dry and spread so that it will come in contact with fresh air. I prefer the brush for general cleaning. Two or three dishcloths should be kept on hand, so that a clean one will always be ready when needed. Use soap to cleanse them, and never leave a cloth without spreading it out in the air, or it will be unfit for use in dairy work. Have some cotton waste to wipe up any waste oil about the machines, and do not use the cloth that is used in washing the milk cans for this purpose. Two or three strainer cloths should be kept on hand for straining milk. They should be washed in two waters then scalded in boiling water and spread on a line outside in the light of the sun. In some cheese and butter factories they boil the strainer cloth for twenty minutes. This is wise, as this cloth is a source of trouble many times, and is very difficult to clean so as to destroy bacteria or germs that may cause bad flavors in the milk. Serious trouble in the flavor of cheese in some factories has been traced to the strainer cloth through which the milk was strained as it entered the vats. Some of our best cheesemakers won't allow their patrons to use a cloth strainer, as they know how difficult they are to clean. They are all right if kept clean, but I know from experience that it takes more time, patience, perseverance and hot water to clean them than they will receive in many dairies. A wire strainer with one hundred meshes to the inch would be more suitable generally.

CHURNS.—It is important to keep the churn sweet and clean, so that the flavor of the butter will not be tainted while churning. After you are through churning and making the butter, rinse down the inside of the churn with a little hot water and allow it to run out at once to remove any butter that may be sticking to the sides of the churn.

(Continued in next issue.)

TO MEMBERS OF THE DOMINION CATTLE, SHEEP AND SWINE BREEDERS' ASSOCIATIONS.

To arrange for the first publication of the monthly lists of stock for sale has taken much longer than was at first supposed necessary. It proved a difficult task to ascertain who had stock for sale and how many they had on hand; other considerations also prevented publication at an earlier date. Arrangements have been completed whereby upwards of 20,000 copies of these lists will be distributed monthly. Hereafter the lists will be published separately. See announcement at the head of each department. Members who have stock for sale are respectfully urged to send to the Secretary promptly each month, at the time specified, a carefully prepared list of the animals he or she has for sale. These lists promise to be of great value to the country and to the breeders if they are properly conducted, but in order that they be so managed it is absolutely necessary that each member report promptly to the Secretary. I appeal personally to the members to assist me in this matter. For the economy of space it is necessary to condense the lists as much as possible.

The name and address of several members of each Association has been unavoidably omitted in this issue, but the name and address of each one who has stock for sale and has notified me, has been published.

Members are respectfully requested to send me the name and address of persons who are reliable breeders of purebred cattle, sheep, or swine, and who do not belong to any of the Associations, or better still induce such persons to join one of the Associations and send to me his annual membership fee and a list of stock he has for sale.

F. W. HODSON,
Secretary.

MARKET REVIEW AND FORECAST.

Office of FARMING,
October 11, 1897.

Wheat.

The Canadian wheat market moves in close sympathy with prices in Chicago. Owing to the general confidence that the European shortage has been sufficiently taken into account, it turned out that for about a month, beginning, say September 8th, wheat prices gradually but slightly declined. During the last few days, however, the prices have been slightly stiffening again. The change is not much, but, on the whole, the movement is upward. The reason of this is fourfold: (1) It is found that stocks held in Europe are almost 50 per cent. lower than they have been for years, and this, too, although the imports from America have been unusually large. *Bachm* reports the total stocks held to be 48,000,000 bushels, against 80,000,000 bush. same time two years ago. (2) The French demand for wheat promises to be much greater than for some time it was thought it would be. (3) Advices from Argentina are all to the effect that the probability is that the supply from there next December will be greatly diminished by drouth. The drouth is reported unusually severe, and though it is too early yet to form any definite opinion, the probability is that the Argentina wheat export next December will not be sufficiently large to affect English prices to any appreciable extent. (4) There is a very serious and widespread drouth in all the wheat-growing areas of the middle and Western States. The winter wheat already sown this fall promises to be a failure, and in places where the sowing is not yet done farmers are afraid to sow. In many districts where the wheat has already shown itself a failure the farmers have determined to use the land for other crops.

All these considerations tend to establish the belief that wheat will again show an upward tendency, and perhaps continue to show it for some weeks. In Toronto at the end of the week the local markets were much firmer, and the prices offered considerably better than they were a week ago.

Coarse Grains.

Coarse grains, in sympathy with wheat, are firm, and show a slightly upward tendency. In the Western and Middle States, owing to the drouth, farmers everywhere are feeding grains instead of pasture. This has a tendency to stiffen the markets there, and the market here sympathizes. Barley in Toronto is selling at 26c. to 34c., rye at 41c. to 42c., oats at 24c. to 25c., peas at 46c. to 47c. Oats in Chicago rule from 19c. to 23c., according to grade, so that prices here are better than there. All coarse grains are higher in Montreal than in Toronto. For example, for peas 52c. is offered; oats are held at 25½c. to 26c.; feed barley is going at 34c., and rye is quoted at 40c.

Hay.

Hay is almost wholly a local article as there is no demand for shipment owing to the scarcity of freights. In Toronto hay is quoted at \$8 to \$9 with a fair local demand. Straw is quoted at \$8, with none offering. But the probabilities are that hay in Ontario will not rise in price since there is an estimated surplus in the province of 1,800,000 tons. There is no chance of shipping hay at reasonable freights for a long time, so that farmers will have to make up their minds whether they will sell their hay at low rates or use it at home. We think that they ought to try to use it upon their own farms and convert it into beef or milk. Prices are higher in Montreal than in Toronto, but there is not enough difference to warrant the Ontario farmer holding his hay with the expectation of a rise in his own local market.

Butter and Cheese.

The exports of these products to Britain have been unprecedented for this time of the year. For the week ending Oct. 2 \$600,000 worth of cheese was exported from Montreal. The importation of cheese into Britain from Canada since January has been enormous, and there have been many fears that the market would break. There has also been a very great increase in the importation from New York. What will no doubt strengthen the cheese market is the fact that owing to the drouth the make of butter in the Western States has been very much diminished, and butter intended for export to England has been consumed at home. This has lessened the visible supply of butter intended for England and much increased the price of butter in stock. During all summer Montreal shippers have been buying butter from the Western States and sending it to England at a profit. This can no longer be done. The whole

situation seems to be this: (1) The price of cheese remains about the same, but makers may well be uneasy lest the English demand may suddenly cease, for it is said that English retailers are stocked full. (2) The price of butter shows a decidedly upward tendency, the probability being that the tendency will continue for some time.

Eggs.

The demand just now is not for eggs simply, but for *guaranteed fresh* eggs. A large local dealer informed FARMING a day or two since that it was impossible to get guaranteed fresh eggs in Toronto now at any price. He said: "Tell the farmers that if they will send in their eggs *fresh* they can command any price they wish for them." Taking up an egg from his counter he said: "I cannot tell whether this egg is three days old or three weeks old, or even six weeks old. If I were certain it were newly laid I could sell it for three times the price I can now ask for it." Eggs on the Toronto market are quoted at from 15c. to 16c., but family grocers will pay from 25c. to 30c. for guaranteed fresh eggs.

Apples.

The apple crop is not turning out anything like so badly as was first reported; so that low grade apples are likely to rule low in price. But in England the market for good apples is advancing rapidly. But in anticipation of a scarcity of supply dealers here have been already paying all that they can afford, even with an advancing market, so that it is not likely that prices here in Canada will go any higher. Good winter fruit is offered by western Ontario dealers to Montreal shippers at \$3 a bbl. f.o.b. cars in west; which does not mean more than \$2.25 a bbl. to the grower, perhaps not more than \$2. This is all that the grower can count upon this season. The market is a rising one, however, and if he has choice fruit, and can store properly, it may pay him to hold and sell locally.

Live Stock.

Cattle, Sheep and Swine

The whole tendency of the cattle market is upward. The deficiency of breeding cattle in the Western States is enormous. It is estimated that it will take at least *seven years* before the western ranges will be up to their normal condition for breeding. Some make the limit ten years; others four years; but the most careful authorities say at least ten years.

A noticeable feature in the Canadian cattle market is that not notwithstanding the Dingley Bill our exports to Buffalo are greater than they ever were.

The demand for cattle for export to England shows, however, a present falling off, so that prices both in Toronto and in Chicago are not so good as they have lately been. This is, however, only a temporary condition; for there is not enough cattle in America in sight to supply the regular European demand. But it must be admitted that prices this week have ruled low and have been somewhat discouraging. The market for sheep and lambs, in sympathy with that for cattle, has also shown a slightly downward movement. In Toronto hogs have had brisker sales than any other kind of stock.

The prices actually paid in Toronto have been about as follows: Export cattle from \$4 to \$4.35; butchers' cattle, 3½c. to 3¾c. for choice; stockers and feeders, heavy, \$2.75 to \$3.40; light, 2¼c. to 3¼c.; export sheep, 3c. to 3½c.; export lambs, 3½c. to 3¾c. Choice calves are in good demand, not only in Toronto, but elsewhere. In fact, the demand for good veal is growing everywhere. And this is one reason why breeding cattle are scarce. Poor veals are not wanted at any price—at any rate in Toronto. Choice bacon hogs are bringing from \$5.50 to \$5.65 per cwt.; light fat hogs and thick fat hogs about \$5, with a preference for the light ones.

Mr. Frank T. Shutt, chemist of the Dominion Experimental Farm, read a paper before the chemical section of the British Association for the Advancement of Science at its late meeting in Toronto, on "The Composition of Canadian Virgin Soil." This paper was a summary of the investigations carried on in the laboratories of the experimental farm during several years past. Mr. Shutt arrives at the general conclusion that in all the provinces of the Dominion large tracts of untilled land exist that would rank with the fertile soil of other countries; and, further, he holds that many Canadian soils are possessed of a most abundant store of plant food—stores so vast as to allow of their most favorable comparison with the richest soils of which we have any knowledge.

Publishers' Desk.

Important Auction Sale.—The herd of purebred Ayrshires, bred by the late Thos. Guy, Oshawa. Mr. Guy won the herd prize for nine years in succession at the old Provincial Show. Representatives of his also won good places at the World's Fair, Chicago, in 1893. There are descendants of prize-winning stock for sale. The success of stock from this herd in the show-ring and their excellent performance at the pail have made this herd well known. It affords a splendid opportunity for any one to get a number of well-bred Ayrshire cattle.

A Good Time is Now.—The best time to make a contract for farm produce, so far as possible, is when the article is in good demand. For instance, just now dealers are anxious for eggs, butter, poultry, or anything else produced on the farm; therefore, just now is the time when the producer should endeavor to make such connection with the buyer as shall place both in the best position to handle the produce with the best mutual results. Contracts for supplying certain quantities of farm products, weekly or monthly, can be made for many of the different farm products with good reliable buyers to the mutual advantage of both buyer and seller. In another column will be seen the advertisement of The Wm. Davies Co., Limited. They are a thoroughly reliable firm. A wink is as good as a nod.

Reliable Facts Regarding Blower Ensilage Cutters.—This is purely a Canadian invention and worthy of special notice. No more important improvement has been placed on the market for many years than the principle of the blower elevator as a silo filler. The practicality of such a machine has been very much in question. All, however, have been agreed as to its value if it could be made to do the work. Now there is no longer any reason to doubt its success, as sufficient proof is within the reach of all that upwards of fifty silos have been filled this season by the Watford make of machine. To Mr. D. Thom, implement manufacturer of Watford, is due great credit for the persevering manner in which he has brought this improvement to perfection. This is another instance of the perseverance of Scotchmen, for few amongst either farmers or manufacturers would credit the possibility of elevating green corn twenty-five or thirty feet before they had actually seen it done. Fuller particulars can be had from the makers.

Two Great Horse Shows.—During next month two great horse shows will be held. On November 1st to 6th will be held the Chicago Horse Show, at which the magnificent sum of \$45,000 will be distributed in prizes. This show will be held under the auspices of the Illinois State Board of Agriculture, but it will have the leading citizens of Chicago behind it. The managers hope to make it a permanent affair like the New York, Boston, and Philadelphia shows. The prizes are the most liberal ever offered. Mr. John A. Logan, Jr., is the manager, and all entries, which close October 20th, should be addressed to him. Canadians should make a good showing in this show, especially with their Hackneys. The National Horse Show—or, as it is generally called, the "Madison Garden Show"—will be held at Madison Square Garden, November 15th to 20th. At this show the sum of \$35,000 will be distributed as prizes, and the competition is expected to be very close. The breeding classes will be separated from the driving classes. The premiums in the Hackney classes range from \$150 to \$500, and we trust a number of our Canadian Hackneys will be successful in winning good ones.

Farmers' Institutes. The annual meeting of "The Annual Association of Farmers' Institute Managers" will be held at Columbus, Ohio, on October 27th and 28th. We notice that our own superintendent of Farmers' Institutes, Mr. F. W. Hodson, is to give an address on "How to Make Sure of the Co-operation of Local Talent."

Butter and Cheese
Maker Wanted

Applications will be received by the undersigned, up to October 23rd, for the position of

Butter and Cheese Maker

at the Norwich Junction Butter and Cheese Factory. Output per annum about 20 tons of butter and 140 tons of cheese. Applicants to state experience, monthly salary expected; also price per cwt. for making cheese and butter, maker to furnish everything.

JOHN McKEE, Norwich, Ont.

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278 Queen St. E. (cor. Ontario St.)	2456	444-446 Yonge St. (opposite Carlton St.)	308
454 Spadina Ave. (near College St.)	1834	280 Queen St. W. (near Beverley St.)	2501

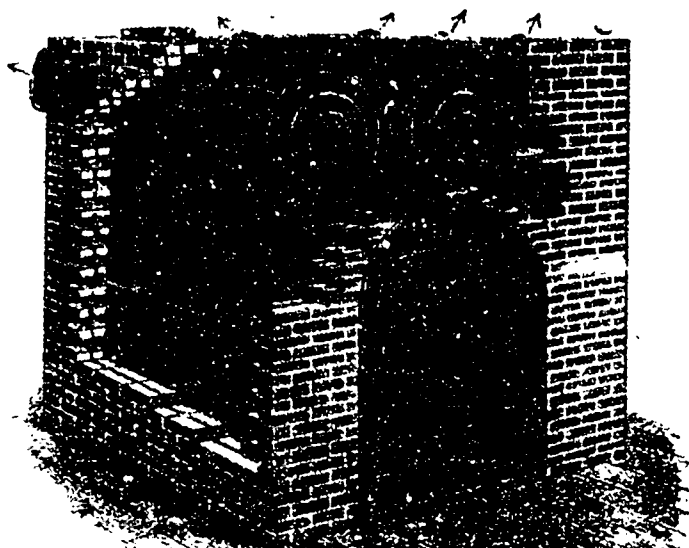
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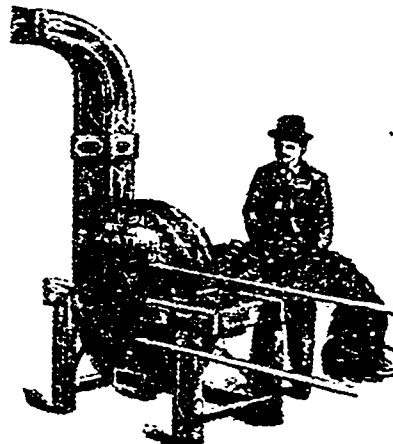
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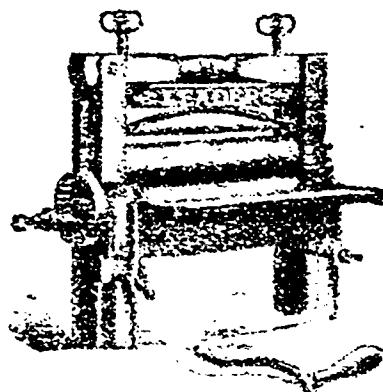
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In the United States four times as much money is expended for education as for the military. Brain is better than brawn. By our educational facilities we have become a great nation. We, the publishers of Woman's World and Jeannette Miller Monthly, 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 soap, pianos, medicines, books, baking powder, jewelry, etc., we shall add \$50,000 a year to our income, and with this mathematical 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 month 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 Florida Diamond Scarf Pin (for lady or gentleman), the regular price of which is \$1.25. Therefore, by sending your list, you are positively certain of the \$25 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.

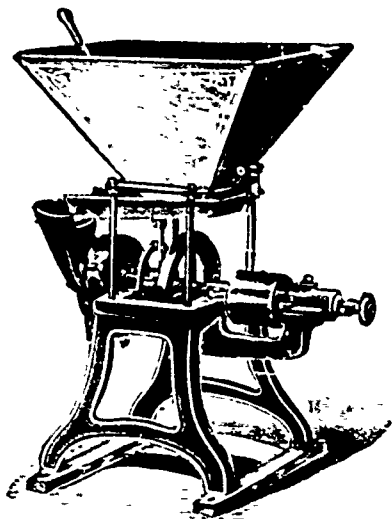
PRIZES WILL BE SENT PROMPTLY.

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. - - G - T - U - 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 - - - H Once President of the United States. |
| 8. N - 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. G - R - A A foreign country, same size as Kansas. |
| 11. H - V - - - A A city on a well known island. | 26. B - R - - - O 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. G - - R - L - A - Greatest fortress - knob 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. G - L - F - - - I - One of the United States. | 30. M - D - G - S - A - An island near Africa. |

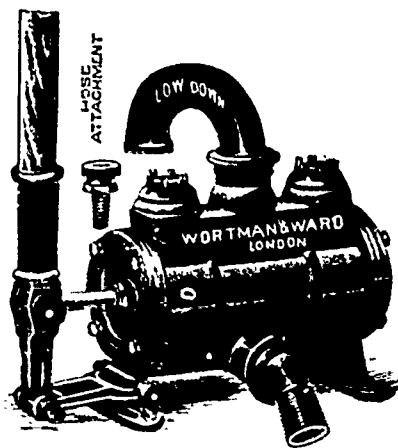
In sending your list of words, mention whether you want prize money sent by bank draft, money order or registered mail. We will send any way that you prefer. The Florida Diamond is a perfect imitation of a Real Diamond of large size. We desire copies to distinguish it from any cheap imitation. In every respect it is free of the purpose of being as brilliant as a Real Diamond. It is artistically finished in a beautiful, ornate pin. We cannot send it by parcel post. All post payments of 25 cents should be enclosed with your list. We will send you a copy of our magazine, and we shall send you \$25.00 in money instead of not being able to pay you. We shall send you the regular price of \$1.25 in cash. In addition to your participation interest in the \$200.00 cash prize. This entire offer is all the best we can do for you. We will send you a copy of our magazine, and we will send you a copy of our magazine, and we will send you a copy of our magazine. Write or call Kansas Street, Chapel St. Corner, 11th St. Dundas.

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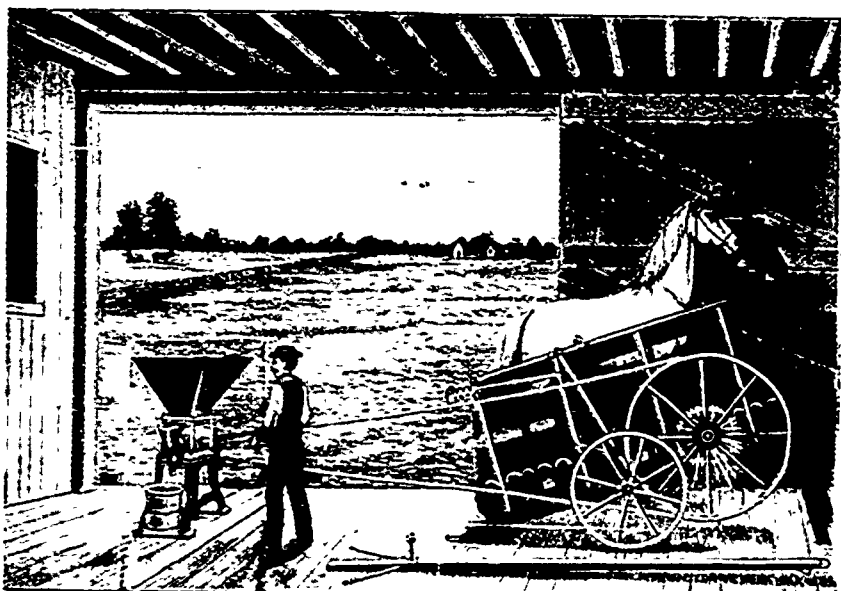
THE DAISY FEED GRINDER.

Simplest in construction, lightest running, ball bearing Grinder made. Every farmer his own miller. Capacity from 25 to 70 bushels per hour. Buy one and be convinced.



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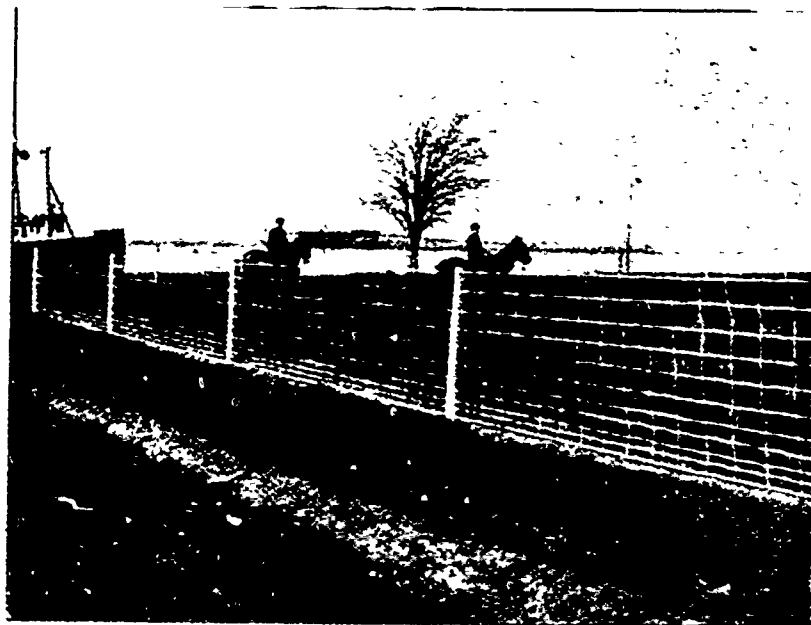
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Our Improved Double Geared One, Two, and Three-Horse Tread Powers surpass all competitors in quality, durability, efficiency, and simplicity of construction. They have cold rolled steel shafting, long bearings, improved governor (which acts automatically), and many other valuable improvements.

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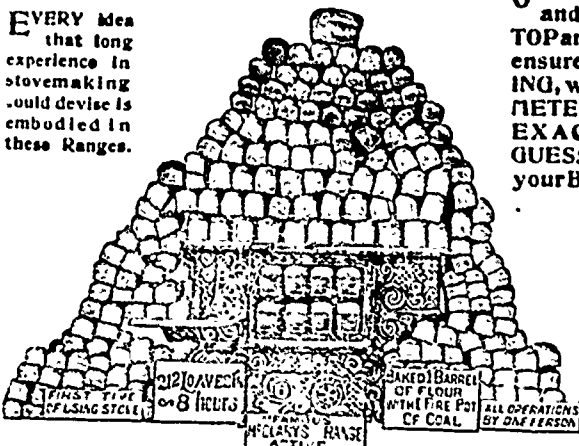


From the appearance of this fence you may think it cost a lot of money. But we are quite sure it is cheaper than you think. And the fence is still better than it looks. We have not room to say more here. Write us and we will send full particulars.

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EVERY idea that long experience in stovemaking could devise is embodied in these Ranges.



OVEN is VENTILATED and CEMENTED on TOP and BOTTOM—this ensures EVEN COOKING, while a THERMOMETER in door SHOWS EXACT HEAT—NO GUESSING as to how your BAKING or ROASTING WILL TURN OUT.

Every housewife knows what an advantage this is.....

Quick Working!
Easily Handled!
Sparing on Fuel!

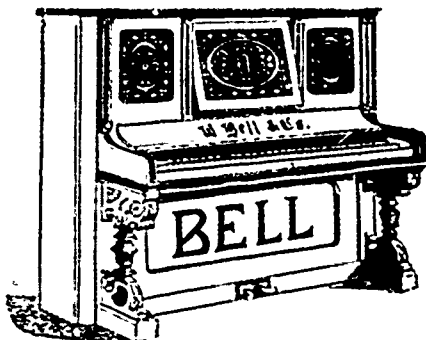
Cut shows 8 hours' work by one woman, using only one fire-pot of coal.

The McClary Mfg. Co.,

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

ESTABLISHED 1864.



Eureka!

We have found it, after thirty years of study and experiment.

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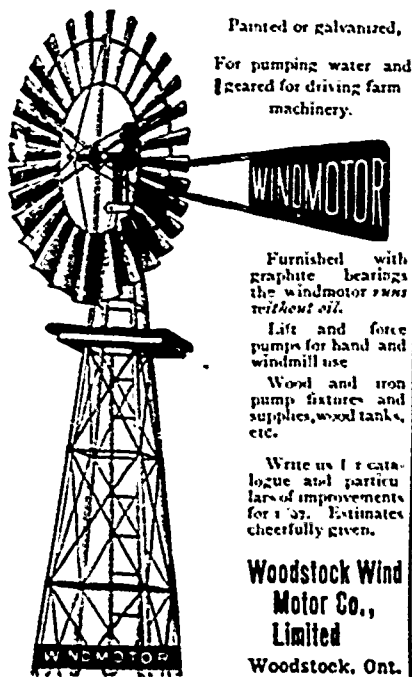
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Painted or galvanized,
For pumping water and geared for driving farm machinery.

Furnished with graphite bearings the windmotor runs without oil.

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have had eight years' experience in Canada, with an increased sale every year, which is the highest compliment to their merits. They have been in use by Liverymen, Doctors, Farmers, and hundreds of others from ocean to ocean, and one and all say that they are the robe of the future. The robe is made in one piece, therefore no seams to rip, and is as strong as leather. A superior class of lining is used, and it is interlined with rubber cloth, making it both wind and waterproof. It is also moth-proof, easily dried after being wet, does not get hard like a skin robe, and has no offensive smell.

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