

The Farming World

A PAPER FOR
Farmers and Stockmen

THE SUGAR BEET WORLD

Devoted to Sugar Beet Culture in Canada.

This is a distinct journal incorporated with THE FARMING WORLD. In it is given from week to week the most careful and detailed information, based upon actual experience, on the cultivation of the Sugar Beet in different parts of the Dominion and indeed throughout the world.

The latest and most-improved implements for its cultivation will be described and illustrated.

Because of the great national importance of this new industry, the paper will be of peculiar interest and value to all farmers and stockmen, implement and machine manufacturers, merchants, commission men, shippers and others.

The Cultivation of Sugar Beet

means big profits and quick returns in spot cash for the Canadian Farmer.

Because...

1. The price is fixed by the Government and the market is sure.
2. It requires no capital and very little extra labor.
3. It tends to increase the price of every other farm product.
4. It promptly advances the value of farm lands.
5. The pulp from the sugar factory makes excellent fodder for live stock.
6. The Sugar Beet adapts itself admirably to our system of mixed farming.

But...

1. A certain rotation of crops must be followed.
2. The soil must be prepared in a particular way.
3. The seed must be sown, the plant cultivated and the crop harvested according to certain rules.

THE FARMING WORLD

Is the only paper in Canada devoting a regular department to The Sugar Beet. It is the only weekly farm paper. It is Canada's Best.

SUBSCRIBE NOW - - Only \$1.00 a Year

Address—
**THE FARMING WORLD :::: Confederation Life Building
TORONTO**

Address

The Farming World

**Confederation Life Building
Toronto**



THE UNDERWOOD

REBUILT TYPEWRITERS

We have in stock at present and offer for sale rebuilt machines as follows :

	Cash.	Time.		Cash.	Time.
No. 2 and 3 Caligraphs	\$30 00	\$35 00	No. 6 Remington	\$75 00	\$80 00
No. 5 Blickensderfer	25 00	30 00	No. 1 Vost	35 00	40 00
No. 1 Williams	40 00	45 00	No. 1 New Vost	45 00	50 00
No. 1 Smith-Premier	50 00	55 00	New Franklin	30 00	35 00
No. 2 Smith-Premier	75 00	80 00	Bar-lock	40 00	45 00
No. 1 Jewett	50 00	55 00	Latest Oliviers	40 00	45 00
No. 2 and 3 Jewett	75 00	80 00	Hammond Ideal	25 00	30 00
No. 2 Remington	50 00	55 00	Hammond Universal	40 00	45 00

A good many of these machines are practically as good as new. We have ten expert mechanics in our Repair Room; several of these men have been in the employ of prominent typewriter factories in the United States for many years, and are thoroughly familiar with all makes of machines. We mention this fact, since we are the only concern in Canada thoroughly equipped for this work.

ALL MACHINES CARRY A YEAR'S GUARANTEE

Creelman Brothers' Typewriter Co.

15 ADELAIDE STREET EAST, TORONTO



Blood Tells!

Feed your horses on grain ground on the

"Joliette" Grinder

And you will be surprised at the improvement. Good feed properly ground makes rich, red blood, and a full blooded animal, is always the best.

S. VESSOT & CO.

108 Front Street East - TORONTO
Factory at Joliette, Quebec.



No Matter

Whether you are training for a race or racing for a train, this watch will keep you right. It is honest, reliable and looks well. It is a man's watch, and every man should carry one. Every school-boy can earn one easily. Read our offer below :

Five Good Points

- FIRST**—It is made by one of the best manufacturers in the world. Every one is guaranteed.
- SECOND**—It is a good time-keeper—in fact so good that many railway conductors rely on it.
- THIRD**—It is strong, and will stand the rough and tumble, the dust and damp of every-day wear.
- FOURTH**—The case is nickel-finished, and looks just as well as solid silver. With ordinary wear it will keep its color for two or three years—much longer with care. The works will last ten or fifteen years.
- FIFTH**—It has a stem-wind and a stem-set. No key to lose; no key-hole to let in dust.

Address THE

Farming World,

Confederation Life Building,
TORONTO.

Any one sending us six new subscribers to THE FARMING WORLD will receive one of these fine Watches, carefully packed in wooden box, post-paid, Free. Or we will send the Watch for three new subscribers and one dollar in cash. Or any subscriber whose subscription is paid up may have one for \$2.00. Your money back if you are not satisfied.

The Farming World is published every week, only \$1.00 per year.

You can earn one of these watches in one afternoon.

SHEPHERDS

X



SHEEP DIP

Kills Lice and Ticks, destroys all disease germs. Disinfectant and antiseptic. Is healing. Prevents and cures skin diseases.

Having so much confidence in this preparation we will give to any farmer who personally brings this advertisement to our warehouse a full-sized bottle for trial. Any Dealer who has not got it in Stock can get it for you from us.

Put up in Qt. Bottles. Price 25 Cents. Manufactured by
THE LYMAN BROS. & CO. Limited,
Wholesale Druggists,
71-73 Front Street, Toronto.

THE MODERN WAY TO DESTROY SHEEP TICKS

is by the use of

INSTANT LOUSE KILLER

It is not a dip, but a powder, that can be applied in zero weather. No slop, no muss, no danger.

There is no profit in letting ticks sap the life out of your sheep during winter, and there is no longer any call for it. With INSTANT LOUSE KILLER the weather cuts no figure.

Examine your sheep at once, and you will probably find ticks and lots of them. Don't wait on the weather, wait on the sheep with a package of Instant Louse Killer. Guaranteed.

Put up in one-pound packages, with perforated top, ready for use, very convenient.
PRICE 35 CENTS. Sold by dealers generally, or address

The Greig Manufacturing Co.,
Canadian Agents, Montreal

Maxwell's "Favorite" Churn.



Patent Foot and Lever

Drive.	No.	Height.	Capacity.
Patented Steel Roller	2	15"	3 to 7 "
Bearings	3	30 "	3 to 9 "
	4	36 "	4 to 12 "
	5	30 "	5 to 14 "
Improved Steel Frame	6	40 "	8 to 30 "

Superior in Workmanship and Finish

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

The Farming World

For Farmers and Stockmen

VOL. XVIII

APRIL 23rd, 1901

No. 35

The Canadian Cheese Trade.

THE letter of Prof. Dean, published elsewhere in this issue, is worthy of careful consideration by every dairyman. The mere fact that dairymen of Wisconsin are looking forward to a time when they shall surpass Canada in the quality of their cheese output, should be sufficient to stir our patrons, manufacturers and makers of cheese up along definite lines of improvement. The Professor's statement that there has been no material improvement in the quality of Canadian cheese during the past five years is a pretty strong one. But if we judge by the numerous complaints made by exporters and others as to the inferior quality of a great deal of the cheese made at our factories there certainly seems to be good ground for this contention. There may, however, be another way of looking at the matter. It is evident that the English consumer is every year getting more particular about the quality of food products he consumes, due largely to the fact that he has a larger range of qualities to choose from. Our lack of improvement may, perhaps, be due to this increased desire on the part of the consumer for a better article. While there may have been improvement in the quality of our cheese, that improvement has not kept pace with the growing demand for a better and more uniform quality of goods.

But, be this as it may, our dairymen must face these facts; that other countries are gradually improving the quality of their dairy products; that the consumer is becoming more particular about the quality of food he consumes; and that Canada will require to put forth every effort to retain the position in the cheese trade she now occupies and to keep up with this march of progress along the lines of improvement in quality. The first essential to improvement, in our opinion, is getting the raw material delivered at the factories in better condition. We quite agree with the Professor that some organized and determined effort should be made by the Associations and others interested to reach the patron, or the man who supplies the milk, and instruct him as to what his duties are in caring for this milk, so as to

produce the finest quality of product. We are not so sure that the annual meetings of factories could be so organized as to undertake this work. As a rule these take place during January and February, after the business of the previous year has been closed up. This would necessitate a large number being held at the one time, and it would require a little army of speakers to overtake the meetings at 1,200 factories in a couple of months' time. Then at so many of them there is so much business to be transacted, connected with the management of the factory, etc., that there would be very little time for an address or discussion. The plan is, however, well worth considering, even if only a portion of the meetings were reached during a winter. The holding of local conventions or special meetings of the factory patrons would help considerably. But after all this is done there still remains the patron who never attends any of these gatherings, and who very often is the greatest offender. As we have previously stated, we believe a large share of this educational work in connection with the patron could be undertaken by the maker, if he would perfect himself somewhat as to the requirements for the proper care of milk, etc., for cheese and butter-making purposes, and had a little more leisure so that he could pay a personal visit to such patrons. If our makers have now reached a point at which no further improvement can be made in the practical work of making, they could very well branch out and perfect themselves as to what the patrons' duties are, and thus bring about improvement in that direction.

We believe, with Prof. Dean, that the time has come when the skilled scientist must carry the work of investigation in cheese and butter-making away beyond the ordinary routine of making. The bacteriologist and chemist must lead in all investigation as to the causes which lead to bad flavors, etc., and open up the way for the maker and patron to follow. We include the patron, as it will be necessary for him, when the causes of the contaminating influences on milk are known, to adopt preventive measures. But until the dairymen of this country have the skilled scientist to lead the way they should try to help themselves.

The Marking and Inspection of Fruit.

One of the principal bills before the House of Commons this session is an act to provide for the marking and inspection of packages containing fruit for sale. This was introduced by the Hon. Mr. Fisher, Minister of Agriculture, and will come into operation on the first day of July, 1901. We have had occasion frequently to refer to the urgent need of some such legislation, in order to prevent, if possible, fraudulent packing and marking of fruit destined both for the home and foreign trade. The present bill was drafted by Mr. Fisher, after frequent consultations with the fruitmen, the packers and others interested in fostering the export fruit trade and is designed to meet the needs of the case without inflicting, as far as possible, any hardship on the honest packer and grower who is endeavoring to conduct an honest business. That there is need of some definite legislation in regulating the fruit trade, and more particularly that of apples, nearly every one will agree. It would be a very difficult matter to draft a measure that would be eminently satisfactory to all parties, where so many interests are concerned. The grower or producer and the consumer, however, are the chief factors to be considered, and so far as we are able to judge the provisions of the bill are such as should meet with their approval. Besides, there does not appear to be anything in the bill to interfere with the legitimate business of the packer or shipper. In fact, if the law is enforced, as we presume it will be, the middleman should benefit as much as the grower from the increased trade and better prices that should result from more uniform and more honest packing and marketing of fruit.

Our export trade in apples has been seriously jeopardized the past few years by the careless and dishonest methods that have been practiced in many cases in the shipments of fruit to Great Britain. If by the enactment of this new law these fraudulent practices are discontinued we have a right to expect a growing trade and a more stable market in the Old Land. Then the home trade should be greatly benefitted, and especially the trade with Manitoba and the Canadian West, where Ontario fruit has got into disrepute, chiefly because of careless and dishonest methods in packing fruit sent there. There should be a large and growing market in the West for the fruit of this province if it is properly looked after. All these grievances it is to be hoped will vanish, if not altogether, in a large measure after July 1st next, and we shall see our important fruit trade put on a more stable footing.

Some of the clauses of the bill with which our readers are chiefly concerned, are as follows:

"4. Every person who, by himself or through the agency of another person, packs fruit in a closed package, intended for sale, shall cause the package to be marked in a plain and indelible manner, before it is taken from the premises where it is packed,—

"(a) with the initials of the Christian names, and the full surname and address of the packer;

"(b) with the name of the variety or varieties; and

"(c) with a designation of the grade of the fruit.

"5. No person shall sell, or offer, expose or have in his possession for sale, any fruit packed in a closed package and intended for sale unless such package is marked as required by the next preceding section.

"6. No person shall sell, or offer, expose or have in his possession for sale, any apples or pears packed in a closed package, upon which package is marked the grade 'A No. 1 Canadian,' unless such fruit consists of well-grown specimens of one variety, sound, of nearly uniform size, of good color for the variety, of normal shape and not less than ninety per cent. free from scab, worm holes, bruises and other defects, properly packed and marked in a plain and indelible manner with the minimum size of the fruit in inches (or fraction thereof) across the core of the fruit.

"7. No person shall sell, or offer, expose or have in his possession for sale, any apples or pears packed in a closed package, upon which package is marked the grade 'No. 1 Canadian,' unless such fruit consists of specimens of one variety, sound, of fairly uniform size and not less than eighty per cent. free from scab, worm holes, bruises and other defects, properly packed and marked in a plain and indelible manner with the minimum size of the fruit in inches (or fraction thereof) across the core of the fruit.

"8. No person shall sell, or offer, expose or have in his possession for sale any fruit packed in a closed package, upon which package is marked any designation which represents such fruit as of first, best or extra good quality, unless such fruit consist of well-grown specimens of one variety, sound, of nearly uniform size, of good color for the variety, of normal shape and not less than ninety per cent free from scab, worm holes, bruises and other defects, and properly packed.

"9. No person shall sell, or offer, expose or have in his possession for sale, any fruit packed in any package in which the faced or shown surface gives a false representation of the contents of such package; and it shall be considered a false representation when more than fifteen per cent. of such fruit is substantially smaller in size than, or inferior in grade to, or different in variety from, the marks on such package or the faced or shown surface of such package."

The other features deal mainly with the penalty for violation, and the methods for enforcing the act. A person violating the provisions of the act shall, for each offence, on summary conviction, be liable to a fine not exceeding one dollar and not less than twenty-five cents for each package fraudulently packed. In default of payment the person is liable to imprisonment. There are, no doubt, some who will consider that the provisions of the bill don't go far enough. It is expected, however, that the bill will act more as a preventative in that the dishonest packer may be deterred by reason of the possibility of being caught and prosecuted.

Early Spraying.

A question of vital importance to everyone possessed of an orchard or garden is that of spraying. Insect pests, parasites, vegetable or otherwise are likely to be with us for all time to come. Because of this fact, how-

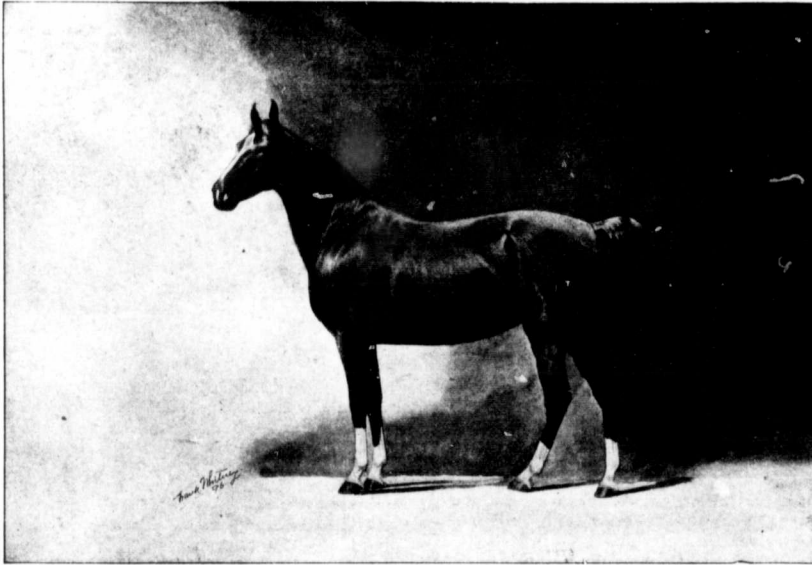
ever, it is not necessary for the fruit grower or gardener to give up in despair. He must meet these enemies to his growing crops by the only feasible weapon in his power, that of spraying. The question to be considered now is not whether it is advisable to spray or not. That has been decided long ago, and the conclusion is that the fruit grower and the gardener must spray if he desires a crop. Spraying is no longer an experiment. It is an accepted practice, just as cultivation is, and the farmer should prepare himself to do a certain amount of spraying every year. A spray pump with spraying apparatus should prove a profitable investment for every farmer.

Spraying, to be most effective, should be done at the proper time and in the proper way. The apple crop will, perhaps, demand more attention in this regard than anything else. The

For the currant worm use arsenite of lime or soda when the first larvae appears. In any worms appear after the fruit is half grown use hellebore (1 oz. fresh white hellebore to 3 gallons of water). For the potato scab soak uncut seed potatoes for 1½ hours in a solution of sulphate of copper as above. The potato beetle is always a source of annoyance to the farmer. The old-time remedy of paris green applied when necessary is the best. These are a few instances that need the special attention of the farmer just now. We will note others from time to time as the season advances.

Of Interest to Breeders.

Mr. F. W. Hodson, Dominion Live Stock Commissioner, who has just returned from the



KATHLEEN (2852) 783.

Bred by Thomas Binnington, North Dalton, England. Foaled 1889, Imported in 1896 by F. C. Stevens, Maplewood, Hackney Stud, Attica, N.Y.

apple scab is a serious detriment to quality in the fruit. To prevent the growth of scab the trees should be sprayed with a copper sulphate solution (1 lb. sulphate of copper to 15 gallons of water) before the buds break. When the leaf buds are open and before the flower buds expand, the trees should be sprayed with the Bordeaux mixture (the normal mixture consists of copper sulphate 6 lbs., quicklime 4 lbs., and water 50 gallons). For the codling moth apply paris green (paris green 1 lb., water 100-300 gallons) immediately after the blossoms have fallen, and repeat 1 and 7 to 10 days later. Use burlap bands on the trunks of the trees and kill all insects under them every 10 days from July 1st to August 15th, and once later before winter. Paris green may be added to the Bordeaux mixture, and the two applied together with good effect. For the San Jose Scale apply whale oil soap, 2 lbs. to a gallon of water, when trees are dormant. Apply the soap before the buds start.

West, reports the stock outlook on the prairies as a bright one. Though the grass was in rather a poor condition when winter set in, the cattle came through with a smaller percentage of loss than last year. Seeding operations are about as far advanced throughout the West as in Ontario, and the acreage will be a large one. On April 12th the first annual auction sale of pure-bred cattle for the Territories was held at Calgary. It was a success. The animals offered were the progeny of Ontario pure-bred stock previously purchased in this province, and brought high prices. The bulls averaged \$90 a head, and the cows \$75. The results of this sale must be very gratifying to Ontario breeders who are interested in the development of the live stock interests of Western Canada.

Mr. E. B. Elderkin, Canadian Live Stock Commissioner to the Pan-American, was in Toronto last week making final arrangements for the Canadian cattle for the dairy contest at the Exposition. All of the cows reached Buffalo on

Monday. They number from 35 to 40. Only 25 cows are needed for the test, including five each of Ayrshires, Jerseys, Holsteins, Shorthorns and Quebec Jerseys. It is fully expected from the high quality of the animals selected, that Canada will take a prominent place in this important competition.

The Thoroughbred Horse.

The Canadian Horse Show opens on Wednesday of this week, and the prospects are that it will excel any previous effort of the management. An interesting and valuable feature of the show will be the competition for the Governor-General's special prizes. Full particulars regarding this were given last week. His Excellency is very anxious to promote the breeding of a better class of horses in Canada, and his views on the subject are most valuable. In a number of letters from His Excellency's secretary to the management of the Show, dealing with the awarding of the prizes, some information of a practical nature is given that is worth reproducing. The following are a few of the extracts:

"His Excellency's purpose is to encourage breeders to go in for a well-bred active horse with plenty of bone and substance, not too big, and especially suitable for hunting or cavalry purposes.

"His Excellency considers that a very large increase in the demand for horses suitable for riding is likely to afford great openings for the Canadian horse market in the future, and thinks it is of immense importance that some encouragement should be given to horse-breeders to develop such a class of well-bred horses.

"Provided the thoroughbred competitor has the necessary bone and substance, he will, in my opinion, invariably prove better than the half-bred. We particularly want to encourage well-bred stock, and what has always been proved in campaigning is the superiority of thoroughbred blood, or, to speak more correctly, Arab blood. The Boer ponies, for instance, and the South African horses generally, have the Arab strain. In my opinion some of the best Indian ponies on the prairies have obtained a strain of eastern blood somehow, and I think it would be a great mistake to prohibit purely thoroughbred stock from the competition. Of course thoroughbred stock are very apt to be light of bone, and to possess faults which half-bred stock do not, but it must rest entirely with the judges to decide as to these faults, and to eliminate weedy thoroughbreds unsuited for the objects aimed at; on the other hand, if they find a thoroughbred competitor with the necessary qualifications I shall be very glad to see him placed first.

"There would appear to be an impression in some quarters that a possible entry of racing stock into the competition may defeat its object. This is an objection which has often arisen in connection with competitions of a similar nature, and is one which is somewhat difficult to deal with, but to do so by the exclusion of the thoroughbred is, in his Excellency's opinion, radically wrong. Besides other objections to such a course, it is very likely to cut out stock raised from some thoroughbred mare in the possession of a small farmer who has obtained her as a cast-off from some racing

stable. Many such cast-offs have proved most valuable dams of large families of hunting stock. Attempts have frequently been made to deal with the difficulty by limiting the competition to stock in the possession of small breeders and owners farming a certain small stated acreage, but this has proved possible of evasion and is not entirely satisfactory. In His Excellency's opinion, the best safeguard for the objects of the competition rests in owners of large stables realizing that though by the letter of the conditions they are not forbidden to compete, yet that the object of the prize given is particularly for the encouragement of small breeders. At the same time His Excellency considers that the country districts generally should be very grateful for the existence of racing stables in their localities, in view of the public good they are likely to do in the horse breeding interest by the importation of valuable stock, by rendering available the services of good stallions and by the opportunity they frequently afford to farmers to obtain mares which may be useless for racing, but which may be very valuable for breeding purposes."

Soil Depletion.

An Iowa agriculturalist, in writing on this subject, says:

"If it is true, as it is without doubt, that the Great Creator has endowed the earth and the air with the most unexhausted supplies of fertility, then no precautions against soil exhaustion need be adopted by the farmer. It is true that under the prevailing systems of agriculture the lands after several years of cropping become depleted of their fertility to such an extent that diminished yield of farm crops is the general result as shown by the United States census reports. Each season shows an average yield of less amount than the former year.

"A true system of agriculture will not only prevent this disastrous result, but will show a constantly increasing fertility and an increased yield and improved quality of all farm productions. The truth of this claim is clearly demonstrated in the healthy growth of timber forests which produce each season an increased growth over the former season, which requires an increased supply of fertility, which is always afforded by the inexhaustible stores in the earth and air. The natural laws of production have only to be understood and followed to bring about these valuable and desirable results.

"The farmer by conforming to natural demands may improve the productive capacity of his lands each season, while increased yields with improved quality of crops will reward his intelligence and labor."

The Canadian Cheese Trade

EDITOR THE FARMING WORLD:

In a recent number of the American Cheesemaker, there is an article by H. C. Adams, Dairy and Food Commissioner, of Wisconsin, in which he predicts that Wisconsin will distance Canada in cheesemaking within a short time. The concluding portion of his article reads as follows:

"Canada has undoubtedly made splendid advancement during recent years and captured

the European market, while the United States was fooling with the filled cheese industry. The Government of the Dominion has been wide awake to the value of the cheese industry, and has stimulated it tremendously by Government aid, but Canada is not out of reach, and Wisconsin will certainly overtake and surpass her if the present educational forces at work in this State grow in effectiveness during the coming years as they have recently."

All those interested in the cheese industry of Canada will be somewhat surprised to read the foregoing statement from Commissioner Adams, and it would be well for us to consider in what respects Canada will have to improve in order to maintain the lead which she now has in the European markets. I would beg leave to suggest the following points wherein Canadians must aim to improve in the cheese business:

1. The patrons of cheese factories must be educated to know the importance of keeping nothing but first-class cows, fed on pure, wholesome food, given pure water to drink, and they must also know that the milk must be cared for in the best manner possible, in order that the cheesemaker will be able to maintain our reputation for fine Canadian cheese. In the care of milk for the cheese factory, three points are essential: 1st, everything that comes in contact with the milk must be clean; 2nd, the milk must be strained as soon as it comes from the cows; 3rd, it must be stirred and cooled to a temperature below 70 degrees as soon as possible after being milked. In order that this education may reach the patron, it would be well if the Dairymen's Associations would organize the cheese factories of the provinces, and have the very best men obtainable attend the annual meetings during the winter time, and thus bring the importance of the proper care of milk home to the patrons. In the Province of Ontario there are about 1,200 cheese factories, and ten good men could cover the whole province during the winter time, and this work would be of untold value to the cheese business. There is no other way in which the patrons may be reached, except by going to their factory, either during the winter or during the summer time, but as farmers are usually busy in the summer time it is difficult to get them to attend meetings.

2. The second point which is necessary, in order to maintain our position in the cheese business is to educate cheese-makers on the preparation and use of cultures, or what are commonly known as starters. The flavor of the cheese is the most important quality in the cheese, and this may be controlled to a very large extent by the use of properly prepared cultures, if the milk reaches the factory in a sweet condition. A great deal has been said against the use of starters or cultures, but if they are properly handled and used with good judgment they are a valuable aid to the cheesemaker in producing a uniform quality of cheese from day to day. Combined with first-class milk and the proper use of cultures, the proper curing of the cheese should also receive the attention of every cheesemaker or factory owner at the present time. Efforts should be made now, before the season opens, to control the temperature in the curing room during the hot weather. Most of the curing rooms of the country could be improved very much by lining with two ply of building paper and matched lumber. These rooms should also have double

windows and double doors, and the outside windows should be painted with a mixture of white lead, oil and turpentine, to make the room light, and at the same time to keep out the heat. The room should also have a sub-earth duct for cooling it during the hot weather. A sub-earth duct may be constructed at a cost of less than \$100 by using two rows of ten-inch tile placed six to ten feet in the ground and having a length of 100 to 200 feet. The air should enter a tall pipe, from 30 to 50 feet high, having a cowl on the top for easy access of the air from all directions. The outlet from the duct to the curing room may be an opening in the floor, closed with a trap-door or a register, and the warm air should be taken out from the room by means of ventilators, preferably placed at the opposite side of the room from where the cool air enters.

3. Another very important point in order that we may hold the position we now occupy, is the application of scientific knowledge to the manufacture of cheese. It is well known that Wisconsin has made strong efforts, through two of her trained men in connection with the Experiment Station, towards applying the Science of Chemistry and Bacteriology to practical cheesemaking. In connection with the cheese business of Canada, there is no dairy chemist and no dairy bacteriologist who are devoting all their time to the study of the many problems connected with the dairy business. During the past five years there has been practically no advancement in the cheese business, and this lack of progress is due in a great extent to the fact that the cheese makers have gone as far as they are able in studying the problems of over-ripe milk, tainted milk, gassy milk, bad flavors, and many other ills which make it so difficult at the present time to manufacture fine cheese. There will be no further progress until we have the aid of the chemist and the bacteriologist. These men can study the causes and apply the remedy for many of the troubles that are now met with in the cheese trade. The Dairymen's Associations could very well employ a part of the fund now devoted by the Government towards paying the cost of the work done by a dairy chemist and a dairy bacteriologist. If the inspectors who are visiting the factories from time to time, and the cheese buyers who find samples of cheese that are not of first-class quality would send samples of these to a central point for the scientific men to study, the cause and remedies would be suggested. In a very short time the improved quality of the cheese would pay many times the cost of this scientific investigation. We have reached a point in the cheese business where we may safely say that further progress is impossible without the aid of scientific investigations, such as may be undertaken by a trained dairy chemist and a trained bacteriologist.

H. H. Dean.

O.A.C., Guelph, April 12, 1901.

A stream of raindrops lay on earth,
Quite idly one cold morn,
When suddenly one rose and cried,
"Come, brothers, we are born
For some good purpose, let us rise
And reach out toward the sky,
Nor weary if the road be long,
Nor deem the heights too high."

Rape for Hogs

By Professor John A. Craig, Iowa Agricultural College.

The principal value of the rape crop lies in the fact that it usually furnishes an abundance of succulent food in a short time. Under the most favorable circumstances, the crop is usually ready to feed six weeks after it is sown, though, as a rule, eight weeks elapse before stock can be turned onto it to advantage. It is chiefly its use as a catch-crop, affording succulent food when other crops are not available, that gives it its highest value.

METHOD OF SOWING.

Considering this crop only from this point of view, the most successful way of growing it is to sow it on ridges. The best plan I know of is to have the land ribbed with a double-mold-board plow. The furrows between the ridges made in this way are half-filled with well-rotted manure; then the ridges are split back over the manure. If the land has been well worked before plowing, the rape may be sown right in the ridges, but if it is at all rough it should be dragged or rolled. It will be found by this method that as soon as the rape starts it will continue to grow steadily and rapidly, without showing any check on account of the dry, hot weather. This is the main advantage of sowing in this way. I have found by experience that much larger yields may be obtained when the land is treated in this way, in comparison with the ordinary way of flat culture. About three pounds of seed sown in rows thirty inches apart, will give the best results.

LEVEL OR RIDGE CULTURE.

In an experiment undertaken to determine the difference in growing the crop in the ordinary way, and manured as indicated, I found, on carefully cutting and weighing one-sixth of an acre from each plot, that the plot that had manure under the ridges gave us 1,353 pounds more of green rape in one cutting than the same size plot of level ground manured with the same amount. That would mean about 7,000 pounds more green fodder by manuring the land under the ridges. Rape is a crop that will seemingly stand any amount of manuring, and hence should be sown on very rich ground, or land treated in this way. The difference in the results obtained by these two methods of preparing the land is very noticeable. The rape growing on the level land, with the same amount of manure given it as that of the other plot, reaches about a foot and a half in height. The other plot, where the rape was sown on the ridges with manure under them, grew much stronger, and appeared to be much fresher and crisper, was fully three feet high, and shows a much larger growth of leaves. Sowing

in this way is an almost sure method of getting a crop, and where the crop is to be used in small plats for feeding hogs during the hot dry season, or for cutting it and feeding it to brood sows and growing pigs, I would certainly advise taking the extra trouble to grow it in this way. When cultivated a couple of times, as it should be, the ridges will have disappeared almost completely.

USING THE CROP.

To dispose of the crop in the easiest way, the most satisfactory plan is to use hurdles and give the hogs a small strip at a time. I do not think there is any danger in giving the hogs all they will eat; but as the hogs will waste considerable if given the whole run of the field, it is best to confine them to a small piece at a time. As a result of two seasons' trials, I have found that an acre of rape was worth in hog-feeding 2,600 pounds of a grain mixture consisting of two-thirds corn and one-third shorts. This was determined by having each season two lots of hogs under experiment; the one lot running on the rape, and the other lot penned and getting exactly the same grain ration as those on the rape. We controlled the feeding so that both lots made the same gain, and putting the extra grain which the pen lot required against the extra rape that the other lot received, we found as the average of all the trials that an acre of rape was equivalent to 2,600 pounds of the grain mixture.

PREPARATORY FEEDING ON RAPE.

There is another feature connected with feeding rape during the summer which we have been able to bring out in an experiment here, and that is, that when hogs are allowed to run on rape they will keep stronger and thrifter when pen fed later. In one trial, there were twenty-eight hogs on the experiment; these were put on another experiment later, and fed for twelve weeks. When they came off the rape they averaged 210 pounds, live weight, and at the end of the twelve weeks' feed they averaged 340 pounds, which is not only a remarkable gain, but another fact of equal importance was in evidence, namely, that they were all strong and active on their legs at the end of the feeding. These results show that for pasturing hogs during the summer season, either to fatten them quickly or to prepare them for reaching heavier weights later, the rape crop serves a good purpose.

USING RAPE FOR SOILING.

Another method of using the crop is to cut it. We are now at this station feeding sixty-four hogs in pens in this way. The rape is cut daily and given

to them in two feeds, night and morning. The hogs average about 100 pounds in weight, and easily dispose of from four to six pounds a head daily. When the rape is handled in this way, we have found it possible under favorable circumstances to get three cuttings in a season. To do this with the greatest certainty, the rape should be sown as early as possible in the spring, on manured ridges. It may be cut the first time when it is about two feet high. As a result of several experiments in cutting rape different distances from the ground, I have found that four inches give the best returns, compared with cutting it as close as possible to the ground or higher up the stalk. After cutting, it should be well cultivated, and it will be found to sprout thickly and rapidly after the cutting. The best results that I have ever been able to obtain by cutting it three times in this way was a yield of thirty-six tons of green rape to the acre. It may be that it is not handy to pasture the hogs on the rape, and for this reason it is well to know that almost as good returns may be obtained by cutting it. We are this season experimenting with peas and rape, and so far the rape promises to sustain its past reputation, though the hogs appear to relish the peas much better than anything we have been able to grow. They do not always take to the rape at once, it being necessary sometimes to limit their other feed to make them acquainted with the merits of the rape.

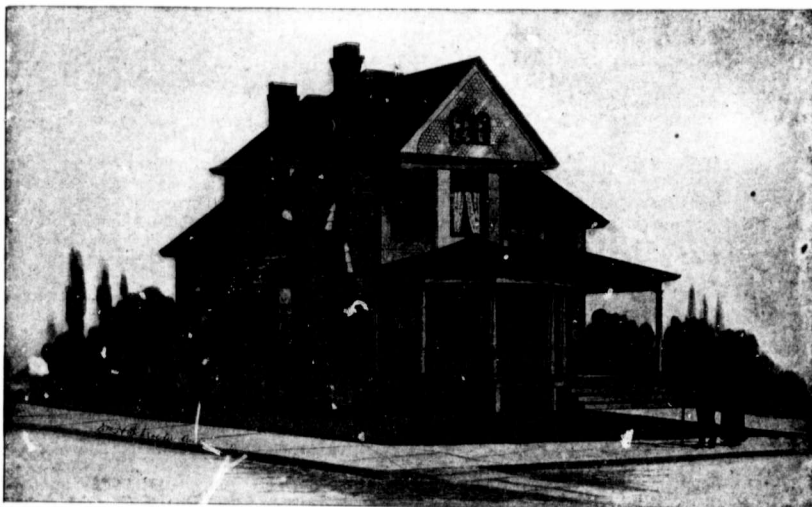
VARIETIES.

The Dwarf Essex rape is the one that I have always had in mind in discussing rape for feeding stock. There are some other varieties that have been fairly satisfactory, but, as far as I can learn, the Dwarf Essex is most satisfactory. The variety to chiefly guard against is the birdseed rape, which is of very little value for fodder purposes, as it blossoms the first season. It is very similar to the mustard plant, being hairy and having a yellow flower and head, the same as the mustard plant. Its seed is smaller than that of the Dwarf Essex, and of various colors, while Dwarf Essex seed is a uniform deep brown or black.

Tommy's pet parrot died and his sister said, "I dess he is an angel now." "No," said Tommy, "only people is angels; he is a bird of paradise."

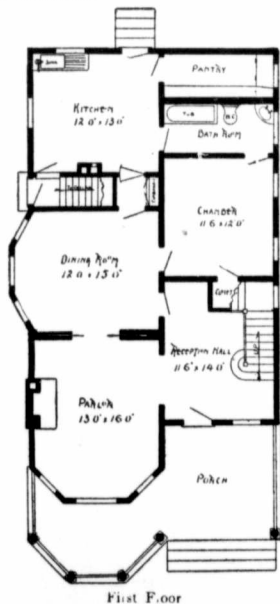
When a wife asks a husband blunt questions, Of course he'll respond as he can, sir; But I make one suggestion: Don't answer the question— For she's likely to question the answer.

—Judge.



Ideal Farm Homes

Design number 53, the perspective view and floor plans of which we show on this page, is another of those handsome homes which, with many others that we have presented, make up the list of surprises that a house of such dimensions and with such architectural beauty can be built for the price which this figures out at. This house is 28 feet wide and 46 feet long, exclusive of porches. The blue prints consist of the cellar and foundation plan, first and second floor plans, front, rear, and two side elevations. The price of the blue prints, together with a complete set of type written specifications, can be had for \$5. The cost of the house is about \$2,200, exclusive of plumbing and mantels.



First Floor

There is but very little that can be said in regard to the house plan when one has so plain and detailed a plan as we show of this one. Even the sizes of the rooms are all marked on them. The house shows in the perspective the same as it would were it built and photographed. Should you decide to build this house, you would find that the blue prints show every stick of lumber that goes into the house. It would be as plain as though you had paid an architect \$50 to \$75 to plan an individual house for you, and it could undoubtedly be built cheaper than the same kind of a plan from an architect's pencil, for the reason that very few of them hold closely to the stock sizes of lumber, and in this fact of stock sizes is one of the secrets of building a reasonable-priced house.

We have been asked at different times why we did not furnish a lumber bill with these plans and specifications. You want to be very suspicious of a contractor who is not able in a few minutes to take off a lumber bill from an architect's plan. The chances are he is not competent to build your house. There are two reasons why we do not do this, or perhaps three. The first is, it is not exactly in our line of business; the next, it is plainly on the plans and can easily be figured, and the third, and perhaps the most important reason is, that in different sections of the country different sizes of lumber are used.

Blue prints and specifications for this residence can be had at the office of THE FARMING WORLD for \$5.

To Live One Hundred Years.

These are Sir John Sawyer's rules for living one hundred years:

1. Eight hours sleep.
2. Sleep on your right side.
3. Keep your bedroom window open all night.

4. Have a mat to your bedroom door.

5. Do not have your bedstead against the wall.

6. No cold water in the morning, but a bath at the temperature of the body.

7. Exercise before breakfast.

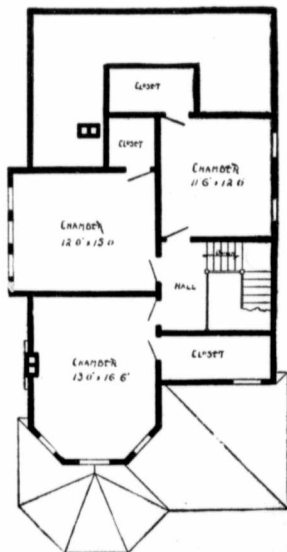
8. Eat little meat, and see that it is well cooked.

9. For adults. Drink no milk.

10. Eat plenty of fat to feed the cells which destroy disease germs.

11. Avoid intoxicants, which destroy those cells.

Sacred interpreter of human thought,
How few respect or use thee as they ought!
But all shall give account of every wrong
Who dare dishonor or defile the tongue.
—Cowper.



Second Floor

Breeding Clydesdales from a Small Beginning

By M. E. Devitt, Freeman, Ont.

Thinking that a review of my experience in breeding Clydesdales, commencing with an ordinary farm mare of twenty-five years ago, might be of interest to some of the readers of FARMING WORLD, I will try to follow the work as closely as possible for that period.

In the year 1876, my father, Mr. S. Devitt, bred his first mare to a Clydesdale stallion. A description of the mare may be appropriate to begin with.

She was sired by a coach stallion, Young Arthur, breeding unknown, her dam being got by a half-bred Suffolk Punch horse. She stood about 16 hands high, and would weigh 1,200 pounds, and was very active. She would trot a mile in about four minutes without any training. She was bred at two years old to a trotting bred horse and raised a colt, and was returned to same horse and raised another. She was then bred two seasons to a thoroughbred, and also raised two colts, all of them turning out to be good horses of their kind.

In 1872 a company was formed, which purchased from Mr. Simon Beattie, Markham, Ont., the Clydesdale stallion, Solway. A little later they bought of Mr. John Hope, Bow Park Farm, a two-year-old colt, Bay Comet, which proved to be a great stock horse. This horse travelled past our gate for several years, but my father was a light horse man, who loved a good horse, but did not like the big, clumsy Scotch horse, as he was called. After a few years, however, there were a few colts scattered about by the big horse, and then sprang up a demand for heavier horses, and buyers came in from Pennsylvania and New York and picked up all the big colts they could get at good prices, though horses generally were not selling very well, and farmers were pretty well stocked with the lighter classes, our own along with the rest.

Seeing the way the big colts were being picked up, father decided in 1876 to breed his mare to the big horse. The following spring she foaled a fine filly colt, which did remarkably well, and at the local fairs carried all before it. As a yearling he won again at local fairs. Encouraged by the success at local fairs, the writer being then about fourteen years of age, determined to try a wider field the following year. So, after getting parents' consent, the filly was entered for the Great Central Fair, then held at Guelph. He met with strong competition and was defeated. But this disappointment was partially atoned for by the honor (as it was then considered) of leading out the colt for the Marquis of Lorne and the Princess Louise to examine. Returning to our own local fairs, I was again successful in carrying off several red cards.

The following winter the colt was sold for \$140, which was then considered a high figure for a horse, and especially for a two-year-old. In 1878 and 1879 the old mare raised two more fillies, which were not as successful in the show-ring, but grew to be larger and heavier mares, and were also prize-winners when matured. These mares were retained, though several very tempting offers were made for them, Mr. John Hope offering \$300 for one of them, and at another time \$700 was offered for the pair.

By this time father began to buy stock in the old horse, and at one time had three shares out of ten, but now came the need of another stallion. Horses were brisk, and buyers from New York were scouring the country. After some delay the Waterloo Horse Company was formed, the following being the members: Messrs. H. W. Peterson, A. Peterson, Thos. Garbutt, Levi Stauffer, Simon Snyder, Geo. Moore and Isaac Devitt.

They bought from Messrs. John Miller & Son, of Brougham, the well-known Boydston Boy (111), acknowledged to be one of the best Clydesdales then living. The above-mentioned mares were then bred to Boydston Boy, but before foaling time one of them died. The other, however, proved to be a good brood mare, and raised four foals by Boydston Boy. One of the fillies was retained, and in turn bred first to Lord Lion, an imported horse of many good qualities, and raised a filly. Her next filly was by Maclay (imported), a well bred horse. Both fillies were retained for a time.

In 1886, Nellie, of Guelph (A 40), was bought at Mr. Jas. Cowan's sale. She was then in foal to Clyde Boy. The result was a filly, afterwards called Isabella. She proved to be a good mare and winner of several prizes at Toronto and London.

Nellie, of Guelph, was bred to Boydston Boy for two seasons, but failed to get in foal, but in 1888 was bred to MacArthur and proved in foal, and dropped another filly called Lady MacArthur.

In the fall of 1888 another addition was made to the brood mares by the purchase of the imported mare, Bell, from Messrs D. & C. Sorby, of Guelph. Bell was winner of the Clydesdale society's prize, given for the best draught mare of any breed or age, and also one of the first-prize team at Toronto. This placed her as the best Clydesdale mare in Canada at that time.

She was in foal to The Macpherson when imported, and produced a horse colt, Douglas Macpherson, who was put to stud service at two years old, and stood at the head of our stud until last July, when he was sold to Mr. D. A. Macfarlane, of Huntingdon, Que.

We now have three families to deal

with. First, we have the mare named Bess, founded on the Canadian mare, having two Clyde crosses, and her two fillies. Then we have two daughters of Nellie of Guelph, having two Shire crosses in them, and, third, Bell (imp.).

Bess and Isabella were bred to Maclay and both produced fillies.

Bell was bred to Boydston Boy and also brought a filly. The fillies were all kept and bred. Bell lost several colts then, and was not bred for one year, after which she was bred to Grandeur (imp.) and brought Grandeur II., now at the head of the stud.

Bess and Isabella, after producing the Maclay fillies, missed breeding, and were fitted for the show, and won 1st at Toronto and London fairs for heavy draught team, and were afterwards sold.

We will now take the younger fillies. First, Bess's filly, by Lord Lion, and one by Malcay, a filly by MacArthur, called Lady MacArthur, and Nellie Maclay, out of Isabella, were all bred to Douglass Macpherson several seasons, and a filly from each of them is now breeding on the farm. Minnie and Nellie Malcay were shown in harness at Toronto in 1900, and won third place, and were sold on the grounds. Aggie Macpherson was bred to her sire, and produced a filly, which is now breeding on the farm, and promises to make a good producer. Her filly by Grandeur II. is full of quality, and has plenty of substance. We will now take Bell (imp.), filly, by Boydston Boy. She was bred to Grandeur (imp.), and raised a filly, Lady, which is now breeding, and has produced two colts, and a filly by Douglass Macpherson, and is in foal again. Though we have now three different families, our young things resemble each other so much that it would be hard for a stranger to tell which traces to the Canadian mare or which has shire blood, or which traces to an imported dam.

From my experience I fully believe we can now produce as good a horse from our Canadian mares as can be produced any place, and I would say to any young beginner, do not be afraid to commence breeding draught horses if you have but a small mare. By making good selections of sires you will, in time, be able to produce a good animal, and your first cross will be a good, useful, farm animal, but if you can afford a good mare to begin with, you will be just so many years ahead as it takes you to produce her equal. Besides, it may be cheaper to buy a good mare to begin with, but you can work into a good class of horses with little capital by judicious selection of sires for from fifteen to twenty years, but remember that none but the best of sires must be used if you wish to succeed.

The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industries. Specially Representing the Farmers' Interests.

EDITED BY JAMES FOWLER.

ONTARIO BEET SUGAR ASSOCIATION. OFFICERS FOR 1901.

President, John Parry, Dunnville; First Vice-President, J. M. Shuttleworth, Brantford; Second Vice-President, B. B. Freeman, Warton; Third Vice-President, T. A. Smith, Chatham; Fourth Vice-President, W. S. Caron, Aylmer; Secretary-Treasurer, D. H. Price, Aylmer; Solicitor, N. B. Gash, Toronto.

EXECUTIVE COMMITTEE.

E. R. Blow, Whitby; Charles Kelly, Uxbridge; S. A. Perry, Warton, T. Elliott, Brantford; Ald. Parnell, London; Hugh Blain, Toronto; T. A. G. Gordon, Alveston; F. G. Ramsay, Dunnville; D. A. Jones, Beeton; J. H. Glover, Aylmer; John A. Auld, M.P.P. Amherstburg; Charles Cain, Newmarket; J. R. McCallum, Wolland; B. W. Stewart, Mount Forest; George E. Bristol, Hamilton; Howard Annis, Whitby.



Sugar Beetlets.

Beet tops furnish excellent cattle feed.

A poor man, owning or able to rent a few acres, will find a profitable industry in growing sugar beets.

A few acres of sugar beets will support more people and give more employment than any other crop.

The children can work in the beet fields, and earn as much money as a man working in the harvest field.

The beet field is an educator of children, and develops their skill and intelligence.

The beet work does not interfere with school attendance; most of the work comes during vacation.

Beets may be grown profitably on any rich ground that will grow corn well.

The beet crop will stand a drought better than any other crop, after it is well under.

The beet crop pays enough to warrant the farmer in richly fertilizing and cultivating the land.

The weather or other conditions that reduce the profits in other crops might not interfere with the beet crop.

The growing of sugar beets will not lessen the fertility of the soil, but will prepare the ground for the following crop.

The thorough methods of preparation of soil and cultivation necessary for beet-growing gets and keeps the ground cleaner and in better condition than under grain cultivation.

The sugar beet thrives in a variety of soils, but best in rich, well-cultivated and well-manured soil. Use your best land always.

The establishment of the beet sugar industry will enhance the value of all farm properties. You cannot afford to discourage it.

If you are a new grower of beets don't be hasty in the preparation of your ground. Take time and do the work well.

A beet crop is a poor man's salvation. Five acres of beets will give better returns than 50 acres of any other crop.

D. Taylor, a north Lyons, N.Y., farmer, realized \$183 from a scant two acres of sugar beets last year. His gross outlay for help amounted to \$8.

Sugar beets require but a small acreage, and offer special advantages for the boys and girls to make some money and get started in farming for themselves.

There is a great lack of information regarding the planting, cultivation and harvesting of the sugar beet, and of the beet sugar industry. Subscribe for THE FARMING WORLD, and read their beet sugar news.

The "sugar beet" department of THE FARMING WORLD will be worth hundreds of dollars to you if you contemplate going into the business of raising "sugar beets for profit."

Many Tuscola county, Michigan, farmers have been feeding their sheep through the winter exclusively on sugar beet pulp, and report the result of their experiment as most satisfactory.

There is but one factory in all the United Kingdom that now refines cane sugar, all the others being exclusively engaged in preparing for the market the raw sugar from Germany, France, Austria and Russia.

The dairy farmer should not lose sight of the fact that sugar beet culture is a very valuable acquisition to the dairy business. Sugar beets and the Jersey go well together.

You have perhaps spent many an hour on the knotty problem of how to conserve the fertility of your soil. Give sugar beets a thorough trial and watch results.

Copies of Beet Sugar Bill.

So great has been the demand upon the Ontario Government for copies of the Bounty Act, granting a bonus for the manufacture of beet sugar, that the supply is about exhausted.

We have already published the Act in our journal, and will re-publish it within the next few weeks, so that every one interested can secure a copy. In the meantime, if you wish all the news of the beet sugar industry, subscribe for THE FARMING WORLD, and read their "Sugar Beet News."

The Growing of Sugar Beets.

Every farmer, every dairyman, every one who grows or sells food for man or beast, should be alive to this fact, every sugar factory erected in the country would bring to him an increased and a home market for his produce. What the farmer needs more than anything else is this increased home market. The development of the beet sugar industry to the fullest extent will be an important move in the right direction. It is to the personal interest of every farmer to do all he can to encourage factories already under way, by supplying the needed beets, and thus demonstrate that others coming into Canada will have no difficulty in procuring the raw material.

The ground that is being prepared for raising beets should not be manured the same year that the beets are to be planted, because the roots can never give satisfactory results, as they find it difficult to penetrate downward, and the nourishment would be less than if the ground was fertilized immediately after the harvest, for the heavy rains and snow would mix and together would penetrate the soil, so that by spring the soil would be fertile and the beets would grow more rapidly, and with good care and cultivation a larger harvest can be expected.

Sugar beets need, says an Illinois farmer of five years' experience, the same culture as carrots or any other garden vegetable. While a deep, light, sandy loam soil of the best fertility is desirable, yet they will succeed on a strong loam, if dry and mellow. When the subsoil is hard, deep subsoling is of great value, as the roots of the beet find the downward penetration more easy, and they will grow more readily because the nourishment and moisture is easier obtained. If the ground is thoroughly plowed and manured the previous year it would be better, except on the very lightest soils, which do not hold manure, as there is no solid foundation and no satisfactory crop can be expected.

The best crop to precede beets is one which will best prepare the soil physically and chemically. The soil should be free from weeds, loose, easily worked, and with proper strength of manure. In rotation of crops special attention should be given to the condition of moisture in which the preceding crop leaves the soil. A few samples of rotation as it occurs in practical farming may follow:

Four-year rotation, with 25 per cent. beets:

1. Winter crop, with strong stable manuring.
2. Beets.
3. Summer crop.
4. Clover.

Clover is an excellent crop to precede beets, and advisable in all cases where grain is apt not to succeed.

Practical observation shows satisfactory crops, both as to quantity and quality.

Value of Sugar Beet Factory to a Town.

Speaking of what a factory will do for a town, Prof. Shuttleworth says: "In the first place, with a factory established, you have five hundred tons of beets, equal to two hundred and fifty wagon loads, coming into the town daily during the season, and for these beets over \$2,000 per day will be paid out. You would require coopering shops with a capacity of 400 barrels per day. You would require great blacksmith shops for providing other material. You would have an output of eight million pounds of sugar in the season and this would require two hundred and thirty cars, or eleven trains of over twenty cars each, for its removal. The factory would employ from one hundred to two hundred and fifty men per day, and the daily pay roll would amount to at least six hundred dollars. All these men would want food, houses, and fuel. Five thousand tons of lime, six thousand tons of coal, and large quantities of oil would be required for each season's operations.

"There is a factory in Michigan from which I obtained the returns received by 95 of the farmers growing beets for the factory. These patrons were not picked out, but were a fair average of the whole. Nine out of the lot received last year \$100 per acre for the beets produced, and as the cost of cultivation was \$35, this left a profit of \$65. Sixteen of them received between \$80 and \$90 per acre for their beets, fifteen between \$70 and \$80; not one of the lot received less than \$40 for his beets. The poorest man of the lot received a profit of about \$10 per acre. The effect of the location of an industry of that kind to farm values would be readily understood. If a factory were located in a suitable position in Ontario nothing is surer than that the present values of land there would go up from 25 to 30 per cent."

Sugar Beet Industry Would Improve Agriculture.

Hon. G. W. Ross, Premier of Ontario, in a recent speech said: "Within a few years there has been established in New York, Michigan, Wisconsin, Minnesota, California, Nebraska and Idaho a large industry known as the 'beet-root sugar industry.' Everybody knows the extent to which sugar enters into the social economy of life; you have to sweeten everything for your guests, and it is very important that you should do so. All the money we spend on sugar in this country practically goes out of the country. We imported last year 251,000,000 pounds of sugar. We believe a great deal of this may be produced in this country. Germany produces all her own sugar and exports millions of pounds in the bargain. I think a reasonable and proper encouragement of the beet-root industry would lead to an industry that would yield a large profit to the farmers and give employment to our own people. It would have three effects.

"It would improve the agriculture; the average profit on an acre of beets is \$40, which is more than the average profit on wheat, oats or barley. This will give improved agriculture, and employ a great many people, and the factory will employ a great many more. Then it will bring capital into the country and will make us self-sustaining, so far as the consumption of sugar is concerned. We have made various tests; we have been inquiring into this matter. We have for the last three years been making tests as to the soil, and we find the soil of York, Welland, Elgin and Kent grow beet roots containing saccharine matter a good deal above the average of the beets in the states of the union, and better than the average in Germany, where the industry has prospered so well—another illustration of the great wealth which a beneficent Creator has given us and which we may, if we utilize to the best advantage. Now, if we can with a very small assistance establish a few beet root sugar factories in this province we will have given employment to a large number of people, and will have made our Canadian soil that much more productive than it was."

Value of Sugar Beet Industry to Canada.

Among the valuable addresses delivered at Ottawa during the present session was one by Dr. Sproule, M.P., upon the sugar beet industry which is deserving of special mention. Dr. Sproule has been a strong champion of the industry for a number of years, and has never failed to urge its claims upon the Government of the day.

Among other things the doctor said: There is an industry which in my judgment will be equally valuable with the iron industry. It has been much written about and talked about, and experiments have been made to deter-

mine whether it can be made a success or otherwise, for the last ten or twelve years; and the data which have been collected on the subject justify the conclusion that this industry could be and would be started in the near future if the Government gave it a little assistance by way of bounty, as it did in the case of iron. I refer to the beet sugar industry—an industry for which the soil and climatic and other conditions of Canada are well adapted. The requisite raw material is available here in large quantities. Everything is available for the establishment of that industry if the Government would only give it a little assistance.

THE MARKET.

The first question is, have we a market for the product if it were manufactured? My answer is in the affirmative. I take up the Trade and Navigation Returns, and I find that last year we imported no less than 312,626,731 pounds of sugar and molasses for home consumption, representing a value of \$8,361,000, which was paid in Canadian money for a product which is consumed in Canada, and which could just as well have been made by the people of Canada. It would require about thirty factories to manufacture that large quantity of sugar. I think it needs no further argument to convince this House and the country that there is a valuable market for the product as soon as it is produced. We have that market at home; we need not look abroad to any other country for it; and it has always been my opinion that the Government should direct its efforts towards so varying the pursuits of the people of the country that they would be working for each other, one portion producing and supplying what the other portion consumed. When that is done I believe our energies will be directed in the best possible channels.

SUGAR BEETS A PROFITABLE CROP.

The question arises whether it would be a profitable crop. I have given the net profit of these parties; and now for a moment I will draw a comparison with what the farmer receives for other crops he grows. The average crop of wheat in Ontario would be less than 20 bushels per acre. But for the purpose of this comparison I allow 25 bushels per acre. Wheat did not average, last season, higher than 65 cents a bushel. That would give the farmers \$16.25 for his wheat. Allow \$2 an acre for the straw. That gives a total of \$18.25 as the product of an acre of wheat. The average crop of peas is 25 bushels to the acre, and the price last year was 60 cents, a total of \$15 an acre for peas. In oats the average crop was 35 bushels, and the average price less than 30 cents a bushel. Allowing the full 30 cents a bushel and you have a return of \$10.50 per acre; adding \$2 for straw you get a total of \$12.50 per acre to the farmer for growing oats. With an average crop of 15 tons of sugar beets to an

acre, at \$4 a ton, the farmer would receive \$60 an acre for growing sugar beets.

\$70 AN ACRE FOR BEETS.

But, last year, we had some experience. At one point in Canada sugar beets were grown, though the farmers had no factory to send them to. But they sold them for use in Marine City, Mich. Through the company's agent, Mr. Snider, the farmers sent 9,000 tons of beets. The American duty was 25 per cent., and the freight was 500 a ton. The price to the farmers was reduced in consequence. The farmers were at a further disadvantage because they had to sell their beets without a test of as to what percentage of sugar they contained. They sold them on the Canadian bank of the river at \$3.20 a ton. Notwithstanding all disadvantages, they sold last year 9,000 tons of beets to the refinery in Marine City. The business paid them so well that, as I am informed by Mr. Snider, he is entering into contract with the same farmers, and in nearly every instance, the farmers have agreed to grow twice as many acres of beets as they grew last year. The farmers are satisfied with the conditions, if they cannot get a factory at home. But they have organized a company and intend to start a factory, if the Government will only give a little assistance by way of bounty on the sugar produced in the factory. These facts show that, even at \$3.20 a ton, the business of growing beets can be carried on successfully. Why, some of these farmers got as high as \$70 an acre for their beets, which they sold at \$3.20 a ton.

THIRTY FACTORIES NECESSARY IN CANADA.

Now, what would it mean if all this sugar was made in Canada instead of being imported from other countries? Let hon. gentlemen consider a moment what it would mean. It would mean, in the first place, that we would have thirty factories built and operating in this country. I say thirty factories, because I think that number would be sufficient to manufacture the product of the sugar beet in quantities sufficient to supply the home market. Each of these thirty factories would use up 500 tons of beets per day, for it is held that a factory ought to consume about 500 tons of beet per day to do a profitable business. Now, it would cost to build each one of these factories about \$500,000, and this would mean to begin with an expenditure of \$15,000,000 for the construction of those thirty factories. To run one of those factories, including the factory hands, clerks, chemists, experts, etc., about 200 hands are required. Multiply that number by thirty, and you have 6,000 people who would be directly and regularly employed in those factories, besides all the labor of mechanics, artisans, and workmen that had been employed in building them. The season for manufacturing the product of beet roots usually lasts about 100 days, and if each one of the thirty

factories used up 500 tons a day, that would mean 1,500,000 tons of beets in a year. Now, what would be paid to the farmers who grew those beets? At an average price of \$4 per ton, the farmers would receive \$6,000,000 a year, a large sum to be distributed directly to them. I desire to say here that it seems to me that above all classes in the community this industry would benefit the farmers of the country. At least 60 per cent. of the money paid out in connection with the industry is paid to the farmer for the beets that he raises. He will realize \$6,000,000 a year for the beets that he grows on his farm, and which can be grown as well in Canada as in any other country in the world. These 30 factories would consume about 240,000 tons of coal a year, which would either have to be mined in this country or brought from abroad. That of itself would be an important consideration in the calculation that I am making of the benefit to the country through this industry. These factories would also consume about 150,000 tons of lime a year, of which we have any quantity.

Sugar Beet Pulp Increases Milk Flow.

Mr. J. W. Edgar, of Sugar City, Col., gives us the information that his herd of sixty head consume about two tons of pulp per day, only requiring a small amount of hay and no grain; that the flow of milk is far in excess of that in any former year at this season, even when his cows were highly grained. Taking into consideration that two tons of pulp at the maximum price of 50 cents per ton costs only the small sum of \$1 per day for the sustenance of sixty head of dairy stock this demonstrates both the value of the pulp as a feed and its desirability on the part of the stock man on account of the light expense in carrying stock through the winter months.

Does the Beet Crop Pay?

Mr. W. J. Wood, of Vassar, Tuscola county, Michigan, gives a few figures of the products of his farm which we reproduce for the benefit of our readers:

From 45 acres of hay he sold \$800 worth. From this 45 acres he would probably get 70 tons of hay, which would bring about \$850, or about \$18 per acre; from 10 acres of beans he got \$400; from 20 acres of wheat \$310, or about \$15 per acre.

From seven acres of sugar beets he received \$548, or a trifle over \$78 per acre, four times as much as his hay, about twice what he got for his beans, and nearly five times as much as he got for his wheat. Does the beet crop pay?

What Our Public Men Say.

The industry is dependant upon the farmer. If it did not pay the farmers they would not grow the beets. There

is no danger of a quarrel between the manufacturer and the producer. The manufacturer wants the beets and would pay for them.—GEO. F. MARTIN, M.P.P.

The difficulty was not in the production of beet roots, but in finding the market. To do this, it was necessary to induce capitalists to erect factories. Under the bill the farmers' interests were protected by requiring the factory to give at least \$4 per ton for the beets. At \$4 per ton, the production of beet roots would be six times as profitable as wheat-raising in this province, and five times as profitable as barley-raising.—HON. JNO. DRYDEN.

The Government has not gone far enough in the way of encouraging the beet sugar industry, which, if properly developed, would become one of the most important in the country.—MR. BOYD, M.P.P.

The measure for the encouragement of the manufacture of beet root sugar deserves public favor. The establishment of a new industry so closely connected with advanced methods of agriculture and with the activities of rural life cannot fail to improve the conditions of that important class of the people of the province who depend for their subsistence upon the profits to be made from the cultivation of the soil.—SIR OLIVER MOWAT.

What Next?

An Interesting Discovery.

It is stated that at last some ingenious person has discovered a means of extracting the sugar from corn stalks. If this be so a revolution will be witnessed in the sugar trade. It has long been known that corn and sorghum contain sugar in large quantities, and it has been extracted, but at a cost which prevented the process becoming a profitable industry. It is estimated that there are 200 pounds of sugar in each ton of stalks. There are 75,000,000 acres in the States grown in corn, each acre producing about ten acres of corn stalks after the tops and blades have been removed. This is equivalent to 75,000,000 tons of sugar, enough to supply Europe, the States, and, in fact, the entire world, and leave a surplus. It is now said that two men have almost simultaneously discovered a means of economically overcoming the difficulties in connection with the separation of the sugar from the impurities in the cane which prevents it crystallizing. It is now reported in the Agricultural Department at Washington that a Georgia man has described to Professor Wiley, the chief chemist of the department, that he has discovered a process for extracting sugar from sorghum economically, and that he intends to build a sugar factory which would be kept in operation the year round. In the summer and early autumn he will make sugar from corn stalks and sorghum, from sugar cane in the late autumn and from sugar beets in the winter and early spring. The sanguine inventor claims Georgia would

be able to furnish enough sugar for the entire world. But the proof has yet to be given. But it will readily be seen that such a process is more than possible, and the discovery of a means of carrying it into operation would be far reaching in its effects, and Canadian farmers will watch for further developments with interest.

E-Z—E Z.

EDITOR SUGAR BEET WORLD:

SIR,—Can you inform your readers what is meant by the Finance Minister's intimation in the Budget that the Agricultural Department would render some assistance to the Beet Sugar Industry.

Yours truly,

Leamington.

We really must establish a question and answer department in connection with this journal, but we do wish our readers would not propound such easy questions. Give us something that would puzzle the brain of a Philadelphia lawyer to answer. Put in a few jaw-breaking technical terms or something of that nature. Such questions as above are too easy.

The answer is, that the Agricultural Department will take the matter into serious consideration; in other words "nothing," that is, not yet.

Beet Pulp for Feed.

Beet pulp from the sugar factory at Waverly, Washington, is being used to fatten 300 beef cattle on the stock farm of W. E. Mann near that town.

Mr. Mann said yesterday: "I am feeding 300 head of three and four-year-olds, most successfully on the pulp. The cattle consume, on an average, nearly 100 pounds each per day, in addition to hay. The animals are putting on flesh in fine shape—better than three pounds a day.

"The pulp from the beet sugar factory is excellent feed. It can be kept in an ordinary silo, and is good feed for a year, and with good care can be kept two years."

The value of beet pulp for stock feed has been demonstrated in the past, many feeders shipping it great distances from the sugar factory, and even after paying the freight, finding it a profitable fodder. In talking with an official of the sugar factory this morning, it was learned that the whole pulp product for next fall's campaign has already been contracted. In making this contract, however, the factory reserved the right to supply all beet growers all the pulp they can use free of charge. Hence the situation during the coming campaign will be that of the farmers who raise beets will be able to secure all the pulp they want for their own use without cost, but none can be bought at any price, as all not taken by beet growers is to go to stockmen, who have contracted to take all they can get.—*Norfolk, Neb., Journal.*

Premiums for Beets.

Illinois Business Men Appreciate the Beet Industry.

Over in Illinois is where people appreciate the sugar beet industry, and aside from the legislature making a suitable appropriation for the purpose of carrying on experiments and educating the people in the care of the crop, the business men take hold and boom the industry by offering suitable prizes to encourage the industry and the farmers in raising a high percentage beet. In the small towns tributary to the Pekin refinery merchants are offering merchandise prizes as follows: Best five acres producing greatest amount of sugar; best one acre producing greatest amount of sugar; best one fourth acre producing greatest amount of sugar; best one-fourth acre grown by boy under 16 years of age; best kept account and record showing cost and profits of growing one or more acre of sugar beets; best 15 beets weighing not less than one pound each; showing highest test of sugar grown by a boy under 16, and the same for girl. The people in that section have the right idea of encouragement and as the company is very liberal in its dealings we anticipate some good results from there this fall.—*Michigan Sugar Beet.*

Why Farmers Should Grow Beets.

The beet tops furnish excellent cattle feed.

Farmers who have fed beet tops

have found in every case that the flow of milk was decidedly increased.

Sugar beets add another crop to the list that farmers can grow at a profit.

You know the price one crop will bring before you grow it.

You cannot overstock the market. A sugar factory requires all the beets you can raise.

The sugar factory is practically in the hands of the farmer, they must have the crop or the plant is valueless.

Your children can work in the beet fields and earn good wages.

Five acres of beets will earn you more money than fifty acres of oats.

The beet pulp makes excellent feed for stock.

The lime and other refuse from a factory is given to the farmer, and there is nothing better for the land.

If you figure the cost of raising your oat crop on the same basis as your beet crop, you are running into debt every year.

Always use your best land for a beet crop, it will pay you.

Do not ridge up your beets. Experience has shown this to be the best plan.

No hard and fast rule can be laid down for the cultivation of beets. Use your brain and work intelligently.

The rapid increase in the consumption of sugar is shown by statistics just published by the United States Government.

There was 568,000 barrels of sugar imported into Toronto last year.

The American Beet Sugar Association will have an exhibit at the Pan-American Exposition.

OXNARD CONSTRUCTION CO.

NASSAU STREET,
NEW YORK CITY.

Build and Remodel Beet and Cane Sugar Factories,

Adaptability of Location Investigated,

Furnish Agricultural and Technical Advice.

Beet Seed and all Necessary Supplies.

THE VESSOT SUB-SOILER

Patented July 13th, 1897

Call and see it, or ask for
Circulars.



Price \$5.00.

Attachable to
any plough.

S. VESSOT & CO. Sole Makers. 108 FRONT STREET EAST.
Factory at Joliette, Quebec. TORONTO

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' \$1

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 names and address of each member, and the stock he has for sale, are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and 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.

Who 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 15th 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. WESTREVELT, Secretary.
Parliament Buildings, Toronto, Ont.

The Territories Adopt Annual Auction Sales.

The first annual auction sale of pure-bred cattle under the auspices of the Territorial Pure-bred Cattle Breeders' Association was held at Calgary on the 12th of April.

The rules and regulations were practically the same as those governing the auction sales of pure-bred stock in Ontario.

Cattle only were offered at this sale, everything offered being owned in Alberta. No Eastern stock was offered for sale. There were twenty-seven bulls and twenty females. The bulls averaged ninety dollars and the females seventy-five dollars.

The annual live stock meetings were held at the same time, and a great deal of enthusiasm was manifested. The sale has been so successful that it is intended to conduct annual sales of a similar character.

The Largest Mint Farm in the World.

The connection between live stock and the growth of mint may not be apparent at first glance, but yet Mr. A. M. Todd, Kalamazoo, Mich., who, it will be remembered, was a large purchaser of stock at the provincial auction sales held at Guelph and Ottawa, has found it profitable to combine the raising of both.

Mr. Todd's farm is located in the township of Ganges, Allegan county, Michigan, and is devoted to the production of the various kinds of mint that furnish oil, chiefly peppermint. The soil of the farm is a deep black muck, in some places 20 feet deep. All the year round, but especially in the spring, the soil is very loose and shaly, and to keep the horses employed on the farm from "miring," broad wooden shoes about 12 inches in diameter are fastened

on to the ordinary shoes and secured by an iron strap. The horses soon get accustomed to these wide shoes and do not trip or hurt themselves.

Cut 2 gives a view of the big horse barn, one of the largest in the United States, which stands prominently on the right centre with one of the three mint distilleries on the extreme right. To the far left is the summer cottage, and next to it the boarding-house for the men and a store, reading room, machine shop and other offices. Since this view was taken, an immense cattle barn has been erected, with a capacity for 500 head. In it are six silos which will hold 3,000 tons of silage. From the central barn six barns radiate in different directions, each having four rows of stalls for cattle. The wind pressure on these big barns is obviated by the adoption of truncated, in place of upright gables. From 50 to 125 men, according to the season, find employment on the farm, which contains 1,400 acres. It is thoroughly drained by means of canals and branches, which are also used for irrigating in dry seasons. The main canals are bordered by 13 miles of Carolina poplars, which act as windbreaks. There are no fences on the farm.

Although the mint root is perennial, it is renewed once every two or three years in order to freshen the crop. When plowed down it comes up as a new crop. In planting a field, it is first plowed and harrowed as for a grain crop; then drilled or furrowed with a special marker, which makes a narrow, shallow trench. In these trenches the roots are dropped by men who carry a supply of them in sacks. A good hand can plant as much as 1 1/4 acres in a day, but 1/2 an acre is good work. When fully matured and blossomed, it is cut, cured and distilled.

In cutting a new crop Mr. Todd first sends a strong two-horse sulky rake over the field to draw the mint in

one direction. Then the mowers come in the opposite direction, and in this way cut all the stems. When cured for eight or ten hours, the mint is raked in windrows, bunched and drawn to the stills, where it is unloaded into large vats, which are carefully filled and sealed with a strong cover. Steam is then turned into them, which softens and expands the oil glands on the under side of the leaves, until they burst, and the oil is vaporized. From the top of each vat the oil-laden steam is conducted to a condenser or "worm" of pipes, which are bathed in a falling stream of cold water. The "water of condensation" with the oil in suspension is discharged into a separating tank, where the oil rises to the surface and overflows into storage tanks. Mr. Todd has a special arrangement for securing a percentage of the oil, which in some distilleries is allowed to run to waste.

The mint is exposed to the action of the steam for an hour. The spent straw is then hoisted out and dumped on a plot of ground, where it rots, and in time forms a fertilizer. When dry, it is greedily eaten by horses and cattle. When the three stills are running at their full capacity the average daily product is 2,500 lbs. of crude oil, which is stored in large cans like milk cans. Twenty-five years ago each of these cans of oil would have sold for \$400; now they are worth only about \$50 apiece. Half the output of the farm goes to foreign dealers.

The first cut gives a life-like picture of Mr. Todd and of a large oil refinery which he operates in Kalamazoo, which contains a process for isolating the essential solids or "cream" of peppermint oil, commonly used in crystalline form in menthol inhalers.

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 invited to forward his or her name and full particulars to A. P. Westrevelt, 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.

Wanted, an active young man, of good character, to work in a cheese factory for 6 months, board included.

Write at once, stating wages expected, age, etc., to Box 76, Ripley, Ont. a

Man wanted, at once, on a farm for 7 months, with the prospect of a longer engagement. Wages \$15 to \$17 a month, with board and washing. No 803. a

Young man wanted for general farm work. Must be steady. State wages wanted. No. 804 a

Good, capable, experienced man wanted to carry on the work of a fruit and dairy farm, in conjunction with the owner. Trustworthy married man preferred. Will have house rent free, and farm products, fuel and oil provided, but must board himself. Wages \$25 a month and \$2 extra a week to board the owner. Farm is in Nova Scotia. No. 805. a

Wanted, at once, man of mature age on a 100 acre farm for a period of 7 or 8 months. Would give \$18 a month or more to a good man. No. 801. b

Wanted a youth about 15 or 16 years of age to help work on a 200-acre farm in Lanark county. One who has a liking for stock preferred. Steady employment, suitable wages and a good home provided. No. 802. b

Wanted, young man and wife, no family, for a ranch in Manitoba, 10 miles from Carberry. Man to do ordinary farm work; wife to board 3 or 4 men. Apply to N. K. Boyd, House of Commons, Ottawa, Ont. b

Wanted, a man for general farm work, for a term of 7 months or one year. State wages wanted, age, and experience. Address Box 58, Wyoming, Ont. b

Wanted, a working farmer, to take charge of the Indian Industrial Farm at Red Deer, Alta., and instruct the boys. Must be a single man, understand farming, kitchen gardening, breeding of live stock of all kinds, and be able to milk. Must be a Christian and have good references. Salary, \$30 a month, with board, washing, etc. Permanent situation. Address C. E. Somers, Red Deer Industrial School, Red Deer, Alta. b

Situations Wanted.

Single man wants a place as herdsman. Has had practical experience in breeding, rearing and fattening poultry and in the use of incubators and breeders. Apply to H. Stepney, care of D. Drummond, Brooklin, Ont. a

Man, with experience in raising all kinds of stock, and who can furnish good references, wants a place. No. 928. a

Domestic Help Wanted.

Wanted, woman for general household work, 3 miles out of Toronto. No milking. State wages expected and give references. Apply to Toronto Poultry Co., Davisville, Ont. b

Steady position in a farm house wanted by a woman with a child, one year old. Is quiet and reliable and understands farm and dairy work. No. 929. a

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 the Superintendent he will be put in direct communication with the Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes

Horticultural Field Notes.

By G. C. Creelman, Superintendent of Farmers' Institutes.

One of our Farmers' Institute workers has a subject entitled "One eye on the field and the other on the town," and many a good sermon might be preached from that text.

Our town councils are always ready to listen to a proposition and frequently ready to bonus anyone offering to build a factory in their municipality. They do not, as a rule, pay attention to the nature of the product that is to be manufactured, but they say to themselves, "These people will employ much labor; our idle men will get employment, and a certain number of outsiders will come to live in our town."

When all preliminary arrangements have been made, a large bonus has been given, and the machinery is set in motion for the actual building of the factory itself, the council and the townspeople generally congratulate themselves that their town is now on the eve of a great wave of prosperity.

The farmers immediately surrounding the town have no interest in the matter. They do not see how they are going to be benefited by a factory in the town where they do business, and so it does not affect them in the least. Nevertheless it is these same country people who have year after year been bringing the products of their farms into this town, who have by supplying the raw material for maintaining all the public and private institutions of that town, kept it alive. In fact the town itself could not have existed without the people from the country who come every week to do business. Does it not seem reasonable, therefore, to suppose that, if manufacturing establishments such as canning factories, beet sugar factories, cold storage depots, pork-packing houses, and such like concerns were encouraged, the town would not only be benefited by the number of employees engaged, but the entire population surrounding the town would be financially interested in the enterprise?

TOWN AND COUNTRY PEOPLE HAVE INTERESTS IN COMMON.

If, as we have shown, the town people are dependent upon the sur-

rounding country, so the country people are dependent upon the townfolk for all the necessities of life not grown upon the farm. We have often felt that if we could break down the reserve existing between these two classes of people, we would very materially improve our agricultural conditions in this province. The larger the place the poorer the Farmers' Institute. This has gotten to be a by-word with us, and our largest and best meetings are held in schoolhouses and township halls at the cross roads.

While farmers may not practice town manners, and town people lack experience in farm management, there is one common topic in which both are personally and practically interested, and this is the matter of the garden, fruit, and flowers.

HORTICULTURAL SOCIETIES.

These societies have existed for years in the province, and have done good work in distributing information in reference to the growing of flowers. In many places, however, they have become very narrow, and a few professional florists and botanists have taken control. For instance, one society wrote us this year that unless we could send a speaker to give them a dissertation on tuberous begonias we need not send them a delegate.

BROADENING THE WORK.

This year the work of arranging the meetings of the horticultural societies has been transferred to the Department of Farmers' Institutes, and we have endeavored to broaden the scope of the work, so as to include everybody interested in any branch of nature study. Two speakers have been sent to address the society instead of one, as heretofore, and arrangements have been made whereby delegates will address the school children in each town and village during the afternoon before they are to lecture to the Horticultural Society in the evening.

OUR PLANS APPRECIATED.

The first of the Horticultural Society meetings was held on Tuesday last, April 9th, hence we have not yet received full reports, but are pleased to learn that the first meeting was a genuine success.

Mr. F. J. Frampton, secretary of the Lindsay Horticultural Society, writes in reference to their meeting as follows:

"I have pleasure in informing you that our meeting of the 9th of April was a success. Miss Maddock spoke well, and the people were well pleased with her. Mr. Hutt gave us a good talk on "Insects," and the only complaint I have heard was that the people wished his time had been longer to have dealt more fully with the subject.

"There was quite a large audience; the room was comfortably filled with, I should say, over one hundred interested people. There were a number of questions asked, which were answered by Mr. Hutt and Miss Maddock,

and Mr. E. Maxson, our town florist. Altogether I think we had a most successful meeting."

Tree Planting.

By T. G. Raynor, Rose Hall

In nearly every part of the older settled parts of Ontario too much of the original forests have been removed, as regards the benefit of our country in very many ways. Is it not time a halt was called in this matter? Before tree planting has to be resorted to as a

remarking on the increasing violence of the electrical storms which pass our way every summer. Many of our springs which used to run the whole year now dry up in the early summer. Many rivers and creeks are decreasing in their summer volume of water, and very many more wells are going dry from year to year.

In asking ourselves what is the cause for these conditions, there can be but one solution of the problem, it seems to me, and that it is emphatically the results of our over-clearing. If this be true, and I believe it is, should we not be aroused to the great importance of the question.

TREES CONDUCE TO INCREASE RAINFALL.

It is generally remarked that when woods were plentiful the rainfall was more evenly distributed than it is now. It came in copious showers

in many districts there are enough left worth preserving, and I believe the time is ripe for re-planting as well. Forestry experts claim that twenty acres of every hundred should be left with trees. I am under the impression that, if belts of woodland were left along our streams and around our lakes, and if the barren hillsides, unsuitable for cultivation, were replanted along with what is being replanted to orchard, ten acres for every one hundred acres would be sufficient for the best climatic conditions.

KEEP OUT THE LIVE STOCK.

So long as farmers allow their stock to forage in the wood lots, so long will wanton destruction of those wood lots ensue. It is quite noticeable that grass soon follows stock roaming in the wood lot, and it is only a question of time when more or less sod gets n. Then it is that the trees begin to die at the top, which is soon followed by their removal, and a general clearing of the bush land, adding to the arable part of the farm.

It has been recommended that wood lots should be exempt from taxation, where the owner would guarantee to keep his stock out. I believe this scheme could be worked through the municipal machinery with little or no cost to the country. Some such encouragement must surely be given if any attempt at preservation be made. If cattle were kept out of the wood lot the second growth would soon become rank enough to smother out the grass, and restore primitive conditions, to some extent at least. The leaves falling would form a mulch and the snow drifting in would accumulate in large quantities, which would supply the needed moisture. We would not see this snow going with such a rush as the snow outside under

the direct rays of the sun and exposed to the warm winds. More of the water formed from the melting snow in spring would soak into the ground through the gradual melting, and many a spring freshet, carrying destruction of life and property in its track, might be averted.

BENEFICIAL INFLUENCES ALREADY AT WORK.

I am aware that some progress is being made in tree planting. The impetus of apple culture is doing a good deal. The setting apart of Arbor Day, to be observed in our schools, is exerting some influence, and a few, who believe in beautifying their homes



A. M. Todd and his Oil Refinery in Kalamazoo, Mich.

matter of necessity would it not be wise to consider the preservation of what is left?

The importance of this matter is coming home to us with greater force every year. Our conditions are approaching more and more the conditions of the open, treeless prairies, where the storms may frolic at their own sweet will. The violence of heavy wind storms is being felt much more than formerly. I have only to refer to the September gale which visited us last fall from end to end of the province, and which was claimed to be the tail end of the Texas storm. It shook the apple orchards to an alarming extent. Everyone, too, is

during the growing season when evaporation was the greatest, mostly from the leaves of forest trees. It was rare in those days to have a poor crop of any kind. But all the evils of over-clearing have not yet been estimated.

Comparatively little is known to what extent the insectivorous birds have befriended us in destroying the many injurious insects which prey upon our crops. The rapid destruction of our forests has driven many kinds of insects out upon the field crops, and at the same time removed the favorable nesting places for our birds.

While in many places the destruction of our trees has been wanton, yet

and farms by planting ornamental and shade trees, thus adding very materially to the value of their farms, are acting as an educational force.

These influences are too slow to keep pace with the destruction which is continually going on, therefore I maintain that this question is of sufficient importance to be forced upon us to such an extent that we shall see the benefit of preserving what we already have, and of making some amends for the mistakes made by our ancestors in over-clearing.

If the prairie farmer finds it so much to his advantage to have even a few willows and poplars for wind breaks, surely where trees grow so well as they do in Ontario, there is no excuse for the present generation's neglect to derive all the benefits that would result

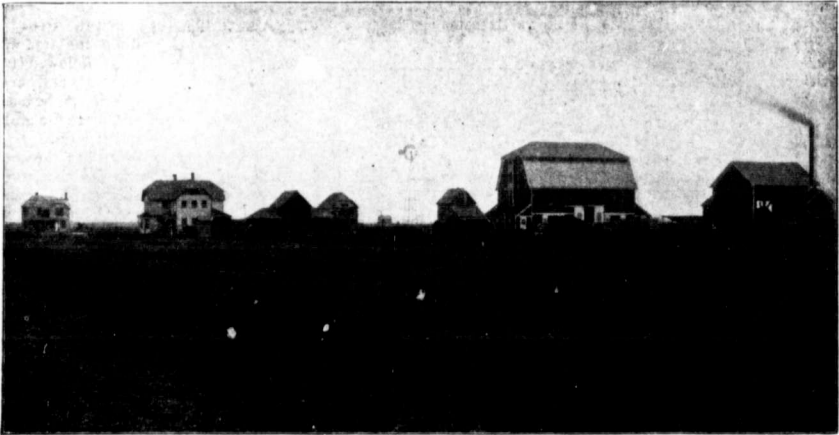
Summer Cultivation and Conservation of Soil Moisture.

By F. A. Sheppard, Queenston.

The question of summer cultivation and conservation of soil moisture is probably one of the most important questions which the farmers and fruit growers of the present day have to contend with. The question of supplying moisture to the growing plants in time of drought is of vital importance. Each season, as the years go by, the droughts appear to become more frequent and persistent, and it therefore becomes necessary for us farmers to devise means that will, to a certain extent, overcome them, and, by adopting a better system of cultivation, get our soil into such a condition that it will be capable of absorbing

get a proper understanding of how water exists in the soil. It may be one of three forms, first as free water, second as capillary water, and third as hygroscopic water. The free water of the soil is that which flows under the influence of gravity, and is the source of supply for springs and wells. It is not directly used by plants, and in fact its presence in the soil within a foot or fifteen inches of the surface is detrimental to most cultivated crops, from the fact that it excludes the heat and air from the surface of the soil; two elements that are absolutely necessary to successful plant growth. The free water is valuable, however, on account of its being the source from which capillary water is drawn.

Capillary water is the direct supply of moisture for plants. It is held be-



General view of house and farm buildings of A. M. Todd.

from the growth of plenty of trees.

If every farmer would plant some evergreens and other kinds of trees to the north and west of his buildings, and a shelter belt on the same sides of his farm, the country, as the individual, I am sure, would enjoy the benefit. In fact, what better legacy could a man leave to posterity than a number of silent monuments in the shape of trees.

On many farms that I have seen, if a little encouragement were given to the trees already growing along the fences, by protecting them from stock and field mice, it would not be long before a considerable wind break would be formed. Where shelter-belts are planted along farms the outside row might be evergreens which make good nurses. Then a row of nut-bearing and fruit-bearing trees, the latter for birds, to be followed by both ornamental and useful trees, such as maples, hard and soft, elms, basswood and ash in a third row.

I trust that these few ideas may be taken up by others, which may result in a general crusade in favor of more tree-preservation and tree-planting.

and retaining a much larger amount of water than it formerly did.

We find by looking over the records of the last twenty years that the annual rain-fall in the Province of Ontario has been ample, yes, more than ample, to secure a full crop of either fruit or grain had it been equally distributed over the whole of the growing season. Now, while we have an annual rain-fall of from 35 to 40 inches, nearly one-half of it is carried off by surface drainage, and is lost so far as the growing crop is concerned, and not only is the moisture lost, but it often carries with it a large amount of soluble plant food from the surface soil. This then suggests the first step in the conserving or storing up of moisture. This surface flow must be stopped and caused to sink into the soil to form a reservoir from which plants can draw in time of drought.

UNDERDRAINING THE BEST METHOD OF CONSERVING MOISTURE.

One of the very best methods of obtaining these conditions is by underdraining. Before going further, let us

tween the soil particles like a film surrounding each, and has the power of motion under certain conditions of the soil. The regulating of these conditions is the key to success in conserving moisture. The power by which the water in the soil is moved from place to place is known as capillary attraction. The soil is filled with what is known as capillary tubes or pores running from the moist soil beneath up to the surface. Through these the moisture is being continually drawn to the surface, where, if not arrested, it is quickly evaporated by sun and wind and is therefore lost.

Now, what we wish to do is to find some means of preventing this loss of moisture. Anything that will cover up these capillary tubes or pores will serve the purpose. For instance, we have all noticed that if we lift up a board that has become partially embedded in the earth, no matter how dry the ground around may be, it is always moist under the board. We often say the board has drawn the moisture. The board did not draw the moisture, but simply prevented it from escaping

(Continued on page 897.)

Farm Implement Department

Anti-Dirt Milk-Pail

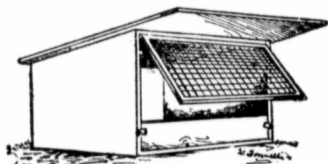
The accompanying illustration represents a new cover for a milk-pail, which should serve a useful purpose in the milking yard or stable. The inventor is Mr. E. W. Silver, Huntsville,



Ont., a practical dairyman and farmer. Any contrivance of this nature that will help to preserve milk free from dirt and dust should prove a great boon to the dairy industry.

An Ideal Chicken Coop.

It has a projecting top to keep out the heat of the sun and the rain. It has a netting front to give good ventilation, while keeping out enemies at night. It has a small board below that can be removed during the day



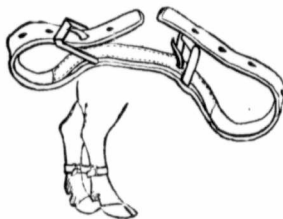
so the chicks can run out and in, while the hen will be confined. The coop can be cleaned in an instant. All these advantages will commend this coop to those who have had experience with the coops ordinarily seen.

Can't Kick.

A correspondent of *Hoard's Dairyman* says:

"I enclose here a sketch of the best contrivance for preventing a cow from kicking that has ever come to my notice. The first time it is used upon a cow, she will strive to lift one foot and then the other straight upward in rapid succession, at the same time stepping backward until she reaches the length of her halter. After a short struggle, in which she will neither throw nor strain herself, she

will give up, and, unless the provocation is great, cannot be induced to move a foot while the strap remains upon her. The strap should be 1 1/4



or 1 1/2 inches wide and 2 feet long, with the two buckles placed midway of the same and four inches apart. It should buckle and unbuckle easily."

A New Churn.

The illustrations represent a new churn which has been produced in Sweden; it revolves with extreme rapidity around a beater within, which is represented at Fig. 2. It costs



Fig. 1.

only 28s., for dairy implements are much cheaper in Scandinavian countries than in England; it can be easily cleaned, and it is worked with great facility.

There is nothing absolutely new in principle, but the adaptation is new,

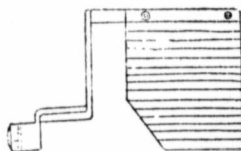


Fig. 2.

and, as the worker has absolute control over the cream and the butter, it should be easy to do the very best work.

A Woman's Views on Farm Machinery.

On a farm of one hundred acres or over a gang-plow pays. With it, one man having four horses can turn two furrows at once and save the hired man's wages. The plows do good work in all kinds of soil, and on rolling land as well as level.

For sowing fall or spring grain, use a drill that will cover the seed well. In places where there is apt to be long, dry spells, the drill that will put the seed down where there is plenty of moisture is the best.

The spring-tooth harrow, made with runners, and having levers to gauge its depth, is a fine thing to loosen up the earth. Every farmer should have one, and if he has much land to work, it will pay him to get a wide one that has a seat on it, then he can put four horses on and ride.

By the way, this expansion idea is a good thing applied to farming. Let the farmers, if they have enough land, get bigger implements, drive four horses, and ride. They will live longer and pay their mortgages faster by so doing.

Fasten a big umbrella or a home-made awning to the seat of whatever you are riding upon in hot weather. It is a great relief to be sheltered from the hot sun.

Watch the gearings of the mower and binder to see that the cogs mesh up well. If they get to running on their points, they will very soon cut out. Use Babbitt metal when necessary, and this will not be likely to occur.

Keep everything running smoothly and tight. A wobbly machine is a disgrace.

Of all machinery used on the farm, there is nothing that requires a good man with it, and careful, intelligent handling, so much as the threshing machine. The best men a thresherman can hire are none too good.

Don't forget or neglect to use plenty of grease and oil about all farm implements from the engine down to the hoe.

Keep all the woodwork and iron-work not covered with oil or used in the ground well painted. The blades and shovels of hoes, harrows, and cultivators should be dampened with kerosene when not in use.

As soon as you are through with an implement put it under cover. A good, tight building is the best place, but a shed is better than nothing. However, if farm machines, especially binders, are stored in a shed, care should be taken that the parts are well blocked up. If the ground is not exactly level, warping and binding will be the result.

Keep the chickens and pigeons and sparrows out of the machine shed. It's no place for them.—*Effie Brown, in Farm Journal.*



The Bi-pedal Sickle and Tool Grinder.

A New Sickle and Tool Grinder.

A new thing in the way of a sickle grinder, which is named the Bi-pedal, has been patented in Wisconsin. It consists of a foot power machine of very simple construction, that seems to have caught the fancy of dealers everywhere. For several years farmers have demanded something on which sickles could be ground with less fatigue than by the common sand grindstone or hand emery grinders, and the inventor is to be congratulated in solving this knotty problem. It is stated that the Bi-pedal foot power revolves the emery stone at a speed four times greater than any hand machines, thereby grinding sickles much quicker. This high speed of the emery is found to give a much smoother edge to the knife, and all danger of drawing the temper is eliminated by using a finely-tempered steel spring to give the pressure. The power is derived by pedals, the same as on the bicycle, thereby giving no dead centres to get stopped on.

The Plank Drag vs. the Roller for Spring Seeding.

To roll or not to roll, that is the question! There is no implement, in general use on the farm, in which there is a greater difference of opinion as to the function and proper use than the roller. Scientists and soil physicists are unable to come to a general conclusion as to the precise time when this ancient and useful implement should be used. One scientist says that if you roll the land in spring it causes rapid evaporation and loss of moisture, and advises the use of the roller in early spring to rapidly dry the land. Another says

that land should be rolled immediately after seeding to hasten germination, but the next scientist says that by rolling the surface soil dries out rapidly and the seed may not germinate. Then another says that rolling should be done after seeding in early spring when there is plenty of moisture in the ground, but that later, when the soil becomes dryer, rolling is an injury, as it causes the land to dry out by increased sub surface capillarity; and this is quite true, except that if a rain comes soon after the early spring rolling the surface is apt to crush badly.

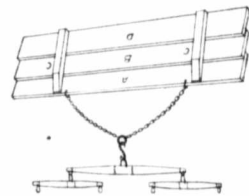
The average farmer, however, thinks that by rolling immediately after seeding, thus pressing the fine surface soil around the seed, he is doing the correct thing without thought or consideration of the season, and he cannot understand why anybody could be silly enough to roll land and immediately spoil (?) his work by following the roller with light harrow or weeder.

Rolling in early spring, when there is much moisture in the ground, certainly greatly assists to dry the ground by increased evaporation, but the danger point lies when thus rolling an early spring grain crop; the surface may crust and cause more injury to the grain crop than the over-abundance of moisture in the soil. If we roll in early spring to dry out the land it does not do to follow with the harrow, as this would destroy the object of our rolling. If we roll to increase germination we spoil the effect by immediately following with the harrow. But if we could defer the harrowing for several days, or until germination had taken place, this would be the ideal method. This, however, is not always possible with spring sown grains. It is, however, the method which should be followed

with corn. Were it not for the trouble the roller should be followed by a light harrow or weeder about four days later. With the necessary hurry of spring seeding this is hardly tenable. It should be practised, however, with corn. All this only goes to show that the roller in the hands of the farmer is not a safe implement, and is likely to do as much injury to his crops as real benefit.

In my own case, in order to be comparatively safe at all times, I have made a sort of compromise between the harrow and the roller in the shape of the plank-drag, here illustrated. This implement has the good points of the roller without the bad or injurious points, at least not to the extent of the roller. For spring seeding of grain crops it is certainly away ahead of the roller. It may be used in early spring, and by its perpendicular and horizontal action, grinds and compacts the soil without undue pressure, while the roller compacts only by reason of its pressure on the soil surface. The roller does not grind the soil nor break hard lumps, but merely presses, and deceives the eye by presenting a smooth surface. The plank-drag acts both as a harrow and roller. After its use in early spring there is not that baking and crusting of the soil so often observed after the roller.

For covering grass seed the plank-drag answers admirably, and no harrow is required. It is handy to hitch the team to, and being wide a field may be gone over in a very short time. Sometimes the drag should best be used twice, lengthwise and crosswise



of the field, and always when clover and grass seed is sown. The use of this drag saves the use of a smoothing harrow. It answers every purpose of a smoothing harrow and of a roller as well.

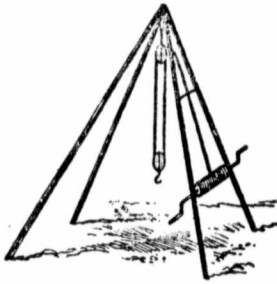
It may be built in an hour by any farmer. Three spruce planks 2 x 10 inches and 10 to 12 feet long, and two 4 x 4 2 feet long; and a few long wire spikes are all the material needed. The planks are lapped two inches. The lower, forward eight inches of the cross pieces are tapered as shown. The illustration makes the matter quite plain.

J. A. MACDONALD,
Kings County, P.E.I.

A Portable Beef Hoister.

Here is a portable beef hoister originally sketched for *The Farm Journal*. It can be taken apart easily, or folded up and carried to any part of the farm, or loaned to the neigh-

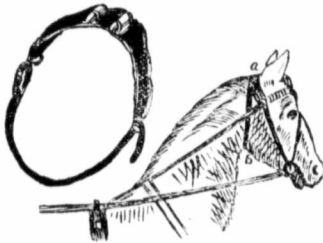
bors: Four 2 by 4 scantlings 16 feet long, fastened together at the top with a heavy iron bolt, the front pair of uprights braced across with a crosspiece, making them 4 feet at the base. Use a buggy axle for the windlass, placed



below the crossbrace. With block and tackle this hoister can be relied on to handle and load the heaviest beeves with ease. As the block and tackle is part of a farmer's outfit, it will need no description.

For Checking Runaways.

A single rein is provided with buckle attachments, as shown separately in the drawing. This is buckled under the crown piece of the bridle at A, by the two buckles. The rein is drawn under the throat of the horse at B,



and through a drop-ring on the left side, passing through a terret on the saddle to the driver. Should a horse bolt the rein is tightly pulled, thus crossing the horse's throat, and he is compelled to stop, inasmuch as his breathing is impeded.

Farm Machinery in Agriculture.

An interesting and instructive discussion of the influence of farm machinery on cost and production of agricultural products and on labor appeared in the agricultural issue of the *Country Gentleman*, from Mr. J. R. Dodge, of Washington, D. C., as follows:

No one doubts that our agricultural implements and farm machinery have played an important part in our agriculture. Really that part has been dominant, paramount. This may seem to our farmers, so familiar with their use, a trite saying, yet there are evidences that the full importance of their influence is not fully realized.

Could they go back to the condi-

tions of 1850 for one season, how vivid would become that realization—how drudgery has been relieved, labor rendered more effective, production cheapened. Our implements are more varied and effective than those of any other country in the world, and hence our ability to supply liberally the wants of an increasing population, and to compete with other countries in a surplus that is enriching the country and making it the creditor nation of the world.

These implements are lighter than those of foreign make, of greater strength in proportion to weight, and remarkable for ingenious adaptation to specific uses and labor-saving. These qualities secure premiums in contests with English and German machines, and cause heavy exportation to all civilized countries of the globe, which furnishes the best proof of these statements and the best international test of their efficiency. More than twenty countries are specially named in the present official export record, and many others are included in the miscellaneous classification, and the quantity and value represented are constantly increasing. Since January, in eight months to August 31, the statement of shipments is as follows, compared with similar periods in 1898 and 1899, showing a rapid enlargement of the trade.

	1898.	1899	1900.
Mowers and reapers.....	\$5,775,928	\$ 8,718,367	\$ 9,410,027
Plows and cultivators.....	730,491	1,076,972	1,674,215
Other implements.....	1,069,818	1,460,920	2,214,472
Total.....	\$7,575,237	\$11,496,459	\$13,854,774

There is increase in all lines, and proportionally greater in the miscellaneous classifications.

We see in certain state estimates of cost of production, a failure to appreciate the cheapening effects of modern farm implements and machines, showing a putative loss, the assumed cost being greater than the value of the products, while all the producers are living well, and some are growing rich, and year after year putting in liberal breadths of the same crops. The cost is exaggerated; the real cheapness is effected by farm machinery.

How much average saving is effected by implements and machines? It would require a long and difficult investigation, which has never been made. It would be found much greater in some crops than in others. In the same crops it would be much greater on some farms than on others, depending on the relative amount and character of labor-saving implements used, and something on the manner in which they were used. Were their use universal, and fully effective, the average cost of production would be still more cheapened. The condition would then be ideal, and the result a still greater marvel of cheapness. Hon. Carroll D. Wright some time ago made an investigation in the Department of Labor to show how farm machinery has cheapened the cost of production. The investigation sought, in individual cases, the exact amount of cost of hand and machine labor, the num-

ber of operations performed, and time actually employed. For instance, it is shown, in 1830 that 64 hours and 15 minutes was the time employed in producing an acre of wheat, at 50c. per day, and in 1896, by machine processes, two hours and 58 minutes, with wages varying from \$1.50 to \$4.50. For an acre of hay 35 hours and 30 minutes was the record for hand labor, and 11 hours and 34 minutes by machine methods. We know that this improvement is not actually made, as an average; if it were, something like the following showing of saving would result in cereals and hay, usually worth, at farm prices, about \$1,600,000,000, applying the cost per acre to the usual breadth of these crops, viz.: Corn, \$2,000,000; wheat, 44,000,000; oats, 26,000,000; barley, 2,900,000; rye, 1,600,000; hay, 41,000,000 acres:

	Cost per Acre.		Total Labor Cost.	
	Hand	Machine.	Hand.	Machine.
Corn.....	\$3.6259	\$1.5139	\$297,250,000	\$124,066,000
Wheat.....	3.6333	0.6892	159,801,200	30,224,800
Oats.....	3.7292	1.0732	96,959,200	27,903,200
Barley.....	3.5908	0.6020	10,427,820	1,745,800
Rye.....	4.1061	2.6142	6,562,760	4,216,729
Hay.....	1.7901	0.4233	71,754,100	17,343,090
Total.....			\$642,836,080	\$205,629,520

On the basis of results of the labor department's hand and machine inquiry, the reduction in labor cost, the clumsy hand methods being all replaced by machine processes, would be \$437,196,500, or 68 per cent. of the whole cost of labor. Thus we can see how farmers produce and live as prices get lower. In cereals and hay, machine methods are generally used, and it may not be extravagant to say that \$250,000,000 to \$300,000,000 may be actually saved annually in the cost of these products by use of farm implements and machines.

Is this use of machinery a disadvantage to farm laborers? On the contrary it is beneficial. It is a question as old as machine invention. Industrial conservatism and prejudice declare in the affirmative. The facts of industrial progress declare in the negative. The farm laborer's lot is made easier by these inventions, his hours of service shorter, his mental faculties stimulated, and he becomes a more efficient worker, a broader man and a better citizen. Have improved implements reduced the number of laborers? Not necessarily. They have enabled a given amount of work to be done by fewer men, but they have greatly increased crop acreage, and made higher cultivation possible, and more operations for soil amelioration and farm improvement. Prof. Davenport, before the Industrial Commission, testifies that agricultural machinery intensifies the labor put on the land, and enables farmers to use more per acre than they otherwise could, more labor in drainage, in physical amelioration of soils, in fertilization by ammonia gatherers, in many things absolutely essential to increase of yield and profit. The old-fashioned farm, by old methods, cannot produce enough to find the means of employment of this necessary labor.

The Farm Home

Checkers on the Farm.

The checker-board is all worn out,
From use each winter night;
The checkers have become begrimed,
Which once were shining bright,
But still the game goes straightway on,
Altho' the squares are blurs,
While Cynthia pens up Reuben's men,
Or Reuben captures hers.

Sometimes the old man takes a hand,
To show his practiced skill,
And then the farmhands circle round,
When everyone is still;
They would not say a single word
That would distract his play;
So breathless they observe him drive
Young Reuben's men to bay.

Ah what would winter evenings be
Without the checker-board,
With double corners, jumps and moves
And fun which they afford;
Our dissipation oft consists
In too much checkers here,
Which makes the gossips tell about
Our checkered life's career.

—Arthur E. Locke in *Boston Globe*.

The Plea for More Simplicity in Living.

I am pleased to see that this subject is receiving more attention in the journals and newspapers. Of course we have heard it all along in the form of a protest from the men, but we don't take any notice of that, because men are such contrary animals. Now, however, the women are becoming restless under their shackles and we may hope for reform. This matter rests with the women; it is they who fill their rooms with a mass of bric-a-brac and perishable finery that drives comfort from the house, and then pull down the blinds to keep out the life-giving sunshine for fear something will become faded, never realizing that by this process they themselves will fade more quickly than their carpets. It is the women who load the table with a bewildering multiplicity of china and silver with lace trimmings under and over which creates an absurd amount of work and worry. It is the women, and not the men, who overdress. Think of the precious hours and days spent over elaborate costumes in which all our labor but helps to make us appear ridiculous, whereas something neat, simple and easily made would be far more becoming.

If a woman's duties are so light that after faithfully discharging them and reading enough to be able to converse intelligently, she can, without overtaxing her strength, still find time for embroidery, etc., then she has a right to do so without criticism. But when a woman—already tired—will spend hours straining her eyes over unnecessary needlework and then make her chief topic with her husband a prolonged wail of overwork which he ought to relieve, then she is open to strong censure.

When addressing Farmers' Institutes I have advocated simpler living in

order that women may have more time to give to mental culture and to outdoor recreation and nature study, also the free admission of fresh air and sunshine into every room as an aid to health and happiness. For this I have received a degree of applause from the masculine side of the house that astonished me. Doctors and ministers have said, "I am glad you spoke of that, it is what I am always trying to impress on the people."

"I wish my wife could hear that," was a frequent remark. To the wives who were present I often heard the men say "Isn't that just what I have been telling you all along."

Nine out of ten who read the above will declare that I am opposed to all things ornamental, want the house to be as bare as a barn, etc., and even the most emphatic statement that I desire to see every home made beautiful by nice furniture and a moderate amount of fancy work, will not save me from being misquoted. I don't mind that, however, if I only succeed in making some woman think more seriously of her servitude to fashion.

ALICE HOLLINGWORTH.

Beatrice, Ont.

Patching Wall Paper.

Many a dollar might be saved and many weary hours as well, if women understood the gentle art of patching to the extent of repairing the paper on walls. Many a woman has tried to cover up an unsightly blemish or a rent in the wall-paper with such indifferent success as to end ultimately in the stripping of the walls and a hard day's work to dress them up again. When the paper is only slightly soiled it may be cleaned with a rye flour dough, and if a rent or grease spot needs hiding try the following method: Do not cut the patch from the roll, but paste a piece which contains the figure you wish to match, then tear the paper off by pulling it away from under the right side. By this means the paper will be left thin at the edge and all the color left at the top. The sides and bottom of the patch should be treated in the same way, and when smoothly pasted over the defacement the joining will not show. If the paper is torn before the paste is applied, the edge being thin gets too wet from the paste, and is apt to rub off upon the wall, leaving a streak. Most wall-paper fades after being on the wall a short time, so the new paper to match it should be exposed to strong sunlight until, when compared, the colors are found to have toned down to those in the old paper.

Two Good Recipes.

Excellent Baked Brown Bread.—
Three cups of cornmeal, three cups

of rye meal, one-half cup of sour milk, one-half cup of molasses, three and one-half cups of warm water and one teaspoonful soda. Beat five minutes and bake in a covered lard pail one and one-half hours.

Raised Coffee Cakes.—Dissolve one-half yeast cake in one quarter of lukewarm milk, or half water and half milk; add one heaping tablespoon of sugar, one-half teaspoon of salt and stir flour in with a spoon until quite stiff. Let rise over night. Cut in small pieces from the bowl and drop into hot fat. Serve hot with coffee. More sugar can be used if sweeter cakes are liked.

Muffins.

In the evening, when mixing the bread, reserve a cupful of the foaming batter. Sift into a bowl 1 quart of flour, 1 tablespoonful white sugar, and a pinch of salt. Add the cup of batter, 1 tablespoon melted butter, and sufficient lukewarm milk to form a rather thick batter. It should be thin enough to stir well. Cover, and allow to rise over night. In the morning add a pinch of soda to 1 tablespoonful of hot water, stir into the batter, pour into greased muffin rings, allow to raise for half an hour, and bake in a hot oven.

The Woman and Her Clothes.

"When a woman devotes one-half of her life to thoughts of dress she absolutely takes the whole question out of its proper relation to her life, and belittles the talents which God gave her for far greater things," writes Edward Bok, in reply to a woman correspondent, in the *April Ladies' Home Journal*. "It is, indeed, a grave question whether she does not debase herself. Nor will she be 'well dressed': the chances are far greater that she will be 'over-dressed.' No woman who has any regard for what is worth while in this world, and for what will bring her the surest and fullest happiness in the long run, will so dissipate her energies and vitality. The right to dress prettily and becomingly belongs to every woman. It is her birthright and her duty. A disregard of dress, or the affectation of queer or freakish dressing, does not belong to a normal woman. But to make dress one of the vital things of life is carrying it beyond the ridiculous point and close to the criminal. And it is just this rightful adjustment of the things in life which simplicity does for us. It gives a rightful place and a rightful value to each. It doesn't belittle the one nor distort the other."

Who scatters tares shall reap no wheat,
But go hungry while others eat.
Who sows the wind shall not reap grain,
The sown wind whirlleth back again.

—Christina G. Rossetti.

Why Cats Wash After Eating.

You may have noticed, little friends,
That cats don't wash their faces
Before they eat, as children do,
In all good Christian places.

Well, years ago, a famous cat,
The pangs of hunger feeling,
Had chance to catch a fine young mouse,
Who said, as he ceased squealing :

"All genteel folks their faces wash
Before they think of eating !"
And, wishing to be thought well-bred,
Puss heeded his entreating.

But when she raised her paw to wash,
A chance for escape affording,
The sly young mouse said his good-by,
Without respect to wording.

A feline council met that day,
And passed in solemn meeting,
A law forbidding any cat
To wash till after eating.
—The *Opal*.

undersleeves are attached, the upper portions being finished separately and slipped over the whole. As shown, the lining beneath the full portions is white silk, but, if preferred, the foundation can be cut away, leaving them transparent and allowing glimpses of the wrists.

To cut this waist for a woman of medium size 3 yards of material 21 inches wide, 2½ yards 27 inches wide, or 1½ yards 44 inches wide will be required, with 1 yard of chiffon, ¾ yards all over lace and ¾ yards of insertion to trim as illustrated.

The pattern, No. 3,782, 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.

Hints by May Manton.

Woman's Fancy Waist, No. 3,782.

The waist with bolero effect and narrow full front is very generally becoming and is essentially smart. The attractive model illustrated is made



3782 Fancy Waist, 32 to 40 in. bust.

from veiling in Russian blue trimmed with Russian lace, with front and undersleeves of embroidered chiffon. But the style is appropriate for almost all the season's materials, albatross wool crêpe, barège, corea crêpe, foulard, and all the long list of soft silks and wools.

The fitted lining closes at the centre front and consists of the usual pieces. On it are arranged the seamless back, the soft fronts and the full vest, which last is attached permanently to the right side and is hooked into place at the left. The fronts are extended to form the revers which meet the sailor collar that is joined to the neck, and the trimming is arranged to give a bolero effect, over lines indicated in the pattern. The sleeves are made over a fitted lining to which the full

How to Make Egg Soup.

Stir a teaspoonful of beef extract into one quart of boiling water ; add a grated onion, an eighth of a teaspoonful of celery seed or a little celery chopped, half a teaspoonful of salt and a saltspoonful of pepper ; stir constantly until it reaches the boiling point ; strain through a fine sieve, and pour it while hot into the well-beaten yolks of two eggs. Add four table-spoonfuls of carefully boiled rice, and serve very hot.—*April Ladies' Home Journal.*

The Way to Force Plants to Branch.

There is only one way in which a plant can be forced to branch, and that is by cutting off the stalk. The plant thus interfered with will make an effort to grow, and either a new shoot will be sent up to take the place of the lost top, or several shoots will be sent out along the stalk. If but one starts, cut it back. Keep up this cutting back process until you have forced as many branches as you think are needed. Persistency and patience will oblige the plant to do as you would like to have it do.—*April Ladies' Home Journal.*

Red Nose.

It is generally supposed that the most frequent cause of a red nose is overindulgence in alcoholic beverages, and "rum blossom" is one of the most common and cruel names applied to it. Through this misconception much injustice is done to many a worthy man and woman, who must suffer not only from personal disfigurement, but also from injury to his or her reputation.

The disease is known as rosacea, a congestive affection of the skin. It attacks chiefly the nose, but sometimes also the adjacent portions of the face, the forehead and cheeks.

The redness increases little by little,

MILLIONS OF ACRES
fenced with them this year. The fences that grow more popular every season. Real saving, service and satisfaction in
Ellwood Steel Wire Fences
Fully guaranteed. Best steel and galvanizing. If you can't find our local agent write to American Steel & Wire Co., Chicago or New York.

and at first comes and goes irregularly. At this stage it appears after exposure to cold, after a hearty meal, or after drinking a little more than usual.

After a while the redness and congestion persist, being intensified by the causes just mentioned, but not disappearing in the intervals. Soon the veins of the nose or other parts affected become visible as fine, wavy lines running through the skin, and later the skin becomes thickened.

It is greasy, and little pits, which are the mouth of the oil gland ducts, are seen dotted over the surface. The surface is roughened and uneven, the nose increases in size and becomes shapeless, and pimples of varying size appear more or less thickly on it.

All these changes do not occur in every case, and the process may stop at any one of them. Sometimes a burning is felt, especially during the period of greatest congestion, but as a rule no abnormal sensation is complained of.

The trouble begins usually after the age of thirty or thirty-five years, but sometimes earlier, and affects women more often than men. The common causes are some disturbance of the functions of the stomach, bowels or liver, due to eating poor or too highly-seasoned food, the abuse of alcoholic beverages, lack of exercise, and so forth. Habitual exposure to cold winds or to the rays of the sun may also produce it.

Treatment consists in removal of the cause, if possible. Great attention should be paid to the mode of living ; the diet should be regulated, highly-seasoned and indigestible food, alcohol and strong tea being forbidden ; constipation, so often present, must be overcome, and all the functions of the body should be inquired into, and corrected if not properly performed. Exercise in the open air is necessary, but the face must be protected from cold winds and from the sun.

In mild cases oxide of zinc ointment, lime water, or a bismuth lotion is often of great benefit. In severe cases stronger remedies, or even the use of electricity or the knife, may be called for.—*Youth's Companion.*

When a fellow proposes, the up-to-date girl no longer says : " This is so sudden." She thinks : " Well, he was a long time about it."

The Farming World

▲ PAPER FOR FARMERS AND STOCKMEN.

Publisher, D. T. MCALPIN.
Editor, J. W. WHEATON, B.A.

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.

Postage is prepaid by the publishers for all subscriptions in Canada and the United States. For all other countries in the Postal Union add fifty cents for postage.

Change of Address.—When a change of address is ordered, both the new and the old address must be given. The notice should be sent one week before the change is to take effect.

Receipts are only sent upon request. The date opposite the name on the address label indicates the time up to which the subscription is paid, and the change of date is sufficient acknowledgment of payment. When this change is not made promptly notify us.

Discontinuances.—Following the general desire of our readers, no subscriber's copy of THE FARMING WORLD is discontinued until notice to that effect is given. All arrears must be paid.

How to Remit.—Remittances should be sent by cheque, draft, express order, postal note, or money order, payable to order of THE FARMING WORLD. Cash should be sent in registered letter.

Advertising Rates on application.

Letters should be addressed:

THE FARMING WORLD,
CONFEDERATION LIFE BUILDING
TORONTO

Business Notes.

Sheep, page 894.

Shorthorns, page 893.

The Northwest territories heard from.

Poultry advertisers appear on page 894

Gould, Shapley & Muir, Brantford, are advertising gasoline engines. Enterprising farmers are finding these machines a great convenience on the farm.

Prospects for the export trade with Great Britain are very good. All raisers of poultry should look after this department of their farm and secure the best stock of poultry.

We owe an apology to Mr. K. A. Shaw, of Simcoe, Ont. A typographical error was made in the name. It should have read "K. A. Shaw," instead of what appeared. His advertisement appears on the poultry page.

Enterprising farmers will find a great convenience, as well as a saving of time and doubling your loads by securing a set of low wide tire wheels from the Dominion Wrought Iron Co., of Toronto. They have given entire satisfaction where they have been sold.

Sheep raisers should take advantage of an offer made by Lyman Bros., in their advertisement appearing on the inside front cover page. They have such confidence in their preparation "Sheep Dip" as to give a full-sized quart bottle free to all bringing the advt. to their wholesale department.

On last week's cover page appeared an advertisement of the Patterson Mfg. Co., offering a four-ply roofing, wire edged. This roofing is giving entire satisfaction, which is shown by the tremendous sale of 1900. This roofing has been on the market since 1880, and has stood the test of time. Write for samples to their address.

Elkton Ranch, DeWinton, Alta, N.W.T., Canada. "Having had very satisfactory results from *Gombault's Caustic Balsam*, I thought it might be worth while writing to you asking whether you had any representative in this part of the world." Signed, C. Davidson. This testimonial shows that Lawrence Williams' preparation, "Caustic Balsam," is known and used in all parts of the country. See page 892.

...FARM FOR SALE...

150 Acres, half-mile from Royalton; Churches, High School and station, a fine two-storey house, 15 rooms, extra well finished, 3 barns, never-failing running water at the house and barns, 2 good orchards—a fine locality. Address S. W. Grant, Confederation Life Building, Toronto.

QUESTIONS AND ANSWERS

Raspberry Cane Borer.

H. S., Listowel, Ont., wrote THE FARMING WORLD a few days ago stating that he had had some trouble last year with his raspberry bushes. His communication was submitted to Dr. Fletcher, Entomologist and Botanist, Central Experimental Farm, Ottawa, whose reply, which was sent direct to the enquirer, is published below for the benefit of our readers who may have similar difficulties:

From your description the trouble with your raspberry canes is not any fungus disease but is due to the attacks of the small worms which you found inside the canes. These are the grubs of a small beetle called the Raspberry Cane Borer. The eggs are laid in June and a cane which has been stung and received an egg is easily noticed. The eggs are always laid in the young canes when they are green and succulent, and at the time the egg is laid the female girdles the young cane with her jaws forming two rings about half an inch apart. The egg is laid in between these two rings. The tip of the shoot at once fades and hangs down. These canes should at once be broken off down to the lower ring where they will snap with a slight touch at this time. After hatching the young grub burrows down the centre of the cane consuming the pith and when full-grown, about the 1st Sept, it is nearly an inch long and of a yellow color. It changes to a pupa the following spring and the beetles appear in June. The best remedy is to watch for the injured canes in June and remove them. The presence of these insects is in no way due to your having put on the heavy coat of manure. In fact perhaps if you had not done this your plantation would have suffered much more severely. I do not think there is any need for relinquishing your purpose of planting more raspberries. I would not plant them in the same land but in any other good land you have, manure them well and be keenly on the look out in June for any injured canes which must be removed at once before the egg hatches.

Remount Station for Ontario.

Hon. Mr. Dryden, referring last week to Lieut. Col. Den's visit to Canada and his approaching arrival in Toronto, expressed the opinion that a remount station was pretty sure to be established here. Col. Dent will buy horses here in any case, and has been arranging for the use of the exhibition stables. Mr. Dryden quoted the British officer as saying that those stables were the best suited for the purpose of a horse purchasing depot of any he knew of anywhere.

Two hundred bushels of potatoes remove eighty pounds of "actual" Potash from the soil. Unless this quantity is returned to the soil, the following crop will materially decrease.



We have books telling about purity and excellence of fertilizers for various crops. They are sent free.

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

CABBAGE SEEDS and PLANTS of undoubted purity and excellence. Pedigreed stock. Price-list free. Lillinghast Seed Co., La Plume, Pa.

Better Sure than Sorry

Buy the seeds that have been *sure* every year for more than 40 years. Many seed buyers have been *sorry* they did *not* get

Gregory's Seeds

No one was ever *sorry* he bought them. Our three guarantees make you *sure*. New catalogue free.

J. J. H. Gregory & Son
Marblehead, Mass.

REGISTRY SEED CATALOGUE FOR 1901

The Good Roads Movement.

The passage of the bill appropriating a million dollars for the improvement of Ontario highways is likely to be followed by active campaigns in many of the counties of the Province. At present Hastings and Wellington are said to be the only counties eligible for a grant, as their country road systems had been previously organized. A summer school of practical instruction in road making is talked of in Renfrew. The Eastern Ontario Good Roads Association is arranging for a tour through several counties of a complete outfit of road making machinery, with which samples of good roads will be made at intervals to serve as object lessons.

Seed Grain Tests.

During the past few weeks a large number of samples of grain have been sent to the Central Experimental Farm at Ottawa by farmers residing in different parts of Manitoba and the Northwest Territories for the purpose of ascertaining their vitality or germinating power. It has been customary at the Experimental Farm to regard all samples germinating from 80 per

cent. upwards as good grain for seed. Those whose samples range from 50 to 80 per cent. are generally advised, when using such grain for seed, to sow an increased quantity, sufficient to make up for the lack of vitality, and all samples falling below 50 per cent. are held to be unfit for seed purposes. From this standpoint the results of these tests are very gratifying. Of the 450 samples of wheat tested, representing all parts of the northwest country, only sixteen (scarcely 4 per cent.) were unfit for seed. In oats the results are also encouraging, as of the 400 samples tested only 32 fell below 50 per cent., equal to but 8 per cent. of the whole. Of the 67 samples of barley tested only four samples were found unfit for seed. While the fact that this small proportion of the Northwest grain crop of 1900 which is unfit for seed should make the farmers careful to inquire into the vitality of untested seed, yet when the very unfavorable character of the harvest weather last year is considered, it seems marvellous that the grain all over the country should make so good a showing as to its germinating power.

Horses at the Industrial.

The Horse Committee of the Exhibition Board met on Tuesday last, with Ald. O. B. Sheppard in the chair. There was a full gathering of the members, Messrs. W. H. Pugsley, Wm. Hendrie, jun., William Smith, John Gardhouse, J. A. Boag and Robert Miller coming in from the country. The prize list was thoroughly gone over and several changes made. In class 1, thoroughbred horses, in sections 7 and 8, geldings as well as fillies will henceforth be eligible, and also in class 5, hackneys, sections 6 and 7. The Canadian Horse Breeders' Association's \$25 will this year go to the best standard-bred mare, having last year been given to the roadster class. The money given for the best span of Clydes, Shires and Canadian breeds, heavy draughts, was lumped together, and will be given as \$60, \$40, \$30 and \$20, to the best span of any breed of draught horses, mares or geldings. A section was added to class 11, general purpose horses, for the horse, mare or gelding, best suited for express or general delivery service. In class 12, ponies, wherever 13½ hands appears, it was made 14 hands, which was accepted as the standard limit. A section was added for brood mare with foal by her side, 14 hands and under. In class 13, section 1 was made to read saddle horse, gelding or mare, up to from 150 pounds to 180 pounds, and a section was added giving a premium for heavyweight saddle horses equal to more than 180 pounds. It was decided that hunters cannot compete in both the light and heavy weight classes. It was also resolved that where qualified hunters was specified certificates would be required from the Master of a recognized Hunt. An offer of a silver cup, valued at \$50,

from the Canadian Pony Society for the best pony and outfit, was accepted. It was decided to give prizes of \$20, \$15, \$10 and \$5 for best judging of horses by farmers or farmers' sons not over 25 years of age. The speed classes were left to be dealt with on another occasion by the Chairman and a sub-committee appointed by him.

Rural Mail Delivery.

By Our Travelling Representative.

When in Hamilton recently we had the pleasure of a call on our old friend, H. L. Rechet, one of the medalists of the Agricultural College, Guelph. He had just returned from Virginia, where for the past two years he has been managing a large ranch of over 1,700 acres. He states that the people of that State are very much behind Ontario in all agricultural methods, but it surprised us to learn that in a State where the people are so poor and the land so rough that many farmers do all their farm work with a sleigh they have the rural mail delivery in operation, while in Ontario, the banner province of Canada, with her agricultural colleges, dairy schools, farmers' institutes, etc., we are still satisfied with the old-fashioned way of every man going to the post-office for himself. But in Canada the farmers certainly show their generosity by being satisfied to go after their own mail and at the same time allow the cities to have their mail delivered free at the expense of the whole people, farmers included.

Surely if any class deserve to have their mail delivered free it is the pioneers who go out into the wilderness and change what was unbroken forest into fruitful farming land. We can speak from experience with regard to rural mail delivery, as for the past two years we have been enjoying a daily service, but the only drawback being that it is not free.

We are glad to know that the present Postmaster-General is investigating the system now in force in the United States, but it will be necessary in order to strengthen his hands, for the farmers to sink party differences and pass resolutions in their clubs and institutes, urging their members in the Dominion Parliament to support a measure of this kind, for no Cabinet minister will commit political suicide by giving the farmers reforms before he is sure that they will support him in so doing.

The tender thoughts we nurture for a loss Of mother, friend, or child, oh! it were well To spend this glory on the earnest eyes, The longing heart, that feels life's present cross.

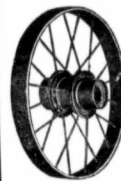
—Rose Hawthorne Lathrop.

No home should be without it. Pain-Killer, the best all-around medicine ever made. Used as a liniment for bruises and swellings. Internally for cramps and diarrhoea. Avoid substitutes, there is but one Pain-Killer, Perry Davis'. 25c. and 50c.



"Stuck on his Fence"
If you use Page Fence you will like it, but will not be stuck like the gentleman in the picture. The Page Fence is woven in our own factory, from coiled wire made by ourselves, and twice as strong as that used in other fences. Get this year's prices, they are lower than last year's.
The PAGE WIRE FENCE CO. (Ltd.)
WALKERVILLE, ONT.

Farmers' Low Handy Waggon[®]



Wide-Tire Wheels
Made to fit any axle.

They are lighter, stronger and much cheaper than wooden wheels.

Wrought Iron Wheels
with Wide Tires

should be used by every farmer, in fact by everyone who has a waggon.

Dominion Wrought Iron Wheel Co.
9 and 11 Brock Ave.
DEPT. A. TORONTO, ONT.

CANADIAN PACIFIC

A Tourist
Car . .

Its
Equipment.

A Canadian Pacific Tourist Car is fully equipped with berth curtains, mattresses, pillows, and clean linen. The Toilet Rooms are supplied with towels, soap, combs, brushes, etc.

It has a Range, enabling passengers to make tea or coffee or warm food.

It has large tanks, holding an abundant supply of water.

The smoking compartment has been abolished.

Any Canadian Pacific Agent will gladly give you further particulars and secure you accommodation in one of these cars.

A. H. NOTMAN,
Assistant General Passenger Agent,
1 King St. East, Toronto.

When writing to advertisers please mention THE FARMING WORLD.

Mrs. Sleepyize—Henry, the alarm clock just went off.

Mr. Sleepyize—Thank goodness! I hope the thing'll never come back.
—Ohio State Journal.

Time has no flight—it is we who speed along; The days and nights are but the same as when

The earth awoke with the first rush of song, And felt the swiftly passing feet of men.
—T. S. Collier.

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.

Cattle.

During the three months ending December 31st, 1900, the English Shorthorn Society granted certificates for cattle exported to foreign countries as follows: To South Africa, one; to the United States, thirty-two; to South America, fourteen; to Australia, one; to France, two; and to Canada, eighty-nine. According to this statement Canada is far in the lead, and the improvement in the quality of our beef cattle that should result from these importations should be very considerable. There has been a notable falling off in South American importations.

Mr. S. Hoxie, Superintendent of Advanced Registry American Holstein-Friesian Association, writes as to the official records received for March, 1901, as follows:

"This class of records are uniformly made under personal, critical and official supervision of representatives of State Experiment Stations. Reports of 38 were received during the month, all of which are for periods of seven days. Summarized, 14 full-age cows average 7 years, 1 month, 25 days, 37 days after calving: Milk, 422.9 lbs.; butter fat, 14.265 lbs.; equivalent butter, 80 per cent. fat, 17 lbs. 13.3 oz.; equivalent 85.7 per cent fat, 16 lbs. 10.3 oz. Six four-year-olds average 4 years, 9 months, 4 days, 31 days after calving: Milk, 401.8 lbs.; butter fat, 13.110 lbs.; equivalent butter 80 per cent. fat, 16 lbs. 6.4 oz.; equivalent 85.7 per cent. fat, 15 lbs. 4.9 oz. Eleven three-year-olds average 3 years, 5 months, 11 days, 23 days after calving: Milk, 368.8 lbs.; butter fat, 12.631 lbs.; equivalent butter, 80 per cent. fat, 15 lbs. 12.6 oz.; equivalent 85.7 per cent. fat, 14 lbs. 11.8 oz. Seven classed as two-year-olds average 2 years 2 months, 21 days, 38 days after calving: Milk, 282.7 lbs.; butter fat, 9.380 lbs.; equivalent butter 80 per cent. fat, 11 lbs. 11.6 oz.; equivalent 85.7 per cent. fat, 10 lbs. 15.1 oz. While these averages are high they include no records that may be regarded as phenomenal; the average of four is above twenty pounds butter 80 per cent. fat. Two three-year-olds produce over 18 lbs each, and one two-year-old reaches 16 lbs. 10.8 oz.

We recently paid a visit to the home of J. W. Widdifield, of Glen Crescent Stock Farm, a few miles from the thriving town of Uxbridge. Mr. Widdifield is a graduate of the Ontario Agricultural College, and is putting the theory learned at College into practice on the farm where he is breeding Shorthorn cattle and Oxford Down sheep.

A long winding ravine traverses the place from corner to corner, the main curve of which, from its shape, gives to the farm its name. The place is well watered by a grand stream running through this depression, and this feature makes the place admirably adapted for stock-raising. This stream also furnishes the power for a sawmill on the farm managed by Mr. Widdifield, Sr., and which

does the principal trade of the neighborhood. Here also is the source of water supply for the stables. About twenty-five rods of underground pipes connecting the stream with a tank at the barns, and the water forced up through these by an hydraulic ram. An extension of the farm water works system for irrigation purposes is contemplated for the coming season. A large water-tight receptacle is to be constructed suitable for a silo in the winter and as a water tank in summer. Into this the pipes from the ram may be turned in dry weather, and the water will be gravitated thence through pipes or hose to the garden.

The foundation of the Glen Crescent Shorthorns was laid right, and although the herd is as yet small, numbering at present only seven females, the basis is laid with a proper selection of sires for a grand herd, and that attention is being given to this selection and careful mating is evidenced by the quality of the young things now coming on. Mr. Widdifield's first stock bull, and, in fact, his first Shorthorn was Juryman, bred by John Miller & Sons, Broughman, a worthy son of Sittytton Stamp, imp., and Julia, imp., and latterly he has been using, at considerable inconvenience, such sires as Precious Stone, imp., and Blue Ribbon, imp. Among the females at Glen Crescent we noticed two beautiful red cows of a deep massive style, one a Crimson Flower, the other a Mayflower maid of the good old Livinia extraction, both bred by David Birrell, of Greenwood, and sired by Clan Campbell, imp., and the latter from an Indian Chief cow. If show-yard proclivities are any test of merit then Glen Crescent Shorthorns are certainly good, for although they have not as yet been shown at any of the larger fairs they have been wonderfully successful in the local show rings. As an instance of their winnings in 1899 at the North Ontario Fair at Uxbridge, five individuals had to their credit five red tickets, as well as herd prize and sweepstakes female.

The foundation of his Oxford Down flock was laid in 1895 by a draft from the celebrated Farnham Farm flock, the property of Mr. Henry Arkell, Arkell, Ont. This, with subsequent drafts from Farnham and the natural increase, comprises the present flock. Imp. Royal Windsor Fifth is at present at the head of the Glen Crescent Oxfords. At the time of our visit in March about 20 lambs had already appeared to the credit of the Oxford females.

With regard to the method of farming followed at Glen Crescent the principal idea involved is the reciprocation of the plant and the animal, or, in other words, the growing of material for stock feeding, and in return the feeding of stock for the resultant production of plant food. The manure is drawn directly from the yards and spread on the fields, he believing that there is less loss in this method than in any other, a practice that is rapidly growing in favor all over Ontario.

CHAMPIONS OVER ALL

BLOOD WILL TELL.

MAPLEWOOD HACKNEY STUD

Property of FREDERICK C. STEVENS, Attica, N.Y.,

Again Furnished BOTH CHAMPIONS at the NATIONAL HORSE SHOW

STALLIONS IN SERVICE FOR THE COMING SEASON ARE

Langton Performer, Clifton 2d, Fandango,

ALL CHAMPIONS.

Magnificent young stallions and mares sired by the above stallions and out of mares equally famous always on hand for sale. Beautiful, high-acting carriage horses, bred, raised and trained at Maplewood, now ready for sale. Here you can purchase four-in-hands, pairs, tandems, single drivers, ladies' pairs and children's ponies. For further particulars address, **E. T. GAY, Manager.** - - - **Attica, N.Y.**

THE WALLACEBURG AGRICULTURAL SOCIETY

Offers a PRIZE OF \$25.00

FOR AN IMPORTED CLYDESDALE STALLION

weighing 1,800 lbs. or over, to travel in district.

For particulars apply to

WM. BURGESS, WALLACEBURG, ONT.

CLYDESDALES FOR SALE



1 Stallion, 6 years old ;
1 Stallion, 2 years old ;
3 Yearling entries, 8
brood mares in foal to
good sires. Also several
fillies and a few young
Shorthorns. Farm a
quarter of a mile from
Burlington. Station on
G.T.R.

T. DEVITT & SON
Freeman, P.O., Ont.

Horse Owners Should Use

GOMBAULT'S

Caustic Balsam

The Great French Veterinary Remedy.

A SAFE, SPEEDY AND
POSITIVE CURE.



Prepared
exclusively
by J. E.
Gombault
ex-Veteri-
nary Sur-
geon to the
French
Govern-
ment Stud

SUPERSEDES ALL CAUTERY OR FIRING

Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable. **WE GUARANTEE CAUSTIC BALSAM** will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address **THE LAWRENCE-WILLIAMS CO., TORONTO, ONT.**



ROCK SALT for horses and cattle, in ton and car lots. **Toronto Salt Works, Toronto**

Good Butter

Windsor Salt makes good butter because it dissolves easily and quickly, and, too, because the butter receives the full goodness of each flake of the Salt and the delicate flavor of pure Salt.

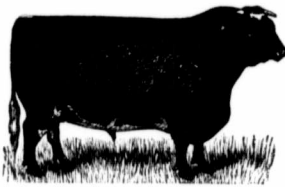
Windsor Salt

Best grocers sell it.

THE WINDSOR SALT CO.,
Limited

WINDSOR, : : : ONT.

Shorthorns



Greenhouse Chief

ARTHUR JOHNSTON

Greenwood P. O., Ont.

Offers for sale at Moderate Prices:

Imported Bulls and Bull Calves
Imported Cows, Heifers and
Heifer Calves.
Home-bred Cows and Heifers
Home-bred Bulls.
CATALOGUES ON APPLICATION.

R.R. Stations:

Claremont on the C.P.R.
Pickering on the G.T.R.
22 Miles East of Toronto.

Lake View Farm

OSHAWA, ONT.



- 1 Bull, 11 months, Color Red.
- 1 Bull, 12 months, Color Red.
- 1 Bull, 10 months, Color Red.

All Shorthorns. These Registered bulls were sired by Grand Sweep, an imported bull and half brother to the

noted British Statesman. He was got by Royal James. Terms on application.

THOS. ALLIN & BROS.

Lake View Farm, OSHAWA ONT

SUNNYSIDE

Shorthorns for Sale

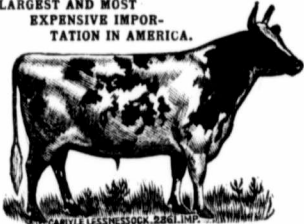
5 BULLS, Eleven Months' Old
3 red and 2 roan.

Also a few FEMALES, all registered.

E. A. GARNHAM, | Stratfordville, Ont.

Pure-bred Ayrshire Imported Cattle.

LARGEST AND MOST
EXPENSIVE IMPORTATION IN AMERICA.



Bred for the dairy with grand constitution, and champion prize records awarded them in Scotland and England. Sweepstakes herd Montreal, Toronto, London, and Ottawa in 1897; also Toronto, 1899. Awarded four years in succession, herd prize at Ottawa's great exhibition, and special gold medal; at Montreal, herd prize and W. W. Ogilvie's special \$100.00 prize. Their individual prize records are of the same distinguished honors as for years of their exhibition career. Stock all ages for sale and at prices in reach of all.

Maple Grove
Ayrshire Stock Farm
LYN, ONT.
Line G.T.R.

R. G. STEACY,
Importer and Breeder,
Brockville, Ont.
Box 720.

OAK LODGE YORKSHIRES



are acknowledged to be the best type of bacon hog to produce the ideal carcass for the best English trade. CHAMPIONSHIP HERD AT TORONTO INDUSTRIAL EXHIBITION FOR NINE YEARS also sweepstakes on Dressed Carcass at Provincial Winter Show. We have on hand now a large herd of different ages. Our prices are reasonable and the quality is guaranteed to be choice. Write

BRETHOUR & SAUNDERS,
Burford, Ontario

Shorthorns

Shorthorn Bulls For Sale, from 8 to 17 months old. Color, red. JAMES BROWN, Thorold, Ont.

GLEN CRESCENT SHORTHORNS AND OXFORDS.

A few shearing rams by imported "Royal Windsor 5th" and one two-year-old bull for sale.

J. W. WIDDIFIELD, Uxbridge, Ont.

SHORTHORN BULLS

Four Bulls, eleven months old, and a few Heifers for sale. All eligible for registration in American Herd Book.

Also 25 Yearling Grade Rams, and 6 registered Cotswold Lambs.

JOHN SOCKETT, Rockwood, Ont.
P. O. and Station.

T. Douglas & Sons, Strathroy, Ont.

Breeders of

SCOTCH SHORTHORNS

(100 head to select from)

Offer for sale 14 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee—28861—, at head o' herd. Farm one mile north of town.

Shorthorn Bulls For Sale

Three strong lusty sons of Aberdeen Jack 245031.

S. DYMENT, Barrie, Ont.

LIVE STOCK LABELS

Send for circular and price list.
R. W. JAMES,
Bowmanville, Ont.

S. & F. JACKSON

breeders of

SHORTHORNS AND TAMWORTHS
A sow and 4 boars, three months old, for sale. S. & F. JACKSON, Oxford Centre, Ont.

IMPERIAL HOLSTEIN-FRIESIAN STOCK FARM

10 Young Bulls from one month to four months, bred from Winnie K's De Kol.

W. H. SIMMONS,
New Durham

ABERDEEN ANGUS THOROUGHBREDS

Three Young Bulls For Sale.

"Black Monarch," aged 18½ months; "Black Prince," aged 8 months; "Zimro Chief," aged 7 months. These are all bred from the well-known cattle of the "Hay Estate" farm of Angus, Ont. For further particulars write to "The Manager, Grape Grange Farm," Clarksburg, or to C. W. Hartman, Clarksburg, Ontario.

RETTIE BROS.

HOLSTEIN-FRIESIAN BREEDERS

A few choice young animals for sale. RETTIE BROS., NORWICH, ONT.

SHORTHORN BULLS FOR SALE

One solid red, 18 months, Scotch-top crosses and of good milking stock; also a red and white bull 8 months. Come and see them or write to

H. O. GRAHAM,

No business; no harm. AILSA CRAIG, ONT

Poultry

Eggs For Sale

Black Minorcas (Duff and Senior Strain).
Barred Plymouth Rocks.
Brown Leghorns.
Black Breasted Exhibition Games.
All Prize Winners. Farm raised, \$1.00 for 13.

K. A. SHAW, Simcoe, Ont.

CRYSTAL SPRING

POULTRY YARDS

ELIAS SNYDER, Prop.,
Burgessville, Ont.

Barred Rocks exclusively.
A few choice cockerels for sale.
Eggs from prize-winning stock.
Correspondence invited

Parkhill Poultry Yard

Offers Eggs from the best of stock of the following varieties: L. Brahmas, Black Langshans, W. and Barred Rocks, Golden Silver Laced and W. Wyandottes, Buff, Brown and W. Leghorns, S. S. Hamburgs, and Golden Seabright. \$1.00 per 13 eggs. Pekin Duck eggs, \$1.00 per 11. W. B. Turkey eggs \$2 per 9.

D. A. GRAHAM, Parkhill, Ont.

EGGS FOR HATCHING

Barred Plymouth Rocks
White Plymouth Rocks
Golden and White Wyandottes

\$1.00 per setting, \$3 per 100. Express paid on orders of \$3 and upwards.

A. L. KENT, Box 203, Oakville.

Maple Grove Yorkshires

of pure bacon type, also

Eggs from White and Barred Rocks and Rouen Ducks, \$1 per setting; M. B. Turkey eggs, \$2.50 per setting. An Imported Tom at head of flock.

T. J. COLE.

Box 188, Bowmanville, Ont.

Eggs for Hatching

From the following varieties of utility fowls with prize winners in every pen at \$1.50 per 15 80 per cent guaranteed fertile.
Barred Plymouth Rocks. White and Buff Wyandottes and S. C. White Leghorns. Eggs \$1.50 per 15; \$2.50 per 30; Rocks \$5.00; Wyandottes \$6.00 per 150.

C. C. HEAVEN, Westwood, Oakville, Ont.

The Safety Incubators

AND BROODERS

Are the best and cheapest you can buy. It will pay you to write for full particulars before placing your orders.

Address the Manufacturer,

J. E. MEYER,
Kossuth, Ont.

ST. LAWRENCE COFFEE HOUSE

78 and 80 King St. East

"RESTAURANT" TORONTO

Dinner for 20c.

6 Dinner Tickets \$1 Served from 11.30 to 3
for : : : : \$1 and from 6 to 8

Farmers and their wives visiting Toronto will find this to their taste.



RIPPLEY'S COOKERS.
Sells from \$10.00 to \$45.00. Made of boiler steel. No flues to rust or leak. Can't blow up. Guaranteed to cook 50 lbs. feed in 2 hours, and to heat water in stock tanks 300 feet away. Will heat dairy rooms. Cask alum and prices marked free.
RIPPLEY HARDWARE CO., Box 216
(U.S. Factory, Graston, Ill.) London, Ont.

of De Kol II., with record of 26½ lbs. butter in week. Her dam gave 62 lbs. as a two-year-old.

Suka Rose Pieterije De Kol, is one of the best show cows in the herd, and has a record of 64 pounds in a day as a four-year-old, and 21 lbs. of butter in a week.

Kaatje De Boer III., a very promising four-year old, made an official test as a three-year-old of 29½ lbs. milk 10.37 butter fat in seven days, while her full sister Kaatje De Boer II., has an official test of 23 lbs. butter in seven days as a four-year-old and gone over 63 lbs. in a day when fourteen years of age.

In one of the box stalls were a pair of very choice heifer calves from the old bull, with the high sounding names of Ellen Terry and Julia Arthur and we look for them to keep up the reputation of their famous namesakes at the leading exhibitions this fall.

We also noticed a very likely young bull, Daisy Leak's King, out of Daisy Soldene Clothilda who was a first prize yearling heifer at Brantford.

At Norwich, Mr. H. McKay, the energetic secretary of both the Norwich Junction cheese factory, and also of the local Farmers' Institute, is breeding Ayrshires. He has a choice herd of about 25 cows which supply the town with milk.

Mr. B. J. Palmer, who is a well-known Holstein breeder, about a mile and a half out of the town, showed me his degree from Toronto University School of Agriculture, obtained in 1870, one of the first ever issued in Canada.

We also had the pleasure of a call at Brookbank Farm, Currie's Crossing, so well known as the home of the veteran Holstein breeder, Geo. Rice, and also equally well known as the home of the wonderful performer, Calamity Jane.

Mr. Rice has sold stock all over Ontario, the Northwest and the United States. He showed us a pile of letters from customers all expressing in the highest terms the satisfaction with their purchases.

Calamity Jane is too well known to need much notice, as she had the honor of winning the Provincial dairy test for three consecutive years. There is a daughter and a son of this great cow in the herd at present, Calamity Jane II., with a record as a two-year-old heifer of 279 pounds in seven days and 11.05 butter.

The son by the former stock bull, Sir Paul DeKol Clothilda, should keep up the record of the herd for deep milking properties.

The stock bull, Homestead Albino DeKol, is one of the greatest show bulls in America, having won first at Toronto, London and Ottawa as a yearling, and also kept up his reputation by winning the past year first at Kingston, second at Toronto, and first at Woodstock and Ottawa, with diploma at the latter place.

Winnie R. is another wonderful cow. She is built much like Calamity Jane, she weighs 1,600 lbs., has great depth and spring of ribs, wedge shaped, and is a cow of great capacity to assimilate and digest her food. She won 12,000 lbs. of milk in one year. She won second prize in the public test at Ottawa, 1900, making 68 lbs. milk in 24 hours at 11 years of age.

Her daughter, Winnie Win, is a credit to her dam and has a record of 400 lbs. of milk in seven days and 13¼ lbs. butter fat as a five-year-old.

Edgley Frena is another cow that has won public honors. She won first at Brantford dairy test, and also in the December dairy test in 1898 as a four-year-old. She has a record of 247 lbs. milk and 9 79 lbs. of butter fat.

White Rose Leaf is a three-year-old with an official test of 322 lbs. of milk in seven days and 14.16 lbs. of butter.

Our market reports are reliable and up-to-date. They are written specially for The Farming World and are of inestimable value to every farmer.

Sheep

SHROPSHIRES

Bred from the best Imported Stock.

Also Silver and White Wyandottes.

W. D. MONKMAN, Bond Head, Ont.

A CHANGE OF SEED POTS

I can supply the following varieties of potatoes: Early Varieties—Manley Early, Throughbred, Michigan Early, and Early Six Weeks. Late Varieties—Sir Walter Raleigh, Uncle Sam, American Wonder, Great Divide, and First Choice. Also Salzer's Big Four Oats, early and productive.

Large English Berkshire and Ohio Improved Chester White Swine. Young stock for sale, registered and express paid. Prices reasonable.

TILMAN E. BOWMAN, Berlin, Ont.

SHAWANOO HILL

FLOCK

of Cotswolds

We breed for Mutton and Wool.

Havs for Sale

50 shearing rams, 30 shearing ewes, and 100 lambs, good quality and excellent breeding.

JOHN RAWLINGS,

Forest, G. T. R. RAVENSWOOD P. O. ONT.

OXFORD DOWN SHEEP

J. H. JULL & SONS.

Yearling Rams and Ram Lambs, and Ewes of all ages, for sale. Prices reasonable. Our flock is headed with the best imported rams in Canada—prize-winners in England, first prize at Toronto Industrial and all leading shows in Canada.

Grant and Plain View Stock Farms,
Mt. Vernon, Ontario, Can.

Money Easily Made



IS THE POULTRY ON YOUR FARM

A PAYING DEPARTMENT?

IF NOT, WHY NOT?

We all know that it is absolutely necessary to continually bring in new blood if we wish to make a success of breeding any live stock on the farm. This rule applies to your poultry just the same as any other department, and for this purpose we make a special offer to farmers by offering them settings of eggs from our magnificent stock of White Wyandottes, Barred Plymouth Rocks and White Leghorns at very reduced prices. All our original stock was imported from the best breeders in the United States, and our present stock is second to none in Canada. Good healthy thoroughbred birds improve the look on the farm, bring more money into your pocket, and they mature earlier, lay many more eggs and demand a far greater price either dead or alive, and they do not cost a cent more to feed than mongrel stock.

Wyandotte Eggs, per setting . \$1.50

S. C. White Leghorn Eggs, per setting . \$1.50

Barred Plymouth Rocks (Hawkins' Strain) \$2.00

We are willing to give farmers any information that we can in reference to their poultry, and all letters will be willingly answered. Address—

The Toronto Poultry Company LIMITED

J. M. WILSON, Manager.

Davisville P. O., Ontario

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,

Toronto, April 22, 1901.

The improvement in the weather has brought about a corresponding improvement in trade. Wholesale houses report quite an increase in orders. The opening of the dairy season will give increased activity, and on the whole the general business situation is brighter than a week ago. Money keeps steady at 5 per cent. on call and discounts at 6 to 7 per cent.

Wheat.

For the past few weeks the bears have had their innings in the wheat markets. The reported scarcity of English wheat has, however, given the other side a little ground to work upon. The English markets did not respond to the decline on this side of the Atlantic during the past ten days, and there has been more doing on export account, both in Chicago and at the seaboard. But looking on the bear side of the argument, there are several things to be considered. There is a better condition of the winter wheat crop than at this time a year ago, and, with an increase of about 4,000,000 acres under cultivation, the probabilities point to a record-breaking yield in the United States. The condition of the winter wheat crop in Ontario is also good, there being very few reports of winter killing. There is likely to be a large surplus of old wheat when the new crop is ready, so that taking it altogether the wheat situation strongly favors the buyer. Chicago is about the cheapest place on earth just now to buy wheat.

The local markets have ruled quiet but steady. There is still reported to be considerable wheat in Ontario farmers' hands. Red and white are quoted by millers at Ontario points at 65 to 67c., goose at 65c., and spring at 68c. east. On Toronto farmers' market red and white bring 68½ to 69c., spring life 70c., and goose wheat 67 to 67½c. per bushel.

Oats and Barley.

There is a scarcity of oats in some sections of Ontario, while there is a good supply in others. This has made home trade more active, and dealers realize more by selling locally than by exporting. Oats are steady here at 30c. for No. 1 white east, and 29½ to 29¾c. for No. 2 middle freights. On the farmers' market oats bring 35¾c. per bushel.

There is still some export enquiry for Canadian barley. The market here keeps steady at 43 to 44c. at Ontario points. On Toronto farmers' market barley brings 46c. per bushel.

Peas and Corn.

There is a firmer feeling in peas east. The market here keeps steady at 63 to 63½c. north and west, 64c. middle freights and 66c. east. On the farmers' market here peas bring 65c. per bushel.

The corn acreage in the United States is likely to equal that of last year. Corn at Montreal rules steady at 53 to 53½c. for car lots of American on track. American No. 3 yellow is quoted here at 49c. on track Toronto, and Canadian at 41½ to 42c. west.

Bran and Shorts.

Ontario bran in bulk is quoted at Montreal at \$17.25 to \$17.50 in car lots. Manitoba bran at \$18 in bags, and shorts at \$18 to \$19 per ton. City mills here sell bran at \$16 and shorts at \$17 in car lots f.o.b. Toronto. Car lots of bran are quoted at \$14 and shorts at \$15.50 at points west.

Potatoes.

Prices are advancing owing to a falling off in receipts at Montreal, where car lots are quoted at 40c. per bag. Car lots on track are quoted here at 27 to 29c. and on farmers' market at 25 to 35c. per bag.

Eggs and Poultry.

There is considerable activity in the egg market, and shippers are getting ready to pickle stock. There is a large consumptive demand, and supplies are not accumulating. It is claimed that present prices are too high for pickling. Very few Canadian eggs are being exported just now, though the English market is higher. Shippers at Ontario points have quoted 10c. f.o.b. to the trade for fresh stock. The *Trade Bulletin* of last week sums up the situation as follows: "Advices from Toronto state the season for laying eggs is fully two weeks later than of last year, and that if buyers are not too anxious to rush in and set the pace on high prices and little or no profits, as they did last season, they will get all the stock they require for cold storage and pickling purposes at reasonable prices. There is no doubt, if reports from all the egg sections in Ontario and Quebec are correct, Canada will have a largely-increased production of eggs over that of 1900. At this time last year picklers commenced to buy for their vats at 11 to 11½c., and to-day sales were made at 11½ to 12c. in a wholesale way, about 300 cases being reported to day at the inside figure, and 150 cases at 12c., but not for pickling. Our special cable from London reports a firmer feeling in that market, and in Liverpool at an advance of 3d. per 10 dozen. A small shipment of 10 cases was made to Glasgow last week via St. John, N.B."

The market here keeps steady at about 11c. for case lots, with heavy offerings. On Toronto farmers' market eggs bring 13 to 14c. per dozen.

On the farmers' market dressed chickens are quoted at 60c. to \$1.25 per pair, and turkeys at 12 to 15c. per pound.

Hay and Straw.

Cable reports a dull market at Liverpool for Canadian hay. The Government is still buying hay for South Africa. In all 12,890 bales were shipped last week. The Government at country points east is paying \$10 to \$10.50 for No. 1 and \$9.50 for choice No. 2 for baled hay. Montreal quotations are: No. 1, \$11 to \$11.50; No. 2, \$10 to \$10.50; and clover \$8 to \$9 per ton in car lots.

Prices here are unchanged at \$9.75 to \$11 for cars on track. Baled straw is quoted at \$5.50 to \$6 per ton in car lots. On Toronto farmers' market hay brings \$15 to \$16, sheaf straw \$9.50 and loose straw \$6 to \$6.50 per ton.

Seeds.

Red clover is quoted at Montreal at \$12 to \$14 per cwt. and alsike at \$12 to \$15. Timothy sells there at \$2.50 to \$3 per bus. and flax seed \$2 to \$2.25 per bus. On Toronto farmers' market there is no change in prices from last week's quotations.

Cheese.

The wind up of the cheese season of 1900 and 1901 has proved very disappointing on both sides of the Atlantic, and has resulted in heavy losses. Last year the old stock was well cleared off at this stage and foders were selling at 11c., while contracts were easily made at 10 to 10½c. This spring it is difficult to get 9½c. for the finest Westerns at Montreal, while foder cheese is reported selling at some Western Ontario factories at 8¾c. There is, however, only about one-quarter of the foder cheese being made this year to what there was a year ago. Held stock on this side is being sent forward very rapidly, holders evidently realizing that the situation is not likely to improve later on.

Butter.

The *Trade Bulletin* sums up the butter situation of the week as follows: "The easier market reported by us last week has become more pronounced, and prices for choice fresh made creamery are 1½ to 1¾c. lower than at this time last week, sales of Eastern Townships creameries selling at 18½c. f.o.b., and to-day the sale of the make of a very fine factory was placed at 18¾c. f.o.b. equal to 18½c. here. This morning a lot of 50 pkgs. of fresh Eastern Townships creamery sold at 19c. here, and a lot of 25 pkgs. at the same figure. A lot was also sold at 18½c. There has been some enquiry for Western creamery for British Columbia, and we hear of a car load being placed at 18¾c. f.o.b. There has also been a demand in this market for good held creamery, which has sold for Lower Ports account at 16 to 16½c., but to-day it would be difficult to get the outside figure. In dairy butter sales were reported to us to-day of about 75 pkgs. of Manitoba at 12½ to 14½c. as to quality, while a lot of 30 tubs of very nice Western brought 15c. Receipts of creamery are increasing. The shipments last week via Portland were 729 pkgs."

Choice creamery is quoted here at 19 to 21c. for prints and 18 to 19c. for tubs and boxes. Receipts of dairy are large and are



Modern Competition

Makes it necessary to employ the best labor-saving quality-producing appliances. The Combined Churn and Butter Worker increases yield, improves quality, and saves labor.

The Victor Combined Churn and Butter Worker

Takes the lead. If you want to insure the success of your creamery for this season put in a Victor. Write us for prices.

Creamery Package Mfg. Company

COWANSVILLE, QUE.

Boilers and Engines, Australian Boxes, Refrigerator Machines, Hansen's Butter and Cheese Color and Rennet Extracts, Wells, Richardson & Co.'s Improved Butter Color, Spruce Tub, Stearn's Style Spruce Tub, Victor Combined Churn and Worker, Ideal Skim Milk Weigher.

piling up rapidly. Choice pound and large rolls are selling in jobbing way at 14½ to 15c. On Toronto farmers' market butter brings 15 to 18c. per lb.

Cattle.

The run of live stock at the Toronto Cattle Market on Friday was large, 79 carloads all told, composed of 1,207 cattle, 1,500 hogs, 100 sheep and 25 calves. This made a total of 250 carloads of stock for the past week, of all kinds, of which there were about 4,500 cattle and 5,500 hogs. The total run for the same week last year was 165 carloads, which shows an increase of 94 loads in favor of this year's receipts.

The quality of fat cattle, generally speaking, was not so good as the demand required. Among the export class there were too many light weights that were in an unfinished condition. And in the butchers' classes there were too few of the best quality cattle, such as will dress out well and make good money for the butcher handling them.

While there was a fair trade for the best classes of shipping and butchers' cattle at about the same prices as on Tuesday and Thursday, the market was not nearly as brisk. And the poorer qualities in both classes were easier. Considering the heavy deliveries of the week, the wonder is that the market kept as steady as it did. The demand for feeders and stockers was not quite as strong as at some of the late markets. Only a medium quality of milch cows and springers were offered.

Export Cattle.—Choice loads of these are worth from \$4.70 to \$5.15 per cwt. and light ones \$4.30 to \$4.60 per cwt. Heavy export bulls sold at \$3.85 to \$4.25 and light ones at \$3.40 to \$3.50 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters', weighing 1,000 to 1,100 lbs. each, sold at \$4.25 to \$4.40 per cwt., good cattle at \$4.00 to \$4.10, medium \$3.50 to \$3.85, and inferior to common at \$2.80 to \$3.25 per cwt.

Feeders.—Heavy, well-bred steers, from 1,000 to 1,150 lbs. each, sold at \$4.00 to \$4.35, and other quality at \$3.60 to \$3.80 per cwt. Light steers, weighing 800 to 900 lbs., sold at \$3.50 to \$3.75 per cwt.

Stockers.—Yearling steers, 500 to 600 lbs. each, sold at \$3.25 to \$3.50, off colors, and inferior quality at \$2.50 to \$3.00 per cwt. Yearling bulls, 600 to 900 lbs. each, sold at \$2.00 to \$2.50 per cwt.

Calves.—These are lower at Buffalo, choice to extra bringing \$5.25 to \$5.60 per cwt. At Toronto market ordinary calves bring \$2 to \$8 each.

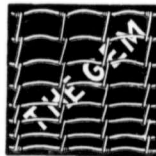
Milch Cows.—These sold at from \$25 to \$45 each. Choice cows would bring more money.

Sheep and Lambs.

Prices were steady for sheep and lambs as the supply was not large. Sheep sold at \$3.50 to \$3.75 per cwt. for ewes and \$3 to \$3.25 for bucks. Yearling grain-fed lambs sold at \$4.50 to \$5.37½ per cwt. and other quality at \$4.50. The Buffalo market has been fairly active for lambs, choice to extra wool lambs selling at \$5.50 to \$5.75 per cwt. and clipped at \$5 to \$5.10. Sheep have ruled barely steady.

Hogs.

Though the Wm. Davies Co. quoted prices last week at \$7 per cwt. for select bacon hogs the market here did not advance. On Friday select bacon hogs sold at \$6.79½ and thick



COILED SPRING and other FENCE WIRE

for sale at lowest prices. Also **GEM FENCE MACHINE**, the most practical device made for constructing wire fencing. Write **McGregor, Banwell & Co. WINDSOR, ONT.**

AGENTS WANTED

Ideal Steam Cookers lead the World, and are recognized everywhere as the best. Housekeepers and cooking experts say its many advantages over all others are unquestioned. Cooks a whole meal over one burner, on gasoline, oil, gas, electric, coal or wood stove. Reduces fuel bills fifty per cent. Meats and poultry, no matter how tough, are made tender and palatable. No steam in the house. No offensive odors. Burning impossible. **Whistle blows when Cooker needs more water** Send for illustrated circulars. We pay express.



The U.S. SPECIALTY CO.

Adelaide Street East - TORONTO, ONT.

Cheese and Butter

Makers of these articles, in many instances, do not pay the necessary attention to the quality of the salt they use. Some people think that "salt is salt," and it does not matter where it comes from or who makes it. This is a great mistake, for it is essential that to produce the best Butter or Cheese nothing but the purest salt should be used.

The number of prizes obtained by users of **"RIE'S or COLEMAN'S" DAIRY SALT**

at the various exhibitions is conclusive proof that these brands of salt stand unrivalled. For prices, etc., address

R. & J. RANSFORD,

Clinton, Ont.

IDEAL MILK TICKET

THE old-fashioned pass book has been discarded by every up-to-date factory.

The Monthly Statement Card shown here is exact size of front. It is made of stout Manilla, and can either be delivered by the milk-hauler or sent to the patron in an ordinary envelope. On back of card rules are given for "The Care of Milk."

The Cards are now ready; order early.

PRICE:

25c. for 100; or a package of 1000 for \$2.00

Post-Paid.

A factory of 100 patrons will require from 800 to 1,000 tickets during the season.



ADDRESS

The Farming World

Confederation Life Building, Toronto.

Monthly Statement

Of Milk delivered at the _____

Factory during the month of _____

By _____

PUBLISHED BY THE FARMING WORLD, TORONTO

1900	1ST WEEK	2ND WEEK	3RD WEEK	4TH WEEK	5TH WEEK
	LBS.	LBS.	LBS.	LBS.	LBS.
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Weekly Totals					
Per cent. of butter fat in milk					

Total milk supplied for the month.....lbs.

Total butter-fat supplied for the month.....lbs.

On the dates underlined the milk was sour or badly tainted.

The butter-fat test covers the milk supplied for the week or weeks intervening between the last test and the one indicated by the per cent. of fat in above table.

Mistakes or complaints, if reported to the maker or the secretary, in writing, will be promptly attended to.

Read carefully and observe the rules, governing the care of milk, on the back of this card.

and light fats at \$6.25 per cwt. Unculled car lots sold at \$6.60 to \$6.75 per cwt.

The Wm. Davies Co., Toronto, will pay \$6.75 this week for select bacon hogs, and \$6.25 for light and thick fats.

Montreal quotations are \$7 for light averages and \$6.75 for heavier quality. The *Trade Bulletin's* London cable of April 18th, re Canadian bacon reads thus: The market for Canadian bacon has ruled steady during the past week in London, with a fairly good demand at last week's advance, as cabled you at the time. The Liverpool market, however, has taken a weak turn, and has lost 6d., but at the decline holders are conservative in their offerings, owing to light stocks. In London No. 1 Canadian is quoted at 59s. to 62c.

Horses.

A Montreal report states that quite a few remounts have been purchased there by Col. Dent. The prices paid were private, though it is reported that some eight or nine sold at \$115 to \$140 each. There is an improved demand there for heavy draughts and sales of about 20 of these animals have been reported at from \$150 to \$175 each, a pair of fine heavy bays bringing \$380. The Sheddin Company is said to have bought a number of heavy draught horses recently preparatory to the busy season. Quite a number of light roadsters, driving and saddle horses have sold at from \$85 to \$150 each, a very fine brown saddle horse being placed at \$200. Carriage horses have realized from \$180 to \$250 each, fancy animals being quoted at from \$350 to \$400 each. Mr. J. S. Dunning, of Brysonville, P.Q., sold a match chestnut team for general purposes for \$245 and 5 or 6 light roadsters at \$85 to \$115 each. Quite a few common hacks have changed hands at prices varying all the way from \$25 up to \$45, according to condition, age, etc.

Very little if any business was done in the regular classes at Grand's last week. A few second-hand horses sold at low prices. Col. Dent is in Toronto this week selecting horses for remounts. W. Harland Smith, of Grand's has upwards of 250 horses for his inspection purchased in all parts of the province. Col. Dent is reported to have purchased 300 remounts in London last week.

Summer Cultivation and Conservation of Soil Moisture.

(Continued from page 884.)

by cutting off the intimate relationship of the capillary tubes with the atmosphere.

Nature's way of conserving moisture in the forest was by mulching with leaves and decomposed vegetable matter, and we cannot do better than follow her example. While we cannot use a mulch of leaves on our cultivated fields we are able to substitute for it the dry earth or soil mulch.

A soil mulch is established by thoroughly fining and pulverizing two or three inches of the surface soil, and although it may be as dry as dust, it, nevertheless, protects the soil beneath it. Then, by constantly stirring this top soil with the cultivator and harrow every few days, the capillary tubes or pores are kept broken or cut off just below the surface, and the moisture from below is prevented from escaping by the soil mulch, and is forced to pass through the tissues of the plants.

Teacher—How do you account for the phenomenon of dew?

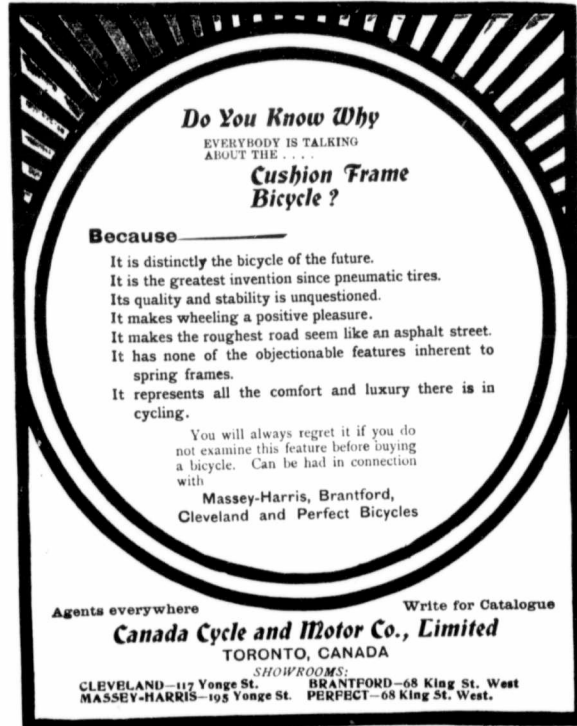
Boy—Well, you see, the earth revolves on its axis every twenty-four hours, and in consequence of this tremendous pace it perspires freely.—Tit-Bits.



IF PEOPLE ONLY KNEW THE ADVANTAGES OF USING OUR "SAFE LOCK" METAL SHINGLE

for roofing houses, churches, barns, etc., they would not consider wooden shingles or any other style of roofing. "Safe Lock" shingles are very durable, have no parts to get out of order, and make a fire and lightning proof roof, very ornamental in appearance. We mail free model samples, catalogue and estimates.

THE METAL SHINGLE AND SIDING CO.
PRESTON, ONT. LIMITED.



Do You Know Why EVERYBODY IS TALKING ABOUT THE ... Cushion Frame Bicycle?

Because

- It is distinctly the bicycle of the future.
- It is the greatest invention since pneumatic tires.
- Its quality and stability is unquestioned.
- It makes wheeling a positive pleasure.
- It makes the roughest road seem like an asphalt street.
- It has none of the objectionable features inherent to spring frames.
- It represents all the comfort and luxury there is in cycling.

You will always regret it if you do not examine this feature before buying a bicycle. Can be had in connection with

Massey-Harris, Brantford, Cleveland and Perfect Bicycles

Agents everywhere Write for Catalogue

Canada Cycle and Motor Co., Limited
TORONTO, CANADA

SHOWROOMS:
CLEVELAND—117 Yonge St. BRANTFORD—68 King St. West
MASSEY-HARRIS—195 Yonge St. PERFECT—68 King St. West.

Oil Spraying In Winter with the Spramotor



The best time to exterminate orchard pests is before they are hatched. Winter spraying does that. A mixture of oil and water put on in the winter will prevent any kind of bug, fly, worm or parasite ever seeing the light of a spring day. A certain cure for San Jose scale.

We publish a fine book all about winter spraying and every other kind of spraying which we will gladly mail free to anyone writing for it.

THE SPRAMOTOR CO.
London, Ont.

The Atlantic Refining Co.

NO COMBINE

Elastic Carbon Paint

TORONTO.

Especially adapted for farm buildings; proof against weather, fire and rust; will not crack, run, blister or scale; will stop leaks, and last a lifetime; great protector for every thing from a hot boiler front to a plow, bridge, roof and fence. Our immense buildings are covered with Metallic Roofing and Siding and painted with ELASTIC CARBON PAINT. Write us for price. We have received thousands of valuable testimonials from Canadian and American customers. Manufactured in Canada only by THE ATLANTIC REFINING COMPANY, Manufacturers and Importers of Illuminating and Lubricating Oils, Grease and Specialties, Foot of Jarvis Street, TORONTO, CAN.

AS AND DEAL ASOLINE ENGINES

BRANTFORD ENGINES.

STRICTLY HIGH GRADE.
2 to 25 H.P.



The Perfected Product of Many Years' Experience.

Also Makers of Steel Windmills and Waterworks Outfits, Etc.


WRITE US.

GOLD SHAPLEY MUIR

BRANTFORD CAN.

FLEMING'S LUMP JAW CURE

Lumps ON... Cattle



Trade Mark should be promptly heeded. It may be Lump Jaw. This disease does not necessarily appear on the jaw. Any part of the animal may be attacked. Our illustrated pamphlet, sent free, tells you how to detect it. It also explains why

Fleming's Lump Jaw Cure cannot fail to cure. It is guaranteed to cure—not Lump Jaw alone, but all lumps and swellings. It is just as certain a cure for Spavin, Curb, Splint, Ringbone, etc., on horses.

Constenay, E.C., Oct. 1st, 1900.
Gents.—I have never had a failure with lumps on cattle, two applications of Lump Jaw Cure removing them clean, and one bottle sometimes curing four heads. Find enclosed \$2.00 for another bottle.
B. C. CRAWFORD.

Price \$2 per bottle, or three bottles for \$5. Sold by druggists, or sent prepaid by mail. FREE—our illustrated Pamphlet, to readers of this paper.

FLEMING BROS., Chemists
Room K, 58 Bay Street, TORONTO, Ont.

Wilson's High Glass Scales

Special Offer for April

2000 lb. Scale Drop Lever.

Every Scale Tested.

This offer is for FARMING WORLD readers only.

Diamond Steel Bearings
Get Prices now



C. WILSON & SON

50 Esplanade Street E., TORONTO

Why—In these times of keen competition, is there such a great demand for this All Swoe Flexible Harrow?

BECAUSE The Flexibility of the Harrow enables it to adapt itself as readily to rough and uneven ground as to smooth, and the oscillating motion produced by its flexibility pulverizes the ground, and leaves it in a loose and more porous condition than any other Harrow, and it is made of the very best material money can buy for the purpose. The bars are made of Hard Spring Steel, very stiff and strong, the hinges and teeth being of solid steel, all of which are of a higher grade than is possible to use in any other make of Harrows.

We can guarantee more than double the strength and wear in this Harrow than there is in any other make.

Parties wishing a first-class Harrow will do well to write us direct or apply to the local agent.

OUR MOTTO: "Not how Cheap but how Good."

TOLTON BROS., GUELPH, Ont

BELL PIANOS AND ORGANS



Built to last a lifetime
By the Largest Makers
In Canada

BELL is the Musician's Favorite

The BELL ORGAN AND PIANO Co., Limited, Guelph, Ontario

Catalogue No. 41 Free

Provan's Patent REVERSIBLE Carriers, Fork and Slings

For Round Iron, Wood, or Angle Steel Tracks

Have now become a Standard of Excellence with the Farmers of Canada and the United States. At the World's Fair, Chicago, 1893, the only medal and Diploma given on Hay Carriers, Forks and Slings, was awarded to us on these implements. Following is a copy of the Judges AWARD: "For open trip hook to receive the sling; automatic clutch, adjustable for size of load desired; ingenious design of stop block, which enables perfect control of carriage; no springs required for locking car which has motion in all directions; compact form of fork which can be tripped in any position; the car is reversible and of double action; for novelty, ingenuity and usefulness, excellence of material and construction." Manufactured by



James W. Provan, Oshawa, Ont., Canada.

Special Discount for Cash. Correspondence Solicited.

One New Sparamotor For Sale

This machine is complete and can be had at a bargain. Enquire at or write to

THE FARMING WORLD,
Confederation Life Bldg. TORONTO, ONT.