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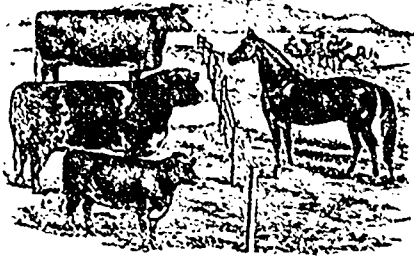
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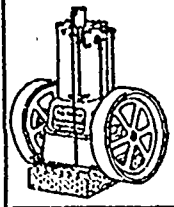
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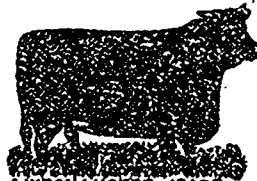
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FARMING

VOL. XVI.

NOVEMBER 8th, 1898

NO. 10

Notice to Advertisers

Changes of all advertising matter must be in the printer's hands not later than Friday of each week. To insure position on cover or preferred position in any part of the paper, copy must be furnished not later than Thursday in each week. We cannot insure changes unless these rules are complied with.

Agricultural News and Comments

A new building is being erected for the Provincial Dairy School at Sussex, New Brunswick. The school will open early in February next, when a large attendance of cheese and butter-makers is expected.

A scheme is on foot for the federation of the butter factories in the colony of Victoria, Australia. The main object of this organization is to effect a reduction in the cost of handling, and to obtain better control and regulation of exports. The authorized capital will be £30,000.

The farmers of the Texas coast country have developed a system of co-operation which has materially improved their financial condition. They formed local and then district associations, regulating by voluntary agreement the acreage of various crops. From that they began to deal with commission merchants for the sale of their produce, and now their organization, receives tenders and bids from the leading buyers of the State.

A movement is on foot to organize an American Agricultural Association with the main object of enabling the farmers to be better informed as to the time to sell their wheat and live stock. Its promoters claim that by the farmers organizing in this way they will be able to hold their wheat or sell it as they wish and accordingly may have more control over the market for it. The work of this association, if organized, will be watched with interest by farmers in other countries.

Reliable reports indicate that the turkey crop of 1898 in the United States will be about 5 or 10 per cent. larger than that of last year, or about 65 to 70 per cent. of a full crop. Chickens will be plentiful, and possibly the crop for 1898 will be 10 per cent. larger than that of 1897. The supply of ducks will be large and equal to the crop of 1897, which was 15 per cent. larger than in 1896. The crop of geese is estimated to be about 85 per cent. of a full crop, which is about the same as last year.

There are some seventy-six agricultural societies in Quebec province, with a membership of 12,770 at the beginning of 1897. They received Government grants of \$25,905 for the year 1896; their members' subscriptions amounted to \$18,922; while from sundry sources, such as entry money to grounds, sums paid towards competitions, etc., enough was derived to make their total receipts \$77,320. Of this there was expended for prizes at exhibitions \$24,630; for farm competitions, ploughing matches, purchase of cattle, etc., \$20,000.

At a meeting of the Maritime Stock Breeders' Association, held in Halifax during the Nova Scotia Provincial Exhibition, the live stock interests of the province were discussed. Among those who addressed the meeting were F. S. Peers, N.Y. State; G. E. Day, Agriculturist, O.A.C.,

Guelph; R. Robertson, Supt., Nappan Experimental Farm, and J. C. Snell. In the discussion it was shown that, while the Maritime Provinces had made considerable progress in the breeding of good dairy cattle, the breeding of good beef cattle had been very much neglected.

The Scottish Farmer is authority for the statement that the general adoption of winter dairying in Scotland would need to be very carefully considered. It also points out that cows, when timed to calve at all dates during winter, are very liable to take "weeds," and this condition has a good deal to do with providing the tubercle bacillus with a favorable soil. It advocates restricting the winter calves to the young, strong heifers bearing their first calves, and not putting them again to the bull until the regular season. We doubt if winter dairymen in this country will agree with this contention.

According to investigations and estimates of *The Orange Judd Farmer*, the total apple production, so far as marketable stock is concerned, in the United States for 1898 is 27,681,000 bbls., compared with 41,536,000 in 1897, 69,879,000 in 1896, 60,543,000 in 1895, 57,629,000 in 1894 and 57,242,000 in 1893. The average for the five years previous to 1898 was 57,000,000 bbls., so that the present year's crop is barely half of the average yearly supply. In the Annapolis valley, Nova Scotia, there is nearly 75 per cent. of a full crop. In 1896 this region exported 500,000 bbls. from a full crop and only 85,000 in 1897, while this year it is estimated that the surplus for export from Nova Scotia will be between 250,000 and 300,000 bbls.

Agriculture in Public Schools

Since the publication of the new text book, "Agriculture," authorized by the Department of Education for use in the public schools of this province, a new interest has been aroused in the teaching of agriculture in rural sections. As yet the teaching of agriculture in the public schools is optional, and is left in the hands of the trustees. If they demand that it shall be taught it will be. We must confess, however, that we are at a loss to understand why the Minister of Education did not make the teaching of agriculture compulsory in the rural schools as soon as the text-book was ready. We think public opinion in this country is in favor of it, and we are quite sure that every agriculturist in the province will hold up his hands for it. If a more definite expression of approval is needed, it becomes incumbent upon every Board of Trustees, Farmers' Institute, and agricultural organization in the province to memorialize the Minister of Education and demand that the teaching of agriculture be made compulsory in rural schools. It may be that the reason why this has not been done before is because teachers are not in a position to teach it. But the quickest and best way to make them competent is to make the subject compulsory, and then every teacher will find a way of fitting himself for the work.

As to the value to an agricultural country like Canada of teaching agriculture in the public schools there can be no great difference of opinion. We have only to refer to what has been accomplished in other countries where such teaching has been tried to prove this. In 1896 a committee was appointed in Great Britain with the Hon. Horace Plunkett, M.P., as chairman, to investigate the agricultural

conditions in Europe with a view to helping the condition of the farmer in Ireland. The report of this committee, after enumerating the different agricultural countries of Europe, says: "The organization of the farming class follows in all these countries. The most positive action of the State in assisting agriculture is taken in connection with education. Everywhere it is accepted as an axiom that technical knowledge and general enlightenment of the agricultural class are the most valuable of all levers of progress." Further on the report gives the opinions of several persons associated with agricultural teaching in their respective countries. The President of the Dutch Agricultural Council says: "Every guilder spent in the promotion of agricultural teaching brings back profit an hundredfold." The Belgian Minister of Agriculture says: "Every franc spent in agricultural teaching brings a brilliant return." M. Tisserand attributes the great progress made by French agriculture since 1870 in a large measure "to our schools, our professors, our experiment stations and the illustrious men of science, whom the administration has induced to devote themselves to the study of agricultural questions." Mr. H. M. Jenkins, in his report to the Royal Commission on Technical Instruction, says: "The results of agricultural education in Denmark have been something extraordinary. Danish butter is now the best in the world; in 1860 it was described by the British vice-consul at Copenhagen as 'execrably bad'; the progress since then is directly traceable to agricultural education."

The report does not give in detail the various systems of agricultural education in vogue in the different countries, but summarizes them as follows: "The most stirring point is the great similarity in the main features of the systems. Almost everywhere there is a course of elementary practical instruction in agriculture given in the primary schools; there is a class of secondary schools in which a more extensive course is given to boys of from thirteen to sixteen or seventeen, and there is a system of higher training for the sons of large landowners and those intended to be managers of large estates, agricultural engineers, and professors and teachers of agriculture. Most countries, however, have adopted a system of travelling instructors or professors, who not only superintend the agricultural courses given in the primary schools of the districts, but also hold conferences and give lectures, and advise and keep themselves closely in touch with the actual cultivators of the soil. Agricultural schools for the farmers' daughters, in which they are taught what is called in France the lore of the farm yard and farm-house, including the rearing of poultry, the feeding and tending of live stock, cooking, domestic economy and the keeping of farm accounts, are also to be found now in most of these countries"

Speaking of Denmark, the report says: "Besides these and other indirect ways of promoting agricultural education, technical instruction in agriculture is given in State primary schools, which are gratuitous and compulsory. The high schools, which now receive a Government grant, include technical training in their curriculum; and there are special agricultural schools, in which agriculture is the chief subject, receiving a subsidy from the State." Of France it says: "In addition to all these forms of instruction, a course of agricultural teaching is now obligatory in every primary and upper primary school in the rural districts of France." The report also quotes from M. Tisserand's annual report on agricultural education in France, who says: "Our schools now are far better attended than they used to be, everywhere people are working with zeal, and the scientific spirit has invaded the farm. Young men of intelligence are becoming more attached to rural life, and the children brought up in our country districts, when they receive an appropriate agricultural education, will be less tempted to go into the towns to increase the already too great number of those chronic unemployed who constitute to-day a perpetual danger to society." The report also gives information showing that the teaching of agriculture in the public schools and otherwise is being encouraged and promoted in every way by the Governments of Holland, Bavaria and Hungary with very satisfactory results.

Referring to Bavaria it says: "Agricultural schools exist in every district, the State paying half the annual cost. They are of the simplest kind, intended for the sons of the peasant farmers, and embracing a course of instruction in tillage, cattle-raising, arbor culture, and market-gardening."

From the foregoing, which is necessarily very condensed, it will be seen that agriculture in the public schools has obtained a strong foothold in the leading countries of Europe, with the result that agriculture is progressing, and is adding very much to their material progress. In closing this article we cannot do better than quote an extract from an address on "Economics in Agriculture," delivered by Governor Lount, of Indiana, last February: "The most marked manifestation of sound economic wisdom has been agricultural education, extending from the state agricultural colleges and experiment stations down to the common schools."

Blackleg

A few cases of this cattle disease have occurred recently in the eastern portion of this province, but, fortunately, it has been taken in time and is not likely to spread. Blackleg was formerly regarded as a form of Anthrax, but later examinations have shown that the two are distinct and independent diseases, each of which is caused by a specific micro organism. Blackleg is an infectious disease produced by the blackleg bacillus, a parasite which lives and propagates in the soil of affected districts and in the body of diseased animals. Certain soils are said to be very favorable to the growth of this germ and such soils when once infected usually remain so permanently and constitute the main source of the disease in the animals. Blackleg, though infectious, is not contagious, and a diseased animal does not transmit the disease directly to a healthy one. Healthy animals become diseased when the germ enters a wound in the skin or mucous membrane of the body. Such wounds can easily be produced on the legs when in the pasture or at the mouth when grazing. The body of an animal that has died of the disease should be burned and not buried, if buried the disease germs will get into the soil.

The characteristic symptom of this disease is the appearance of large swellings on various parts of the body, usually on or near the upper portions of the legs and never below the hock or knee joint. When the hand is passed over these swellings a crackling sound is produced and when cut with a knife a bloody fluid with a disagreeable sickening odor is discharged. Some general symptoms of the disease are loss of appetite, high fever, and lameness. Nearly all affected animals die within one and one-half to three days from the time of the attack. Medicinal treatment of the disease is about useless. The only practical method of dealing with the disease is to prevent it by keeping animals away from infected sources. Another preventive is vaccination or protective inoculation, which prevents almost entirely the appearance of the disease.

Keep More Sheep

The National Provisioner, in advising the American farmers to raise more sheep and fewer hogs, makes the following statement regarding the cost of keeping sheep and the probable profits from the business:

"Five acres of land will take care of twenty-five sheep and their lambs during the summer, and during winter no farmer will miss what they will eat. Their fleeces will pay about \$1 apiece, and their lambs a year old, if properly cared for, are good for \$3. If fattened to 100 pounds' weight and put on the market they are good for \$5 by the carload. It has been figured out by an authority that, with oats and corn at 30 cents a bushel and oil meal at \$1.25 per hundred, a lamb from the time that it is two weeks old until it reaches 100 pounds, which is in the eleventh month, will not consume more than \$1.35 worth of grain. In our opinion, the time is not very far distant when, with the scarcity of beef and with the high price which cattle

command, we will have to resort to eating mutton. There will also be a great export demand for the article. We have too much corn, too many hogs, too few sheep."

Sheep-raising is responsible for a large share of the wealth of Australia and some parts of Great Britain, and why it will not materially increase the wealth of this country there is no adequate reason for. True, as we pointed out a few weeks ago, the worrying of sheep by dogs has had no small part in deterring our farmers from raising more sheep. But this is not an insurmountable difficulty, and, if active measures, such as we gave in our issue of Oct. 18th last, are put in force, the injurious effects of the sheep worrying dog can be easily overcome. Surely there is ingenuity and inventive genius enough in the farming districts of this country to devise some plan of preventing the "prowling" and "sneaking" dog from driving a most important industry to the wall. A sheep is of more value than a prowling dog any day, and the country would be none the worse if there were none of this canine tribe in it. How many farmers have ever got rich by keeping a dog? True, a well-trained dog on the farm is very useful, but if the keeping of dogs on the farm will prevent the growth of so important an industry as sheep-raising the sooner their hides are tanned the better.

Profit in Keeping Hens.

It is considered that 75 cents is a fair estimate for keeping a hen on a farm for one year. This estimate does not allow for kitchen waste, etc., which may be of little value when not fed to the hens. When everything has to be purchased it is estimated that the average size hen will consume from \$1 to \$1.50 worth of grain and supplies in a year. Some farm poultry growers in the United States reckon the cost of keeping their fowls at 50 cents a year. Such an estimate, however, must only cover the cost of feeding them during the winter, and does not place any value on summer feeding in the fields. The lowest estimate recorded is 25 cents per year, but this must apply to countries where there are summer conditions all the year round.

If \$1 per year be taken as a fair average for keeping a hen a year, what profit is there in the business for the poultry raiser? This will depend, largely, upon the kind of fowls, and how they are cared for and fed. It is stated that an experienced poultry raiser of New York State, by selecting the best layers among his flock of Leghorns for several years, got his whole flock of 600 up to an average of 196 eggs per hen per year. This is an extremely high average for so many hens on one farm, and it is not to be expected that ordinary fowls will do as well. At the current price for fresh eggs each of these fowls would return its owner about \$3 a year for eggs. But even if we cut the number down to 100 eggs for each hen per year, there is money in the business for the farmer if he looks after it properly.

Beerbohm Wheat Review.

Beerbohm's London list of October 14th gives some valuable figures as to the probable surplus of wheat exporting countries will have and the amount importing countries will need. The following list gives the probable exports of the various countries for 1898-99 in quarters:

	Quarters.
America and Canada	25,000,000
Russia.....	10,000,000
Roumania, Bulgaria, Turkey and Servia....	6,000,000
India.....	2,000,000
Tunis and Algeria.....	1,000,000
Australasia	1,250,000
Total.....	45,250,000

In this list the probable exports from all countries except Argentina, Uruguay and Chili are given. It is estimated that these countries will have at least 3,000,000 quarters to spare and may possibly run up to 6,000,000 quarters

Another list, which is as follows, gives the probable imports for 1898-99:

	Quarters.
United Kingdom.....	22,000,000
France	1,000,000
Germany, Belgium, and Holland.....	11,000,000
Italy.....	2,500,000
Spain and Portugal.....	750,000
Switzerland.....	1,750,000
Austria-Hungary.....	1,000,000
Greece, Scandinavia, and Sundries.....	1,500,000
Extra-European countries.....	3,750,000
Total.....	45,250,000

As will be seen, the total imports are equal to the exports with the exception of those from Argentina, Uruguay, and Chili, and to quote Beerbohm's summing up, "In any case, the surplus over the requirements is by no means serious when we reflect how greatly reduced are the reserve stocks; it will, in fact, evidently require more than the surplus growth of this season to restore the world's reserves to a normal level. However, it is apparent that the more distant future of the market depends to a large extent upon the next Argentina crop. In this connection it will be well to bear in mind that the gold premium no longer favors very low prices, as it did, for instance, in the years 1891 to 1895, the memorable seasons of 1894 and 1895 in particular."

By substituting eight bushels for each quarter in the above estimates the amount can be changed into bushels, and be more readily understood by people in this country

Potatoes and Field Roots for Fattening Lambs

By Prof. Thos. Shaw, University of Minnesota

This experiment relates to the feeding of lambs bought upon the Montana ranges. The lambs were purchased at Culbertson, Montana, from Wm. B. Shaw, the manager of Prospect Ranch. They had been reared on the open range, and were part of a lot brought in from the range in the autumn of 1897.

Chief among the objects sought were the following: (1) To ascertain the value of potatoes, mangels, and sugar beets respectively as food factors in fattening lambs. (2) To ascertain the outcome from feeding very ordinary range lambs under what may be termed high pressure feeding. There were also secondary objects sought, but of a less important nature. The behavior of the lambs on the diet of roots was the feature of the experiment. Potatoes are largely grown in our state, and in some seasons, as, for instance, in 1895, the price falls so low that the marketing of the potatoes is of doubtful advantage. These conditions have very naturally begotten a desire on the part of farmers to know their precise value in feeding and their relative value for the same use.

The lambs chosen were what might be called the tail ends of a lot of 300. They were not really culls, but were small in size, and not of so good form as were the major portion of the lambs of the entire lot. They weighed, on an average, 49.7 lbs. when the experiment began. They were from Oxford Down grade sires and from dams that were essentially Merino grades in breeding. They were a little flat of rib and long of limb.

They were divided into three lots of twelve each, as thirty-six in all were fed. Each lot had a small apartment of the piggery, 8 ft. x 11 ft., and each had access to a small yard, 8 ft. x 20 ft., on the sunny side of the piggery. They were plentifully supplied with water and salt in addition to the other food named. They were weighed every two weeks. Those to which the potatoes were fed are spoken of as lot 1; those to which mangels were fed are referred to as lot 2; and those to which sugar beets were fed are designated as lot 3.

The grain proportion of the food fed consisted of corn, barley and oil cake, fed in equal parts by weight. The hay was clover and timothy, the former predominating. The

lambs in lot 1 were fed potatoes, those in lot 2 mangels, and those in lot 3 sugar beets. The grain was fed whole and the hay uncut, and they were given of each what they would eat up clean and no more.

The food was estimated at average market values in the state. These were as follows:

Hay, per ton.....	\$ 4 00
Oil cake, per ton.....	22 00
Corn, per bushel of 56 lbs.....	0 22
Barley, " " " 48 ".....	0 20
Potatoes, " " 60 ".....	0 20
Mangels, " " 50 ".....	0 05
Sugar beets, " " 50 ".....	0 05½

These valuations would make the potatoes 33c. per 100 lbs., the mangels 10c., and the sugar beets 11c.

The time covered by the entire experiment was 117 days. The preparatory period began Nov 15, 1897, and covered 7 days. The experiment proper covered 98 days. The lambs were sold when fattened to P. Van Hoven, to be retailed in the Twin City markets.

The evenness in the amounts of the food consumed was very marked. Out of a total of 12,457 lbs. eaten the extreme of difference was only 47 lbs., and this was chiefly from the more grain consumed by the lambs in lot 3. The average total of food consumed per day was 3.52 lbs. The average amount of roots consumed per day was practically the same by the lambs in each lot. In all instances it was relatively small, not exceeding 1¼ lbs. per day, notwithstanding that the lambs were given all that they would eat up clean. Although the amounts consumed by the lambs were practically the same, the cost of the food consumed by the lambs in lot 1 was \$3.51 more than that of the food fed to the lambs in lot 2, and \$3.05 more than that of the food fed to the lambs in lot 3.

During the 98 days' feeding of the experiment proper the profit made on the lambs in lot 1 was \$8.50, on the lambs in lot 2 \$11.13, and on the lambs in lot 3 \$13.26. In figuring this profit the lambs were charged virtually at what they had cost when the experiment proper began. This was \$3.34 per 100 lbs., and they were estimated at the close of the same period at \$5 per 100 lbs., the price for which they were actually sold on March 12, 1898.

The total average profit made by one lamb in each lot during the experiment proper without any shrink in weight was as follows:

Lot 1.....	\$0 86
Lot 2.....	1 05
Lot 3.....	1 24

At the beginning of the experiment on Nov. 15th the average weight of each lamb in the respective lots was as given below:

Lot 1.....	49.6 lbs.
Lot 2.....	49 8 "
Lot 3.....	49 6 "

At the close of the experiment these weights had increased to the following:

Lot 1.....	82.5 lbs.
Lot 2.....	80 4 "
Lot 3.....	84.2 "

The average gain, therefore, on the lambs for the 117 days' feeding was 32.9 lbs., 30.6 lbs., and 34.6 lbs., respectively. The average gain made per month during the experiment proper was 9.2 lbs., and during the entire period of feeding 8.4 per cent. The average cost of making 100 lbs. of gain during the experiment proper was \$4.33, and during the whole feeding period \$4.51.

A noticeable feature of the experiment is the relatively high cost of the grain portion of the ration. While the grain fed during the experiment proper amounted to \$32.79, the cost of the hay was only \$5.73, or not much more than one-sixth as much. It is also to be noted that, while the mangels fed cost only \$1.46, and the sugar beets \$1.64, the potatoes cost \$4.95.

During the experiment proper a profit of but 17c. was made on the increase in weight over the cost of food used in making it with the lambs in lot 1. With the lambs in lot 2 it was \$2.72, and with those in lot 3 it was \$4.30. Happy is the country that can furnish foods so cheaply as to make any profit possible on the increased weight made during the fattening period.

The cash returns for 35 lambs, for one died during the experiment, was \$137.06. The entire outlay for the lambs and for the food fed to them was \$111.45. Hence, there was a profit on the 36 lambs of \$25.61, or 71c. per lamb. The lamb that died was in the lot to which mangels were fed. It died but three days prior to the close of the experiment proper. The trouble was urinal in character, but whether it was in any way associated with the feeding of the mangels is not clear.

On better lambs of the same shipment a net profit of \$1.49 per lamb was made during an experiment that was simultaneously conducted. But the more favorable result is not to be attributed entirely to the superior development of the lambs. It is rather to be attributed to the use of cheaper foods. But it is true, nevertheless, that the lambs in the experiment referred to sold for 50c. more per hundred.

The average value of each lamb in Montana was \$1.62. The average selling price was \$3.89; hence, the average advance in value over the cost price was \$2.27.

The conclusion, therefore, is legitimate that the food factors fed in this experiment gave very satisfactory returns, even with lambs that were under rather than over the average. The further conclusion is also correct that potatoes are a much more costly food to use in fattening lambs than either mangels or sugar beets. They would seem, however, to be almost equally useful in producing gains.



Ontario as a Tobacco-Growing District

Contributed by Rural Sketcher

The cultivation of tobacco in Ontario as an article of commerce has, during the last two or three years, received considerable attention among the farmers in the southern part of this province. While its cultivation in those localities is not as general or extensive as that of food products, nor is it essential that it should be, yet it may form in certain sections a branch of agricultural industry deserving of such attention as its importance merits.

None of the other large agricultural crops require such careful and intelligent culture, none yield so readily to the varying influences of climate, soil, fertilizers, cultivation, harvesting and curing, and there is scarcely another farm product the money value of which is enhanced to such a degree by a practical and intelligent knowledge of the action of these agencies toward the tobacco plant.

The success or failure in growing a certain type of tobacco depends to a great extent upon the character of the soil. It may be said that tobacco will grow upon almost any soil where other agricultural crops will thrive, yet there is no other crop whose general appearance, quality and composition is so readily affected by the different conditions of soils, and by the nature and amount of fertilizing constituents in such soils. Whilst it will adapt itself to adverse conditions of soil and climate, each distinct type requires certain conditions to best develop those characteristic qualities in the leaf which are most highly prized.

It appears that the finer qualities are restricted to certain limits defined by characteristic geological peculiarities. It is generally understood that light-colored soils produce a light tobacco, and the dark soils produce a dark tobacco. The characteristic coloring is also influenced by the texture and humus content of the soil as well as by any particular color the soil may possess, and, while certain lands are adapted to certain types of tobacco, there are some characteristic features which are essential in developing the best qualities of any variety. Climate has much to do in pro-

ducing a fine aromatic flavor, upon which the value largely depends.

As nicotine is the active principle of tobacco upon which the stimulating effect largely depends, it would naturally appear that its development to a high degree would be desirable, but such is not the case. What are considered the best qualities almost always contain a small percentage, while a large percentage usually indicates coarseness. Havana-grown tobacco, which commands the highest prices, contains a very low percentage of nicotine. It is grown on a soil containing about ninety-five per cent. of sand, and also has the benefit of a very warm and moist climate.

Now a soil in which tobacco would thrive best in Ontario would be one which would have the power of retaining a large percentage of capillary water; a soil that would contain an abundance of humus, in order that the plants might not suffer from prolonged drouth. A well-drained soil, well adapted for hard crops and on which ordinary cereals would thrive from early spring until late in the fall without being affected by drouth, would be one on which two crops of tobacco in a favorable season might be expected, except, perhaps, in the southern part of the province, where, in a few cases, three crops have been harvested. The quality of tobacco grown on such a soil would be of a second or even a third grade. Those conditions which are favorable for producing a rank growth of cereals having a very dark green color, together with our more temperate climate, are the conditions which are conducive to the development of coarseness as well as a very high percentage of nicotine in any variety of tobacco.

The glowing accounts we hear of the profits that are being made by some Essex growers are very apt to induce farmers in less favorable districts to attempt its cultivation. We should, however, remember that "all that glitters isn't gold." Tobacco is quoted in the Eastern States to be worth from thirty to fifty dollars per acre to the producer, and with an inferior article we can hardly expect to reap the benefit of the duty, to the extent of from three hundred to five hundred dollars per acre.

Cattle in the United States

The *Liverpool Journal of Commerce*, in a recent issue, gives a very interesting resume of the cattle interests of the United States. The facts are taken from a report issued by the Foreign office and tend to throw light upon the future of the American export cattle trade. At the beginning of 1898 the total number of cattle in the United States was something over forty four million head and of these nearly sixteen millions were classed as milch cows. By comparing these figures with those of a year previous it is seen that a heavy decrease took place. While the number of milch cows decreased by but 100,000, the other classes decreased by 1,200,000. But what is most significant about this shrinkage is that it has been going on since 1892. In fact statistics show that in 1882 there were 37,600,000 cattle other than milch cows, while in 1898 this number had fallen to 29,264,000, a decrease of 22 per cent.

According to this rate of decrease it will not be long till the exporting of beef cattle from the United States would be a thing of the past. But it is pointed out that his decrease is confined chiefly to the south Western States and that the mid-western region is about holding its own. Then during the past six years there has been a movement to bring cattle into the country. In 1895 the number imported was 150,000; in two years this number had more than doubled, but in the next year the number had fallen to 291,000. Mexico contributed 173,000 of the imports, and Canada 116,000. It is estimated that nearly 20,000 steers were imported last winter from Ontario into Illinois, Iowa, Nebraska and Missouri; the north Western States have also taken large numbers of cattle from Manitoba and the Northwest. The cattle raising capacity of the Texas range is pointed out as being rapidly exhausted.

The foregoing shows pretty clearly the cattle situation in

the United States, and if the data given there can be relied upon it will take that country a number of years at least to recover its former position in the export cattle trade, if she ever does, all of which is of importance to the Canadian farmer. The journal above mentioned sums up the situation as follows:

"But, though it is admitted that the present scarcity of stock must be regarded as a permanent element in the situation, it is recognized that the increased prices have given a flip to the industry, and ultimately it may be found that the cattle raising resources of the country are in no way in danger of being diminished. A rather curious feature of recent developments in the cattle trade is the fact that, though during 1897 the average value of steers in Chicago increased by as much as 1s. 10½d. per 100 lbs., yet the price in England was only increased by 7d. per 112 lbs. Indeed, it is inferred that exporters, to keep their hold on the English trade, have done some considerable part of their business at a sacrifice. On the whole, then, it looks as if the back of the American cattle export trade were at length broken, and that we must look to other places than the United States to meet our ever increasing demand. Happily there are such places, and, if the circumstances command, there will be little difficulty in diverting our custom into other channels."

Some Fruits Not Much Used

(Contributed.)

The Dwarf Juneberry.—New fruits after all are slow in reaching the masses. The Dwarf Juneberry is one of these. Some wild varieties are, I believe, known as Saskatoon berries in the Northwest. It is perfectly hardy, very productive, and ripens on bushes three or four feet high, just at the end of the strawberry season. It therefore is on hand on July 1st and 4th and ought to get a good reception from these two twin nations. It is larger than the "huckle" berry and much like it. Many persons like it, while some do not care for it. It is juicy and sweet but has a barky flavor. It cooks sweet and keeps readily when canned. As it has no acid it needs to be mixed with Red Currants to give the acidity that may be called for. Currants alone are too sour for the average of mankind. The two therefore make a meritorious mixture. It will not be a market fruit for a while to come, but every owner of spare land should try a short row for home use.

The Japan Wineberry.—Very few have eaten Japan wineberries—with sugar and cream my family prefer them to raspberries. The fruit is smaller and much handsomer than a red raspberry. It is rather sour and not really as good as the red rasp. In their earlier stages the berries are completely enclosed in the calyx, much like a moss rose, as the fruit enlarges the capsules open out. The bushes most resemble the blackcaps. The foliage is very dense and pretty. In winter the canes covered with red spines are quite ornamental. As an ornamental to cover rockeries they are useful. I have heretofore thought that they lacked productiveness. In 1898, however, we got a large crop. They ripen with late blackberries. They are hardy here but I could not say that they would succeed much further north.

Japan Plums.—These are a distinct type of fruit and tree. They have a very long season in the aggregate, and some individual kinds keep ripe on the trees, or when picked, for weeks. Some ripen in the cherry season; some are ripe late in September. They vary much in color and quality. Some apparently poor will, I think, be useful when cooked. Some are delicious raw or cooked. The flavor of the skin is often objectionable. They rot like other plums. The curculio are nonplussed by them. They cropped heavily in 1897, and very light in 1898. Their productiveness from year to year is open to doubt. In size they vary much, and thus resemble potatoes. By sorting, some fine samples can be got. They have a white bloom in most cases. Latsuma is red like a blood beet; Ogon is very early and a clear yellow. It asks no ques-

tions, but drops off forthwith when ripe. Abundance is best known. It is a very upright grower with a dense foliage. Burbank is more abundant than Abundance. The tree droops and sprawls, hence should not be sold to profane men. Fruit should be thinned on these when it sets too freely. By far the best variety that I have tested comes to me as Hytaukio No. 1. I have not been able to find it named and described in any list, and it is not much known. The fruit ripens late, much of it is very large. It is nearly round, of a whitish ground color, and covered with carmine dots and a thick white bloom. The fruit is beautiful, and its yellow flesh is delicious, raw or cooked. The skin has a slight characteristic flavor. I have shown it to many, and all agree as to its beauty and quality. Some of the gage type of plums are no doubt sweeter. The Hytaukio forms a fair open head, much like the Ogon.

The Keiffer Pear.—This variety, though scarcely new, is not yet known to many. It grows at a furious rate, and bears wonderfully every year. On warm soils in southern Ontario the quality is fairly good. For cooking, its quince-like flavor makes it very popular where known. It has come to stay, and very many of them will be here shortly. The fruit, when picked in October, is not eatable. A few weeks later it turns a lemon yellow, and is very showy, and, at that season, eatable. It should be thinned, as even the strong wood of the Keiffer cannot possibly carry its load of fruit.

Fresh Manure.

By James Long, in Rural World.

I have been reading an article by the chief agricultural chemist in France, published in a little halfpenny agricultural journal which I picked up on a French bookstall—and which is quite a new issue—in which the author in a very simple style shows the farmer how unwise it is of him to waste the fertilizing properties of his manure by exposure.

This is a question which concerns us all—it is one which has been continually discussed—but, in spite of this fact, wherever we go we find the manure heap existing, and in many cases growing in size from week to week, and month to month. When a tenant leaves a farm and is succeeded by another who takes over the manure, as in accordance with the custom in some counties he does, he often takes over a hill of organic material which has been deprived of half its fertilizing value, and pays for it, if the custom accords payment, as though none of this value was lost. It is unquestionably difficult to arrange that manure shall invariably be carried to the field and be ploughed in, but something to ameliorate the loss may always be done in the right direction. When manure is under the soil it is safe, for its mineral and nitrogenous fertilizing constituents alike cannot possibly escape, except in the one way which cannot be prevented.

I mean that the nitrogen of the soil is lost in a particular form in the drainage water. When the manure is in the heap above ground, its properties, *i. e.*, its fertilizing properties, are partially lost by volatilization and partially by waste—drainage—especially where the heap is washed by rain. A heap which has heated, or is heating when opened, submits to more rapid loss of nitrogen, although, no doubt, heated manure, *i. e.*, manure which has partially decomposed, becomes of greater value, ton for ton, when it enters the soil than fresh manure. That enhanced value, however, is dearly bought if the cost is one-half the original nitrogen which it contained. The point is that fresh manure ploughed under the soil decomposes slowly, the nitrogen liberated being fixed by the soil, and there being no waste of mineral fertilizers, as in the case of exposed manure in the heap, however carefully it may be managed. Whether dung should be spread on the land and ploughed in in autumn and early winter, each man must decide for himself.

He can ascertain the probable losses from drainage in the soil, which is greater when the soil is light, and the probable gain, if he takes account of the experience of others in

published statements. If we notice where heaps of manure have lain in the field for a week or two we find that the crop following is richer and heavier than that surrounding it. This is an indication always worthy of notice.

There are few farms upon which there are not some fields ready for the plough, and upon which manure cannot be spread. Similarly, there are few farmers who cannot institute the distribution of dung direct from the carts, as the thrifty Scotch do, instead of leaving it in heaps for future, and often delayed, distribution. Any plan which will enable a farmer to get dung under the soil at the earliest possible moment is preferable to the common plan of leaving it to decompose in the heap and waste in the manner which we have suggested.

CORRESPONDENCE

Profitable Farming

Mr. Heggie Replies to Mr. MacPherson

To the Editor of FARMING:

I am in receipt of your much appreciated paper, FARMING, dated October 11th, containing Mr. MacPherson's reply to my letter in your issue of 27th Sept.

In my letter I asked Mr. MacPherson to give me the cost of his 40-lb. pigs before putting them on to the acre of clover, fully expecting that he would give me, as well as your readers in general, the information in detail. He, however, evades this by turning the question on to me, and replies in one paragraph of his letter that the cost of his 40-lb. pigs is a problem, and in another that they cost him from 50 to 75 cents each, when purchased by his own capital and labour; and \$2 to \$3, when purchased from his "liberal neighbor."

I am inclined to think there is something in Mr. MacPherson's remark about having liberal neighbors, when he can show such magnificent profits from his one acre of clover. In discussing this subject I hope that Mr. MacPherson, as well as your readers, will understand that I leave the "liberality of my neighbors" entirely out of the question, as I do not think it should show up as an item under the head of "Profitable Farming," or above the signature of the author of "Business Methods in Farming."

I notice that Mr. MacPherson's opinion differs greatly on the question of how many pigs can be pastured on an acre of clover. For instance, in his article on "Business Methods in Farming," which appeared in your issue of 28th December last, he claims that thirty young pigs are sufficient for an acre of clover. Now he says that fifty 40 lb. pigs can be pastured for five months on an acre. (I only hope he may not augment further, as the clover will have a poor chance to grow.)

On referring to your issue of April 13th I observe that a Mr. Halliday, of Eldon, asks you a question on this point, and which, I think, Mr. Editor, you replied to by saying that an acre of clover should give pasture for from fifteen to twenty pigs with the addition of a little grain. I would never think of putting more than this on with a good quantity of grain. Clover pasture for pigs is, no doubt, the only profitable method of pork production, and I intend going largely into the business next season.

Mr. MacPherson asks me what my pigs cost when weighing 25 lbs. This is as follows: Keep of five sows during gestation, 4 tons of frozen wheat at \$15 per ton, \$60. Keep of sows for seven weeks when rearing young, 2 tons of barley-meal at \$20 per ton, \$40, one ton bran \$15, \$55; labor attending hogs, \$10; accommodation, \$5, making in all \$130. The forty young pigs were sold at \$4 a head directly they were weaned, so that the profit derived from them was \$30.

Mr. MacPherson's other question I will have to lay aside for the present. Having only lately come to this part of the country I am unable to give him the particulars desired. In the near future I hope to lay before your readers the information requested by Mr. MacPherson.

Enderby, B.C., Oct. 24th, 1898. GEORGE HEGGIE.

FARMING

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STRICT CLEANLINESS IS NECESSARY.

From Report of Commissioner of Agriculture and Dairying.

The udder, the flanks and the belly of the cow should be brushed clean and then rubbed with a dampened or wet cloth before milking. That prevents the falling of dust particles and other things from the skin and hair of the cow into the milking pail. There is need for as much cleanliness as can be practised and attained. There is no benefit from the aeration of milk in the stable during the winter. By the aeration of milk, either or both of two results are effected. A little of the odor, or cause of the odor, in the milk from volatile oils is taken out, and germs of all kinds from the air are taken in. There is nothing in the air of an ordinary cow-stable which by getting into the milk can improve it. Therefore the less contact the milk has with that the better. There is no natural volatile odor from milk which makes it unsuitable for butter-making, unless the cow has been fed on some food unsuitable in that respect, such as turnips; and aeration will remove only a very unimportant part of that. The so-called cow smell of pure, clean milk becomes a delicious fragrance, whereas the cowey smell which comes from stable filthiness, manure and other things is abominable.

THE USE OF SALT.

Professor Atwater says: Something has been said as to the use of ordinary salt as a fertilizer. One important office of the salt is to make soluble, and consequently useful in the plant, the materials already locked up, as it were, in the soil. Supposing you have been putting on barnyard manure and

other fertilizers. Some of the nutritive materials, as, for instance, potash and phosphoric acid, may perhaps have been taken up by the soil, and remain there in a difficult soluble condition. Furthermore, there are in the soil some of these ingredients that were in the original rock of which the soil is made up, and are still, so to say, locked up, or, in other words, still remain in an insoluble form therein. One effect of salt, as is the case oftentimes with gypsum and lime, is to set loose that potash as phosphoric acid. You must expect, therefore, in putting on salt, that its chief use will be, not as a direct nutriment to the plant, but rather as a means of setting other materials loose; and salt is very useful on this account, because it is not readily observed in the upper layers of the soil, but often leaches through into the layers; and it will have the effect of setting these materials free all the way down.

The German farmers say, however, that you must be careful in the use of salt. If you put on too much it injures the vegetation. Further, it will not do to put on loose soil. A very loose, sandy soil is not ordinarily benefited by the application of salt. Again, it is best applied to soils which contain considerable humus. And, finally, it should be used on soils which are in pretty fair condition as regards the context of fertilizing elements. On soils which are not too loose, which have a good amount of humus, and which are in pretty fair condition as regards the amount of fertilizing material, organic and inorganic, contained in them, it is oftentimes a good thing to apply salt.

ADVANTAGES OF FALL PLOWING.

Whenever conditions are favorable the land should be plowed in the fall. During the winter is not only the best time for making manure but in some sections is the best time for hauling it out and applying it to the land. Land plowed in the fall will warm up earlier and dry up quicker in the spring after the frost is out of the ground than when left unplowed. In order to get the full benefit of these, however, the drainage must be good. Land plowed in the fall can be got in good condition in the spring for planting, etc., easier than if left unplowed. Plowed land will freeze deeper than unplowed land, and the freezing and thawing helps to make it easier and better to work. When land is plowed in the fall, weeds, etc., that may be on the land can be turned under and will rot sufficiently not to interfere with the work of preparation or seeding. About the only kind of land that it may not be wise to plow in the fall is that on a hillside, where there is a danger of it being washed down. The fertile portions in such cases are usually the readiest washed away.

STABLE MANURE.

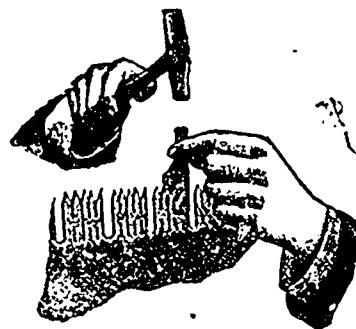
The Ohio Experiment Station has been testing now manure taken directly from the stable to the field in spring, and similar manure left in an open yard during winter. The plan of the experiment is to apply both kinds of manure to land intended for corn, plow under at a shallow depth, and follow the corn with wheat and clover, without any further manuring. At the

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

Manufactured only by SHURLY & DIETRICH, Galt, Ont.

rate of eight tons per acre were used. The result thus far is that the corn of 1897 gave an increase of thirteen bushels per acre for the yard manure against sixteen bushels from the stall manure, and the wheat crop following has given an increase of ten bushels per acre for the yard manure against eleven bushels from the stall manure. Valuing the corn at thirty-three cents, and the wheat at eighty cents per bushel, and the straw and stover at \$3 per ton, the increase from the yard manure in the two crops has amounted to \$15 per acre, and from the stall manure to \$17, an average of \$2 per ton for the stall manure, with further effect probable on succeeding crops.

REMOVING WOOL FROM SHEEP SKINS.

Having got the skins in the yard, they are first beaten on a wooden block with a mallet to bruise the congealed blood on the necks; they are then thrown into water to rinse the dirt and blood from the wool, and are then hung over trestles for the water to drain out. The skins are next lime-washed on the flesh side and folded down the back so as to make the bellies match together. They are then left for an hour or two so that the lime will set a bit. They are then hung by the thick part of the back of the head upon tenter hooks in large dark, closed sheds or rooms, and in about two days in the summer the wool will come off quite easily. The sheds have to be heated in the winter.

OUR CLUBBING LIST

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

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

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

CURES CATTLE

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

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

GRIFFITH'S VETERINARY MENTHOL LINIMENT

Relieves the instant applied
At all Druggists—75 Cents

HORSE HURTS

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

Griffith's VETERINARY MENTHOL Liniment

Relieves the instant applied
At all Druggists—75 Cents

FREE GOODS.

MEN, WOMEN, BOYS AND GIRLS (all over Canada, wanted to introduce our household supplies. To each person selling two dozen Magic Clenall Polishers or two dozen Balsam Plasters at ten cents each, we give a handsome Watch, with Chain and Charm, Cash, or any other valuable article selected from our catalogue list. We have such confidence in our goods and human honesty that we ask no money in advance. Simply send your name and address and we will forward the Polishers and Plasters post paid. When sold send us the money and we will mail you the Watch, Chain and Charm, all charges paid, goods not sold can be returned.

ADDRESS, THE CANADIAN SUPPLY CO.,

Write at once and we will start you on the road to success. TORONTO

Extract from Annual Report for 1897

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

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

We handle the only true

Thomas-Phosphate Powder

sold in Canada; and to be sure of genuine material, see that the bags have our name and address.

WALLACE & FRASER

Masonic Block
ST. JOHN, N.B.

Canada Life Building
TORONTO

Care must be taken not to get any grit in the lime or it will make the "pelt," as it is called, lime-specked.

Publishers' Desk.

Windmills.—We call attention to the advertisement of Mr. R. Bruce, of London, Ont., who advertises his windmills in this week's issue.

A Stationary Engine and Boiler.—Any of our readers who are looking for a good engine and boiler suitable for operating a grinding machine, electric light plant, etc., should write to the Lancaster Machine Works, Lancaster, Ont.

A Fair Offer.—The T. A. Slocum Chemical Co., of Toronto, make a specialty of the treatment of consumption, and evidently place great faith in their own remedies. In this issue will be found an offer, the liberality of which must certainly be measured by their degree of confidence they possess. Read their advertisement, and, if interested, write them. Whatever they promise to do will be done without fail.

Pumps for Creameries, etc.—Various styles of pumps have been offered from time to time to dairymen for use in creameries and milk-skimming stations, but all have hitherto proved ineffective. The Lancaster Machine Works, of Lancaster, Ont., are out with something new in this line, and it will, doubtless, supersede all other devices. It consists of a light pumping engine, which may be secured to a post or pillar by which from one to five pumps can be operated. Experts who have seen it pronounce it perfect, and already orders are being received for it almost as fast as they can be filled.

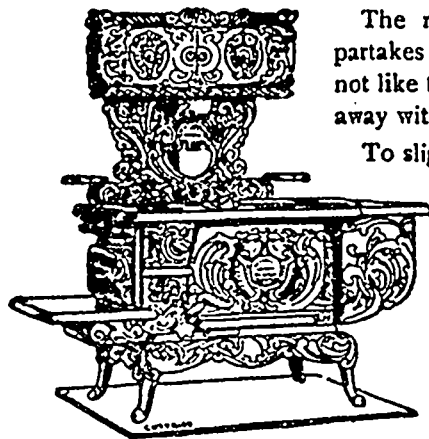
A Correction.—In the advertisement of the Co-operative Knitting Company of this city, on page 182 of last week's issue, headed "A New Enterprise," by a typographical error the first letter from Mrs. R. E. McNaughton, of Perth, testifying to the merits of the company's plan, was dated 24th Sept., 1898, instead of 24th Sept., 1897. The announcement seems to have attracted considerable attention, and the plan to be one likely to meet with public favor. A member of our staff was shown a large quantity of the goods, such as children's toques, men's bicycle hose, socks, etc., knitted on their machines and sent in by the workers employed by them, and it certainly appears to be a very fine class of work. The introduction of methods by which the interests of the manufacturer and the worker are made identical by a system of co-operation between "factory and family" is commendable in itself. The result of such a co-operation should be that many an idle moment otherwise entirely unproductive could be made a source of profit to the worker. Those interested should write to the company at 15 Leader Lane, Toronto, Ont., for full information.

IT IS INDEED A BEAUTY!

We have received a copy of the premium picture given to subscribers of the "FAMILY HERALD AND WEEKLY STAR," of Montreal. It is the famous battle scene picture, by the celebrated artist, Robt. Gibb, entitled "THE THIN RED LINE." It is, indeed, a beautiful picture. "Family Herald and Weekly Star" pictures are always far superior to those given by other weekly papers. They are not out of place in the best art galleries of the world. The publishers of the "Family Herald and Weekly Star" have certainly surpassed all previous efforts this year, both in regard to the picture and paper. The "Family Herald and Weekly Star" and the picture, "THE THIN RED LINE" is certainly a great combination for One Dollar. The rush of subscriptions, renewal and new, has begun two months earlier than usual this year, so great is the anxiety for Canadians to be in possession of one of the pictures and to have their names entered on the "Family Herald" subscription list's.

Time is on the Side of SOUVENIRS

Because they're a Perfect Stove



The record of the Souvenir Kitchen Range partakes in no way of a flash in the pan. It is not like the early dew—a creation to be wiped away with the first ray of sunshine.

To slightly alter a saying of Gladstone's:—

"Time is on the side of the Souvenir kitchen range."

You are delighted with it when you get it. It's so much in advance of any kitchen stove you have ever used. But the more you use it the better you like it—the better it becomes.

It's the only stove where you can be entirely sure of perfection in cooking, because it's the only stove with an aerated oven—the only stove that ensures perfect cooking.

—A tasty and readable booklet, nicely illustrated, tells more about the aerated oven, and is yours for the asking.

The GURNEY-TILDEN CO.
Limited.
Manufacturers, HAMILTON, Can.

\$155 in 5 prizes for 5 best short essays on Souvenir Ranges. Ask for particulars.

Woodstock Steel Windmills

FOR POWER AND PUMPING



Got a **DANDY** WITH GRAPHITE BEARINGS They Run without Oil.

Steel Towers, Pumps, Tanks, Saw Tables and Watering Troughs, etc.

WOODSTOCK WINDMOTORCO., Limited
Woodstock, Ont.



Every Man His Own Cobbler

The Home Repairing Outfit. A complete set of tools for Boot, Shoe, Rubber, Harness and Tinware Repairing. 44 articles packed in a neat strong box; weight, 18 lbs. Every family needs one. They sell like hot cakes. Price for the complete outfit, \$1.75.

The Bailey Donaldson Co.
MONTREAL, Quebec.

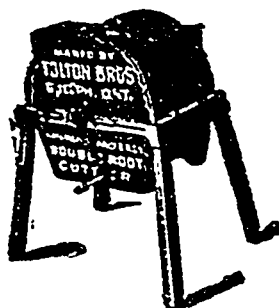
Certain Death

to all parasites, germs, bacteria, etc. Healing to the skin and beautifying the coat.

SPRATTS PATENT'S ANTISEPTIC SOAP

Order through your dealer and send for catalogue to Spratts Patent Limited, Manufacturers of all kinds of Dog and Poultry Foods and Supplies, 245 East 56th St., N.Y. San Francisco Branch, 1320 Valencia St.

TOLTON'S No. 1 Double Root Cutter



POINTS OF MERIT

1. To change from pulping to slicing is but the work of a moment.
2. There are two separate wheels, one for pulping and the other for slicing.
3. The united force of both wheels is always used in doing the work in either capacity.
4. The hopper is between the wheels, and does not choke.

The Only Double Root Cutter Manufactured

Fitted with Roller Bearings, Steel Shafting and all that is latest and best in principle, material and construction.

TOLTON BROS - Guelph

Stock Notes.

MR. THOMAS TRASPALR, of Concord, Ont., the director of the Berkshire section of the Dominion Swine Breeders' Association, is advertising first-class show stock in this week's issue.

THE contest in Lincolns at Omaha was between two Ontario breeders, Messrs. Gibson & Walker, Ilderton, and Wm. Oliver, Avonbank. According to reports the contest was a keen one, it being a case of nip-and-tuck from the very start. But the former well-known Lincoln breeders carried off the bulk of the awards.

MR. F. W. TAYLOR, Wellman's Corners, Ont., reports his Ayrshires as looking well. His cows are still giving a large flow of milk, notwithstanding that the summer in that locality has been dry and hot. He has seven bull calves for sale, in good condition. These calves are all from purebred stock, and from the best breeding strains of Ayrshires in the country. Mr. Taylor's stock bull is Douglas of Sandoun 1384, bred by David Merton & Son, Hamilton, Ont.

AT the Omaha Fair the Union Stock Yards Company, South Omaha, gave \$150 for the best specimen of a bacon hog according to the following conditions:

"A long-bodied, slim hog weighing 200 or 230 lbs. is the kind of an animal required to produce lean bacon and small and lean hams, demand for which is increasing rapidly; to be judged from a packer's standpoint by buyers from the Union Stock Yards."

Fully forty competitors entered and nearly every adaptable breed was represented. A Tamworth shown by the Iowa Agricultural College was awarded first prize, a Nebraska Berkshire second prize, and an Improved Yorkshire, shown by J. E. Brethour, Rusford, Ontario, the third prize.

MR. A. J. WATSON, Castlederg, Ont., deserves special mention in connection with his display of Cotswold sheep at the Trans-Mississippi Exposition recently concluded at Omaha. With commendable enterprise he has ably represented Canada at this important show. *The Breeders' Gazette*, in writing of the Cotswold exhibit, says: "One of the most impressive displays ever made of this breed in America was seen in the herds of Geo. Harding & Son, Wisconsin, and A. J. Watson, of Ontario." In Mr. Watson's exhibit were a number of sheep that were prizewinners at the Royal. Among the classes in which he stood at the front were lambs and three-year-old ewes. In the other classes, though not taking first place in every instance, Mr. Watson succeeded in carrying off a number of valuable prizes.

MR. L. ROGERS, of Cooksville, Ont., has been remarkably successful as a breeder of

CONSUMPTION.

What a Well-known Medical Journal Says About This King of Disease.

"This is essentially an age of scientific progress. Science and invention go hand in hand. Thanks to a distinguished chemist consumption is robbed of its terrors, deprived of its destructiveness, and this insidious disease can first be relieved and then cured. But to accomplish a cure that is final and effective there must be constant persistency in treatment and right living. The sufferer must take the right medical relief, rightly administered. By the labor, skill and research of an eminent chemist, T. A. Slocum, consumption can be both relieved and cured."—*Medical Tribune*.

Three free sample bottles of the Slocum Cure will be sent to any sufferer from consumption, lung or throat troubles or general debility, if name, address and express office are sent to The T. A. Slocum Chemical Co., Limited, 179 King street west, Toronto, Ont. This is a genuine offer, and if the reader is—or knows a friend who is—a sufferer, send at once for the free sample and mention FARMING.

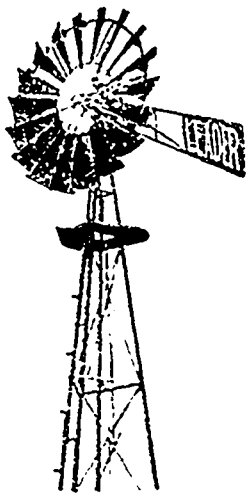


EARN A WATCH

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

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

The Leader



We will guarantee this mill to be more durable and run with less wind than any manufactured. It runs on two bearings which gives it a great advantage over other makes. Its lifting is directly over the pump, by an eccentric and friction, thus doing away with the pinion shaft, making it a great deal more powerful. Those who have used "The Leader" bear us out in this particular, and what is better than reliable local testimony?

Exeter, April 6th, 1908.

The Leader Windmill, Ridgetown, Ont. The Steel Windmill purchased from you last fall has given good satisfaction. It does its work easy and well as any mill could do. Yours,

COATES BROS.

"The Leader" has won for itself a famous reputation, and is now being placed in Goderich, Huron Co., Calgary, N.W.T., and throughout the entire Dominion, which speaks for its reputation.

WHITMAN BROS.

RIDGETOWN - ONTARIO

ALL PEDIGREE STOCK-BREEDERS

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

FARMER AND STOCK-BREEDER

The best, most complete and attractive Agricultural and Live Stock newspaper. Enlarged to 36 pages weekly; frequent special issues 40 to 48 pages. Illustrations are a specialty, each number containing many of the leading prize-winners, etc. Brilliant and practical articles on the Farm, Dairy, Horses, Cattle, Sheep, Pigs, Poultry, Veterinary, etc.

Unequaled as a medium for advertisements intended to reach the best class of breeders and farmers throughout Europe.

Subscription, postpaid for one year, \$2.50

Intending purchasers of British Purebred Stock should send us particulars of their requirements, large shipments and extensive connections having given our staff of expert buyers that experience which is indispensable in live stock transactions.

Enquiries welcomed. Address—

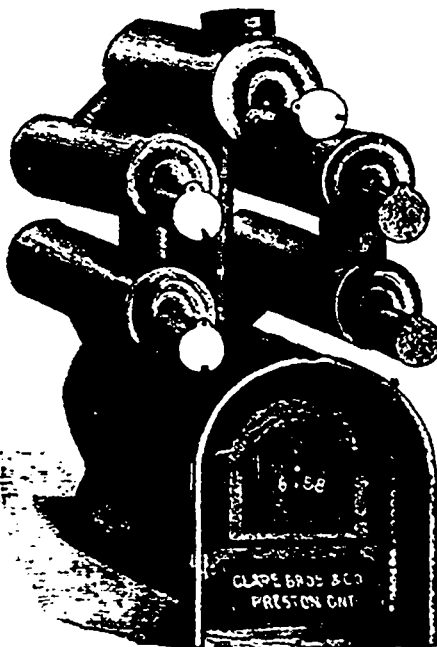
FARMER AND STOCK-BREEDER, London, Eng

A SMART PUBLICATION

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

Free Sample Copy and advertising rates on application to

CO-OPERATIVE FARMER, Sussex, N.B.



The Hilborn Wood-Burning Furnace. Our Catalogue explains.

WE MAKE A Specialty of Heating

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

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

PRESTON HOT WATER BOILER AND STEEL RADIATOR

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

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



CLARE BROS. & CO.

PRESTON, ONT.

Branch at WINNIPEG, MAN.

Improved Yorkshire swine. Although scarcely a year in the business his prize winnings at various fairs have been quite numerous, and the fact that in every competition he has entered his stock has been brought into competition with some of the best known prize stock in Ontario renders his success more valuable to him. At the Western fair he was awarded first and sweepstakes for the best sow and litter of any breed, and first and second for the best pair of young sows. At Woodbridge he got first and second for best pair of young sows, and second for aged sow. At Cooksville his pair of young sows again stood first, and the aged sow second. These prizes were secured against very strong competition from some of the oldest and best known show stock in the district, including prize winners at Toronto and other leading fairs.

At the annual meeting of the American Hereford Cattle Breeders' Association, to be held at the Sherman House, Chicago, on November 10th next, the question of amending the rules of entry so as to admit to entry in the United States all stock eligible to the English Hereford Herd Book will come up for consideration. As the rules now stand the pedigrees of all imported cattle must trace to stock recorded in or prior to Vol. XIII. of the English Record. Hereford breeders are somewhat restive under this restriction, and would like to see this rule amended. From an English point of view it is claimed that this regulation, which was made fifteen years ago, shuts out a number of good animals with as pure blood as those that can be traced back to the Volume XIII., whose blood can only be traced back to Vols. XIV. or XV. The American view is that the English breeders have been somewhat lax in regard to the pedigrees of their animals, and that, as soon as they adopt some better method of recording their stock than that now in vogue, the difficulty will be arranged satisfactory to all concerned.

...BOYS FOR FARM HELP..

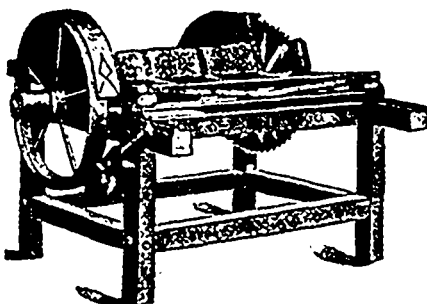
The managers of Dr. Barnardo's Home invite applications from farmers throughout the country for the boys they are sending out periodically from the English homes.

MR. ALFRED B. OWEN, Agent,
Dr. Barnardo's Home, Farley Ave.
Toronto, Ont.

Still in the lead

The Jubilee

**Circular
Sawing Machine**



Light running Easy to operate
Strong and durable

LANCASTER MACHINE WORKS
Box 113 Lancaster, Ont.

Money Cannot Buy

A better churn than the **MAPLE LEAF**.
None better is made. Yet the Maple
Leaf Churn is inexpensive.
Write for Free Circulars to
the Manufacturers.

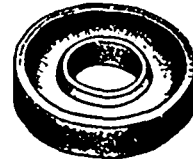
Wilson Brothers, Collingwood, Ont.

BRANTFORD



**GALVANIZED
STEEL
WINDMILLS**

For Power and Pump-
ing
With Patent Roller
and Ball Bearings

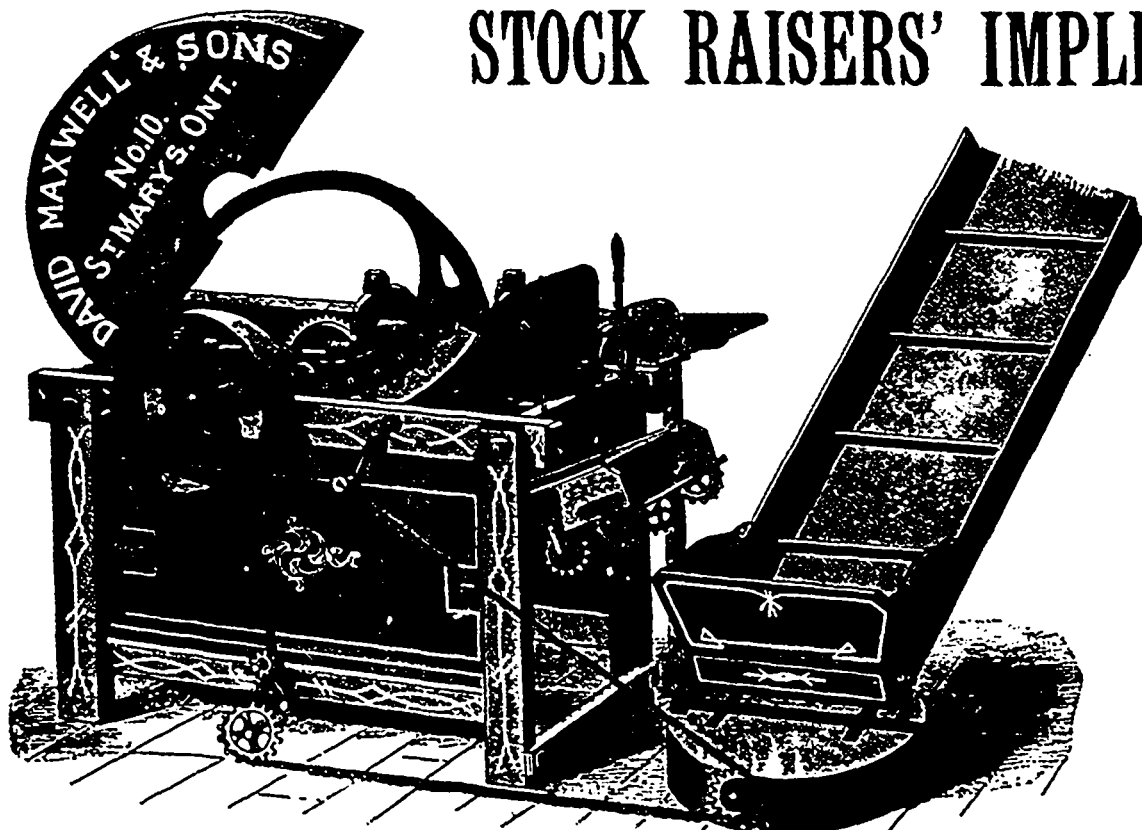


Makers of the lightest
running and best con-
structed Galvanized
Steel Windmills and
Towers made.

Write for Illustrated
Circulars.



BRANTFORD CAN.



STOCK RAISERS' IMPLEMENTS

**Power Ensilage
Gutter NO. 10**

The latest and
most modern
manufactured.

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

Made in two sizes,
14 and 12 inch.

We are also plac-
ing on the market
new and improv-
ed Pulpers and
Slicers.

Send for catalogue,
giving full descrip-
tion.

DAVID MAXWELL & SONS
St. Marys, Ontario, Canada

The Ontario Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP.

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

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

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

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

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

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

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

STOCK FOR THE WEST.

Another car-load of pure-bred stock will leave Ontario for Manitoba and the West this week. The car will start from London on Thursday morning, November 10. Stock will also be loaded at Streetsville on Tuesday evening and at North Toronto on Wednesday morning, November 9th.

A NOTE FROM THE BACTERIOLOGICAL DEPARTMENT, ONTARIO AGRICULTURAL COLLEGE.

It was thought advisable this year to remove the incubators and other apparatus used in connection with the manufacture of tuberculin, from the general Bacteriological Laboratory to a large room downstairs, so as to be at some distance from the students' work-room. The room in which the manufacture is carried on is connected with the main laboratory by a staircase. Several new pieces of apparatus have been added recently, and we have now facilities for making over 20,000 doses per year, should this amount be needed. Farmers who wish to have their well-water examined can send to the Bacteriologist for instructions, and may have the analysis done free of charge.

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

RATIONS FOR DAIRY COWS. WIDE VERSUS NARROW RATIONS.

The Pennsylvania Station made inquiries among the dairymen in that state as to the rations they were feeding their cows. The replies show that only about twenty-five per cent. of the rations were compounded in a practical and scientific manner. The larg-

est ration reported contained four times the amount of food found in the smallest one. It seems impossible that of two cows of equal weight one could eat four times as much as the other. Making some allowance for difference in appetite it would seem that in one case the cows were over-fed and in the other case they were under-fed. Both conditions mean a loss to the owners.

As a rule the rations reported do not contain enough protein, *i.e.*, nitrogenous substances. Bulletin No. 104 of the Ontario Agricultural College on "Rations for Dairy Cows" shows that Ontario dairymen are inclined to err in the same way. That is, they are not feeding enough of such foods as clover hay, peas, bran, linseed meal, cotton-seed meal, gluten meal, brewer's grains, and malt sprouts.

The amount of protein required to properly balance a ration has been determined by numerous experiments both in America and Europe. The proportion of protein to the other constituents of the food is called the "nutritive ratio." If the ration contains a large amount of protein it is called a "narrow ration," while if it contains a small amount of protein it is said to be a "wide ration."

The Pennsylvania Station tried the effect of wide and narrow rations with the station dairy herd. The cows used were nine Guernsey and Guernsey grades about sixty days from calving. The permanent portion of the ration was corn stover and chopped wheat. To this different amounts of gluten meal were added so as to make rations possessing nutritive ratios ranging from 1:3.9 to 1:6.7. The American standard for dairy cows calls for a nutritive ratio of 1:5. In the trial seven of the nine cows required less digestible food to make a pound of

butter when they were fed the rations rich in protein. After deducting the cost of the food the rations rich in protein gain a little larger net profit. With the richer rations the percentage of fat was better maintained in the milk and even slightly increased.

The Massachusetts Station has made two experiments to find out the effect of narrow and wide rations in the quantity and cost of milk and butter and the composition of milk. The basal rations fed the cows in the first experiment consisted of hay and sugar beets. In addition to the wheat bran and Chicago gluten meal were added in such quantities as to make the nutritive ratio 1:3.86. Another ration was made up with cornmeal instead of gluten meal, having a nutritive ratio of 1:9.43.

The results of the experiments show that the narrow rations produced from 11.8 to 18.9 per cent. more milk than did the wide rations, and that they reduced the cost of production from 5 to 12 per cent.

On the narrow rations the cows produced 13.7 per cent. more butter in the first and 8.3 per cent. more in the second experiment than they did on the wide rations. The cost of feed per pound of butter produced was 10 per cent. less per pound from the narrow ration in the first experiment, but only 1.67 per cent. in the second one.

While the so-called narrow rations as used in these experiments were extreme ones, it might be said that narrow rations which contain from 2 to 2½ lbs. of digestible protein in a day's feed, aside from causing a ten per cent. increase in the milk yield, furnish in addition a manure from 10 to possibly 15 per cent. more valuable than do wide rations.

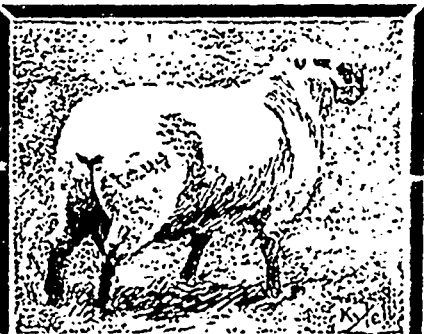
There is no doubt that the narrow rations produce more milk and butter than the wide ones and that by increasing the proportion of protein in the food up to a certain limit the fat content of the milk may also be increased. The market price of the foods fed, however, will be the controlling feature in actual practice as to how far a narrower ratio than that of the feeding standard can be profitably used. There can be no doubt that many dairymen would feed more economically if they paid more attention to the proper balancing of their rations. The store of feed on the farm is generally lacking in nitrogenous substances and consequently too often the ration for dairy cows is also lacking in the necessary amount of protein to enable the cows to produce as much milk and butter as they are capable of doing.

TAINED OR DEFECTIVE MILK.

The susceptibility of milk to taints and odors and the rapid growth of bacteria in it, when once it had been drawn from the cow, are matters well known to all practical dairymen; but, unfortunately, are not taken into consideration by a large number of farmers.

A bulletin by Prof. Russell, of the Wisconsin Station, treats of the cause, nature, and prevention of taints. He divides taints under two general heads (1) those produced by living organisms, and (2) those due to the absorption of odors or to the derangement of the normal functions of the animal. He discusses the bacteria of milk, the manner in which they get into milk, the effect of temperature on their growth, and the specific fermentations which cause taints in milk and cheese. The direct absorption of taints before and after milking, the discrimination between directly absorbed taints and biogenic taints, the treatment of tainted milk, and the method of eliminating taints are treated of in logical order.

In concluding a comprehensive list of suggestions as to the care of milk, animals and utensils, Prof. Russell has this to say: "In caring for milk it should be remembered that two things are necessary: (1) to prevent the absorption of any foul odors; (2) to prevent the development of living organisms in the milk that are able to form foul substances that taint the same." The first can be accomplished by keeping taint-producing feeds from the cow and by keeping the milk in a place



Persiatec Sheep and Animal Wash

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

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

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

- RUBBER GOATS -

WE have as good an assortment of RUBBER COATS as any man would wish to look at, from \$1.75 up to \$8.00. We have a job lot of Tweed Rubber Coats, in large sizes, at from \$3.00 to \$5.00. We have some ea bargains in Men's and Women's RUBBERS and OVERSHOES, just received from Montreal this week.

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

144-14 KING ST. EAST (Cor. Jarvis), TORONTO

R. V. MANNING, MAN. RR.

that is free from all undesirable odors. The second result can be attained by thorough cleanliness combined with a low temperature.

Eggs are the outcome of brain force. The laying hen is the nervous animal always. Heads easily indicate characteristics; select the long head, not too full between the eyes, fairly good in width, and carrying a mild yet impressive eye.

FARMS FOR SALE

PRICES LOW. TERMS OF PAYMENT EASY.

For List and particulars apply to

L. SCARTH, York Chambers,
11 Toronto St., Toronto.

Good Butter Making

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

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

Progressive Grocers Sell

Windsor Salt

The Windsor Salt Co.
Limited,
Windsor, Ont.

THAT WONDERFUL CHURN.

H. T. Marshall writes us as follows: "I want to add my testimony to the list of those who have used the lightning churn. It does all that they claim for it. You can churn easily in one minute, and get a larger percentage of butter than with ordinary churns. I never took the agency for anything before, but so many of my neighbors wanted churns that I ordered thirty and they are all sold." Other farmers can do as well as Mr. Marshall. No farmer can afford to be without one of our churns. By using it he can make 25 per cent. more butter than with his old churn. Any intelligent farmer can easily sell four or five churns every week in his own township. Every one who sees his churn will want one like it. We will mail circulars and full particulars on demand. Mound City Churn Co., Ozark Bldg., St. Louis, Mo.

The Spramotor

The only way to prevent what's past is to put a stop to it before it happens, as Mrs. Partington would say. Many fruit-growers and farmers are induced to buy cheap sprayers, for one reason and another, and they always regret it.

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

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

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

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

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

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

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

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

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

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

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

SPRAMOTOR CO.

357 Richmond St., - London, Ont.

WINDMILLS

A 16 ft. Windmill for

..\$25..

AGENTS WANTED

R. BRUCE

551 William Street,

LONDON, : ONT.



A VERY DESIRABLE IMPROVED

FARM FOR SALE

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

E. A. GARNHAM,
STRAFFORDVILLE, ONT.

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Richmond street W., Toronto.

Nov. 7th, 1898.

General trade circles continue good, and country dealers are beginning to evince a desire not to wait any longer for their winter stock of goods. Farmers generally are inclined to hold their grain, and the present condition of the wheat market is their reason for doing so.

Wheat.

The wheat markets during the week have been up and down, in keeping with the war feeling. When the war talk began to look ominous prices would advance, and when it inclined towards peace there would be a corresponding depression in values. This condition of affairs has made operators restless, and there is a feeling of insecurity in speculative circles. Whether we have war or peace, it will be better for all kinds of trade if the matter is settled one way or the other. An European war would certainly bring big prices, while a certainty of peace would bring things to a normal basis. Because of the war feeling farmers are more inclined to hold their wheat, and speculators rush in and buy for a rise. This makes it more difficult for legitimate operators to supply present wants. The statistical position has not changed any, and if there is no war dealers expect to get their supplies at reasonable prices.

The London market is reported steady, though according to *The Trade Bulletin* cable there has been a drop of 9d. to 1s. per quarter during the week, with a weaker market to prospect. Early in the week a firmer feeling set in on this side, and red winter wheat at points west of Toronto sold at 68 to 69c. at Manitoba No. 1 hard at Fort William at 71½ to 72c., but towards the last of the week an easier feeling prevailed. The quotations here are 68 to 69c. for red west. Goose wheat is ruling at 70 to 73c. and Manitoba No. 1 hard quoted at 82 to 84c. Toronto and No. 1 Northern at 78c. On the farmers' local market red and white bring from 72½ to 74½c., goose from 75 to 78½c. and spring five 72c. a bushel.

Oats and Barley.

The London oat market has been fluctuating with the rise and fall of the war barometer, but a firm feeling has set in. Considerable quantities of American and Canadian oats have arrived lately, but owing to lighter shipments of Russian the market has not been overloaded. Owing to the increased percentage of inferior oats coming to Montreal this season the difference in value has widened. Sales of No. 2 have been made at 30½c. to 30¾c. afloat, and of No. 3 at 29c. The market here has been steady at 26c. for mixed and 26½c. for white west. On the local market they are quoted at 30½c. to 31½c.

Barley at Montreal rules firm at 51½c. to 52c. for No. 1 malting quality, but holders are asking 56c. to 57c. The market here is steady at 48c. to 50c. for No. 1 west, and 45c. to 46c. for No. 2 west. On the local market it brings from 50c. to 54½c.

Peas and Corn.

The London market for peas is reported very strong at 2s. advance, owing to reports of a small crop on this side. The Montreal market is unsettled, and prices are irregular, quotations being all the way from 67¾ to 68¾c. afloat. These figures are from 15 to 17c. a bushel higher than at this time last year. The market here is steady at 60 to 61c. north and west. On the local market peas sell for from 64 to 67c. per bushel.

The Montreal corn market is firm at 43 to 44c. in car lots. Canadian yellow is selling at 35c. west, and American at 41 to 42c. Toronto.

Bran and Shorts.

There is a good local demand for bran at Montreal and for export to the United States. Quotations are \$12 to \$12.25 for bran, \$13.50 to \$14 for shorts, and \$15 to \$16.50 for moullic in car lots. The market here is firmer

ROBES and GOON GOATS

We are Manufacturing Furriers, and can do better for you than the country dealer or retailer in any city in Canada. In order to convince you of this fact, we offer for this week:

GREY ROBES.

Size 60x72 inches, plush lined, edged with heavy felt, long haired, and made from select skins, for ONLY \$6 These robes are positively good value at \$8.50 to \$9. Your money refunded if not satisfied.

COON COATS.

We are offering a handsome Coon Coat, no flanks, prime skins, 9-inch collar, quilted linings, edges turned with fur four inches deep; natural dark color; not a flaw, but perfect in every way. Price... \$35 and would be good value at \$45. THIS WEEK ONLY.

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

WE BUY ALL KINDS OF RAW FURS

at \$12 to \$14.50 for shorts and \$8.50 to \$9 or bran west.

Eggs and Poultry.

The British egg market continues firm, and shipments of Canadian fresh eggs have fallen off of late. Prices are firm at 8s. to 9s. per 120. The Montreal market continues steady with sales of strictly new-laid reported at 20c. Choice straight candled stock bring 14 to 15½c. and P. E. Island 13 to 13½c. There have been large shipments of pickled stock lately. Eggs are in fair supply here at 16 to 18c. for new laid; strictly fresh gathered at 15 to 16c., and held fresh at 12 to 14c. On the local market new-laid bring 20 to 23c.

Several shipments of dressed turkeys arrived at Montreal during the week, but most of them were of poor quality, and sold at 8½ to 9c. There have been complaints there of too many geese, ducks and chickens coming forward, but the mild weather has been against their sale. Chickens are quoted there at 6 to 7½c., geese in case lots at 6 to 6½c., and ducks at 7½ to 8c. Owing to the condition of the weather the market here is easier, and prices are 25 to 35c. for chickens, 25 to 45c. for ducks, 5½c. per lb. for geese, and 6 to 8c. for turkeys. Prices on the local market are about 20 per cent. higher than these figures.

Potatoes.

There is a good demand at Montreal for sound stock, which sells in car lots at 50 to 52c. per bag. Inferior stock brings from 40 to 45c. ex-cars. The market here is steady at 55c. in car lots, and 65 to 75c. out of store. On the local market they bring from 60 to 65c. per bag in car lots.

Hay and Straw.

The Montreal market is not overcrowded, which is steady at \$4.50 to \$5.50 for choice clover, \$5.50 to \$6 for No. 2, and \$6.50 to \$7.50 for No. 1 timothy. The market here is quiet at \$7 to \$7.25 for cars of baled hay on track, and \$4.50 for baled straw. Locally timothy brings \$9 to \$10, and clover \$6 to \$7.50 per ton.

Fruit.

The apple export trade has been characterized by more purchasing of stock than former

years. Many packers who consigned fruit have had \$1.50 advanced which is considered by those in the trade to be too high. There are reports that shipments of fall fruits have not realized large profits and fruit growers are advised to grow as little of this kind as possible. Montreal prices now are \$2.75 to \$3.00 per bbl. for No. 1 and \$2.00 to \$2.50 for poorer quality. Apples on the local market here bring \$1.00 to \$2.50 per bbl.

Cheese.

The British markets are reported quiet, but the prices remain the same. Stocks there are evidently smaller than at this time last year, and the feeling is that prices will have to advance. Finest Canadians are quoted in London at 44s. to 45s., and good to fine at 40s. to 43s. The market on this side is in a much healthier condition, and at Montreal there is fully one-fourth cent advance on prices over a week ago. The Warrington failure does not appear to have had any serious effect upon the market. Quotations there are: finest Western, 9½ to 9¾c.; finest Eastern, 8¾ to 9c.; under grades, 8 to 9c. There has been more business on the local market, and considerable quantities have been sold at prices ranging from 8¾ to 9c., with one lot reaching 9 1-16c. Some factory-men evince a disposition to hold for awhile.

It is estimated that stocks in Canada are from 150,000 to 200,000 boxes less than at this time last year. Up to Oct. 29th the total shipments from Montreal were 1,649,412 boxes, as against 1,854,577 boxes for the same period last year, showing a decrease of 205,165 boxes. The shipments from New York for the same time were 271,628 boxes, as against 514,197 boxes last year, a decrease of 242,569 boxes—making a total decrease from Montreal and New York of 447,734 boxes.

Butter.

The butter situation is easier than a week ago. There have been large shipments of creamery butter from Montreal lately, and there seems to be large stocks to go forward. Most of the heavy exports of late have been cold storage good held on English account. There is an exceptionally large make of October creamery, but factory-men are inclined to

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

WILL PAY ITSELF IN 4 MONTHS

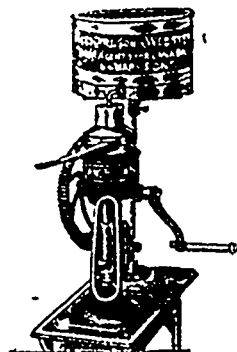
BLYTHESWOOD, ONT., JUNE 8TH, 1898.

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

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

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

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



RICHARDSON & WEBSTER,

ST. MARY'S, ONT.

hold for a price which is much above the present export basis. Arrivals of fresh Australian creamery are reported in London. This, together with the fact above mentioned, has tended to lower values. Some of this Australian quality sold for 110s. to 112. per cwt. The London market for Canadian creamery is reported 4s. per cwt. lower, and quotations are 96s. to 102s. for choice and 88s. to 94s. for good to fine. Things have been quiet at Montreal during the week's regards new business. Choice creamery in boxes is quoted at 18 1/4 to 18 1/2 c.; tubs at 17 1/4 to 18 c.; good to fine in boxes, 17 to 17 1/2 c.; tubs, 17 to 17 1/2 c. Western dairy at 14 to 15c. Up to Oct. 29th the total shipments from Montreal were 233,035 packages as compared with 202,875 packages for the same time last year, showing an increase of 30,160 packages. Shipments from New York show a big falling off; the total for the season up to Oct. 20th was 48,845 packages as compared with 169,663 for the same time last year, a decrease of 120,818 packages, leaving the combined shipments for both places 90,658 packages behind last year. It is estimated that the New Zealand make of creamery will fall short 20,000 boxes between now and Christmas.

The market here is a little easier at 18 to 19c. for tubs and 20c. for prints. Choice dairy butter in tubs brings 15 to 16c.; medium, 12 to 13c.; large rolls, 14 to 15c.; pound prints, 15 to 16. Pound rolls on the local market bring 18 to 22c. and large rolls, 14 to 15c.

Cattle.

The cattle situation has been growing weaker for the past few days. The export demand has not been large, and with a liberal supply of inferior stuff to be disposed of, prices receded from 5 to 10 cents per cwt. on Friday's market for export and butchers' stock. A visit to the cattle market here would convince one that our farmers do not yet understand how to feed cattle to get the highest price. For butchers' and fat cattle the American markets are also easier.

Export Cattle.—Shippers do not appear very anxious to operate. Choice cattle will bring about \$4 per cwt. and light exporters from \$3.60 to \$3.90 per cwt. Choice export bulls bring \$3.50 to \$3.70, and light exports \$3 to \$3.37 1/2. Good loads of butchers' and exporters' mixed sold on Friday for \$3.65 to \$3.85.

Butchers' Cattle.—Good cattle of this class are scarce; choice picked lots bring from \$3.90 to \$4 per cwt. Loads of good butchers' bring \$3.40 to \$3.60; medium, \$3.30 to \$3.40; common, \$3 to \$3.20; inferior, \$2.50 to \$2.75.

Stockers and Feeders.—Feeders are inclined to be a little easier. Choice heavy feeders bring about \$3.65, and medium, from \$3.40 to \$3.50, the bulk going at the latter prices. Buffalo stockers sold on Friday at from \$3 to \$3.25, the bulk going at \$3.10 to \$3.15 per cwt.

Calves.—Are in moderate demand at Buffalo and easy at about \$7 for choice to extra calves. Good veal calves are reported scarce here and sell at \$3 to \$6 for common with \$7 to \$8 each for the best, or \$5 per cwt.

Milk Cows.—Are easier at \$25 to \$45 each, with choice milkers bringing \$50 each.

Sheep and Lambs.

The American market for these is weaker. Chicago has had very large supplies for the past week or two and prices there are easier. The Buffalo market is also a dragging one with Canadian lambs quoted at \$4.50 to \$5.30 per cwt., and sheep at from \$3.00 to \$4.50 to quality. The market here is quiet, though good fat sheep find a ready sale. Ewes bring from \$3.00 to \$3.10 per cwt., and bucks \$2.50 as to \$2.75. Lambs are lower at \$3.90 to \$4.00 per cwt. Buck lambs bring about \$3.75 per cwt.

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 PRESTON ONT.
 FINE BANK OFFICE, OFFICE SCHOOL, CHURCH & LODGE FURNITURE.
 COURT HOUSE & DRUG STORE FITTINGS. SEND FOR CATALOGUE

Hogs.

The American markets early in the week showed a little advance, but this was only of a temporary character. The Montreal market is quiet, and packers there are able to secure what bacon hogs they want at \$4.25 and fat hogs at \$4. The market here has ruled steady, though receipts have been large. Best selected bacon hogs off cars sold for \$4.12 1/2 on Friday, light fats at \$4. Thick fat hogs seem to be bringing bacon hog prices now. According to *Trade Bulletin* cable, Nov. 3rd, there is a further drop of 5s. to 6s. per cwt. in bacon owing to large receipts from Ireland, Denmark and Canada.

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Fall and winter term now on. Book-keeping, arithmetic, commercial law, shorthand, typewriting, etc. MRS. M. L. RATTRAY, Principal.

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

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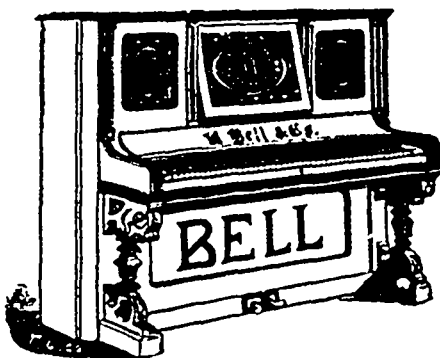
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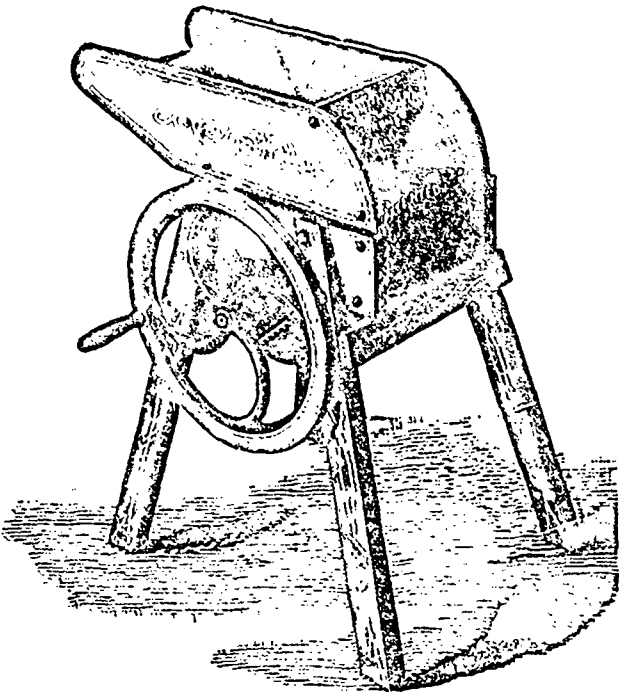
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need careful attention in order to bring you good returns. The roots they eat should be well sliced and pulped. The

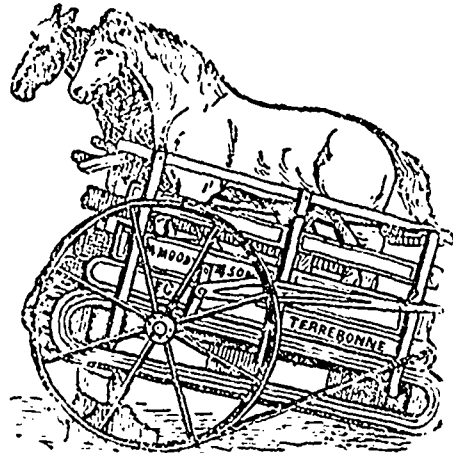


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Always ready. Stop instantly and when you wish.

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No. 1—330 lbs. \$75
No. 2—600 lbs. \$125

HAND OR POWER

EAST ORO, Aug. 30, 1898.

Creamery Supply Co., Guelph:—

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

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

MISSIS A. & B. MACDONALD, Guelph.

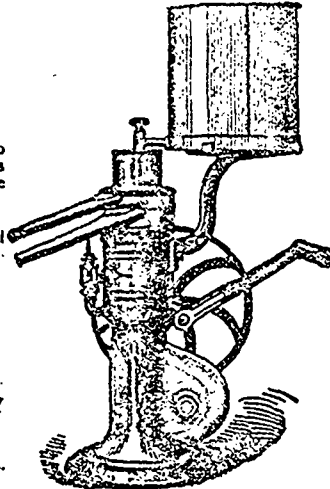
DEAR SIRS,—My 8 year old boy can run it from start to finish. The increased yield is about 1 lb. per week from each cow.

J. M. BARBER, Guelph.

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Write for Circulars



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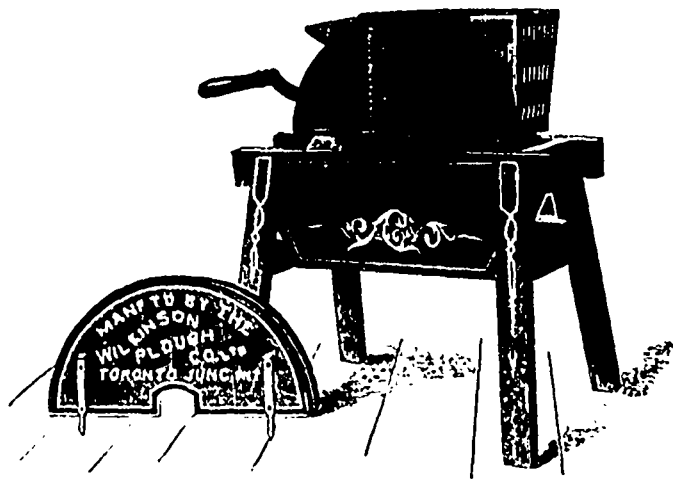
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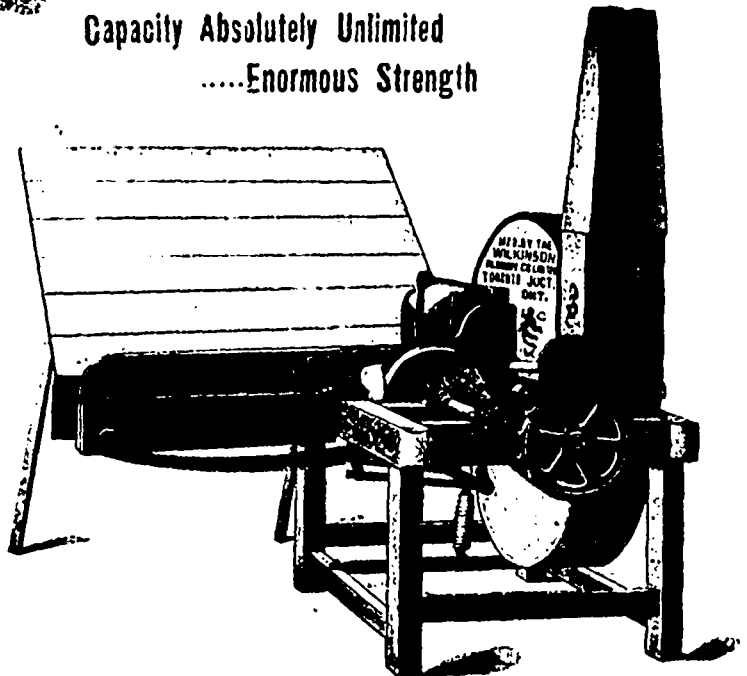
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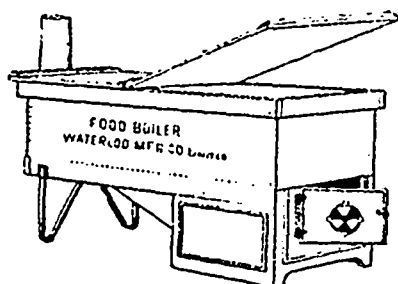


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