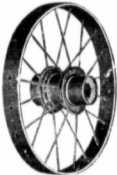


Farming World

A Paper for Farmers and Stockmen

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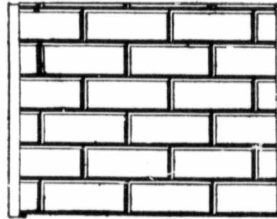
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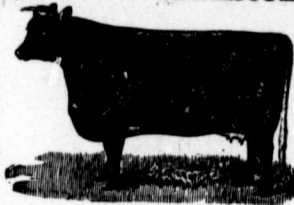
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The Farming World

For Farmers and Stockmen

VOL. XVIII.

NOVEMBER 13th, 1900.

No. 11

Election Atermath



HE elections are over. The campaign has been short and decisive and the country will now settle down to its regular routine with a feeling of relief that political strife will lie dormant for another five years. The return of the Laurier Government to power means that there will be no radical changes made in connection with the work of the Department of Agriculture. The movements inaugurated by the Hon. Mr. Fisher during the past few years for the benefit of the farmers of this country and which we are free to say are making for progress along agricultural lines will have ample time to be worked out to the fullest extent. Mr. Fisher has shown characteristic energy and foresight in the administration of his department and the experience of the past four years indicates that the farmers' interests will not suffer at his hands.

During election time the farmer assumes a very important place in the eye of the politician. He is catered to, patronized and everything possible done to obtain his favor for one policy or the other. He is made to feel that he is the most important individual in the country whose every desire shall be gratified. And there is, perhaps, nothing wrong in this. But what is most peculiar about the situation is that as soon as the elections are over the farmer drops largely from view politically speaking, while the good things sometimes go largely to other classes in the community not so deserving.

It is not, however, this particular phase of the situation that we wish to draw attention to just here. If the farming community is the important element in this country during an election contest why is it not the important element all the time? If it is not we believe it should be. Nearly one-half of the population of the Dominion is made up of farmers. But is this half the power and influence in this country, politically speaking, that it should be? We hardly think so. And one of the reasons why it is not is because the farmers as a class do not rise up to the privileges which their position and numbers in the country give them. They are seemingly content to let others take the lead and remain in the background while those no better qualified than they direct affairs of state. To such an extent is this the case that many people in other walks of life are led to believe that the farmer is not capable of taking the position in the affairs of the country he has a right to expect.

The farmer's calling is neither ignoble nor undignified. The prosperity of nations since time was, has been closely connected with the farming industry. On this continent especially, both in the United States and Canada, the wealth and prosperity of the country is inseparable from the cultivator of the soil. No other vocation surpasses

farming as a reliable and stable profession, and in no other calling is the individual so completely the architect of his own fortune. George Washington once said: "Agriculture is the most useful, the most honorable and the most necessary of the professions." Let the farmer then rise up to the position that the dignity and the necessity of this vocation demands. Let his influence be so exerted all the time that it will not need an election to show what his real power in the country is.

The Germ Theory and Soil Fertility

A somewhat remarkable deliverance on the subject of soil fertility was made by Prof. McAlpine, of the West of Scotland Agricultural College, at the opening ceremonies of that institution a few weeks ago. He has long been recognized as a genius in the teaching of agricultural botany and is perfectly familiar with crop plants. The Professor's argument on the subject is summarized by *The North British Agriculturist* as follows:

Soil fertility can only result from germ activity in the soil; the conditions favorable for the active operations of soil germs are the first things to be studied in manuring to profit; farmyard and other manures are not applied for the direct feeding of plants, but for the feeding of the soil bacteria, which convert these manures into substances suitable for assimilation with the tissues of the plants; and, finally, a due supply of lime in the surface soil is absolutely essential to the due discharge of the functions of these soil bacteria, whose activity is the sole source of soil fertility.

This germ theory in connection with soil fertility is not altogether a new thing, though it has never been brought before the agricultural public in so prominent a manner as Prof. McAlpine has done. It has been referred to in these columns a few times, but only in an incidental way. But nowhere in the reports of the leading experiment stations in Great Britain or on this continent has it been referred to. The theory, however, emanating, as it does, from so prominent an agricultural scientist, comes as a surprise to thinking farmers who have been taught to believe that plants take their food direct from the manure or food supplied without any go-between. One of the striking things in connection with it is the necessity for lime in the surface soil in order that these soil bacteria may be able to discharge their functions.

The development of this new theory in Great Britain is not without its humorous side. About ten years ago a lecturer in the Agricultural Department of Edinburgh University began to teach these new ideas as to germ activity and soil fertility, and the result was that the professor in charge of this branch called a meeting of the other lecturers in this branch—but without success—in order to get them to expel their fellow-lecturer on the ground that the teaching of such doctrines showed that the party teaching them must be "rapidly qualifying for a lunatic asylum." The same lecturer, however, continued this line of work with the result that to-day the idea of a germ theory prevails largely among many leading British agriculturists, not the least of whom is Prof. McAlpine.

The practical bearing of this germ theory may not be very important, though it may help to solve many of the

problems connected with modern agriculture and the maintaining of soil fertility. The announcement in regard to it, however, coming from such an important source, shows in a very striking way what science has done and is doing for the farmer. Science and agriculture must go hand-in-hand in all matters pertaining to the farm and its products.

Live Stock Notes

By Stockman

CLYDESDALE SIRES.

The show season being finished, there has been the usual comparison of prize-winners. The list gives Baron's Pride (9122) the first place, and no other horse near him. Of 252 prizes offered at the seven leading shows, Baron's Pride was the sire of 42 animals winning 99 prizes. The next to him on the list is Sir Everard (5353), with but 20 prizes won by 13 animals. Prince of Carruchan (8151) and Monrane Mac (9958) follow next, each with 13, and Royal Gartley (9844) has 11, the three last having six and eight animals shown. Handsome Prince (10356) has five and Lord Stewart (10084) has four, each with seven prizes. There are four with three, and the balance are scattering ones and twos. Baron's Pride is owned by Andrew Montgomery, of Netherhall, Castle Douglas, Scotland.

SCOTCH FAT STOCK SHOW.

Scotland is to have a fat stock show this winter in the Waverley Market, Edinburgh, 5th and 6th December. In addition to cattle, sheep, and pigs, there are to be prizes for feeding roots—turnips, cabbages, and potatoes, for grains, and an exhibit of butter-making showing the most modern methods. The prospects are that this new departure for Scotland will be a decided success.

FEEDING HEAVY HORSES.

For steady, hard work heavy horses require abundance of nourishing food. One of the largest English firms allows 29 lbs. per day and asserts that this is the least that will keep very heavy horses at hard work in good condition. Oats, good and well cleaned, are the best grain food for horses and well-cured timothy hay the best rough feed. For economy other grains may be used, and the following was a cheap ration used by one English firm: Indian corn 10 lbs., Egyptian beans or Canadian peas 5 lbs., oats 2 lbs., bran 2 lbs., hay 10 lbs., roots 3 lbs. This makes a cheap ration of 29 lbs. with the roots as an extra. Linseed was used for sick or delicate horses. Oatmeal gruel is used by many to give a drink when the horses come in tired at night. Notice the weight of hay used, 10 lbs., very much less than is usually fed in Canada.

FALSE ENTRY AT SHOW.

At Birmingham, England, quarter sessions Joseph Gowling-Hill farm, Radford, Leamington, was charged with making a false entry of the age of a Hereford bull exhibited at the Birmingham show. The directors of the Agricultural Society prosecuted. It was shown that the animal in question was calved 23rd July and he made an entry giving the date as 13th September. Gowling was found guilty and fined \$600 and costs.

IMPURE BUTTER.

Canadian butter is making for itself a good name in Britain. The continental shippers are feeling the competition and in some cases have resorted to questionable practices to beat the Canadian article. This was brought out in the city of London court recently in an action for damages over the sale of a parcel of Dutch butter valued at \$5,000. The purchasers were able to show that the butter contained about ten per cent. of margarine cleverly mixed with it. The court gave a verdict against the sellers of the adulterated butter. The Canadian article is pure and no margarine is allowed to be imported into Canada.

Fattening Steers

February 13, 1900, the Kansas State Agricultural College began fattening eighty head of steers to test the value of several different methods of preparing feed for steers where, on account of cholera, hogs could not be used to follow and save the droppings. The steers were divided into four lots of twenty each. Lot one was fed shelled corn and whole alfalfa hay, lot two shelled corn and alfalfa hay cut in inch lengths, lot three corn-meal and alfalfa hay, and lot four corn-meal and alfalfa hay cut in inch lengths. With all lots the hay was thrown in the bottom of the grain boxes, the grain placed upon the hay and the two carefully mixed. Salt and water were kept before the steers all the time.

The average weight of the eighty head at the beginning of the experiment was 1,036 pounds per steer. The steers were fed 116 days and were then ready for market, averaging 1,307 pounds each, an average gain of 271 pounds each or an average daily gain of 2.34 pounds per steer.

The steers required an average of 747 pounds of grain and 385 pounds of hay for each 100 pounds of gain. This is much below the average amount of feed required to make 100 lbs. of gain.

The steers ate an average each of 19.4 pounds of grain a day. This is a low amount of feed for the grain made.

The gains for the whole feeding period are as follows:

	Gain per steer.
Shelled corn, whole hay.....	262 lbs.
Shelled corn, cut hay.....	257 lbs.
Corn-meal, whole hay.....	273 lbs.
Corn-meal, cut hay.....	293 lbs.

Average gain of steers fed shelled corn, 260 pounds each. Average gain of steers fed corn-meal, 283 pounds each. This shows a gain of 8.8 per cent. from grinding. The steers fed shelled corn required an average of 780 pounds of grain for 100 pounds of gain. While those fed corn-meal required an average of 718 lbs. of grain for 100 lbs. of gain.

But little was saved in cutting the hay, the average gain of the steers fed whole hay being 286 pounds each and those fed hay cut 275 pounds each, a gain of 2.6 per cent. from cutting.

There is a shortage of both grain and roughage in Kansas this year and every feeder should get the most possible out of his feed. One experiment does not settle any question in feeding but may indicate what is probable. The results obtained in this experiment seem to indicate that feeders can get considerably more gains from their feed by mixing the grain and hay, as considerably less than the usual amount of grain was required in this feeding to make 100 pounds of gain. Our explanation is that where grain is fed alone much of it is not brought back to the mouth again, while if the grain is mixed with hay all of it gets the benefit of thorough mastication in the cud. There is less difficulty from scouring where grain and hay are fed together.

The steers were sent to Armour Packing Company, Kansas City, for slaughter test and their report is as follows: "The cattle dressed out 59.3 per cent. of live weight, the yield of fat 6.7 per cent. The carcasses cut bright, were of good color on the outside and made good, clean, bright-looking, well-colored beef. Our buyers consider that ground corn and alfalfa is the best feed for cattle."

The eighty head made an average gain of 7.5 pounds for each bushel of food eaten and ate 28.8 pounds of hay with each bushel of grain.

The gain from the different methods of feeding was as follows:

	Gain per bushel of grain (56 pounds).
Shelled corn, whole hay.....	7.1 lbs.
Shelled corn, cut hay.....	7.3 lbs.
Corn-meal, whole hay.....	7.4 lbs.
Corn-meal, cut hay.....	8.2 lbs.

—Press Bulletin, Kansas Experiment Station.

[NOTE.—The average gain of steers fed on whole hay is given as 286, which evidently is a misprint, as the context shows. The figures should be 268 in order to show a gain of 2.6 per cent. for cut hay.—EDITOR.]

Hon. Sydney Fisher

In our exhibition number we had the pleasure of recounting in a somewhat brief manner a few of the important features of the work of the Department of Agriculture at Ottawa during the Hon. Mr. Fisher's tenure of office. By the return of the Government to power on Wednesday last Mr. Fisher will, no doubt, continue to be the Minister of Agriculture for the next five years, and a short review of his earlier life and fitness for the position may not be amiss at this juncture.

Mr. Fisher is a Canadian by birth and descent, his great-grandfather having come from Perthshire, Scotland, and settled in Quebec somewhere about 1790. He is the son of Dr. Arthur Fisher of Montreal and was born on June 12, 1850. He was educated at the High School and McGill University and afterwards went to Cambridge University, England, where he obtained the degree of B.A. in 1872. After completing his education Mr. Fisher returned to Canada and in the following year purchased his present farm at Knowlton, Que, familiarly known as Alva Farm. At that time he had very little practical experience and no training for the work. But by devoting all his ability and energy to the business he was able in a very few years to make a great success of it. He made a specialty of live stock breeding, and went into the making of fancy butter, a feature which he always considered the highest development of the business.

Starting in with little knowledge, he purchased common cows and a thoroughbred bull as good as could be found according to his judgment at that time. First he purchased an Ayrshire, then a Jersey and in 1885 a Guernsey, eventually retaining the last named breed as the most satisfactory for his purpose. His first Guernsey bull was purchased from the well-known herd of the late Sir John Abbott, and he afterwards purchased several females from the same herd. Finding that there was no great choice of the breed in Canada, Mr. Fisher went to the States in 1889 and bought a bull and four females from the celebrated herd of Mr. Morton, who was at that time Vice-president of the United States. He then began to build up his herd of Guernseys by cross-breeding these two strains with most gratifying success. For several years previous to becoming Minister of Agriculture, Mr. Fisher's young stock carried off valuable prizes at the leading fairs in his own district. Since going to Ottawa he has not exhibited at any of the fairs though taking the same pains to keep up the standard of his herd as formerly.

We have said that Mr. Fisher began to make fancy butter. In this line he has been most successful, disposing of his butter at fancy prices to the grocers of Montreal. He has also been very successful as a prize-winner for fancy butter at the various Eastern Townships and Montreal exhibitions. He very early became a believer in the silo as a means

of preserving succulent food for the winter feeding of stock, and was the first farmer in Canada, if not the first in America, to build a wooden silo. He recognized that the stone or cement silos which were then being built were beyond the means of the ordinary farmer, and that wood would serve the purpose just as well.

By his skill and ability and the practical experience acquired after a few years, Mr. Fisher soon succeeded in making Alva Farm one of the very best in the Eastern Townships, the banner agricultural district of the Province of Quebec. He made a thorough study of the best methods of agriculture, and by applying them in a practical way to his own farm and his own conditions, was able to make his chosen vocation a success and to fit himself for the position he now fills so ably.

As might be expected in a farmer of Mr. Fisher's education and ability his services were in frequent demand in a public way in his own province.

He became a justice of the peace, vice-president of the Quebec Provincial Dairy Association and vice president of the Quebec Fruit Growers' Association. He was always in demand at dairy and agricultural conventions in his own province to speak on all sorts of agricultural topics. When the dairymen of Quebec were desirous of establishing a scheme of factory inspection, Mr. Fisher was deputed by the committee in charge of the matter to draw up for the use of the Government a memorandum embodying his views as to what the proposed scheme should be. On this memorandum was based the present system of factory syndicates and factory inspection which has revolutionized the dairy system of Quebec.

We have not the space nor have we the desire to deal specially with Mr. Fisher's entry and success in political life. It is sufficient to know that he has been successful in this line also and is today the Minister of Agriculture for the Dominion. We point out elsewhere that his work in this

capacity during the past four years shows that the interests of the farmer will not suffer at his hands. And this short review of his earlier life and training as a practical farmer confirms our judgment in this matter. He is certainly the right man in the right place, both by his training and ability. Canadian agriculture as in the past will no doubt continue to progress under his care and management of the Agricultural Department. It must not be taken for granted, however, that because there will be no change in the head of this important department no new movements will be undertaken in the interests of the farmers of Canada. Mr. Fisher has always shown his willingness to take up new lines of work in the interests of agriculture as seen in the recent appointments of the live stock commissioner and the official referee and inspector at Montreal. As the country develops new movements and new departures must necessarily follow, and Mr. Fisher, we are assured, will keep well abreast of the times.



The Horses that Sell Well

The remarks in these columns from time to time in regard to the scarcity of really first-class horses of nearly every type have been confirmed from many sources. Last week Mr. Geo. Williams, Secretary of the Illinois Horse Breeders' Association, in a letter to the *Rider and Driver*, confirms them in a very striking way. His letter is so much to the point that we give it in full as follows:

"During the talks I have inflicted upon the farmers, I have tried to impress upon their minds that we are now using up what may be called the last full crop of foals, that of 1894, and are spending our reserve fund of horses. As the foals from mares this year will take about six years to become marketable horses, they may well look forward to a scarcity before they are ready for it. I have also tried to sound a note of warning that they must profit by their former mistakes and not breed in the haphazard manner that they formerly did; that if they breed for their own use or for the markets, it will repay them amply to breed for a type of horse that will sell well in the city market, if they are at any time lucky enough to have a surplus to sell; to those who are breeding the American trotter to breed to the stallion that begets large and handsome colts, and not for speed alone; to try and get the horses on their farms of one type, so that they will match up into teams more than they have in the past; that the great nursery studs that breed for speed are not the ones to copy after, but that the general breeder must breed for size, style and beauty, and they will find ready market for their stock even if it has not speed enough for the track. By persistently and consistently following out these lines, they will be able to hold the markets of the world that now are open to him. If in the "boom" days we would be in better shape to stand the strain of the shortage of good horses that is now upon us, and if in the past we had made size, style and beauty an object, instead of trying for speed, the breeders could now be getting good prices for their animals fit for coaches or the road."

The Care of the Dairy Cow

No dairyman need expect to reap a rich harvest in dairying unless his cows receive the very best care and attention. The breed may be the very best, but unless proper care and feed are provided the very best results cannot be obtained. And the better the milker the better the care and attention she receives must be. Many dairymen fail altogether on this point in connection with the management of their herds and wonder why they are not receiving as large returns from the factory as their neighbors are. Special care and attention is necessary in order to make winter dairying a success.

The various points connected with the care and feeding of the dairy cow are put in a very terse and short form by Mr. C. P. Goodrich in a recent issue of *Hoard's Dairyman* as follows:

1. *Comfort*.—Cows must have comfort or they cannot do well. Give them a good bed and a comfortable stall with as much liberty as is consistent with security, cleanliness and convenience.

2. *Cleanliness*.—Have the arrangement of the stalls, gutters and fastenings such that the cows can be kept clean. Keep the stable clean.

3. *Good Air*.—Have the stable ventilated in such a way as to provide pure air for cows without making it too cold.

4. *Kindness*.—Always be kind to cows, then they will be glad to see you when you come around. Speak gently to them and never in angry tones. Remember Ward C. White's famous saying: "Always speak to a cow as you would to a lady."

5. *Exercise*.—Give cows a chance to exercise in the open air when weather is comfortable.

6. *Milking*.—Milk regularly, at the same time each day, dividing the day equally between milkings; cows in the same order and by the same milkers, if possible. Milk

quickly, but gently. Get all the milk each time, but do not keep on stripping after you have got it.

7. *Feeding—Amount to Feed*.—Feed cows all they will eat of the proper kinds of food. The concentrates should be fed somewhat in proportion to the amount of milk each cow can be made to give. But in no case should the concentrates constitute more than half, in weight, of the dry matter of the daily ration—a safer rule is to say one-third. Give only what they will eat up at once. Have none left over in the mangers or feed boxes for them to breathe on and get foul.

8. *Variety*.—Feed a variety of foods. They will eat more and digest more because of it. Feed nothing but sweet, wholesome food.

9. *Regularity*.—Feed at the same time each day, then cows will not be worrying about their feed.

10. *Balanced Rations*.—Feed as nearly as practicable a balanced ration. But all cows should not be fed alike; those inclined to lay on flesh should be fed less of the carbohydrates, such as corn, and those inclined to turn all their feed into milk should be fed more of such feed.

10. *Succulent Feed*.—In summer, cows should have good pasture or other green food or silage. In winter a part of the daily ration should be silage or roots to enable them to do their best.

12. *When to Feed*.—Feed both coarse fodder and concentrated feed both morning and evening. Feed a small feed of coarse fodder at noon if cows have been accustomed to it. If cows have not been accustomed to it, they may, perhaps, do as well without the noon feed by giving more of the other feeds.

13. *Water*.—Cows should be watered at least twice a day when on dry feed, and the water should be pure and wholesome and at a temperature that best suits them, which is, at least 20 or 30 degrees warmer than ice water.

14. *Salt*.—Cows should have at all times all the salt their appetites crave, which is from one to two ounces each daily.

Do Good Roads Pay?

Many persons have not given the question of good roads the serious consideration that its importance deserves. Especially is this the case in the country, where the farmers have heretofore been obliged to stand the entire expense of road-building or improvement. They have naturally viewed with suspicion an agitation for better highways, which may mean largely increased taxes. Many look upon good roads as a desirable convenience but either ignore or fail to comprehend the money side of the question.

Leaving out of consideration, temporarily, the matter of paying for permanent roads, we have before us the question: Do good roads pay—would they benefit the farmer financially? To properly answer this question we should know what it is costing the people of the United States to haul their produce and what it cost the people in other countries.

The federal Government has been collecting statistics on this subject for years and the results of the investigations have been published far and wide. It should be borne in mind that these figures are entirely impartial and as reliable as the most careful corroboration can make them.

The total wagon transportation in the country amounts to 500,000,000 tons each year. The average distance freight is hauled in wagons is eight miles and the average cost of hauling one ton this distance is two dollars. On this basis the hauling done in wagons costs us \$1,000,000,000 per year. This sum seems too large for accuracy, but it has been determined by independent investigators whose figures substantially agree.

We are now interested in knowing what this hauling should cost. Carefully compiled statistics show that in England and European countries the average cost of hauling a ton eight miles is 80 cents, or \$1.20 less than our cost.

To put the figures in a different shape, it costs the

How to Raise High-Priced Table Chicks

American farmers 25 cents per ton per mile to market his crops, while his foreign competitor pays but 10 cents to haul a ton a mile. If we could haul in a wagon as cheaply in this country there would result an annual saving of \$600,000,000. If there is the slightest hesitation about accepting these figures they can be cut in two and we have still a saving of \$100,000,000 per year—a sum worthy of our most earnest consideration.

There is not the slightest doubt but that the cheaper cost of wagon hauling in foreign countries is due to their better highways and to the universal use of wide tires. The average load, abroad, for two horses is four tons, exclusive of the wagon, and this is the all-day load, six working days per week.

We are wasting about \$600,000,000 each year on account of our poor roads, and this excessive cost of our primary or wagon transportation constitutes a steady tax on our farmers and our commerce. American producers are handicapped to that extent in the markets of the world.

The saving of this money would enhance the profits of the farmer and increase the trade of the towns. But in addition to the direct saving of this "mud tax," as it has been called, there are many other ways in which good roads pay.

Commerce would be benefited if crops could be moved regularly and at all seasons of the year. Farmers could promptly take advantage of favorable prices, and perishable crops could be marketed expeditiously and with certainty.

It is not possible to set a money value upon the gain to the farming community that would result from permanent highways, but undoubtedly the improved social and educational advantages would do much towards solving the vexed question of how to keep the young men on the farm.

And when to all these features we add the increase in real estate values the conviction is forced upon us that good roads do pay; that first-class, permanent highways are the best investments the farmers can make, and that it is now time for the citizens of Kansas to lay the foundation for future prosperity.—*J. D. Harper in the Industrialist.*

Crops and Live Stock in Great Britain

The English Board of Agriculture has collected and recently issued in the form of a series of tables some valuable statistics in regard to the position of Agriculture in the United Kingdom. The following is a summary of crops and live stock in 1899 and 1900, the "corn crops" including wheat, barley, oats, rye, beans and peas, with about half the average in this table given to oats:

	1900.		1899.		1900 compared with 1899.	
	Acres.	Acres.	Acres.	Acres.	Increase.	Decrease.
CROPS.						
Corn crops	8,707,391	8,803,599	—	—	—	96,208
Green crops	4,301,774	4,274,003	—	27,771	—	—
Clover and rotation grasses	6,024,317	6,105,837	—	—	—	81,515
Flax	47,794	35,463	—	12,331	—	—
Hops	51,308	51,843	—	—	—	535
Small fruit	78,687	76,772	—	1,915	—	—
Bare fallow	316,644	347,026	—	—	—	30,382
Total arable land	19,527,915	19,694,598	—	—	—	166,683
Total permanent grass land	28,261,529	28,100,672	—	160,857	—	—
Total cultivated area	47,789,444	47,795,270	—	—	—	5,826
LIVE STOCK.						
Horses	2,000,402	2,028,092	—	—	—	27,690
Cattle	11,454,902	11,344,696	—	110,206	—	—
Sheep	31,054,547	31,680,227	—	—	—	625,678
Pigs	3,663,669	4,003,589	—	—	—	339,920

The very rapid development of the poultry fattening business in Canada has, of necessity, directed attention to the methods of poultry raisers in other countries where high prices are received and the business made a success. One of these countries is Belgium, and the succulence of the Brussels "chicks" has so wide-spread a reputation that a consideration of the means by which its excellent table qualities are produced cannot fail to be of interest to Canadian farmers. The following from one of our English exchanges gives a good account of the methods adopted, the special point to notice being the emphasis laid upon cleanliness and sanitary conditions in connection with the treatment of the eggs and the setting hen:

"The excellence of this fowl seems to depend, as far as can be ascertained, on the careful manner in which the setting hen is treated, the cleanliness observed about her, as well as the careful feeding of the young chickens until sufficiently developed for eating purposes.

"The choice of eggs for setting is regarded as a matter of importance, and the freshest obtainable are invariably used. The best breeders seldom use eggs older than eight days.

"Care is taken that the eggs given to one hen should be of the same age. The eggs when collected, are kept at a very even temperature until given to the hen, and are turned daily. The object of this is to prevent the yolk, which is lighter than the white of the egg, from adhering to the top of the shell. The eggs selected are of an average size, those above the medium being rejected, as they often contain double yolks. Eggs received from a distance, and consequently exposed to more or less shaking, are allowed to stand a day or two before being put under the hen. Great care is also taken that the eggs should be perfectly clean.

"The nest is prepared of straw or cut hay, and must be scrupulously clean, dry, and odorless. The setting hens are located in corners where the greatest quiet is obtainable, and are not exposed to strong light. When so located they are not disturbed for any other purpose than the placing before them of their daily supply of food and water. As the hen leaves her nest at least once a day to search for food, to take exercise, etc., care is taken to put her food and water within reach of the nest, in order that the time that she is off the eggs may be materially shortened.

"It is customary in Belgium to mix with the food given to chicks, eggs, milk, the blood of earthworms, field worms, and that of a common variety of fish; also to introduce, for the formation of bone, certain quantities of phosphate of lime found in grain and flour. In the early days flour is given on account of the ease with which it is digested, grain being substituted as the birds get older. Wheat flour is generally used. The grain given is wheat, rice, millet, buckwheat, and corn, raw or cooked. Cooked potatoes are also often given as a change of diet.

"The grain diet is varied as much as possible, and frequently administered mixed. The food ordinarily employed is made up as follows: Hard-boiled eggs and wheat flour are mixed in milk, a little water being added. To this paste is added a small onion finely cut up, together with lettuce when other green food is scarce. The mixture is usually quite stiff, as moist food is considered harmful for the young brood. After the first few days a small quantity of whole grain is mixed into the paste, but if rapid development is desired the simple paste should be continued alone. The daily ration of grain for the fowls is from 2½ to 3 ozs. As a rule the birds are confined on wet days and allowed as much exercise as they wish in fine, sunny weather.

"Birds thus treated find a ready sale, a young Brussels chicken which we should consider about the size sufficient to make a meal for two persons being sold for 4s. 6d., about double the price a fowl reared in the ordinary manner would fetch in the same market."

A New Manure

A subject that has received considerable attention in these columns is that of soil fertility and how to maintain it at the highest standard. The following description of a new manure from the *Rural World* bears somewhat on this topic and may also be of interest to parties identified with the production of beet root sugar in this country:

"The recent discovery of a manure that, it is said, will prove of great value, came about through a consideration of the extreme desirability of utilizing the waste materials which accumulate so rapidly in German beet sugar factories.

"It had for some time been felt that there were valuable ingredients in this surplus matter which might be rendered profitable if some means could be found of deodorizing them and of safely disposing of the dangerous waste water.

"An inventor has now come forward who claims to have discovered a process which achieves these desirable ends, and converts what was formerly a noxious residuum, difficult to dispose of, into a serviceable manure. By this process the brown lye or molasses dregs (the waste matter alluded to) is changed into a dry substance, which can be stored and eventually easily scattered over fields. Upon analysis this product is found to contain: Nitrogen, 3.22 per cent. of which 2.74 per cent. is nitrogen soluble in water (of this 0.7 per cent. is ammonia nitrogen and 0.09 per cent. saltpetre nitrogen); phosphoric acid 0.13 per cent., of which 0.04 per cent. is phosphoric acid soluble in water; potash (soluble), 10.74 per cent.; carbonate of lime, 25.99 per cent.

"The manure is sold in Germany at 3s. per cwt. and it is believed that molasses sugar refineries and molasses distilleries will be able to secure higher net profits from the sale of this article than now result from the manufacture of saline and potash and that the process is of considerable value from a hygienic standpoint. The inventor thinks that the application of the process can be extended to waste materials of other industries and perhaps also to sewage matter."

Care of Horses' Feet

While I was in Dick Benson's stable last week in Kansas City, I succeeded in inducing Mr. Dick to talk about his methods of caring for horse's feet. No one ever saw Dick with a sore-footed horse, and when I inspected his racers and noticed that they all stood on good-shaped tough-looking feet I asked him to explain how about it.

"Well," said Dick, "the secret of keeping a trotter's feet in good condition is in knowing how and when to use water on them. Water is the life of a horse's foot when he has a shoe nailed to it. Without it the foot will fever up and contract, but like any other good thing, it is easily abused. You can soak a foot with water as often as you like, but if you let it dry off rapidly the result will be as harmful as if you had used no water at all. I use wet swabs on my horses' feet a great deal—leave them on hours at a time—and the way I prevent the foot from drying out too fast is to cover it with a thin coat of a good hoof ointment while it is still wet. This closes the pores in the horn and prevents the water in the foot evaporating too rapidly. Lots of times I see swabs removed from a horse or see him taken out of a tub and tied up in a draft on the floor while he is being done up, and I know that that horse's feet are going to dry out so rapidly that they will be feverish the next morning. Any time you soak a horse's feet with water and then take him out in the sun or let him stand where the wind can get at him, his feet will commence to get hard and brittle and the only way to keep them right after using water is to rub on a little hoof ointment while the hoof is wet." Dick showed me a mare that had been very sick and the fever had all settled in her feet, which had contracted to a considerable degree just below the hair. Her hoofs were wrapped in wet swabs and she had springs in them. "This mare," said Dick, "would have had laminitis if I had not kept her standing in a tub of cold water for the larger part of five or six days. Sometimes

diseases of the lungs or bowels will seem to quit those regions and intrench themselves, as it were, in the feet. The feet then contract and soon become ridgy and deformed, if stringent measures are not taken to remedy the trouble. This mare was so weak that it was hard work to keep her in a tub, but if I had neglected to do it she would have been ruined. From now on I will use plenty of water, lots of hoof ointment and keep springs in her feet, and I think I will bring her out all right. I use hoof ointment as packing in the bottoms of all my horses' feet, but I think that stuff wants to be used very judiciously on the outside of the hoof. Too much of it will do more harm than good."—*Horse Review*.

European Cavalry Horses

Mr. Christopher Wilson, one of the judges of horses at the Paris Exposition, writes the *London Live Stock Journal* regarding the training and exhibit of cavalry horses as follows:

"We may fairly take a lesson from the French, Germans, Russians and Hungarians with regard to breeding horses for cavalry purposes. In the first place, they grade their horses and men into three distinct classes, viz.: heavy, medium and light. They also have three distinct classes of stallions and mares suitable to produce these remounts. That they do it was clearly proven by their parades. They first of all sent in their heavy stallions and mares, followed by a troop of cavalry mounted upon the produce of the above stallions and mares. They were all in the ring together. Next came the medium stallions and mares with a troop of their progeny and then the light cavalry with their sires and dams. The way these light horses swept down the ring gave me the idea that the Boers would stand a poor chance of getting away from them. Any practised eye could see at once that the horses in each individual troop were of the same speed, which is most essential in a charge and entirely neglected in our cavalry, where strong and light horses and heavy and light men are mixed together. That these stallions and mares reproduced themselves could be seen at a glance. I had the greatest civility shown me by all the representatives of the various 'haras,' and went into the breeding of these various sires. I found the particular strain which they liked best dated back to the old Norfolk Phenomenon. I saw father and sons as like as two peas. The champion mare, also, was by the same horse, and another half-sister had a colt foal at foot for which they had 400 guineas offered. They very much resemble a very large Hackney, over 16 h. 1 in., with grand hock action and long, sweeping shoulder action. These animals also reproduced themselves to a marked degree. Sir Walter Gilbey very wisely bought two three-year-old mares of the Oldenburgh breed, over 12 hands, dark browns, with immense bone, for the purpose of breeding carriage horses when crossed by the Hackney, which will put the extra dash of action into them; one of these mares was the champion of her breed, and the other was nearly as good."

Weaning Pigs

By Theodore Louis, Wisconsin

The critical period in a pig's life is when it is deprived of the mother's milk; and how to furnish a substitute for it is a problem often difficult to solve. It is reasonable to say that the growth of pigs while nursing a vigorous, healthy, well-fed sow, and the uniform development of flesh, muscle and bone can scarcely be maintained when nature's food is withdrawn. But every observing feeder knows that pigs receive their milk warm and often, and that their digestive powers are never overtaxed, and it is failure to observe this that often makes the weaning period an "unlucky" one.

It is good economy to feed the sow freely during the nursing period, even if it does seem wasteful to feed so much for the little milk she gives; but it must be remem-

bered that it is the whole litter that is being fed, and when they are four to five weeks old they need a deal of it. But the feed must be of a quality and quantity that will not cause derangement of the bowels of the little ones. Such things are better prevented than cured. Feed three times a day, at regular hours, and just enough, having none left in the trough, and yet have the appetite satisfied. This requires observation, but it is necessary to success. Where Tom feeds to-day, Dick to-morrow, and Harry the next day, neither knowing or caring about quantity, pig feeding is a lottery, and blanks are often drawn.

Most every farm has a surplus of milk, and too often it is thought that this alone will substitute sow's milk, and it would to some degree if fed sweet, but this is next to impossible. If milk is dumped into some old swill barrel that is never scalded out and the receptacle of kitchen offal, vinegar, soap-suds, decayed vegetables, and other things too numerous to mention, it is a dangerous substitute for mother's milk. While pigs may become accustomed to sour milk, there is a wide range in its acidity, and the extreme sourness should be avoided.

Nor should milk in any form be fed to youngsters in undue proportions. Shorts and corn meal in equal parts should be mixed with it into a thick slop. Or the corn may be shelled and soaked and fed by being scattered on a clean floor.

Of course where good pasture is at hand less grain is required, but no greater mistake can be made than to stint pigs by depending entirely on pasture, for the first hundred pounds of growth costs the least. Ever bear in mind that when the pig is not adding to growth and weight every day it is a boarder that fails to pay its bills.

Keeping Cabbage Through the Winter

By C. L. Allen

Market gardeners near New York plow a single furrow, from 6 to 8 in. deep, in which they place the cabbage, heads down, as closely as they can be set; they then turn a furrow over the heads from each side. The heads put in these trenches are always fully developed. Where cabbage is grown for shipping in large quantities, the farmers keep it in their orchards, or in groves, where there is slight natural protection. It is best to commence against a fence with a southern or eastern exposure. Against this are set the cabbages as grown in the field, upright, but with a little slant, and placed closely together.

When a row has been placed, another row is placed above them, the stems being arranged between the heads of the first tier, so that the heads of the second tier rest upon the tops of the first. Then other tiers are added in the same manner until the crop is put away, when the whole is covered with newly-fallen leaves, to the depth of 3 in. The leaves are kept in place by sprinkling a little soil over them, or with brush, boards or old rails. Wherever salt or marsh hay or seaweed can be obtained they can be used to advantage in place of the leaves.

The time for putting away cabbage for winter shipment is a local matter. Cabbage should never be put away when wet or handled when frozen. It is better to leave it in the field as long as possible. Select a day best suited for the work, and leave the covering with leaves as long as possible. Cabbage will almost invariably rot if bruised, which they will be if handled when frozen. Should a field of cabbage not perfect its growth before it is time to put away for winter's sales, plow out a double furrow, which will make a track sufficiently wide for three rows. They should be placed roots down and at the angle a head would naturally lie when pulled up and laid upon its side. As fast as the heads are placed in the trench cover the roots with earth and pack firmly over them.

After the heads are entrenched, leave them exposed as long as they are safe from freezing, then cover to the depth

of 3 in. with soil, which will be sufficient until appearances indicate that winter is to set in earnest, then cover with at least 1 ft. of earth, and leave them for the winter. After the covering of soil is frozen to the depth of 3 in., cover with stalks, leaves or whatever material is most convenient, to prevent further freezing, so that the heads can be taken out as required.

Preparing Bees for Winter

By F. G. Hernan

Bees ought to be prepared for winter before very cold weather sets in; when the fall honey crop is removed from the hive, it is none too early to begin work. In the Middle states the beginner will have better results by wintering on the summer stands. Cellar wintering requires more experience and watchfulness; the first requisite necessary for successful wintering is to have bees enough to cover at least four Langstroth frames; they should have from twenty to thirty pounds of good ripe honey. If lacking in stores they should be fed good granulated sugar, one cup and a half of sugar to one cup of hot water makes a syrup of the right consistency; if you have on hand some extracted honey add a few tablespoonfuls, which will prevent it granulating. Bees will winter well on good sugar syrup, which is about the only substitute that can be used. Unripe honey, or honey dew, often kills the bees in winter, as they cannot stand a long confinement on such food.

If the bees are in a double walled chaff hive, no more protection is necessary. If in a hive of single thickness, an outer case of some sort should be put over the hive, but in no wise close up the entrance, for the bees need plenty of fresh air. The entrance should be left open full width, which will also prevent the combs from becoming mouldy.

On warm days during winter, when the thermometer registers fifty degrees or more, the bees will go out for a cleansing flight, after which, they will be able to stand another month of rigorous weather.

With cellar wintering I have had no experience, but the conditions necessary thereto are to have a good ventilated cellar, kept dark, with an even temperature of about forty-five degrees. Some time in November, right after the bees have had a good flight, remove them to the cellar, selecting the time toward evening. The bees should be handled as gently as possible to keep them from filling themselves with honey, for it will be from four to five months before they will again have a cleansing flight. The essentials for successful wintering are, an even temperature, quietness, darkness and ventilation. These conditions observed and success is assured.

A Tribute to Canadian Horses

The movement to establish a remount station in Canada is attracting considerable attention in Great Britain. A writer in the *Rural World* of London, England, of Oct. 27, quotes the remarks of Major Dent on this subject made at a luncheon of the Industrial Fair Directors last September and pays the following tribute to Canada and our ability to supply horses of the type required for military purposes:

"I think that Canada deserves more attention than it has yet received as a source from which suitable horses might be obtained. This remark not only applies to Eastern Canada, but to the prairies of the great Northwest, especially Alberta, a district which offers many advantages for the raising of horses.

"There is no doubt that this view would be confirmed by the distinguished officers who have commanded the Canadian militia in recent years. And evidence can be produced to show that the Canadian horses used by Strathcona's Horse and the Canadian Mounted Rifles in South Africa have been most serviceable and hardy, which cannot be said for the animals imported from some other parts of the world."

The 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 5,000 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 5th 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.

A. P. WESTERVELT, Secretary.
Parliament Buildings, Toronto, Ont.

The New Quarters of the Provincial Winter Fair.

The new building which is being erected on the market square, Guelph, for the accommodation of the Provincial Winter Fair is proceeding most satisfactorily (in spite of the fact that some delay occurred before operations were commenced on it), and will be ready for occupation on the dates fixed for the show. When completed, it will be found to have been most admirably designed for the purposes required of it. In shape like an L it is 310 feet long in its greatest length, while the foot of the L is 100 x 180 ft. and the breadth in the narrowest part is 118 feet, thus giving a ground floor space of over 40,000 square feet.

THE FAIR NOT ONLY AN EXHIBITION, BUT AN EDUCATOR.

The educational features of the Winter Fair have been steadily kept in view by the directors, and, in laying out the plan, they have arranged the building so that every facility is given to those who attend to see all that goes on, and also to hear the lectures which will be given by experts in their respective departments in a comfortably warmed and seated lecture room. Both live stock and carcasses will be used to illustrate the lectures.

Nothing in any way to compare with this forthcoming Winter Fair, either as an exhibition of fat and dairy cattle, sheep and swine, and live and dressed poultry, or as regards its value as an educational medium has been hitherto attempted on this continent. In order that this educational work may be productive of the best results it is necessary to secure the attendance of as many as possible at the show. The buildings are there, and a large and representative exhibit is already assur-

ed. If all interested in one or more of the branches of live stock to be exhibited will attend, the best results will be obtained. All who come with the object of learning will receive lessons in the breeding, feeding and rearing of live stock which they cannot get in any other way. Anyone who is interested in this work should not only try to be present himself but should induce as many others as possible to attend. There will be cheap rates over the railways from all points in Ontario. Every secretary of a Farmers' Institute should make an effort to influence the members of his Institute to attend. At the last meeting of the Live Stock Associations it was decided that free admission would be allowed the members of any Farmers' Institute amalgamating with the Fair Association and paying a subscription fee of five dollars to the general fund of the Fair. A large number of the Institutes have already sent a notice of their intention to join in the work and assist in having a large representation from their district at the Fair to take advantage of all the privileges offered. Delegates to Farmers' Institutes will be there, officers of Farmers' Institutes will be there. Let all who possibly can attend make a point of spending at least a couple of days at the Winter Fair. They will never regret doing so.

A Budget from Medicine Hat.

Beef Steers at \$70.

We think it can safely be said that last week witnessed the highest price ever paid for beef steers on this range, and probably a top price for ranchers' stock in this country. The steers referred to were two animals of a shipment sent out by J. D. Wylie of the Maple Creek Cattle Co., and pur-

chased from Messrs. Spencer Bros. These two steers—five-year-olds—weighed 1900 lbs. each, and as they were sold by weight at the top price of the season—\$3.65 per cwt.—it can readily be reckoned up that these steers realized between \$69 and \$70 each, weighed at the new stockyards after a ten or twelve hours shrink. The 162 head shipped, which included 20 head from the Medicine Hat Ranch, averaged 1437 lbs., and at the figure mentioned would bring the ranchers about \$50 per head. These prices are no doubt top prices, but they furnish an illustration of the upward tendency in cattle values, which have been gradually rising from \$35 for beef a few years ago until the present, when three and four year old range steers sold by weight bring from \$43 to upwards of \$50 a head. The ranchers are strictly in it this year.

CANADIAN RANCHES SUPPLY THE KLONDIKE MARKETS.

That the Klondike and thereabouts are becoming an important market for the produce of Canadian ranches, those who have been engaged in shipping live stock to that country during the past nine months can vouch for. From January of this year, to the close of last month, the figures show that the northern market has become an important consumer of this class of food. During the period from January 1st to September 30th, 1900, there were 2,922 head of cattle shipped there from Vancouver. At \$65 each, a fair average, the value of these shipments would be \$189,930. During the same period there were 3,220 sheep also shipped from Vancouver, the value of which, at \$6 per head, would be \$19,320, or a total valuation for cattle and sheep of \$209,250. There were also 235 horses shipped between the same dates, which, at \$150 each, would represent a value of \$35,250.

Nearly all of these shipments were supplied from Canadian ranches, the greater part of the cattle and sheep coming from Manitoba and the Northwest Territories, while British Columbia furnished a respectable share.

Taking the shipments of horses, cattle and sheep, month by month, for the period named, an interesting table is supplied, which shows at a glance what this business amounted to:

1900.	Horses.	Cattle.	Sheep.
January.....	1	—	—
February.....	20	—	—
March.....	61	56	—
April.....	12	145	125

May.....	5	265	279
June.....	59	264	545
July.....	32	1034	1023
August.....	37	578	703
September.....	8	580	545

Of swine there were shipments in April of 34; May, 14; June, 179; July, 147; August, 199; September, 60.

A Model Dairy at the Pan-American.

The decision has been reached by the directors of the Pan-American Exposition to operate a model dairy on the grounds during the entire duration of the Exhibition. The dairy will be composed of four or five representatives from each of the dairy breeds, which will be selected by a committee and placed in the stable at Buffalo early next spring, there to remain until November 1. The stable will be built under modern conditions and the animals will be cared for and fed under rules which will be formulated in the near future and which will embody, as far as possible, suggestions made by dairy associations who furnish animals for the model dairy.

The general plan is to care for and feed these animals, making such changes from time to time as will be necessary to bring out and determine what each of the breeders' associations claim is a prominent characteristic of their particular breed. When any changes are made they will be made for every animal in the dairy, and strict data will be kept regarding their performance under these given conditions.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

Married man wanted. Must be a good milker, and able to feed and care for stock and poultry, and willing to do well and cheerfully all kinds of farm work; also must be temperate and trusty, and plow well. House and garden furnished. Will engage by the year. State wages. No. 609. a

Steady, reliable man required by the year, who can milk and do all kinds of farm work. Good wages to a good man. Farm is near Morden, Man.;

also domestic wanted who can milk and do general housework. Wages \$8 a month in winter, and \$10 in summer. No. 610. a

Good, reliable, competent man wanted on a farm, who can undertake the chief work and minor management of it. Married man with small family preferred. House, garden, etc., furnished. Good wages. Other things being equal, preference will be given to one who uses neither tobacco nor any intoxicants. No. 611. a

Man wanted for a farm. No. 606. b

Married man required for a farm in Minnesota. No. 607. b

Wanted on farm near Columbus, Ohio, thoroughly honest, sober, reliable married man, to take general charge under owner's supervision. Will supply house, cow, garden, wood etc. No. 608. b

Domestic Help Wanted.

Housekeeper wanted on a farm. Must have good references and be a Protestant. Middle-aged woman preferred. Permanent position to satisfactory person. No. 612. a

Experienced domestic, of good moral and religious character, wanted at once. Must be qualified to do all kinds of household work, and also help to milk if required. Wages, \$10 a month to one who gives satisfaction. No. 613. a

Situations Wanted.

Graduate of O.A.C., with good, practical experience at buttermaking, wants employment at dairy or other work on a farm. No. 453. a

Man, 30 years of age, with 2 children, aged 3 and 6, who is steady, a total abstainer, and has no bad habits, wants a place on a dairy farm. Wages, \$200 a year. No. 454. a

Married man wants a situation as farm manager, or would work a place on shares. Has thorough knowledge of farm work and of care of stock and does not use tobacco or drink. No. 452. b

N.B.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Farmers' Institutes.

Under this head the Superintendent of Farmers Institutes will each week publish matter relating to Institute work. This will include instruction to Secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to us he will be put in direct communication with the Institution that has carried on the work.

G. C. CHEELMAN,
Superintendent Farmers' Institutes.

Locating an Orchard.

(Concluded.)

SIGN OF NEED OF MANURE AND CULTIVATION.

As to the indications when a bearing orchard needs stimulating, the eminent pomologist, Dr. Warder, once said: "When the the growth of the terminal branches fails to make an annual extension of at least 1 foot in length, the tree should be stimulated by manuring the land and giving it thorough cultivation."

PREPARING THE LAND FOR PLANTING.

The general work of preparing the land for planting an orchard consists in deep tith, and the more thoroughly it is done the more certain is success. The preparation had best be done late in the fall, when it will be ready for early spring planting or for fall planting, if preferred. Many successful orchardists, especially in the Western States, prepare the land by opening with a heavy plow a furrow where the rows of trees are to be set and then back furrowing the space between them, making a land section with a tree row in the centre.

This method affords a deeper tith under the trees, and, at the same time, surface drainage into the opening and finishing furrow midway between the rows, which will receive and, if properly graded, carry off any surplus water which may accumulate from heavy rainfalls.

DISTANCES FOR PLANTING.

A decision as to the proper distance apart to set trees varies with different plantings. Some plant 16 by 32 feet—that is, the rows one way are 32 feet apart. The object of this method is to obtain a crop from the trees until they begin to interfere with each other, when every alternate tree in the row is cut out, leaving the trees in the entire orchard at a distance of 32 feet each way. The trees to be cut out should be early-bearing, short-lived varieties. This system has the advantage of utilizing the land between the rows, which becomes a source of great fruit product before the thinning out becomes necessary.

Other planters adopt a distance between trees of 20, 24 and 30 feet apart each way, claiming that by the time the trees interfere with each other they will have finished their growth and the orchard will begin to decline. But it is generally conceded that 32 to 40 feet is the preferred standard distance. If the distance of 40 feet each way is adopted it will afford ample space between the rows for growing any crop which requires cultivation, such as corn, beans, potatoes, etc. Such cultivation is highly important and necessary for the maintenance of moisture in the soil and to the health and vigor of the trees. This distance will afford free circulation of air and abundance of sunlight, both of which are essential

to the growing of well-developed and highly-colored fruit. As stated elsewhere, small grain should never be grown among fruit trees, especially when the orchard is young.

SEASON FOR PLANTING.

This question is governed somewhat by latitudes. In southern latitudes late fall or the early part of the winter may be safe for planting. But in most of the States and Canada early spring is considered the better time. Fall planting has the objection against it that the roots of a tree do not take hold of the ground sufficiently to supply enough moisture to maintain a healthy, active circulation of the sap which is required to prevent shrivelling of the branches during winter's extreme cold and exhaustive evaporation from drying winds.

SELECTION OF TREES.

This is a very important part of orcharding, for upon care and judgment in the selection of trees depend largely future profits of the investment. Strong, stocky and vigorous one or two-year-old trees, called whips by nurserymen, having well-developed root systems, are preferable. Trees of this type and age are more satisfactory and profitable in time and suffer less in transplanting, cost less, and are much more easily handled than older ones.

In this connection we would suggest the advisability of purchasing trees for planting from the nearest responsible nurseryman. The local nurseryman, if perfectly familiar with his business, will understand the needs and demands of his home customers and should grow the varieties best suited to his section of country. If honest he should feel himself morally, if not legally, responsible for the correctness of his nomenclature. By securing trees at the near-by nursery all danger from damage by long transit and injurious effects of sunshine and frosts are avoided; besides, if the farmer makes his purchase direct from the nurseryman, he will save expense of middleman or agent, and is less liable to the mistakes and injury that may occur through repeated handling.—*Selected from Farmer's Bulletin, No 113, of the United States Department of Agriculture.*

Butter in China.

Butter and cheese were imported into Shanghai during the year 1900 from France, Denmark, Australia, Sweden and the United States to the value of \$100,000—much the greater part of this being butter. Butter is shipped in tubs, in tins of half a pound, one pound and two pounds, and in the common quart fruit jars holding two pounds. Some of the best butter in this market comes in fruit jars from California. This retails at \$1.75 Mexican (88½ cents

United States) per jar; is the highest priced butter sold here, and on that account is not extensively used.

The weight of jar and necessary packing makes the freight much greater than on butter in tins. Tins are preferred.

Large orders are being placed now for Australian butter that retails at 60 cents Mexican (30 cents United States) per pound in one and two pound tins.

There is no import duty on butter here.

There is a general complaint against United States butter in tins, which I am inclined to believe is due to lack of knowledge on the part of packers of the proper method of putting up the butter.

HOW DISHONESTY RUINS TRADE.

The principal complaint made by dealers here is that there is usually a deterioration in the quality after a few shipments. The French butter is a remarkable example of this. At one time, this was preferred to any, and it was practically in control of the market. It was so popular and the demand for it so great that the temptation to adulterate it was sufficient to cause the makers to turn everything possible into butter, and I have just been informed by a very prominent dealer that because of the adulteration, it has discontinued entirely the handling of French butter.

A good brand of butter that is once established and maintains its quality can count upon a permanent and increasing trade. It is necessary to have the tins stained to prevent rust, and brands should be stamped on the tins instead of being pasted on with paper.

It is of great importance to have the package as neat as possible and in such form as will retain not only the good quality of the contents through all conditions of climate, and especially very warm weather, but its neat appearance as well. It must especially be preserved against rust.

AUSTRALIANS CATERING TO THE DEMAND.

The Australian butter in tins is very neatly branded in colored inks on the top of the can. The can is provided with a rolling opener, so that the top can be lifted and replaced tightly, all of which is necessary.

Butter in rolls or two-pound blocks is shipped to this market in brine during the months of November, December, January, February and March, and can be satisfactorily handled in this shape during these months. Mistakes and failures have been made by sending butter in this form at other seasons, either earlier or later, when the weather is too warm.

GROWTH OF DAIRY IMPORTS.

The importation of butter and cheese into this port was:

1897	\$64,800
1898	80,500
1899	104,390

The demand for good butter in the Philippines, in Japan, and along the entire coast of China is increasing very fast and is bound to assume immense proportions; and with the ability of the Pacific Coast States to produce excellent butter at reasonable cost and under favorable conditions, it only remains for the creameries and dealers to master the proper method of packing and handling to secure this trade. With this growing market, more convenient to our Pacific coast than to any other butter-producing country, with the many lines of steamers coming here from that coast, it seems a matter of importance to our Western States to secure this trade.

I would also call attention to the increasing importation of condensed milk and cream at this port. During last year, there was imported here from various countries \$55,000 worth of canned milk and cream. I can see no reason why our Western States should not secure a large part of this trade also. In 1897, the importation amounted to \$34,560; in 1899, to \$54,750. There has no doubt been an equally great increase at other ports of the Orient.

The most difficult problem in securing and holding the oriental market for pure dairy products is the competition of various forms of so-called butter. The manufacturers of these spurious articles are free to make all manner of adulterations and put them on the market labelled pure dairy butter. I attribute the low price of butter here now to this competition, and firmly believe from my own experience that the greater proportion of butter sold is a spurious product, although it is handsomely put up and branded as pure dairy butter. None of the large dealers have the product sold as butter tested by a chemist, and they are not certain of its purity.

The following is a list of general storekeepers who deal in butter and condensed milk:

Dunning & Co., Nankin Road; Yuen Tah, Broadway; Framjee Lorabjee & Co., Hong Kew; E. L. Moudon, Yang King Pang; J. Gaillard & Co.; Tom Pow Ching, Broadway; Charles & Co., Broadway; Pope & Co., Nankin Road; Hall & Holtz & Co., Nankin Road; Lane, Crawford & Co., Nankin Road; American Trading Company; F. A. Blake & Son.

HENRY J. MILLER,
U. S. Consul at Chungking.

Shanghai, Sept. 19, 1900.

[In view of this rapidly increasing demand for butter and cheese in China, it would certainly seem possible for Canada to get a good slice of the trade.—Ed.]

When writing to advertisers please mention **The FARMING WORLD.**

The Farm Home

They Two.

They are left alone in the dear old home,
After so many years
When the house was full of frolic and fun,
Of childish laughter and tears.
They are left alone! they two—once more!
Beginning life over again,
Just as they did in the days of yore,
Before there were nine or ten.

And the table is set for two these days;
The children went one by one,
Away from home on their separate ways,
When the childhood days were done.
How healthily hungry they used to be!
What romping they used to do!
And mother—for weeping—can hardly see
To set the table for two.

They used to gather around the fire
While someone would read aloud,
But whether at study or work or play,
'Twas a loving and merry crowd.
And now they are two that gather there
At evening to read or sew,
And it seems almost too much to bear
When they think of the long ago.

Ah, well! ah, well! 'tis the way of the world!
Children slay but a little while,
And then into other scenes are whirled,
Where other homes beguile.
But it matters not how far they roam,
Their hearts are fond and true,
Add there's never a home like the dear, old
home,
Where the table is set for two.
—Mrs. Frank A. Breck, in the *Youth's Companion*.

Bathing and Swimming.

Do you think I exaggerate when I maintain that not nineteen out of twenty girls and women on farms know anything of the pleasure to be derived from having all of the body in water? We all know how refreshing is the sponge bath, how beneficial is a foot bath. The children on the farms know the meaning of the tub bath where the wash tub is the principal figure.

Unfortunately the bathroom with its convenient accessories is not to be seen in many farm houses, and when we realize that we are dirty we have to put up with "any old thing" in the bathing line, when if we had the convenient bath rooms of our city sister we would never realize that we were dirty but would know the pleasure of always being clean. Often I am afraid we may resemble the man who takes a bath regularly once a year whether he needs it or not.

People in the city and the more up-to-date farmers have perfectly fitted up bathrooms but the rest of us must be content with a wash bowl and pitcher in our bedrooms or a hand basin on an old chair in the kitchen.

We should consider the bath room as more necessary than many of the rooms, and the bath as more necessary than many of the articles of furniture we now enjoy. If a room only is wanting there is a spare bedroom used perhaps only once a year, when if converted into a bathroom it would be

used by some member of the family every day in the year. If it is the cost of furnishings we consider. The furniture for a spare bedroom often costs as much as an enamelled or porcelain bath tub. The water supply on the farm is often a difficulty, but if we have a pump indoors connected with the cistern, as every farm house should have, though of course piping and taps would be even better, but if we have not the latter—if we had we would probably already have our bath tub—we could easily connect a hose with the pump and bath tub while a pail full of boiling water will be sufficient.

It is quite easy to see how everything might be arranged, but to execute our plans—there's the rub.

I said that possibly one farm woman out of twenty knows the pleasure of the all-over bath. Not one woman in a hundred knows the real enjoyment of bathing in an abundance of water, with water all around her, lying, sitting, standing, to say nothing of floating and swimming. As the bathtub is superior to the hand basin, so is a swimming pond superior to a bathtub, and I incline to the belief that bathing in a pond, even if one is not able to swim, where one has room to exercise all the muscles, is not attended with ill effects as might result from too frequent or lengthened use of the tub.

Near lakes, rivers and smaller streams nearly all of the men and boys and a few of the women can swim, and during the summer months occasionally enjoy this exercise. Some women receive a shock at the mere mention of a bathing suit, but there are others, too, remote from streams, who are thus deprived of this most pleasant of all exercises.

Why should not the farmer, who is already possessed of a never-failing well and windmill, construct a swimming pond for himself and his family? He has perhaps made a reservoir in other days to supply his stock with water. Why might he not do again for pleasure and good health what he formerly did for money? It sounds like an easy matter with team and plow and scraper to deepen and bank some near-by depression with a diameter of 30 or 40 feet until it is capable of holding a sufficient depth of water, say six feet at the deepest side, and shallow enough to accommodate the two-year-old at the shallow side, to line the hollow with concrete, having a drain to be opened or shut at pleasure when the water needs replacing. A tile drain would convey the water from the well to the reservoir, which, of course, would be in a sunny place, and in the afternoon or evening it would be sufficiently warm for bathing.

This, though not equal to lake or river, would be quite as satisfactory for bathing, floating, diving and swimming. Though one would not have miles straight swimming, one would have practice in turning.

Would such ponds benefit the health of the farm women?

A netting enclosure would keep it free from vermin, water fowl and farm stock, while a tight fence on the north side would make a more comfortable bathing place.

I usually write from experience. This time, though I know thoroughly the pleasures of the water, yet the swimming pond, as I have described, is in my mind only, but perhaps practical men and women can tell wherein it might prove successful or a failure, also give benefits of their experience with the handy bathroom on the farm.

M. E. GRAHAM.

Three Chicken Salads.

Boil three chickens until tender, salting to taste. When cold, pick fine with the fingers, and add three heads of lettuce, cut fine with a knife, and six hard boiled eggs, sliced. Mix thoroughly, and use a dressing as follows: Into a saucepan put a pint of vinegar and a lump of butter the size of an egg. Beat three eggs with two tablespoonfuls of made mustard, two of sugar, salt and pepper to taste. Let the vinegar come to boil, then stir in slowly the egg mixture, stirring until it thickens. Do not let it curdle by boiling too long. Set aside to cool, and put over the salad just before serving.

For a pair of boiled fowls allow three heads of lettuce. Take all the skin from the chicken, pick all the meat from the bones, chop it fine, and mix it with the cut lettuce. Cut the white meat in half inch cubes and add to the other. Boil the livers, sift them, and put them in a bowl rubbed with a bit of onion. Add the yolks of five hard boiled eggs rubbed to a paste, four tablespoonfuls of salad oil or melted butter, two tablespoonfuls of prepared mustard, one of sugar, a heaping teaspoonful of salt, a little cayenne pepper, a level teaspoonful of grated lemon peel, and a tablespoonful each of vinegar and thick cream. Beat well together, and pour over the chicken just before serving.

A simple way to prepare a good chicken salad is to remove the skin from a couple of boiled chickens, and cut the meat fine with a knife. Cut up two or three heads of lettuce and add to the chicken, season with salt, pepper and a little cayenne, mix with a little cold mayonnaise dressing, spread more over the top, and serve.
—Sun.

To Remove Spots and Stains.

Dry tea stains on table linen may be removed by applying equal quantities of the yolk of egg and glycerine. When dry, wash in the usual way.

Apply glycerine to coffee stains, wash the spots in lukewarm water and iron until dry.

Spots produced with acid will disappear if touched with spirits of hartshorn, and those produced by alkali will disappear if vinegar is used.

Pour clear boiling water through berry-stained goods.

Blood stains should be washed in lukewarm (not hot or cold) suds. Let them stand a few minutes before washing them.

Machine oil stains should be treated to a bath of cold water and soap, if applied immediately after the oil is spilled on the garment.

Light iron rust, ink or mildew may be removed by washing the spots with lemon juice and salt, and exposing to bright sunshine. If one application does not prove effective, repeat the operation until stains disappear. If they are very deep, use citric acid instead of the lemon juice, and rinse two or three times to prevent injury to the fabric.

Wagon grease or tar spots should be rubbed well with lard or kerosene while the grease is fresh. Let the lard remain awhile, then wash out in cold, soft water, using no soap.

There are many different ways of removing ink stains. One is with kerosene; another is to pour melted tallow on the spots, and wash out the tallow; by the time the tallow is gone the ink will be gone, too. Still another is to soak the stained garment in sour milk. If the ink is on white goods, it may be rubbed with ripe tomatoes. For old stains, soak in a weak solution of chloride of lime, in the proportion of one ounce to a quart of water. When lime is used, the fabric should be washed in several different waters as soon as the stain is removed, that none of the lime may be left to injure the fabric. Fresh ink stains on carpets should be at once covered with cornmeal or salt, and left there for some time, when they may be rubbed with a little lemon juice.

Apply very strong, hot soda water to paint spots. Spread soda on grease spots on kitchen floors, and pour over it boiling water. The grease will soon disappear. Stains or marks on painted furniture that cannot be removed by ordinary methods will come off if treated to a little powdered pumice stone, rubbed on with a cloth wrung out of hot soap suds.

Apply pipe clay mixed with water to the consistency of thick cream to oil stains on wall paper, let stand four hours, remove, and the spots will come, too.—*The Housekeeper.*

Photography has not yet reached its highest development until it can make baldheaded men look all right

Hints by May Manton.

LADIES' FANCY WAIST, NO. 3,644.

Boleros and bolero effects are shown upon the majority of imported gowns. The prevailing impression among designers is that they will retain first place the season through for all fancy and dress waists. The smart model illustrated has the advantage of combining all the latest features and of being exceedingly simple and easily made. The little jacket is simulated only, the outline being obtained by the applied trimming, but the bodice fits so smoothly that the result is quite as good as if the bolero were separate. The tapering revers, that turn back from the front, give a slender, graceful effect to the figure, and the slight fullness at the front renders the waist becoming alike to slender and stout figures. No error is greater than to suppose that women whose figures have lost the trimness of youth require severe gowns. Excessive fullness is a mistake, but slight folds mean the con-



3544 Fancy Waist.
32 to 40 in. bust.

cealment of faults, while over-plainness reveals every line in a most uncompromising way. The waist shown is excellent as it stands, but can be used without the bolero effect, if desired, leaving the back plain and the front with revers only. The sleeves are particularly good, and follow the latest French idea. The over portion is cut only slightly short, and the under portion, or Paquin cuff, falls in a soft fullness to the band at the wrist. As illustrated, the material is cashmere in chartreuse green, with deep green lace for revers trimming, and stock pure white mousseline for full front and undersleeves and narrow bands of black velvet as a finish to sleeves and stock; but any light-weight woolen material, as well as foulard and the new soft taffetas, are equally suitable. The waist can also be part of a costume or worn with an odd skirt with equal propriety.

To make this waist for a woman of medium size $3\frac{1}{2}$ yards of material 21 inches wide, or $2\frac{1}{8}$ yards 44 inches wide, will be required, with $\frac{3}{4}$ yard of

lace 18 inches wide for revers and $1\frac{1}{8}$ yards for full front and undersleeves.

The pattern No. 3644 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

The price of above pattern post-paid is only 10 cents. Send orders to "The Farming World," Confederation Life Building, Toronto, giving size wanted.

Dishwashing.

Few women have the courage after dinner, when the day is done, to wash dishes. That is drudgery. It means putting the cups and saucers, plates, platters and vegetable dishes into a big pan of hot suds, rubbing them with a dish cloth, setting them to drain, and wiping each piece with a towel. Noah's wife's dishes were cleaned in the same way, and very probably Noah's wife lamented her reddened and roughened hands as the wives of less distinguished men have done ever since. Probably, too, she found that her best pieces of tableware got scratched in the process or slipped out of her soapy hands and smashed to bits. It is not likely though, that she bothered her head much about the condition of the dishcloth or the drying towels. Living as she did in that menagerie, she could hardly be blamed for not keeping everything sweet. If any of her daughters have bothered their heads much either it has been to mighty little purpose, seeing that they have not greatly improved the process. Men that keep hotels, though, being able to get only the lowest class of help to wash dishes—what a comment that is upon us men that expect the wives of our bosom to do such work—found that the bill for broken china was ruinous. Guests insisted upon being served upon fine porcelain and refused to eat from slabs of ironstone, so some way out had to be found. A machine was invented, capable of being operated by anybody, and that could be trusted to wash thoroughly, rinse and dry the most delicate ware without chippage or breakage, all at the rate of 6,000 pieces an hour. Think what an army of dishwashers such a machine must displace, and what an economy it must be! For not only is the hotel-keeper rid of the necessity of giving standing room and subsistence to that army, but of providing captains and generals for it, and of enduring the damage that it must inflict upon friend and foe alike, after the fashion of all armies.

The dishes are collected and scraped and then dropped into wire baskets with wooden interiors so arranged that the dishes stand on edge without touching each other. Pitchers, cups, bowls and the like go into the centre. The basket is lowered into the washing tank, where hot suds mixed with air, so as to present thousands of sharp cutting edges, are driven against the dishes with tremendous rapidity and force. They are washed

in twenty seconds. A trolley carries the basket to the rinsing tank, where two souses take off the soap-suds. They drain and dry from the neat they have absorbed from the rinsing water. China and silverware thus treated always look brighter and newer than if washed by hand.—*Frederic J. Nash, in Ainslee's.*

Pioneer Women of Canada.

The nineteen pioneer women who disembarked on the shores of Massachusetts in 1620 have been celebrated ever since in romance and poetry. Twelve years earlier a banner bearing the lilies of France was planted on the headlands of Quebec. The colony, thus inaugurated, was augmented from time to time by the emigration of the small groups of women from the mother country. These few heroic souls, the pioneer women of Canada, played as important a part in its growth, and are as worthy of eternal remembrance as their Anglo-Saxon sisters of New England. Yet, with few exceptions, they have waited in vain for a poet to tell in immortal verse their heroic deeds, or a historian to perpetuate their fame.

Many of these pioneer women, of whom Jeanne Mance was the central figure, would even nowadays be looked upon as "emancipated" and "advanced." Yet it was nearly three centuries ago that Judith de Bresoles renounced the luxury of a wealthy and aristocratic home and devoted seven years to the study of chemistry and medicine, that she might exercise this profession among the savages of the New World; that Marguerite de Roberval, descendant of a long line of French cavaliers and noble dames, wandered alone through the haunted wastes of Demon's Isle, and kept at bay the wild beasts of the wilderness with her old French harquebus; that Marie Guyard, with her few brave assistants, delicately nurtured and high-born women of France, made of themselves, in turn, mechanics, architects and farmers in their adopted land; that those dainty nurses, the hospitalières of Quebec, dyed their cherished white garments an ugly brown, that they might follow their profession the more efficiently amid the smoke and uncleanness of the squalid wigwams. "Who now will hesitate to cross over the seas," exclaims a poor missionary at sight of these courageous gentlewomen, "since delicate young women, naturally timid, set at naught the vast expanse of ocean? They who are afraid of a few flakes of snow in France, are ready to face whole acres of it here!"

The coming of these women to the New World was in great part due to the urgent cries for women's help sent over the sea by these early missionaries, who put forth many inducements for their emigration, among others the great salubrity of the Canadian cli-

mate. One of them writes that the air of New France is healthful for the body as well as for the soul, while another declares that, although the cold is very wholesome for both sexes, it is especially so for the women, who are almost immortal in Canada.—*From "Maids and Matrons of New France," by Mary Sifton Pepper, in the October Chautauquan.*

How to Select Color-Schemes for Rooms.

After deciding what shall be the predominating color in the room, and what shades or colors you desire to use with it, arrange the colors together and study the effect carefully. It will be found that some combinations bring out all the good and pleasing qualities of the different colors, while other combinations are discordant. There are many things to take into consideration: the exposure of the room, the amount of light, and the style of the house, whether in city or country. Soft finishes, either in walls or draperies, blend more readily than does the smooth or glacé finish.—*October Ladies' Home Journal.*

Most Temperate Country in the World.

Canada consumes just two-thirds of a gallon of spirits per head of population per annum; the United States consumes one gallon of spirits per head of population per annum; France 2.07 gallons; the United Kingdom, 1.03 gallons; Germany, 1.85 gallons; Denmark, 3.02 gallon; Switzerland, 1.36 gallons; Belgium, 1.91 gallons; Austro-Hungary, 2.2 gallons, and Holland, 1.8 gallons.

Of wine, Canada consumes 0.09 of a gallon per head of population per annum, as against 24.6 gallons in France, 14.7 gallons in Switzerland, 20.2 gallons in Italy, 19.6 gallons in Spain, 21.1 gallons in Portugal, 0.14 in the United Kingdom, and 2.64 gallons in Austro-Hungary. Western Australia consumes .1 gallon per head per annum; Victoria, 1.4 gallons; New South Wales, .64 of a gallon; Queensland, .36; and New Zealand, .15.

In the consumption of beer, too, Canada is down at the foot of the class of beer-drinking countries, consuming only four gallons per head per annum, as compared with 45.5 in Belgium, 31.9 gallons in the United Kingdom, 27.1 gallons in Germany, 20.08 gallons in Denmark, and 15.04 gallons in Switzerland.

All the other British colonies, except Natal and the Cape, consume more beer than Canada. Western Australia consumes 23.9 gallons per head per annum; Victoria, 12.6 gallons; Queensland, 11 gallons, and New Zealand, 8.4 gallons.

Notes from the Cooking Class.

For politicians—Gold cake or silver cake, and election cake.

For a geologist—Layer cake.

For a sculptor—Marble cake.

For an advertiser—Puffs.

For a tailor—Measure cake.

For a farmer—Hoe cake.

For a milliner—Ribbon cake.

For the devout—Angel cake.

For a jeweller—Gems.

For the irritable—Short cake and ginger snaps.

For a baby—Flannel cake.

For a lover—Lady fingers.

For the betrothed—Wedding cakes and kisses.

For "bull" and "bears"—Raised cake and drop cake.

For a farmer—Spice cake.

For an idler—Loaf cake.

For an office-seeker—Washington cake.

For a sufferer from "hay fever"—White Mountain cake.

For pugilists—pound cakes and batter cakes.

For a "doctor of the old school"—Cup cakes.

For the man who lives on his father-in-law—Sponge cake.

For a dude—"Johnny" cake.

For a belle—Vanity cake.

For a music teacher—One, two, three, four cake.

For those who partake too freely of the above-mentioned—Stomo cake.

In Norway a girl must have a certificate that she can cook before she can be married. The laws of Norway are all right in that respect, but they are silent when it comes to the bridegroom presenting a certificate that he can keep up a house and provide the wherewithal for the wife to cook. It is a poor rule that doesn't work both ways.—*Brandon (Or.) Record.*

"Yes," said Mr. St. Clair Parke, "our language is queer. The only way a man can be straight in business is to be perfectly square; and the surest way to keep a man from running over you is not to let him sit on you."—*Indianapolis News.*

Citizen—Mr. Greatmann, I heard a curious debate the other evening. The subject was: "Can a politician be a Christian?" What's your opinion?

Mr. Greatmann—He can, but he'll git licked.—*Illustrated Bits.*

Mrs. Neighbors—"I advertised for a plain cook last week, but I didn't receive a single reply."

Mrs. Nextdoor—"Take my advice and advertise for a good-looking kitchen lady, and you'll be overrun with applications."—*Exchange.*

That nature is down on airs is proven by the fact that there is no stylish way to serve watermelon.

The Farming World

A PAPER FOR FARMERS AND STOCKMEN.

Managing Director, . . . D. T. McAINSH
Editor, . . . J. W. WHEATON

The Farming World is a paper for farmers and stockmen, published weekly, with illustrations. The subscription price is one dollar a year, payable in advance.

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THE FARMING WORLD,
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TORONTO



DISEASED UDDER.

A subscriber at Columbus, Ont., writes: "I wrote you sometime ago about cows which had mammites. Since then I believe I have another that has a touch of it. I want to know if there is anything that I can give the cows. What is the difference between the contagious and the other form? In what way is it contagious?"

There is practically no difference in the symptoms of the contagious and non contagious forms of mammites. But the contagious form, instead of being produced by well marked causes described under the above heading in October 9th issue, is produced by an infinitesimal germ or virus that may probably or possibly be conveyed by the hands of the milker or other modes of communication between animal and animal. In contagious diseases the most satisfactory mode of prevention is to guard against all possible communication from animal to animal. To prevent the non-contagious form guard against all possible modes by which mammites may be produced, such as irregularity of milking, avoidance of colds, chills, blows and injurious obstructions in the milk ducts which would prevent the separation of the milk from the udder. Young animals, descended from a long line of ancestry in which special efforts have been made to develop milk production, are sometimes subject to mammites. In such cases avoid too high feeding previous to calving.

In the early stages of mammites a saline purgative is the usual remedy of veterinarians. If the udder is greatly enlarged put a wide bandage over the

udder, leaving holes for the teats, and fasten it over the loins. Bathing the udder with warm water or the application of a good poultice will help to keep down inflammation. Any good liniment containing belladonna will also help if rubbed well into the affected udder. No medicine taken inwardly will help matters unless it be, as we have stated, a purgative to cleanse the intestines.

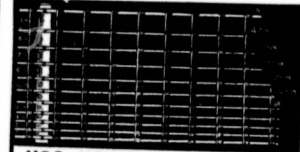
Selecting Judges.

Mr. Richard Gibson, Delaware, Ont., a member of the executive of the International Live Stock Exposition, to be held at the Union Stock Yards, Chicago, on Dec. 1-8 next, was in Chicago last week attending a meeting called for the purpose of selecting judges and other officials for the great show.

Live Stock Importations for October.

The following are the importations of live stock at the port of Quebec for the month of October 1900, as supplied us by Dr. McEachran, director of the Canadian quarantine system:

- 16 Shorthorn cattle imported by Wm. Linton, Aurora, Ont.
- 3 Shorthorn cattle imported by H. Cargill & Son, Cargill, Ont.
- 4 Shorthorn cattle imported by Thos. Russell, Exeter, Ont.
- 6 Shorthorn cattle imported by Chas. Rankin, Wybridge, Ont.
- 23 Shorthorn cattle imported by Geo. Isaac, Cobourg, Ont.
- 5 Shorthorn cattle imported by W. R. Nelson, Kansas City, U.S.
- 6 Hampshire Down sheep imported by J. G. Massey, Fort Logan, Cal.



HOG, HORSE, CATTLE, DOG,
Sheep, fire and water and snow drift proof.
The fence that fences—Cheap and lasts a lifetime—

**AMERICAN
FIELD AND HOG FENCE**

If you cannot find our local agent write to
American Steel & Wire Co., Chicago or New York.

Western Dairy School Strathroy, Ont.

Will re-open Dec. 3rd, 1900, and close March 22nd, 1901. Special Creamery Course, Dec. 3rd to Dec. 22nd; Regular Course, Jan. 2nd to March 22nd.

5,000 lbs. of Milk

received daily to be manufactured into cheese and butter, also cream from a skimming station.

Butter made in both Separator and Cream Gathering Systems.

**Home Dairy Department
For farmers' sons and daughters.**

A competent staff of instructors have been engaged, and students will receive a thorough and practical training in the different branches of dairying.

Send for circular and application form to
ARCHIBALD SMITH,
Supt. Western Dairy School,
Strathroy, Ont.

Provincial Winter Fair

A Combined Exhibition of Fat Stock,
Dairy Cattle, Live and Dressed Poultry

Will be held at

GUELPH, ONT.

December 11th to 14th, 1900

NEW BUILDINGS!

NEW EQUIPMENT!

Every provision made for the convenience and comfort of Exhibitors and their Exhibits.

Entries should be made before Nov. 24th. After that date an extra fee will be charged. Positively no entries will be received after Dec. 1st.

Special R.R. rates from Kingston, Sharbot Lake and points West, good going from 11th to 14th, returning until the 15th. Judges and exhibitors, on presentation of certificate, single fare, Dec. 7th to 14th, returning good until 18th.

All applications should be made to the Secretary,

A. P. WESTERVELT,

Parliament Buildings, Toronto.

Prize List Now Ready.

Soiling Crops and the Silo.

This is the title of a new book by Prof. Thomas Shaw, and forms a most appropriate companion to his "Forage Crops," published last year. The book is divided into two parts, the first of which treats of the growing and feeding of all kinds of soiling crops that have been found useful in any part of the United States or Canada. The discussion is simple, clear, and eminently practical. It treats of the climatic and soil conditions to which all these crops are adapted, of their plan in the rotation, of preparing the land for each crop, and of sowing, cultivating, and feeding the same.

The second part discusses the silo. No treatise on the subject has ever appeared that will approach in simplicity and comprehensiveness the way in which it has been handled by the author. It is not a plea for the silo, as nearly all the publications have been that have heretofore appeared on the subject, but a sensible discussion of the place for the silo, the benefits from soiling crops, the best methods of building the silo, the crops that are suitable for soiling, filling the silo, and feeding the silage.

A New Butter Package.

The ingenuity of man has been taxed to discover some sort of butter package that would keep out heat. The need of such a package is most imperative in Australia and the other British colonies from which butter is shipped to London. One such package is thus described by an exchange :

"It consists in packing butter in a box made of six sheets of ordinary window glass, the edges being covered with gummed paper. The closed box is then enveloped in a layer of plaster of Paris a fourth of an inch thick, and it is covered with a specially prepared paper. As the plaster is a bad conductor of heat, says the *Scientific American*, the temperature inside the hermetically sealed receptacle remains constant, being unaffected by external changes. The cost of packing is only about two cents per pound. It is used to a great extent in Australia. Butter has been sent from Melbourne to Kimberley, in Africa, and the butter was found to be in a perfectly sound condition. Cases are now made which hold as much as 800 pounds of butter."

Sheep in America.

In 1893 we had 47,000,000 sheep, which declined in 1896 to 36,000,000, and increased to 41,000,000 this year. The increase in the improved large mutton breeds of sheep is general throughout all the States, and even in the South increased attention is given to sheep breeding. The introduction of sheep to this country, as given in the Year Book, shows wonderful progress in sheep breeding for mutton and wool.

It is probable that the first sheep in

this country came to Virginia in 1609 from England. About 1625 some sheep were brought to New York by the Dutch West India Company from Holland. Sheep were brought into the Plymouth Colony and that of Massachusetts Bay very soon after the settlement.

Increase in Value of American Horses.

The increase of the value of horses in the United States since 1897 is \$151,320,040, or \$13.10 per head of our fourteen million horses. The increased value from now on will be far greater, as the quality is improving; the value of the scrubs, rangers and little trotters does not increase, but good draft and coach horses increase in price as the industrial demands of prosperity and the export trade requires more horses. Those who raise horses to suit the markets will get the high prices; those who prefer to raise cheap horses will get no advance, as there is no demand for them above cost of production. The world's markets want high-class horses regardless of price.

An Inter-Collegiate Live Stock Association Organized.

At a meeting called at Chicago, November 1, by Professor John A. Craig, of Iowa, to arrange for an inter-collegiate live stock judging contest, to be held at Chicago during the International Live Stock Exposition, an organization was effected. It was decided to hold such a contest, and tentative rules were adopted governing such contest. Professor Plumb, of Indiana, was elected president; Professor Hunt, of Ohio, vice-president, and Professor Mumford, of Michigan, secretary and treasurer; the executive committee to consist of Professors Plumb, Mumford, Craig and Kennedy.

Facts about the Silo.

Twenty years' experience in the use of the silo has brought out some facts about which all are agreed :

First. That a larger amount of healthful cattle food can be preserved in the silo in better condition, at less expense of labor and land, than by any other method known.

Second. That silage comes nearer being a perfect substitute for the succulent food of the pasture than any other food that can be had in the winter.

Third. Thirty pounds a day is enough silage for an average sized Jersey cow. Larger cattle will eat more.

Fourth. A cubic foot of silage from the middle of a medium-sized silo will average about 45 pounds.

Fifth. For 182 days, or half a year, an average Jersey cow will require about six tons of silage, allowing for unavoidable waste.

Sixth. The circular silo, made of good hard wood staves, is cheapest and best.

STONE AND STUMP LIFTER

Will lift 18,000 lbs. The only lifter that will. Will clear your land of large stone. Will build fences from 4 to 5 feet high. Agricultural societies should buy it. Farmers should club together to buy it. Send for full particulars and price.

A. LEMIRE, - - - Wotton, Que.
Made in Hamilton. Patent for sale.

ARE YOU ONE OF THEM ?
If you are a paid-up subscriber of **THE FARMING WORLD** you can get a \$12.00 double-barrel breech-loading gun for \$8.50. See illustration and full description in page announcement of **FARMING WORLD**, Sept. 4th.

Seventh. Fifteen feet in diameter and thirty feet a good depth. Such a silo will hold about 200 tons of silage, cut in half-inch lengths.

Eighth. Corn just passing out of roasting ear stage is the best single material for silage. Corn and cowpeas are the best combined materials in cowpea regions.

Ninth. Silage is as valuable in summer as in winter.

Tenth. The silo has come to be as necessary a part of a dairy farm plant as a corn crib or hay mow.—*Jersey Bulletin.*

Profits from Different Breeds.

At the North Carolina Experiment Station they have been testing several breeds of hens and pullets on the same feed, to ascertain the comparative profits of the different classes. All were fed in the morning with a combination of four parts bran, two parts wheat middlings, one part corn meal, wet up with steamed crimson clover, and usually fresh cut bone. In the afternoon they had different grains, including oats, wheat screenings or cracked corn, either separately or in combination. Prices were 55 cents a bushel for corn and corn meal, 75 cents for clover hay, \$1 each for green bone and wheat middlings, \$1.40 to \$1.60 for oats, 90 cents for wheat bran, and 80 cents for wheat screenings per 100 pounds. Eggs were credited at 13½ cents a dozen.

The American class, Barred and White Plymouth Rocks and Silver-laced Wyandottes, gave 11.60 eggs per month at a cost of 8.94 cents for food. The Asiatics, Light Brahmas, Buff Cochins and Black Langshans, 11.30 eggs at cost of 11.68 cents, and the Mediterranean, Black Minorca and S.C. Brown Leghorns, 11.04 at cost of 6.24 cents. The monthly profit per hen was greatest for Mediterraneans, next on Americans, and smallest on Asiatics, but when all were figured on a standard of 17½ ounces to the dozen, the Americans led with largest eggs, the Asiatic next, and Mediterranean last. Pullets produced more eggs than old hens. Brahma eggs weighed 28 ounces per dozen, and Leghorn pullets less than 18 ounces. These were the two extremes.

Prehistoric Agriculture.

The searching party of Curator Mills of the Ohio Archaeological and Historical Society brought to light many things bearing upon the life and habits of the prehistoric people of America, and added many valuable specimens to the museum. The party spent the entire summer in excavating at the Baum village site, near Bourneville, O.

In the ash pits of the village site were found quantities of charred corn and corncobs. The corn had evidently been placed in layers and had doubtless been charred or parched to preserve it. In these pits were also found hickory nuts, walnuts, butternuts and hazelnuts, also beans and the seeds of the pawpaw and

wild plum. Seeds and stems of various grasses were found in a good state of preservation. These grasses, as well as other material not already determined, will be identified and classified during the winter. Hoed of mussel shells and slate were among the various implements found.

It has been the theory for a long while that the prehistoric men of America were an agricultural people, living largely upon the product of the soil growing, both wild and cultivated. The summer's work of Curator Mills seems to prove the truth of this theory.

Books and Bulletins Received.

Annual Reports of Live Stock Associations, 1899 1900, including report of the Provincial Winter Fair, held at London, December, 1899.

Evidence of Prof. Robertson before the select standing committee, Ottawa, 1900.

Report of the Agricultural Central Experimental Farm, Ottawa, for 1899.

Progress in Beet Sugar Industry in the United States in 1899, issued by Department of Agriculture at Washington.

Statistical Year Book of Canada for 1899, issued by the Department of Agriculture at Ottawa.

Report, Third Annual Convention of the National Live Stock Association, held at Fort Worth, Texas, in January last.

Report No. 64, U. S. Department of Agriculture, giving field operations of the division of soils, 1899.

Report of the Horticulturalist, Central Experimental Farm, Ottawa, for 1899.

Evidence of Dr. Duncan McEachran, veterinary inspector, before the Select Standing Committee of Agriculture and Colonization, 1900, dealing especially with tests and treatment of tuberculosis cattle.

Report of the Director, Central Experimental Farm, Ottawa, for 1899.

Report of the Chemist, Central Experimental Farm, Ottawa, for 1899.

Report of the Department of Agriculture, Pennsylvania for 1899, Part I.

Maxwell's "Favorite" Churn.



Patent Foot and Lever		LIST 1	
Drive.	No.	Holds	Churns
•	0	6 gal.	1 to 2 gal.
•	1	10 "	1 to 5 "
•	2	15 "	2 to 7 "
•	3	20 "	3 to 9 "
•	4	26 "	4 to 12 "
•	5	30 "	5 to 14 "
•	6	40 "	6 to 20 "

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DAVID MAXWELL & SONS
St. Mary's, Ontario, Canada.

Bigger Profits

Your cheese and butter-making will pay you bigger profits if you use

Windsor Salt

Pure, soluble, even crystals; economical to use.

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Have you a Fence to build?

It will cost you less than half if you build with the

London Fence Machine

We challenge competition for speed, ease, quality of work and durability.

The **LONDON** is a thoroughly up-to-date machine and stands without a rival for weaving square mesh-coiled spring fence.

The best and strongest fence in the world.

The **LONDON** is sold at a price which every farmer can afford and save the price in 40 or 50 rods.

We are leaders in Coiled Steel Spring Wire, also common Soft Galvanized Wire.

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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement, will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Horses.

Canadian horses came in for quite a few honors at the recent Chicago Horse Show. A Chicago exchange speaks of their winnings as follows: "Myopia, a well-bred jumping horse from Canada, captured the thousands at the horse show Wednesday night. In a class of a dozen worthy rivals he circled the ring twice and made the three barriers each time without a single scratch. His first jump won favor, the second brought a slight ripple of applause, and the third and fourth and fifth and sixth brought out cheers and shouts and clapping of hands that did not cease until after he had taken his place in line. The following prizes were awarded to Canadian horses: Postmaster, Crow & Murray, Toronto, took a third in the trotting stallion class; South Africa got third in horses in harness; same owners. In the heavy weight green hunters class the Canadians carried off all the prizes, as follows: First prize, Eagle Plume, George Pepper, Toronto, Canada; second prize, Farmer Martin, George Pepper, Toronto, Canada; third prize, Lady Hampton, A. Beck, London, Ont. Crow & Murray also captured four prizes in pairs, of park horses to harness. For the best performance in jumping horses, George Pepper, of Toronto, outclassed everything in that line with Myopia, Glenmore and My Fellow, carrying off all three prizes."

Mr. James Picken, Torrs Farm, Kirkcubright, shipped on Saturday from Glasgow, to the order of Mr. Smith, Brampton, Ontario, the splendid big stallion Ratepayer, 10422, bred by Mr. Thomas Muir, Barwhanny, Whauphill, and by Prince of Carruchan, 1551, out of a dam by the well-bred horse, Gregor Macgregor. Ratepayer is an ideal horse for the Canadian trade, being both big and handsome-looking, with a fine color. He stands close upon 19 hands, and will weigh about a ton. Few bigger or better horses, in fact, have gone to Canada, and he will be difficult to stop, even by the best of them. Mr. Picken travelled Ratepayer in Cumberland this year, where he gave great satisfaction, and was very popular with the breeders. He is sure, with luck, to do equally well in the hands of his new owner, Mr. Smith.—*North British Agriculturist.*

The British Government made upwards of fifty shipments of horses and mules from United States ports to South Africa during the last twelve months.

General Manager Skinner of the International Live Stock Show announces that satisfactory arrangements have been made with the various interested railway companies to grant reduced rates to Chicago as below. Tickets will be sold from points in the Indian and Oklahoma Territories and from points in Texas on and north of a line drawn from Big Springs through Comanche, Valley Mills, Waco, Groesbeck, Palestine and Lufkin, Nov. 28, 29, Dec. 3 and 4; from points south and west of that line, Nov. 27 and 28 and Dec. 2 and 3. Tickets will be limited to leave Chicago up to and including Dec. 9. An extension of ten days beyond Dec. 9 may be obtained on giving notification to the joint ticket agent and paying an additional sum of \$3. The fare for the round trip from any point in the district named will be full fare one way, plus \$2.

The Scottish Farmer has the following: Messrs. Dalgety Bros. have recently purchased for George Bean, and shipped two useful Clydesdale stallions, named respectively Rising Prince (10868), and Royal King (10276). Rising Prince was bred by Mr. John Kerr, Colleenau, and is own brother to the fine filly which gained first prize at Kilmarnock some

years ago. His sire was the Cawdor cup champion Prince Alexander (8899), and his dam the noted breeding mare North of Stracathro (3143). Royal King is an extra well-bred horse, got by the prize horse Mount Royal (8065), and his dam was the well-known prize mare Golden Queen (12071), whose dam, Queen of the Lyons (6967), was cup winner at Aberdeen. These horses are not likely to disappoint their new owners. Mr. James Picken, Torrs, Kirkcubright, has recently sold Ratepayer (10422) to Neil Smith, Woodhill, Ont. This horse was foaled in 1896 and got by the Dual Cawdor cup champion Prince of Carruchan (8151), while his dam was by a son of Macgregor, and his granddam by Flashwird. He was bred by Mr. Muir, Barwhanie Whauphill, and has a long pedigree, his ancestry being all bred for size, color and weight.

Cattle.

A very nice draft of 15 female Ayrshires have been sold from Sir J. M. T. Stewart's herd for exportation to Japan. The animals were personally selected by three gentlemen representing the Mikado's Government. One was a four-year-old cow, a noted prize-winner, but the visitors seemed to prefer two-year-old queys. Out of a lot of 25 they bought 12, including the second and third prize-winners at the Royal show this year. Both had for their sire Queen's Messenger, a bull hired from Mr. L. Pilkington, Cavens. Another was by Yellow Bob of Knockdon, a bull for which Sir Mark paid £73 when a year old. Another was by First Choice, the champion bull of his day. This bull is breeding well, and the young bulls sired by him were sold at high figures this year. Seven were by Prince of Knockdon, a bull for which Sir Mark paid £82 when a yearling. After inspecting the yearlings, the visitors bought one sired by Zeroma of Monkland. This stirk is half-brother to the champion yearling bull sold by Mr. Boyd to the Japanese Government some time ago. The consignment sailed from the Royal Albert Docks, London, on Saturday, under the charge of a son of Mr. M. Dowall, of Girdingwood, and a young man from Barcheskie. Ayrshires have only just got a footing in Japan, but they promise to become popular.—*North British Agriculturist.*

Note.—Why should not the Japs come to Canada for their Ayrshires? They could have purchased just as good, and at a less cost for transportation, in Canada as in Great Britain. This trade should be looked after.—*Editor.*

The following is the summary of sales at the great Kansas City sale of Shorthorns and Herefords:

98 Hereford bulls averaged	\$339.69
47 Shorthorn bulls averaged	305.64
145 bulls averaged	328.65
87 Hereford females averaged	298.79
97 Shorthorn females averaged	322.37
184 females averaged	311.22
185 Herefords averaged	320.46
144 Shorthorns averaged	316.90
329 head (total number sold) aver'gd	318.91

HIGHEST PRICES FOR BULLS.

Herefords.

Columbus 17th 91361, owned by J. G. Reynolds & Son, bought by Frank Rockefeller for \$5,050.

Shorthorns.

Knight's Valentine 157068, owned by G. E. Ward, bought by T. P. Babst for \$1,000.



Hearing Restored

by the use of

Wilson's Common Ear Drums

The only scientific sound conductors. Invisible, comfortable, efficient. They fit in the ear. Doctors recommend them. Thousands testify to their efficiency.

Information and Booklet Free.
WILSON EAR DRUM CO.,
402 Trust Bldg., Louisville, Ky.

WHY NOT HAVE ONE ?

If you are a paid-up subscriber to THE FARMING WORLD you may have a \$2.50 4-inch reading glass for \$1. This glass shows how clear small type appears when viewed through its lens. It is a great comfort to those whose eyesight is not strong and is valuable in examining seeds and insects.

Ravages of Consumption

White Plague on the Increase.

A Cure Now Within the Reach of Every Sufferer.

DR. SLOCUM the famous scientist, whose lectures and demonstrations in New York and London this season have astounded medical circles, has at last perfected his new system of treatment for the absolute cure of tuberculosis and all pulmonary diseases. This triumphant victory over the deadly bacilli is far reaching in its effects, for there is no longer room for doubt that the gifted specialist has given to the world a boon that will save millions of precious lives. Dr. Slocum's system of treatment is both scientific and progressive, going as it does to the very source of the disease and performing the cure step by step.

First Step.—Killing the life destroying germs which invest the body.

Second Step.—Toning the entire system and strengthening the nerves—filling the veins with tingling new life.

Third Step.—Building healthy flesh and fortifying against future attacks.

The Slocum system cures grip and its painful after effects, dangerous coughs, bronchitis and every known form of pulmonary disease.

It makes weak lungs sound, strengthens them against any ordeal, and gives endurance to those who have inherited hollow chests, with their long train of attending dangers. To enable despairing sufferers every where to obtain speedy help before too late, Dr. Slocum offers

FULL FREE TREATMENT

To every reader of this paper.

Simply write to THE T. A. SLOCUM CHEMICAL CO., 178 King St. West, Toronto, Ont., giving your office and express office address and the free medicine (Slocum Cure) will be promptly sent. Sufferers should take instant advantage of this generous proposition, and when writing for them always mention this paper. Persons in Canada using Slocum's free offer in American papers will please send for samples to the Toronto laboratories. Let no previous discouragements prevent your taking advantage of this splendid free offer before it is too late.

HIGHEST PRICES FOR COWS.

Herefords.

St. Justina 75131, owned by K. B. Armour, bought by C. E. Smith for \$1,025.

Shorthorns.

Missie of Brownale, owned by J. W. Smith & Son, bought by M. A. Lowe for \$950.

Vol X, Part 44, of the Herd Register published by the American Guernsey Cattle Club is at hand. It contains the pedigrees of bulls numbered from 6537 to 6675, and cows from 12560 to 12781. As usual, there is much interesting reading matter in the book, and some beautiful half-tone illustrations.

The annual meeting of the American Shorthorn Breeders' Association will be held in the Palmer House, Chicago, on the evening of Dec. 5, at 7:30 p.m. A meeting of all the secretaries of all the breeders' associations will be held in Parlor O, of the Palmer House, Dec. 4, at 7:30—the evening before the meeting of the Shorthorn breeders.

The Armour Packing Company killed more cattle at its packing-house at Kansas City, Oct. 26, than were ever killed before in any packing-house in the world in a single day, the total slaughtered being 3,249 cattle. The Armour Co. first took the world's cattle killing record in October, 1893, shortly after the completion of its new beef-house. The total number of cattle killed in a single day then was 3,218. Shortly afterwards Armour & Co., of Chicago, killed 3,219. This stood as the highest single day's killing until the present record was made.

The following is a summary of the official record of Holstein-Friesian cows tested at the American experiment stations for September and October, 1900: Three full-age cows average 6 years, 11 months, 4 days, 36 days after calving, milk 487 lbs., butter fat 17.514 lbs., equivalent butter 85 per cent. fat 21 lbs. 14.3 oz., equivalent 85.7 per cent. fat 20 lbs. 6.9 oz.; two four-year-olds average 4 years, 3 months, 19 days, 43 days after calving, milk 447.5 lbs., butter fat 13.170 lbs., equivalent butter 86 per cent. fat 15 lbs. 9.4 oz., equivalent 85.7 per cent. fat 15 lbs. 7.7 oz.; five classed as two-year-olds average 2 years, 25 days, 15 days after calving, milk 274.7 lbs., butter fat 8.397 lbs., equivalent butter 80 per cent. fat 10 lbs. 7.9 oz., equivalent 85.7 per cent. fat 10 lbs. 12.7 oz.

Sheep.

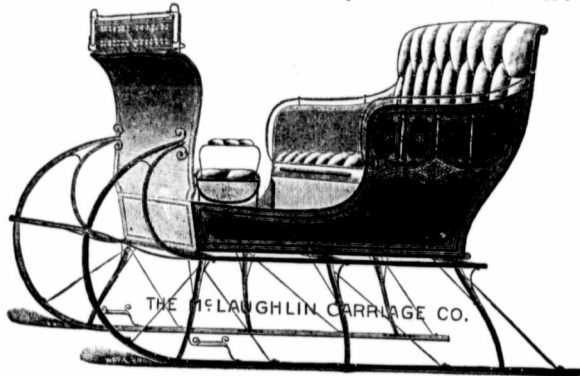
Major Craigie, in his address before the last meeting of the Economic Section of the British Association, gave some figures touching sheep that ought to prove highly interesting to all American sheepmen. Taking the figures given in Government and other official and trustworthy returns Major Craigie said that in Ireland there are 207 sheep to each 1,000 acres of ground, in Scotland 190, Wales 685, Austria 43, Switzerland 67, Hungary 102, Denmark 115, France 104. In these countries the population is dense, ranging from 219 men, women and children per 1,000 acres in Ireland to 345 persons per 1,000 acres in Wales. Similar figures for sparsely-populated countries follow. New South Wales 221 sheep per 1,000 acres, New Zealand 294, Victoria 234, Norway 18, United States 17, Sweden 13, and Russia (leaving off Poland) 36. England and Belgium are the former having 925 men, women and children per 1,000 acres and the latter 893. In England there are 488 sheep per 1,000 acres and in Belgium 32. Major Craigie then pointed out the extraordinary fact, fully demonstrated by official figures, that in every old country save the United Kingdom the diminution of sheep stock has been continuous and rapid, but the reason, he stated, has never yet been satisfactorily given.

"Your dissipated cousin from Paris is keeping very straight, isn't he?"

"Yes. He says he'd be eternally ashamed to be seen in a patrol wagon drawn by horses!"—*Cleveland Plain Dealer.*

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Don't drive into the new century with that old cutter!



Our No. 214½.

We are building for this winter's trade a full assortment of the **Most Stylish, Most Comfortable, Most Durable** Cutters ever offered to the Canadian public.

Send for Catalogue, giving full descriptions.

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EASY SPRAYING.

One-half the Time, Labor and Solution Saved by using **RIPPLEY'S RELIABLE AIR COMPRESSED**

are most effective because they throw the finest spray, most economical because they make the solution go the farthest. Fine machine for white-washing buildings and fences. Will throw a continuous stream 50 feet high. Can't burst. Holds 5 gals., made heavy duty from heavy copper.

For 1901 trade we will have large Compressed Air Sprayer to pull by hand or horse.

RIPPLEY COMPRESSED HAND SPRAYER

for house plants, gardens, dampening clothes, apply lye killer, poultry houses, spraying stock with fly removers. It has 1 qt glass reservoir. Can't corrode. Contents always in view. Throws a fog like mist. Will spray overhead. No Sprayer to equal it.

Patents applied for in United States and Canada.

Write for Beautiful Breeders' Supply Catalogue and Prices.

NEEDED ON EVERY FARM.



Ripley Feed-Cooker, Tank-Heater, Steam Generator.

Cooks a barrel of ground feed in 30 minutes; heat a tank 100 feet away. Uses any kind of fuel; cannot explode; no fire to rust out or leak. No scorching of feed. We guarantee it to do quicker work than any other cooker or money refunded. Made of boiler steel. Will heat hog and poultry houses.

Ripley's Steam Wash Machine and Feed Cooker No. 5.

The only automatic washer on the market. It does the washing without the aid of hands. Made entirely of metal; no wood to warp and shrink. Steam does all the work. Only requires 20 minutes to boil clothes. It is also an excellent feed cooker and a cracker jack for heating water to scald hogs, dairy utensils, etc.

Send for beautiful catalog and special prices on all poultry and live stock supplies.

DIPLOMA OVER ALL OTHERS.

Our Cooker took diploma at the following fairs this season: Toronto Exhibition, Western Fair, London, Ont., Neepawa, Man., Carberry, Man., Brandon, Man.

Our Cookers are Used and Endorsed by the following Leading Breeders in Canada: Brethour & Seaman, D. C. Platt & Son, H. J. Davis, Capt. Hood, Fitzgerald Bros., James Bodin, J. A. McDonald, W. L. Train, and many others.

We also manufacture Poultry and Stock Lice Killers and Fly Remover for removing Flies from Stock and other animals.

We are prepared to fill orders from our branch office at London, Ont.

RIPPLEY HARDWARE CO.,

Grafton, Illinois, U. S. A.

BRANCH OFFICE, LONDON ONTARIO, JNO. S. PEAROE, MANAGER.

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, Nov. 12, 1900.

There is no special change in the tone of general business other than that due to the closing of an election campaign. The elections both in Canada and the United States are over, and things will now settle down to the regular routine. The more reasonable weather of the past few days will help matters, and a greater activity along many lines may be looked for. Money continues about the same.

Wheat.

The wheat situation shows little change, and if anything prices are a shade lower. The *Cincinnati Price Current*, the recognized authority on such matters in the United States, sums up the situation up to November 8 as follows:

"The wheat market was weak during the past week from the natural weight of full sufficiency of offerings, the decline at Chicago for the week being about $\frac{1}{4}$ c. Reports of damage to the Argentine crop continued numerous, but they could not have much influence upon domestic markets so long as European markets failed to respond to such conditions. Last Friday a London authority reported a shortage of 30 per cent. in the Argentine prospects, while another English authority had a cable that the crop would be an average one per acre. Later Argentine information indicates at least that the spell of bad weather has passed. The reported destruction of the wheat crop in a portion of Siberia is not regarded as having material effect upon the wheat situation. On Saturday and Monday there was reported a considerable speculative buying of wheat in anticipation of a sharp advance after the election of McKinley, as occurred four years ago, but the market weakened instead of advanced immediately after the election, as there was no further speculative support.

"Cash wheat has been in fair demand, especially hard winter wheat, which was not very plentiful, and more strength was shown in the Kansas City, St. Louis, and Minneapolis markets than at Chicago. The movement of winter wheat shows a falling off, but the movement of spring wheat is keeping up fairly well. It is worthy of note that the primary receipts of winter wheat so far this season, eighteen weeks, is already larger than were the receipts at the same points during the entire fifty-two weeks of last season. So it should be no surprise if the movement of winter wheat falls off considerably henceforward."

The market here is quiet, with buyers quoting 63c. for white and mixed west and 63c. for red, middle freights. Goose is quoted at 65c. west, and spring life at 65 to 66c. east. No. 1 Manitoba hard is quoted at 82 $\frac{1}{2}$ to 83c. afloat, Fort William. On Toronto farmers' market red and white bring 68 to 68 $\frac{1}{2}$ c., spring life 69c., and goose wheat 66c. per bushel.

Oats and Barley.

There is a little more activity reported in oats east. The market here is steady at 25c. for No. 1 white west and 23 $\frac{1}{2}$ c. for No. 2, middle freights. On farmers' market here oats bring 29 to 31c. per bushel.

The barley market keeps quiet at 37 to 43c. w. st., as to quality. On Toronto farmers' market barley brings 40 to 46c. per bushel.

Peas and Corn.

Peas are quoted here at 59c. east, 58c. middle freights, and 57c. west. On farmers' market they bring 60c. per bushel.

The American corn market has ruled strong, November option at Chicago advancing 2c. during the week. Eastern exporters have been fair purchasers, but the

real strength is due to speculative manipulation. It is reported that interior shippers are not finding feeders so sharp competitors for the product as last year. American No. 3 yellow is quoted at 46 $\frac{1}{2}$ c., and new at 44 $\frac{1}{2}$ c. Toronto. Old Canadian yellow is quoted at 39c. and new at 33c. west.

Bran and Shorts.

Manitoba bran at Montreal is quoted at \$15 in bags, and shorts at \$17, and Ontario bran in bulk at \$15.50 to \$16, and shorts at \$17 to \$18 in car lots. City mills here sell bran at \$13.50 and shorts at \$16 in car lots, f.o.b. Toronto. At points west of here millers quote bran at \$11 to \$11.50 and shorts at \$12.50 to \$13 in large lots.

Eggs and Poultry.

The egg markets both in England and Canada keep firm and a large volume of business is being done. Western fresh stock is quoted at Montreal at 16 $\frac{1}{2}$ to 17c. in large lots. Offerings have been heavy here. Strictly fresh sell well and are firmer at 17 to 17 $\frac{1}{2}$ c. in large lots. On Toronto farmers' market new laid bring 20 to 25c. per dozen.

The dressed poultry market is becoming more active and the cooler weather will help matters considerably. Montreal quotations are: 9 to 10c. per lb. for turkeys; 7 to 8c. for chickens, 6 to 7c. for fowls; 8 to 9 $\frac{1}{2}$ c. for ducks and 6 to 7c. for geese in large lots. The market here is improving, turkeys being quoted at 8 to 9c. and geese at 5 $\frac{1}{2}$ to 6c. p. r. lb. and chickens at 30 to 50c. and ducks at 56 to 70c. per pair in a wholesale way. On Toronto farmers' market chickens bring 40 to 60c. and ducks 40 to 75c. per pair and turkeys 8 to 9c. and geese 5 $\frac{1}{2}$ to 6 $\frac{1}{2}$ c. per lb. Live ducks sell at 25 to 50c. per pair.

Potatoes.

A lot of 900 bags of potatoes has recently been sent from Montreal to Liverpool, the first in many years. The demand there is good and a trade may be worked up that will help prices on this side where the crop is large. Car lots are quoted at Montreal at 40c. per bag. Here car lots bring only 26 to 28c. per bag and on farmers' market 30 to 35c. per bag are the figures.

Hay and Straw.

Shipments of baled hay are being sent forward regularly to England and the United States, and it is expected that a regular trade will be kept up all winter. The Quebec crop is large, though owing to unfavorable weather for harvesting quite a lot is below the highest standard of quality. At Montreal No. 2 quality is quoted at \$8.50 to \$9, and No. 1 at \$7.50 to \$8. Here No. 1 quality is quoted at \$9.50 to \$9.75 and No. 2 at \$8 to \$8.50 for cars on track. On Toronto farmers' market hay brings \$14 to \$15, sheaf straw \$12, and loose straw \$6 per ton.

Seeds.

The seed market keeps quiet with very little activity in the export line, and business in that line is practically at a standstill. Quo-

tations here range from \$5 to \$6 per bushel for alsike, \$5.50 to \$6 per bushel for red clover, and \$2.75 to \$4.50 per cwt. for timothy.

Fruit.

Shipments of apples so far this season show a falling off of over 75,000 bbls. as compared with the same period of 1899. Shippers have been doing well so far. Some recent account sales show handsome profits, one large Montreal exporting firm being reported to have cleared \$1.50 to \$2 per bbl. Cable advices show sales which net all the way from \$1.47 $\frac{1}{2}$ to \$1.71 $\frac{1}{2}$ per bbl. at Ontario points, which would show a big profit on apples bought at 40 to 50c. per bbl. as was the case early in the season. A large lot of Ontario apples were reported sold last week at \$1.75 per bbl. f.o.b., and at Montreal choice varieties sell at \$1.87 $\frac{1}{2}$ to \$2.25 in large lots. On Toronto fruit market apples are quoted at 75c. to \$1.50 per bbl.

Cheese.

The cheese market continues dull and inactive, though there has been more cable enquiries of late, an indication of a movement towards more active business in Great Britain. Prices are lower than a week ago. Holders of September goods seem to have confidence in the future of the market, as they are asking 11c. for first quality. The October make has been large, with the quality of the last week's make reported as inferior in many places. Prices at local markets have ranged from 9 $\frac{1}{2}$ to 10 $\frac{1}{2}$ c., with few sales early in the week, though towards the end of the week quite a few factories accepted 10c. per lb. for Octobers. Cable reports are dull.

Butter.

The export butter market is easier, though exports so far this season show a large falling off as compared with last year. The *Trade Bulletin* summarizes the market as follows:

"Although we do not alter our quotations for choice fresh-made creamery, there is evidently an easier feeling in the market for anything grading below it. For instance, a lot of creamery that was perfectly sweet, but mottled, sold yesterday at 19 $\frac{1}{2}$ c., although a week ago 20c. was refused for the same lot. We also heard of a lot of fairly good creamery selling at 19c. But when it comes to a matter of really choice late-made goods 21c. is more readily obtainable than 19c. for ordinary grades. In Western dairy the market is quiet under a better supply, and prices have ranged between 17 and 18c. Choice Western rolls, which sold a week ago at 19c. to-day brought 18 to 18 $\frac{1}{2}$ c. Our special London cable reports a decline of 2s."

Creamery keeps in good demand here at 22 to 24c. for prints, and 20 to 24c. for tubs and boxes. Choice dairy keeps in steady demand at 18 to 20c. for pound rolls, and 17 to 18c. for large rolls, tubs and boxes. On Toronto farmers' market pound rolls bring 18 to 21c. each.

Cattle.

The general tone of the cattle situation shows little change. At some American

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Great
Special
SALES

Wednesday, Nov. 14—Trotters, Pacers, and Drivers.

Wednesday, Nov. 21—Mr. Jos. E. Seagrams' Great Sale of Thoroughbreds.

Wednesday, Dec. 5—Mr. Wm. Hendrie's Great Annual Sale of Thoroughbreds.

Write for Catalogue.

WALTER HARLAND SMITH

Auction Sales every Tuesday and Friday, at 11 a.m.

points advances are reported, but these are largely due to short runs in special lines. There was only a moderate delivery of live stock at Toronto cattle market on Friday, the last market of the week. Trade was fairly good, with very little change in the values excepting for good butchers' cattle, which were higher.

Export Cattle.—Choice lots of these sold at \$4.40 to \$4.60, and light ones at \$4 to \$4.25 per cwt. Heavy export bulls sold at \$4 to \$5 per cwt., and light ones at \$3.12½ to \$3.35. Loads of good butchers' and exporters' sold at \$3.80 to \$4.10 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters', weighing 1,000 to 1,100 lbs. each, are worth \$4.20 to \$4.40, good cattle \$3.75 to \$4, medium \$3.25 to \$3.50, and inferior to common \$2.50 to \$3 per cwt.

Feeders.—Heavy, well-bred steers of good quality, weighing 1,000 to 1,150 lbs. each, sold at \$3.60 to \$3.90, and other quality at \$3.40 to \$3.60 per cwt. Short keep feeders, 1,100 to 1,200 lbs. in weight, in good condition, sold at \$4 to \$4.15 per cwt. Light steers weighing 800 to 900 lbs. each sold at \$3 to \$3.25, and feeding bulls for the byres, 1,100 to 1,600 lbs. in weight, at \$3 to \$3.25 per cwt.

Stockers.—Yearling steers, 500 to 700 lbs. each, suitable for the Buffalo trade, sold at \$2.25 to \$3, and other quality at \$1.75 to \$2 per cwt. Stock bulls, 600 to 900 lbs. each, sold at \$2 to \$2.25 per cwt.

Milk Cows.—Milk cows and springers sell for \$30 to \$50 each.

Calves.—These keep in good demand at Buffalo and quotations are \$7.75 to \$8 per cwt. for choice to extra and \$7.25 to \$7.50 per cwt. for good to choice. Choice veal calves are in good demand here but heavy coarse skim-milk calves over 200 lbs. are not wanted. Prices are \$3 to \$10 each.

Sheep and Lambs.

At Buffalo market on Friday Canadian lambs were quotable at \$5.35 to \$5.40 per cwt. At Toronto market there have been too many half-fat lambs offered. Prices for sheep are steady at \$3.25 to \$3.50 for ewes and \$2.50 to \$2.75 per cwt. for bucks. Spring lambs sold on Friday at from \$2.50 to \$3.25 each and \$3.75 to \$4 per cwt.

Hogs.

There has been no further drop in prices. Choice select bacon hogs 160 to 200 lbs. each unled and unwatered off cars sold on Friday at \$4.75 and light fats at \$4.25 per cwt. Unculled carlots sold at \$4.60 to \$4.70 per cwt. Montreal quotations are \$5 per cwt. The *Trade Bulletin's* London cable of Nov. 8, re Canadian bacon reads thus: "The market is dull, weak and 25. lower on the week."

The Wm. Davies Co., Toronto, will pay \$4.87½ per cwt., for select bacon hogs this week an advance of 12½c. over Friday's quotations.

Horses.

Very few horses were offered at Grand's last week and as the quality was poor only very low prices were realized. The elections had something to do with the falling off in supplies. The sale of trotters on Wednesday of this week promises to be an important event in horse circles as well as Seagram's sale on Nov. 21, and Hendrie's sale on December 5.

Rusks.

Cream one oz. of German yeast with a spoonful of castor sugar, add three ozs. of butter, two eggs, a pint of milk and two lbs. of flour. Let rise an hour then knead well on a floured board. The dough may be twisted into any number of fancy shapes and the rusks taken from the oven before they are quite done and brushed over with white of eggs.

The Chipmunk and His Toilet

The chipmunk is industrious in all weathers, except the very rainy, although he is rather shy on a very windy day. The rustling and waving branches make him wary. He eats sitting on his haunches and holding his food in his forepaws. He drinks by lapping like a dog. He is very neat about his person, combing out his fur and his long tail with paws and teeth. He washes his face by lapping his forepaws and then rubbing them both at the same time with such speed that the eye can hardly follow his motions.

—*Ladies' Home Journal.*

"Your mother agrees with me exactly, Johnny," said his father, proceeding to trim the twigs from a tough switch. "She thinks, with me, that you need a good trouncing, and you are going to get it, my son."

"Yes," bitterly exclaimed Johnny, "You and maw always agrees when it comes to lickin' me. You and maw's the whole thing. I don't never have no show. This family's run by a trust!"—*Chicago Tribune.*

Spavins, Ringbones, Splints Curbs, and All Forms of Lameness Yield to



Worke thousands of cures annually. Endorsed by the best breeders and horsemen everywhere. Price, \$1; six for \$5. As a liniment for family use it has no equal.

West Lorne, Ontario, Can., Dec. 14, 1898.

DR. B. J. KENDALL CO.
Dear Sirs:—A year ago I had a valuable horse which got lame. I took him to the Veterinary Surgeon who pronounced it *breast spavin* and gave me little hope, although he applied a sharp knife. This made matters only worse and the horse became so lame that it could not stand up. After trying everything in my power I went to a neighbor and told him about the case. He gave me one of your books and I studied it carefully and being resolved to do the utmost in favor of my beast, went to the nearest drug store and got a bottle of your Spavin Cure and applied it strictly according to directions. Before the first bottle was used I noticed an improvement, and when the seventh bottle was about half used, my horse was completely cured and without leaving a blemish on him. After ceasing treatment I gave the horse good care and did some light work with him, wishing to see if it had effected a cure. I then started to work the horse hard and to my entire satisfaction he never showed any more lameness through the whole summer. I can recommend Kendall's Spavin Cure not only as an excellent, but as a sure remedy, to any one that it may concern.
Yours truly,

Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL COMPANY, ENDSBURG FALLS, VT.

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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

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ALPHA

Disc Cream Separator.

Do not continue to use an unprofitable method of cream separation—nor a profitable method, when there is a more profitable method still. Consider a few of the advantages of the "Alpha" Disc Cream Separator:

1. The cream is separated easily during milking, or afterwards—there is no setting of milk—no washing of creamers or pans—no pumping of water—no ice.
2. The skim-milk is warm, sweet, fresh, and possesses from 5 to 10 times the nutritive value of gravity skim-milk.
3. The "Alpha" gets more cream, while it leaves the skim-milk fresher and richer.
4. The cream is sweet, fresh, uniform in thickness, and free from taints and disease germs.
5. Butter from such cream is improved from 10 to 25 per cent. in quality and marketable value.

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Hecla Furnaces are made in four sizes and eight styles, will burn any kind of fuel. Has double door for large rough wood. Heavy flange fire pot made in two sections. The dome has fused joints absolutely gas proof. The **HECLA** is unequalled for **Heating Capacity, Durability, Economy, and Ease of Management.** Write to

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The Razor Steel

SECRET TEMPER, CROSS-CUT SAW



WE take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A Saw, to cut fast, "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These Saws are elliptic ground thin back, requiring less than any Saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good, ask your merchant to let you take them both home and try them, and keep the one you like best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a Saw for one dollar less and lose 25c per day in labor. Your Saw must hold a keen edge to do a large day's work.

Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.

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