

THE FARMING WORLD

THE FARMING WORLD

FOR FARMERS AND STOCKMEN

CONFEDERATION LIFE
OF
TORONTO

Ye Old Firm of Heintzman & Co.

BARGAINS IN PIANOS

For Quick Clearing—Shipped to Any Part of Canada

THIS has been a remarkably busy season in the selling of the well-known Heintzman & Co. Pianos. Large sales of our own instruments mean the taking in exchange large numbers of pianos of others makers. They are crowding our warerooms at every corner, and we must rid ourselves of them. The lot embrace those made by well-known Canadian and foreign manufacturers. Every instrument is carefully overhauled by us and put in first-class condition before being offered for sale—then price is cut down to a mere fraction of the original. The list that follows is a tempting one for those who act quickly:

- (1) Heintzman & Co., Upright Cabinet Grand, 4 feet 10 inches high, 7 1-3 octaves, carved panels, rosewood case, manufacturer's price \$600, now \$3.95. Terms \$15 cash and \$7 a month.
- (2) R. S. Williams Upright Piano, rosewood case, 4 feet 8 inches high, 7 1-3 octaves, carved panels, in A1 condition, manufacturer's price \$375, our price \$225. Terms \$10 cash and \$6 a month.
- (3) Heintzman and Co., Upright, walnut case, 7 1-3 octaves, 3 pedals, continuous music rack, carved panels, good as new, regular price \$375, our price \$275, \$15 cash and \$6 a month.
- (4) Mason and Risch, upright, rosewood case, 7 octaves, carved panels, 4 feet 6 inches high, good condition, regular price \$400, our price \$250. Terms \$10 cash and \$6 a month.
- (5) Newcombe Upright Cabinet Grand, 4 feet 8 inches high, rosewood case, 7 1-3 octaves, original price, \$450, our price \$245. Terms \$10 cash and \$6 a month.
- (6) J. and C. Fisher, New York, Upright, 4 feet 8 inches high, 7 1-3 octaves, cabinet grand, handsomely carved panels, rosewood case, a beautiful instrument, in first-class condition, original price \$600, our price \$275. Terms \$15 cash and \$7 a month.
- (7) New York Steinway Square, rosewood case, carved legs, thoroughly overhauled, good as new, regular price \$600, our price \$175. Terms \$10 cash and \$6 a month.
- (8) New York Weber Square Piano, rosewood case, 7 octaves, serpentine moulding, carved legs, in elegant condition, regular price \$600, our price \$175, \$10 cash and \$5 a month.

A handsome stool and scarf given free with every piano. Freight paid to any point in Ontario, and special rates for shipments out of the province. A result of these special sales that we have been running lately has been the sending of large numbers of pianos to all points in the Dominion, for people have learned long since that the promises of this house are ever well kept. A clean record of fifty years means something—establishes undoubted confidence.

HEINTZMAN & CO., - 116-117 King Street West, TORONTO

Always Mention THE FARMING WORLD when writing to Advertisers

GOLD AND BUTTER-FAT.

Millions of dollars are lost every year by gold-miners who are content with the larger nuggets and richest ore, or who are satisfied with a meagre living because they know of nothing better. Improved mining machinery will recover fortunes from the refuse of these mines, where primitive methods were employed.

Fortunes are thrown away annually by users of cream separators, which through their improper construction, recover simply the largest fat globules and allow the smaller to escape with the skim-milk. The "Alpha" Discs are the means of many a man's business recovery, because they get for him that part of the butter-fat wasted by other systems of inferior design, and which, in many cases, represents the profits of the business.

If you separate milk, do it thoroughly.

THE DE LAVAL SEPARATOR CO.

NEW YORK
WINNIPEG
MONTREAL

77 YORK ST.
TORONTO

CHICAGO
PHILADELPHIA
SAN FRANCISCO

The Farmers' Binder Twine and Agricultural Implement Manufacturing Co. of Brantford

LIMITED



Co-operation of nearly eight thousand farmers indicates mighty strength, and was originally pitted against one of the greatest binder twine combines the world has ever known.

The twine Trust is a thing of the past, while this Company has survived the opposition storms of ten seasons. Scepticism and indifference alone in the ranks of the farmers can now drive us from competition.

If we have no agent representing us in your locality, give us immediately the name of a good man in the interests of this Co-operative movement and your own homes.

Joseph Stratford,
General Manager

The Spramotor Wins

Gold Medal and Highest Award at the Pan-American Exposition at Buffalo

In every case where merit and effectiveness are the points at issue the Spramotor has always lead all others. Nor yet is this true in open competition only. The fruit growers of the world have also set their seal of approval upon and declared for the Spramotor. The use of this machine will turn losses into profits and make the orchard pay as it never paid before. It wipes out all sporadic and fungous diseases and kills all kinds of insect pests. It is unequalled for whitewashing and painting buildings inside and outside, fences, stone walls, etc. Made in the most durable way, with solid brass castings and all parts interchangeable. Write at once for our 80-page book "A Gold Mine on Your Farm." It is full of pointers and suggestions, formulas etc., of interest and value to farmers, orchardists and fruit growers generally. We mail a copy free.

SPRAMOTOR CO., Buffalo, N. Y. London, Can.

In the Dairy

The purity of Windsor Salt shows largely in the increased demand from the largest dairies. For rich, delicate flavor, and quickness with which it dissolves, in butter or cheese, it is unequalled

Windsor
Salt

Best Grocers Sell It

SIDING

In Ornamental Patterns made from Steel Sheets is just what is wanted for dressing up old buildings or to use on new ones.

We have many designs to select from, including Trimmings and Ornaments, and send free estimates and catalogue upon request. We can also supply Metal Roofing, Ceilings, etc.

THE METAL SHINGLE & SIDING CO., Limited,
Freston, Ont.



BUCHANAN'S UNLOADING OUTFIT

Works well both on stacks and in barns, unloads all kinds of hay and grain either loose or in rathens.

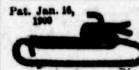
Send for catalogue to

M. T. BUCHANAN & CO., Ingersoll, Ont.

BETWEEN SEED-TIME AND HARVEST . . .

Is fencing interval. The "BEAVER DIGGER" is as far ahead of old style post hole apparatus as the self binder is ahead of the cradle. Pays for itself in one day. Address,

HALL & SON,
50 Bay Street, Toronto.



Agents are making as high as \$1 a day selling the
STANDARD SHOCK
and FODDER TIE.

Sells at sight. Write at once for terms and secure choice of territory. Samples free. THE STAN DARD FODDER TIE COMPANY, Wauson, Ohio

The Farming World

For Farmers and Stockmen

Vol. XX.

MAY 27th, 1902

No. 20

Patronize the Show Ring

THE article elsewhere in this issue, specially written for *The Farming World* by Mr. A. W. Smith, is worthy of consideration by every breeder of pure bred stock and especially the beginner. There is no better education to be had anywhere than for a young breeder to take some of his best animals into the show ring, and measure up his product with that of the other competitors in the ring. If his animals have any weak points he will be sure to find out where they are and can have them improved upon in future lots. A beginning has always to be made in any line of work and few, if any, of our breeders who have won and are to-day winning distinguished honors in the show-ring, came to the top the first time they exhibited. It was only by measuring themselves up over and over again with the older and more-experienced exhibitors that the highest honors have finally come their way. We would, therefore, endorse all that Mr. Smith has said on this point, and urge upon breeders to prepare a few animals for this season's shows. Don't enter a large number with the hope of sweeping the prize list, but a few select ones brought out in good form and bloom.

Russia and the Meat Trade.

Last week in discussing Britain's butter imports we referred to the extra effort Russia is making to increase her exports to England and the remarkable success she is having. Russia's efforts are not alone confined to butter exports. She is now making a big push to extend her trade in chilled meats with Great Britain. Last autumn a deputation from Russian Agricultural Societies visited England and made arrangements for the importation of English prize stock to Russia for breeding purposes. At present Russian beef is much below the standard required by the English markets and if sent there would probably not find sale. But with some more attention to breeding and feeding as seems likely to be the case in the future Russia may become no insignificant competitor in the English meat trade. The Russian government is giving the idea active support and has granted a preliminary sum of £16,000 to the peasant farmers of South Russia to further the scheme. The great land owners of the country are taking the matter up and have purchased largely of stock for breeding purposes.

This feature of the meat trade

should not be without interest to Canadians.

Transition in Agricultural Shows.

No country in the world has as many well attended agricultural shows as Great Britain. These begin in May and continue during the summer and fall, one every week, and sometimes two or three a week are held at some point in the United Kingdom. As would be expected, these shows are largely live stock exhibitions. As a rule, they are run almost entirely without so-called special attractions as we call them in this country, though in some of the smaller ones leaping, or athletic competitions have been conducted. These have proved successful drawing cards, and have largely increased the gate money. To so large an extent is this the case that some of the larger shows are beginning to make use of these agencies for increasing the revenue. The Mark Lane Express, dealing with this feature, says:

"Seemingly, it is a great pity that the success of agricultural shows should so much depend on this and other attractions; but it is so, and we must combine amusement largely with utility in future to make any agricultural show, large or small, prosper."

But while agricultural shows have been plentiful in the past, their number is likely to be increased in the future very materially. This increase will be brought about largely by the permanent location of the Royal. The large shows, which stand next to it in magnitude, will likely be better patronized by the towns in which they are held, while other large shows are in prospect. The most prominent of the new ones discussed, is one covering the four northern counties of England, and perhaps some of the border counties of Scotland. Of course, if this materializes the smaller shows will be amalgamated with it and form one big agricultural show for the North of England district.

The show business in the old land is evidently in a state of transition, just as our local agricultural shows here are at the present time. Here the tendency is to do away with amusement attractions and replace them by educational features. Across the water, as the above would indicate, there seems to be a little tendency the other way. We would advise them to move slowly, or rather not at all, in the direction of amusements.

The Mexicans Want Pure Bred Stock.

The Americans are giving some attention to the development of the Mexican market for pure-bred stock. So important is the future of this trade considered that the U.S. Department of Agriculture has taken the trouble to issue a special bulletin on the subject. The breeds of cattle desired for this trade are the beef types. There has grown up of late a great demand in Mexico for bulls of the beef breeds, for improving the size and quality of the small Mexican cattle. The largest cattle ranches are in the northern part of Mexico where it is not uncommon to find upon a ranch as many as 20,000 head of cattle. It is stated that one Mexican cattle rancher brands from 30,000 to 40,000 calves annually on his own ranges. These figures give some idea of the demand there would be for bulls as soon as the ranchers see the necessity of using a better class of animals.

This demand for better breeding bulls has developed in recent years. Previous to the passage of the United States tariff of 1897, a large number of Mexican range cattle found a market in the United States, where they were brought in the dry season for pasture and for feeding. As many as 400,000 were annually brought over. Since 1897 the tariff has been \$3.75 a head for animals valued at \$14 or less and the annual importations have fallen to about 100,000 annually. The Mexican was thus compelled to seek other markets, and in doing so has found it necessary to greatly improve the quality of his cattle. Hence the demand for better breeding stocks. Should not Canadian breeders have a share of this trade?

Look After the Milk Product.

Patrons of cheese factories and creameries should be guided in the care of the milk this season by the repeated warnings of the past winter. At the dairy conventions, and every gathering of farmers, where dairy matters were discussed the statement was made over and over again that if we desire to see an improvement in the quality of our dairy products a better quality of milk must be secured at the factories. The parties who are responsible for these warnings are reliable men in the trade and others who have made a close study of our dairy methods and of the weaknesses of our present system of making cheese. One of the great

sources of weakness in our co-operative dairy system at the present time, is, as Prof. Dean pointed out in our dairy number a few weeks back, to be found at the patrons' end of the business. It is his duty, therefore, to look into his own method of doing things and endeavor to supply a better quality of milk to the factory.

It may be said by some that this advice is easier given than followed. But no impossible or very arduous task is being imposed upon the milk producer. All that he is asked to do is to give a little more attention to the feeding and milking of his cows and to caring for the milk properly. All this can be done with the expenditure of very little energy and time over and above what he is giving at the present. Indeed, in many cases no more time need be expended than at present, but it should be expended in a more systematic and intelligent manner. One great reason why many dairymen fail in these little things is that they carry on their work without system. No work requiring so much attention to detail and to the little things, as the care of milk does, can be successfully carried on unless system is used.

As has been stated frequently, the keynote to the successful care and preservation of milk is cleanliness. If every dairymen could have this impressed upon his mind in such a way that when it came to the milking and caring for the milk, he would be compelled to give heed to the admonition, "be

clean," we need have no further concern about the quality of the milk supplied to our cheese factories and creameries. Thorough cleanliness applied to the milking of the cows, to the straining and aerating of the milk, to the preserving of the milk over night and to the washing of the milking utensils would go a long way toward perfecting the quality of the milk produced in this country. Add to this the preservation of the milk from all foul odors about the stables, the milking yards and the milk stands or better allow no foul odors to develop about these places and all difficulty in connection with the care of milk vanishes.

It is hardly necessary for us to develop this matter any further. Every patron is, or should be, familiar with what is required in caring for milk, and two principles are applied—cleanliness and protection from bad taints—there should be little difficulty in his performing satisfactorily the duties devolving upon him. Of late years the preserving of milk over night at a low temperature, of say from 60 degrees to 70 degrees, or less, is recommended as being better for securing a good quality of milk. To get this temperature during the warm weather it would be necessary to use ice or cold water. But it will pay every patron to make some provision for doing so. Let 1902 be the banner year so far as the quality of the milk at our cheese factories and creameries is concerned.

to put as many of the prizes my way as he thought I was entitled to, said in my hearing: "The man who beats Mr. So-and-so, must have them fifty per cent. better than he has." I then and there registered a vow, that I would produce that fifty per cent. if necessary, and "I got there."

I would very strongly urge upon those who have good stock, and wish to have them better if possible, and it always is possible, to prepare and show a few at least, and as many as you feel will do you credit, and you will be surprised perhaps how much better you can have them the second or third year than the first. Do not be afraid to try.

Others hesitate to go to the larger fairs, because they are not in a position to take a full flock or herd with them. While in reality the man who fits a few head, say a pen of lambs and two or three older ones perhaps, or a herd of calves or other young cattle, or a few pigs, has the chances of success largely on his side. He has, in that case, fewer to give his attention to, and is very likely to feed and care for them himself, or very closely supervise it, and all along the line, the men who personally prepare their stock for showing meet with the greatest success.

Occasionally a man is found on this side of the ocean who will have as much interest in, and devotion to the care of the animals in preparation for the show-ring, as the owner, but they are very rare, and generally, when a wealthy man succeeds in sweeping up the prize list, he does so largely with animals already prepared by the skillful care and attention of the previous owners, who had put their thought and time to bring them so well forward, and the profit is much larger, proportionately, to the man who breeds and fits his own animals, for his flock or herd is very much more likely to improve, he naturally gives more attention to the breeding and merit of the herd or flock from which he expects to produce the winners, than the man who buys up a whole flock or herd to show, and who, naturally, is a speculator rather than a breeder.

A. W. Smith.

Breeders Should Exhibit Their Stock

One of the very best advertisements for any breed is that their breeders exhibit the best specimens of the result of their skill in mating and handling them at the leading exhibitions.

So many breeders hold back because of a dread of being beaten in the show ring, and fancy, because two or three exhibitors have been successful for a few years perhaps, that those commencing are handicapped by the prestige of the old hands in the work. This is a decidedly foolish way in which to look at the matter, because if you admit as a fact that there is some truth in such a contention, we must also consider the fact that no animal has yet been produced that cannot be improved upon, and no breeder has been able to produce one that another breeder could not equal or surpass, and if the beginner repeatedly overtops his competitor he is sure to come to the front, and then he will find the reward equal to the effort necessary to secure it, and the tables being turned, he will find he has to work harder than ever to hold what he has got, and if a large number of the breeders of any class of animals are determined to win—note the tremendous advantage to the breed. Wherever you see keenest competition from sever-

al breeders of any one class of animals, you will see, also, the greatest improvement in that class, and the more competitors the greater the advance. Every exhibitor cannot win first prize in every case, but five times out of six, at the very least, the best animal gets it. I would urge upon a large number of the champions of every breed, to fit and exhibit at least a few of their best, with every effort to have them better than any person else can have them, and the recompense, through the advancement of the breed, even if you do not secure sufficient of the prize money to pay all the expenses connected with the preparation and showing, it will make the breed more attractive, and draw more custom and more profit.

Do not be afraid of the fellow who has been winning, if he has good stuff it will be all the more credit to beat him, and it can be done. I very well remember, when I began showing sheep, after the flock had dropped out of the ring for some twenty years or more, and when I felt sure the stock I put in the ring was equal to, or better, than those that beat them, and after I had gone through the fight, and come out only second best, one of the committee of judges, who I fancied had not been able

It was reported at Ottawa last week that possibly the Hon. Mr. Fisher, Minister of Agriculture, will visit Japan next fall with a view to studying the opening there for Canadian trade. The Japanese are becoming large consumers of meat and bread stuffs and it would seem as if there were an opening there for Canadian meats and flours.

"Willie, did you give Johnny Smith a black eye?"
 "No ma'am."
 "Are you sure?"
 "Yes, ma'am. He already had the eye, an' I jest blackened it for him."—Chicago Post.



The Sydenham River, Sombra, Ont.

Our Western Letter

The Binscarth Ranch. Cattle Embargo. Transportation. Calgary Sale a Success. Grinding Wheat in Bond.

Winnipeg, May 19th, 1902.

Ten years ago there was no more prominent figure in Western affairs than the late W. B. Scarth. He was interested in almost every undertaking of any magnitude that had for its object the betterment of agriculture, or the advancement of Western Canada, as well as many of minor importance. It has been said that he was ten years ahead of the times. As an illustration of this, might be mentioned the Binscarth Shorthorn Ranch, which he established in the eighties, and which did more than any other agency to build up the live stock industry in Northwestern Manitoba. This herd was well placed in a good stock district and had the times been ripe for it, would undoubtedly have proven a successful enterprise. The influence of the herd is still seen in the counties of Russell, Silver Creek, and Birtle, and even farther east. But it had to be abandoned, as the market was not ready for high priced stock such as they were producing. The Binscarth herd was dispersed in 1891. As one of the chief promoters of the crofter emigration scheme, as townsite commissioner, and as member of parliament for Winnipeg, Mr. Scarth was in close touch with the Dominion Government, and consequently, his appointment as Deputy Minister of Agriculture in 1895 was no surprise, and met with general approval. Mr. Scarth was a citizen of both the East and West being as well and favorably known in Toronto as in Winnipeg.

We are somewhat at a loss to understand the operations of the institution known as the British Board of Agriculture. They declare that the embargo on Canadian cattle is so recent that they cannot think of removing it, as their policy must be continuous. Shortly afterward they find it advisable to remove certain restric-

tions from Argentine cattle, which were more recently imposed than those on the Canadian trade. They stand convicted therefore of a temporising, time-serving policy. The true inwardness of the matter is that the Argentine breeders are to be coaxed back to their allegiance to the British pedigreed bull, and this is how it is to be done. When Canadian breeders are in a position to demand reciprocity in the cattle business we shall have some concessions from Mr. Hanbury and his colleagues. The Argentine secured the removal of restrictions by imposing counter-acting restrictions. Shall we do likewise?

A million bushels of wheat are now lying locked up in Elevator D, belonging to the Canadian Pacific Railway at Fort William, and cannot be removed until the portions of the elevator destroyed by fire on the 10th inst., are rebuilt. How long this may be cannot yet be stated definitely, but with the projected improvements, will probably require nearly the whole summer for their completion. The Fort William elevators were, at the time of the fire, almost all, wholly or partly, disabled, one undergoing repairs, and another having one engine disabled. Probably the present is a convenient season for such accidents to happen, and the result will be better work next fall when the rush is on. The burning of a "fire proof" elevator does not cause the surprise that might be expected.

"The two great questions of interest to the Canadian people, and which far overshadow all others, are preferential trade and transportation." So declares the President of the Lake of the Woods Milling Co., Mr. Robt. Meighen. The boon of preferential trade, he thinks, can easily be secured by going about it "in the right way."

The improvement of transportation facilities, he believes, will be secured by extending the Intercolonial to Georgian Bay, in which opinion we are inclined to think the Hon. Mr. Blair, Minister of Railways, is equally pronounced. Railways have, in the opinion of Mr. Meighen, made the Canal system nothing more than an expensive luxury, and he demurs at the proposal to construct further expensive works of that character. Somewhat strangely, it may be thought, Mr. Meighen believes that the export of wheat rather than flour, to the old country is the future of the trade.

The cattle exporters would be infinitely obliged if Mr. Meighen would tell them how "to go about it the right way" to secure preferential or even equal trade with the old land.

The programme of summer meetings of the Farmers' Institutes is now in course of preparation. The meetings will commence about the first week in July.

Stockmen returning from Calgary report excellent exhibits, excellent attendance, excellent speeches, in fact, a good time all around at the combined meetings, exhibition and sale of the Territorial Live Stock Associations last week.

The principle of protection for farm products having been admitted by the British Government, we can see no reason why the Board of Agriculture should perpetuate the subterfuge known as the cattle embargo. Let them come out fair and square and above board with an import duty on beef cattle, and we can have no grounds for crying injustice. There is equal reason for placing a duty on beef as on wheat and flour. Such action is quite within their rights. But no nation, least of all our mother nation, has a right to impose trade restrictions, based on the false assumption that our cattle are diseased. Such action would not be taken in international dealings; why should it be resorted to in dealing with a "Daughter of the Empire."

By the time this appears in print grinding Canadian wheat in bond will be an accomplished fact in Minneapolis. The United States millers regard the Canadian wheat crop with uneasiness. It is what they call, a disturbing element in the market, and their efforts are directed towards uniting the Canadian and United States crops, or so arranging transportation, milling, etc., that they may be treated as one. In other words the international boundary is to be removed in so far as the wheat crop is concerned, if the Minneapolis millers have their way.

The Triumph of the Horse

What a noble animal is the horse. What a friend he has been to mankind in all the ages of the past. The horse was the pride and the admiration of the Greek and Romans thousands of years ago and continued to be through all the generations up to the present time, and to-day, no animal lies nearer to the hearts of the people than the horse. In the Bible, the power and beauty of the horse are frequently mentioned, and no animal has engaged the attention of the historian and the philosopher, none has figured more in poetry and romance than the horse. He is the servant, the friend and the companion of man. He is the most useful and serviceable of all animals in time of peace and indispensable in time of war. Think of these things, dear reader, when this noble animal is under consideration. Is it reasonable to conclude from all the past achievements of the horse that the time of his displacement is at hand?

That warm friend of the horse, Col. F. J. Berry, of Chicago, in writing recently of the horse, says: "Although the prophet of evil may proclaim the horseless age is already ushered in, no machine of steel and steam, no battery motor, no craft can successfully supersede the horse. When the traction engine and steam plow became realities, when electricity and the cable displaced the horse from the street car service, when the bicycle took its place among the necessities of life, and the horseless carriage was something more than a dream, men began to say that the horse had outlived his usefulness as a domestic animal, and many a ready pen predicted his speedy and practical extinction. Then the cry went up from the sensationalists and knowing ones and the press from all over the country that the horse had seen its day, that he was superseded by more useful, valuable and cheaper power, and this fallacy had a great deal to do with the discontinuing of the breeding of horses, from the best horse raising section of the country from '94 to '98, inclusive. Nothing

could be more false or more misleading than the sensational article published by the press throughout the country, and much to the detriment of a large proportion of breeding and raisers of horses, causing many breeders to go out of business just at the time they should have commenced, thus working great harm and ruin to one of the most valuable of industries, false and misleading in all of its forms, for at the present day never was there a stronger demand for good horses. Never did they bring better prices, never were there so many horses in actual service, and there are more horses sold in all of the markets than ever before, with both foreign and domestic demand increasing daily. I am willing to stake my reputation as a horseman with large experience, that horses will not be less valuable in the next ten years than they are to-day, and for the next ten years they will be higher each successive year.

"Until human nature becomes something else, the beauty, strength, intelligence and utility of the horse will be admired by human kind, and a profitable pleasure be found in his production, improvement and varied uses. In his better form possessing capabilities never before equalled, and the approbation of him has never been more genuine or more generous than now. It is true that much of our ordinary service of horses is being much more cheaply performed by machinery. The same is true of much of the labor of men. All this reduces the value of the low grade individual, whether horse or man, but it does not threaten the extinction of either species. On the contrary new demands are constantly arising. It is a significant fact that horses, like men, are retiring from the cheaper service, and that from all sides the call is for animals of good form and action, quality, docility and high intelligence. The ill-bred mongrel is not wanted because he cannot do what is now demanded of the horse, and if he changes hands at all, is at a normal price, much below the cost of production."

ficial means and that applicable to stables, in which the air is warmed only by animal emanations. In the latter case, if there is a vent at the ceiling, the foul air being the warmest and therefore the lightest will find its way out at the highest possible point especially if its place is promptly taken by fresh air sucked in from below to supply the partial vacuum thus created. The opposite is of course the case in buildings heated by artificial means and without outlets at the ceiling. Under such circumstances the foul air being the heaviest falls to the floor. It is absolutely necessary, in order to ventilate a stable thoroughly, that the foul air should be taken off at the highest point and the fresh air introduced at the floor level. By using the U pipe, as in my system, drafts are entirely obviated, while by means of the damper in the outlet pipe the whole system is absolutely under control and may be instantly adjusted when the number of animals in the stable is suddenly changed.

I would also call your attention to the fact that in the article from which quotation is made, I distinctly state that I discarded louvres altogether and put in instead a galvanized iron pipe or chimney furnished with an ordinary rain cap. It is necessary, in order to keep the outlet always an outlet, which is after all the great secret of perfect ventilation, that there should be nothing to stop the wind or cause a tendency to down draft. In spite of this, however, the illustration accompanying the article shows louvres at the top of the chimney, while the damper, the key-stone of the whole system, is not shown at all.

I trust you will pardon me for calling your attention to these little matters, but I take a deep interest in the question of stable ventilation, and as this particular system works very satisfactorily, I think that any one anxious to try it may as well have the benefit of a correct description. I may say that this plan has been adopted in a number of stables, both for horses and cattle, and I do not know any one who, after a fair trial, would be willing to do without it. It is not patented. Any handy man can knock the boxes together and put them in, while the cost is a mere bagatelle compared with that of most of the so-called systems of ventilation.

Yours respectively,

J. G. Rutherford.
Ottawa, May 20th, 1902.

Correspondence

Ventilation of Stables.

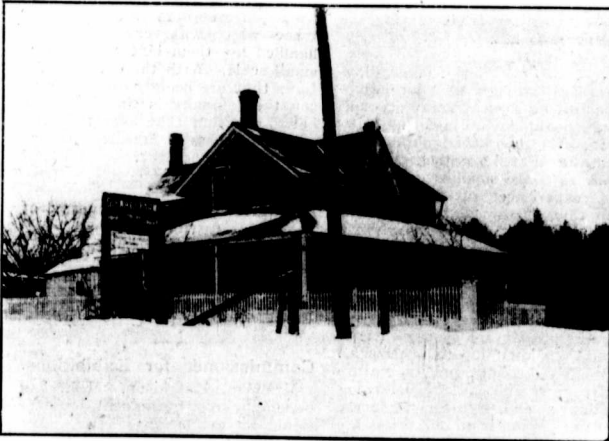
THE DOMINION VETERINARIAN GIVES
SOME GOOD ADVICE.

Editor THE FARMING WORLD

In your issue of May 20th, I notice a description of the system of stable ventilation which I have myself adopted and which I have no hesitation in recommending to others. The description in question is accurate enough so far as the quotation from my paper is concerned, but the writer of your article, in his own notes on the sys-

tem makes a serious error when he says that "the inner arm of the U pipe should terminate near the ceiling or may rise to the ceiling and extend horizontally for some length". There is no objection to the outer arm of the U pipe being any length that the architect may choose but the inner arm terminates on the floor level, this, in fact, being the only object of running the pipe under the foundation. It cannot be too strongly impressed upon stock owners that there is no comparison between the ventilation of buildings heated by arti-

Note—We are pleased indeed to have Dr. Rutherford's views on the question of ventilation. The article on stable ventilation in last week's issue with which his letter deals was prepared from a bulletin just issued by the Ontario Department of Agriculture. The corrections made by Dr. Rutherford in regard to the description of his plan of ventilation as given in that issue should be carefully noted in working out his plan.—Editor.



Front View Glenavy Farm: Property Toronto Poultry and Produce Co.

Raising High-Class Poultry

Work at Glenavy Farm. Early Broilers. Winter Eggs

The rapid development of the poultry trade in recent years in Canada has brought into existence a number of establishments devoted especially to the breeding and feeding of poultry on a large scale. One of these industries, which came into existence a couple of years ago is the Toronto Poultry and Produce Co. This company has already worked up a big trade in dressed poultry and eggs in the city and at the present time is making preparations for conducting the business on a larger scale than ever.

The company's breeding and feeding establishment is located a couple of miles north of the city limits, and is known as Glenavy Farm. Here about \$25,000 is invested in buildings and equipment, the aim of the company being to supply the trade with as much of their own production as possible. The breeding pens and brooder houses are built after the

most approved plan and with the object of producing the bulk of the eggs and young chicks in the winter months when prices are highest. In this particular the company has been very successful.

RAISING EARLY BROILERS

The brooder house especially used for the early broiler trade is a model as regards facilities for rearing young chicks during February, March and April. It was built at a cost of several thousand dollars and is equipped with steam-heating apparatus for controlling the temperature. It is divided into 31 compartments in each of which the temperature can be graduated to suit the age of the chicks.

The plan of raising these early chicks, as explained by Mr. Stewart, the foreman, to a representative of *The Farming World* the other day, is a somewhat ingenious one. There

are as we have already stated thirty-one compartments or separate brooders. To the first of these where the temperature is the highest, the young chicks are transferred from the incubators. They are kept in this one for three days and then transferred to the next one where they are kept at a slightly lower temperature for three days. This plan is followed all the way through the 31 brooders and consequently the chicks are 93 days old and ready for market when they reach the last one.

The feeding of these early chicks is very carefully done. More vegetables and grain are fed than during the summer season beginning with a little meal such as corn meal, oat meal or cracked wheat. Mr. Stewart prefers the wheat or oats as it is not quite so oily. After three days a little meat gravy is mixed with the grain. Milk is not used as it is claimed to be a little hard to digest and consequently not as suitable for chicks raised under hot house conditions as some other foods. Liver forms a large portion of the rations as the chicks grow older. The early chicks have to be handled and fed very carefully and everything about the brooders is kept as clean as possible, the sand in the brooders being taken out and screened every day.

The breed best suited for this early broiler trade is the Leghorn. It matures early, is a good feeder and in three months will average a weight of about 3 lbs. a pair, the weight best suited to this trade. There is money in this trade if properly conducted. During April and early May broilers of the above weight will sell readily at from \$1 to \$1.50 per pair.

THE BREEDING PENS,

The breeding pens are well arranged for both summer and winter use. There are in all four distinct houses with breeding pens in each for 150 hens making room for 600 hens in all. These pens contain at the present time about 500 hens. There are two different types of



A Scene at Glenavy Farm, Showing Winter Brooder House.

pens, one with roosting and scratching pens separate and the other with the two combined. Mr. Stewart prefers the latter as it is more compact and warmer for winter laying. In this the roosts are on an elevated platform about 1½ feet from the ground with the nests attached. The roosts are made in one frame which is on hinges making it convenient for cleaning purposes.

Special attention is paid to the selection of birds for breeding purposes. One of the special points noted is to mate a male bird with a hen that has none of the male characteristic. Very often a hen may in form and action have many of the qualities that predominate in the male. Such a bird should not be mated for breeding purposes. Compact, deep birds should be selected.

Only these birds are kept at Glenavy: White Wyandottes, Plymouth Rocks and White Leghorns. The Leghorns are the most difficult to manage in the breeding season, as they have to be shut up and not allowed out in the runs, unless there is netting over the top. A male bird is placed with about 12 females. At the beginning of the season a careful testing of the fertility of the eggs laid by each breeding pen is carried on. This means a lot of extra work, but is necessary in order to insure the fertility of the eggs for incubator purposes. Besides, a large number of eggs are sold every season for breeding purposes and by a careful test of the fertilizing powers at the beginning of the season customers are certain to secure good eggs for breeding purposes. During the season just closing the 400 layers have averaged about 250 eggs a day.

HATCHING THE CHICKS

Incubators only are used for hatching purposes. The company has over twenty incubators with a capacity of 200 eggs each, fifteen of which have been in constant use for several months past. Very good success has resulted from incubator hatching. The incubators average about 130 chicks out of the 200 eggs put in. After the eggs are in the incubator a few days each one is examined for fertility. The plan used is similar to that described by Mr. Graham on page 530 in *The Farming World* for May 13th last. A second test is made a few days later, so as to make the work doubly sure. So effectively is this work done that after the second test from 90 to 95 per cent. of the remaining eggs turn out thrifty chicks.

During the winter the chicks, as we have already described, are taken to the winter brooder house. In the spring season when warm weather arrives after being kept in the incubator a day or two they are put in outside brooders of which there are 36 at the present time and 25 coops. There are now in these outdoor brooders and coops over 2,000 chicks and more are on the way. These will be fattened

and prepared for the broiler and dressed poultry trade during the summer and fall.

EGG PRODUCTION.

Besides the eggs used for hatching purposes a great many are sold to the company's high-class city trade. The hens kept for this trade are not mated so that only unfertile eggs are supplied customers. The experience at Glenavy has been that hens will lay as many eggs without the rooster as with him and the eggs are better for eating purposes and will keep longer. The Leghorns have been found to be the most prolific layers. Though they are small birds they lay good sized eggs and are consequently a profitable fowl for this purpose. The early Leghorn pullets mature early and will lay the following September and October when the moulting period is on and prices are high. The Rocks and Wyandottes have been found to be the best winter layers. It takes them a couple of months longer to mature than the Leghorns and consequently they do not begin laying till later.

MORE BREEDS.

It is the intention of the company to introduce a few more breeds of poultry at Glenavy and it is probable that very shortly a trial will be made of the Buff Orpington, the noted English breed of poultry. There are a great many visitors during the season and some of the other breeds such as Buff Cochins may be introduced to show people what they are like. No turkeys, geese or ducks are kept though last summer a number of ducks were raised and fattened and which sold readily at Xmas at \$1.40 a pair.

The management is very desirous of aiding farmers and others to breed a better class of poultry and consequently visitors to the farm are always welcome. A visit would well repay any one interested in poultry. The business, however, is not confined alone to the work at Glenavy Farm. The firm are large buyers of poultry and eggs and good rices for supplies of good quality.

We reproduce herewith several views of Glenavy Farm. From these it will be seen that the company's buildings and equipment are quite up to date. We hope to be able to show a few special illustrations of young chicks taken at the farm in a later issue.

Before closing we might add that it is the intention of the company at an early date to open up a number of branch stores in different parts of Toronto, to facilitate the distribution of their high class poultry and garden produce to their numerous customers in the city. This, is in direct line with the policy of the company as we have already pointed out, to greatly extend their business the present season. The company also expects to receive a large share of the out-of-town business, such as at Muskoka and other summer resorts, besides

trade on the steamboats and railways catering to the tourists' trade, which was very successfully handled by them last year on a small scale. With the extra preparations that are being made this season the company is therefore in a better position than ever to carry on the business of breeding, feeding and handling poultry.

Appointed Deputy Minister of Agriculture

Last week, Mr. George O'Halloran, son of James O'Halloran, K. C., Montreal, was appointed Deputy-Minister of Agriculture in succession to the late W. B. Scarth.

Commissioner for Exhibitions.

Mr. Wm. Hutchison, M.P., has been appointed permanent commissioner for exhibitions, at a salary of \$3,000 per annum. The office is a new one and Mr. Hutchison will have charge of the arrangements at exhibitions where Canada may make a display. He is now engaged in preparing plans for Canadian exhibits at St. Louis and Osaka, Japan. Mr. Hutchison acted as Canadian Commissioner at Buffalo last summer and therefore has the experience and other qualifications for this important office.

The number of world's fairs and international expositions is increasing of late, making the appointment of a permanent commissioner necessary. For some time we have advocated such an appointment as we believe this is the only way that Canada can be properly represented at exhibitions.

A person devoting his whole time to this work will be on the look out for suitable material for making displays and can therefore do better work for Canada than if appointed occasionally to look after some one particular exhibition. We believe that where it is found necessary to have Canada represented the very best that we can do should be done. And this can best be done by a permanent officer or department set apart for this work.

The Law of Compensation.

Bridget and Pat were sitting in an armchair reading an article on "The Law of Compensation."

"Just fancy," exclaimed Bridget; "accordin' to this, whin a mon loses wan av 'is sinces another gits more developed. For instance, a bloined mon gits more 'sinse av hearin' an' touch, an'—

"Shure, ain't it's quite thru," answered Pat.

"O'ive noticed it meself. Whin a mon has wan leg shorter than the other begorra the other's longer."

"Does your wife do much fancy work?"

"Fancy work? She won't even let a porous plaster come in to the house without crocheting a red border round it, and running a yellow ribbon through the holes."—Town and Country.

Farmers' Telephones

A great deal is being said and written these days about farmers' telephones. We have had occasion to deal with the subject frequently. But as they serve a useful purpose in any thickly settled farming community, we may be excused for touching on the subject again. They help to make life in the country more pleasant and bring the farmer

controlled by one general company. However, it has been found necessary, after several local companies are organized, to form a general organization, to meet annually or oftener, with power to adopt such rules and regulations as they may deem expedient for the good of the service as a whole.

Rockingham county, Va., has the



A Pen of White Wyandottes, Glenavy Farm.

in touch with the busy world at large and enable him to make himself familiar with the markets and market conditions in an easy and simple way. They have the advantage of not being expensive, and can be built by a group of farmers at very little cost.

A very good description of how rural telephones are organized and erected appeared recently in the *Farm Journal*, one of our many American exchanges, a part of which is as follows:

Let six, eight or ten farmers each build one-half mile line and connect their houses by telephone. These ten, by some persuasion, can induce ten others to extend the line on this same plan. After forty or fifty are thus connected things will become interesting, and the lines can easily be extended in all directions over your country, and will soon work their own way out into adjacent counties.

The county being made up of a number of local companies, each section or neighborhood erects and controls its own line and phones, collects his own tolls, and keep the line and phones in repair.

The lines from the different sections are run to various central points and there connected by switchboards. Tolls collected from outside parties are usually sufficient to defray the necessary repair expenses, with a surplus left to pay a good interest on investment. However, a small fee is annually collected from each phone owner to maintain the switchboards.

This plan is popular, since each section controls its own "affairs." If one local company desires to make improvements or changes they consult among themselves only, and are not compelled to get permission from other sections, or from executive officers living probably at a distance, which would be the case if the whole system was

largest rural telephone service in the United States. Three thousand farmers there have phone connection, each at a cost of the purchase of one telephone, building of one-half mile line, total investment of about \$30.

The towns are not organized and wired on this co-operative plan. All within the corporate limits are required to pay an annual rental of \$15 to \$25. Everybody but Old Peter Tumbledown having phones in all the country round, draws the business houses in line, and those who may desire a share of the

way, and would advise that it be kept a purely farmers' system, owned, operated and controlled by farmers, having no entangling alliances with any party or company whose interest or intentions you may think do not coincide with yours, as they may cause you to depart from the path you have mapped out.

The object of the usual toll-line company is, of course, to make money, to get every penny possible for the service rendered.

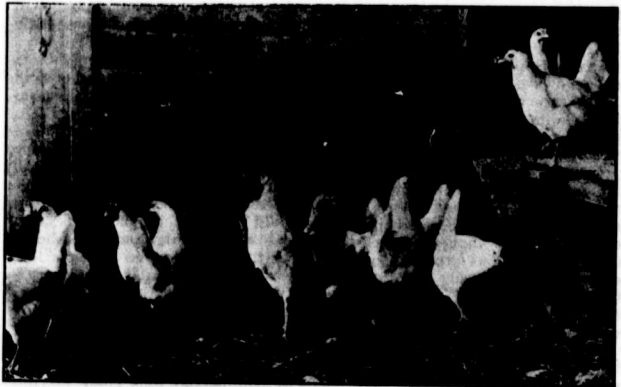
The object of this farmers' plan is diametrically opposite, as they aim to make sufficient only to pay expenses, and have conditions so liberal that the greatest number can afford to install phones.

It has been demonstrated that farmers can erect and maintain their own lines and phones at very much less cost than the usual toll-line companies can furnish them the service.

Farmers usually can furnish poles from their own timber, and haul and erect same, and also aid in the stringing of the wire, necessitating a cash outlay only for wire, brackets and insulators, total cost of same about \$8 per mile.

As farmers living along the whole route are share owners, various ones in different sections are appointed to keep a look out and make any necessary repairs, and in this way things are kept in shape at a minimum cost. Toll-line companies are often placed at an expense of several dollars to travel quite a distance to repair a five-minute job.

Cedar or chestnut makes the most durable pole, but many farmers having oak, to make cost the least possible, cut the poles from



A Group of White Leghorns, Glenavy Farm.

country custom must take phones and pay the prices asked. The income from this source and tolls has been sufficient to collect only from each farmer phone owner \$2 per year, giving him free use of all the extended services, branching out into adjoining counties.

The farmer usually is made to carry the principal burden, but in this telephone plan they have the power to make things come their

own timber. Twenty-six twenty-four-foot poles per mile make a fairly good line. For one mile it takes 165 pounds No. 12 galvanized wire. The B B, made specially for electrical purposes will prove the most durable, as it is better galvanized than the ordinary fence wire, and also the conductivity is somewhat better; however, many use the latter and get good service for awhile, at least.

Pointers for Sheep Raisers

The following excellent notes are selected from Wool Markets and Sheep:

The improper, rough and inhuman treatment of sheep at shearing time by heartless and impatient shearers undoubtedly results in the death and injury of many sheep and the loss of thousands of dollars to the flockmasters of the country.

Farmers and fanciers should be very careful when selecting pure-bred rams. Always go to breeders of repute when wanting them. Unscrupulous breeders will try to palm off some useless individual upon you perhaps, while a reputable breeder would not sell you one at any price.

The feed used in raising scrub sheep rarely costs less than that fed to pure-bred, while the scrub class fattens slower and sells at a lower figure when placed on the market.

Raise pure-bred sheep. Don't raise scrub stock. If you cannot do more than use a pure-bred ram you are on the right road to prosperity. If you keep pure-breds keep only one kind.

An inclosure for the lambs should be provided when they are two or three weeks old, where they can be fed separately from the ewes, which is almost a necessity if they are to do their best. A "creep" must be arranged through which the lambs can pass and the ewes cannot. Place some straw on the sunny side of the pen, on which the lambs can lie and bask, for they love the sunshine, and it is good for them.

When a ewe loses her lamb from any cause she may by a little good management be made to adopt one of a pair that another mother may not be able to do well for. This may be facilitated if the lamb is deadborn or dies soon after birth by rubbing it over the lamb that is to take its place, so that the smell of her own may be upon it.

The rape plant will be one of the first plants available for feed in the spring and a large area should be put out, as feed is scarce and high priced. Broadcasting rape will do for temporary patches, but if the crop is wanted to last through the summer it should be in drills and cultivated. Do not pasture too close if continuous growth is desired. For broadcasting use three or four pounds per acre. In drills one to one and a half pounds will be required.

There is no better way of educating the younger members of the family to habits of economy than to give each a flock of sheep, but in so doing they should be instructed to keep strict accounts and be made to attend to all the details of management. Should any wool or sheep be used in the family the young people should be paid for such, and everything should be done in a business manner. In some families no spending money is allowed children unless they earn it, which is done with a view to teach them to value it, and by giving

them a flock of sheep they do not only endeavor to manage the flock to the best advantage, but acquire knowledge of sheep raising which may in the future enable them to realize a good annual income therefrom.

White scours, the cause of many deaths among lambs, is caused by the curdling of the milk of which they partake, due generally by milk secreted from foods of a rich nature. To bring about a cure of this trouble the curd must be first dissolved and the stomach emptied of the same. Sulphate of magnesia, one ounce; ordinary cooking soda, one-fourth ounce; ginger, what can be taken up on a dime, mixed in flaxseed gruel will effect this. Four hours after the above dose is administered give four ounces of linseed oil to the sufferer; if very young the dose should be reduced a little. The diet of the ewes should be changed at once or the trouble will prove very obstinate. Don't allow the lamb to drink water, as it is liable to do if it has a chance on account of fever attending the trouble.

Don't Miss Dipping the Sheep.

So valuable is the dipping of sheep considered by the leading sheep breeders of the country, that they practice it regularly, dipping their sheep twice, and at least, once a year. Everyone who keeps sheep should adopt this method. No farmer, whether he has a large or small flock of sheep, can afford to have them covered with ticks when he can easily prevent it with little trouble and expense. Ticks not only cause a loss of wool, but the lambs will not thrive well when constantly harassed by these pests.

The best time for dipping is at shearing time, just after the wool has been removed. The ticks usually leave the old sheep, going to the lambs, before or at the time of shearing, so it becomes necessary to dip the entire flock in order to get rid of them. Where one farmer has a large number of sheep he should have a dipping tank, but where several neighbors own sheep, one tank might do for the lot. Galvanized iron tanks, made specially for this purpose, are the best. There are several good sheep dips on the market. Those containing lime and sulphur should be avoided as they are injurious to the wool. The commercial dips come in concentrated form and should be used according to directions. One gallon of dip will cost from \$1.50 to \$2.00 and will make, when properly diluted for dipping, 100 gallons of dip.

A convenient method of dipping is to have the tank set at the end of a narrow lane or chute, leading out from the sheep pen or barn. The lane may be temporary where hurdles are available. The tank for convenience should be sunk a

foot or more in the ground. After the sheep have been sheared, they (lambs included) are driven through the lane, which should be narrow enough to cause the sheep to go single file, to the tank. As they are forced into the tank, a man, or two if available, catches the sheep to see that it becomes thoroughly soaked, forces the head under for a second and then assists it in getting out of the tank. The sheep should remain in the dip long enough to thoroughly saturate the wool to the skin. If a low-wheeled wagon, with bed and sideboards on, is at hand, it is a good plan to back it up to the tank, allowing the sheep to come out of the tank into the wagon, where they should remain until the wagon is full. This keeps them from shaking the dip off for a little time, and is also about the height of the top of the tank, making a good platform upon which to land.

If well done, one dipping at shearing time will suffice. But if ticks are found on the sheep they should be dipped again in the fall, just before cold weather. Dipping is not only a remedy for ticks and lice, but its practice is a cure and preventative of scab. It is an inexpensive process and should be practised by everyone who keeps sheep.

Preparing Wool for Market.

Though wool is cheap that is no reason that carelessness should be shown in the handling of the fleeces. It will add to the value of the wool if care is taken in folding and preparing the fleece for market. A practice that cannot be too strongly condemned is that of tying up the fleece with vegetable bands or strings. Manufacturers object very strongly to this, as the fibres from the string become entangled in the wool and it is impossible to get them out. Shorn fleeces should not, and need not, be tied with string at all. By simply rolling a fleece up and tucking in the ends it can be put in marketable form much easier than if a string is used, and is very much better for the wool.

Another practice, and it is a most disreputable one, is that of rolling up in the fleece dirt, sheep dung, heavy locks, or anything that will make the fleece weigh. We do not think this practice is followed to any great extent in Canada, but it is well to be on guard against it. Canadian producers cannot be too careful in regard to these matters and whether the product be dear or cheap, every effort should be made to have it put on the market in a way that will in no way interfere with its value as a marketable commodity.

The Housecleaning Spirit.—Mother—Edward! Edward! What are you doing to Willie? Edward—We're playing housecleaning and Willie said he'd be the carpet if I do the work.—Chicago Daily News.



Inside View of Winter Brooder House, Glenavy Farm.

Distinction Between Hard and Soft Wheat Flours

By F. D. Coburn, Kansas.

Hard wheat, of which Kansas' hard "Turkey" (Russian) winter wheat is an excellent type, now stands for the world's white-loaf bread, or "light bread"; while soft wheat as definitely represents the total of crackers (English "biscuits"), cake, pastry, and the hot "soda biscuits" so common in the Southern United States. To bakers, millers and wholesale dealers the distinction between the two flours is clear, and their respective uses well defined. To the housewife, who buys of retail grocers, and in localities remote from bakeries, custom largely dictates as to methods of cookery, and home products are not readily supplanted. For this reason, there is still a demand, small and decreasing, wherever soft wheat is grown, for the native flour,

even for bread-making. Also, Graham flour (which should consist of the whole grain ground to a moderate fineness) is consumed in small quantities in the Northern states, and is better made from soft wheat. Since hard wheat has become much more abundant, it has forced its way into competition with the soft-wheat flours, even for domestic bread-making, and thus, by means of a blend, the proportion of hard to soft is being systematically increased. The result is that hard-wheat flour is everywhere, or soon will be, the standard material for bread, and soft-wheat flour for the more delicate oven products.

From the baker's point of view, hard-wheat flour, not too finely reduced, is better for bread, because

it contains a larger percentage of gluten. This is the compound that makes the grain dark, hard, and almost translucent under its bran, as compared with the plump, lighter-colored berry of the soft wheat, which is richer in starch. When crushed, the flinty gluten is reduced to angular particles, which make the finest hard-wheat flour more harsh and gritty to the touch than the velvety soft-wheat product, in which the smooth starch grains predominate. Gluten absorbs water readily and in considerable quantity, increasing its weight and at the same time swelling to several times its dry bulk; when wet, it becomes elastic and tenacious, capable of holding air that is kneaded into it, or gases produced by growing yeast, and of being thereby made porous or "light" to an almost indefinite degree. Thus, the weight of the dough (and baker's bread is sold according to its weight in the dough) and the bulk of the loaf both depend upon the quantity and quality of the gluten. A barrel of good hard-wheat flour will make several pound loaves more than an equal weight of soft-wheat flour; hence the advantage to the baker when the market values of the two are equal.

For the consumer there is a difference even more important. Gluten is the nitrogenous or tissue-building part of the grain, supplying to the body the same important elements that are contained in lean meat and the casein of milk. Since starchy foods are proportionately more abundant and cheaper than nitrogenous, and since wheat is cheaper than lean meat, bread that contains much gluten of good quality is economical food, at the same time that it is more nutritious and more easily digestible. Bread depends for its flavor upon the gluten and oil of the flour, and to these two compounds owes the desirable "nutty" character which is always more prominent in hard-wheat bread. Soft-wheat flour is whiter and in a certain popular estimation makes a more attractive loaf; but, in foods, nutritive value, flavor and digestibility deserve first consideration. On the other hand, the tenacity of gluten, so de-



Rear View at Glenavy Farm Showing some of the Breeding Pens.

sirable for the loaf bread, becomes unattractive "toughness" in pastry and cake; porosity in the former being rendered unnecessary by "shortening," and in the latter secured with greater delicacy by the beaten albumen of eggs.

Pie and cake, in one form or another, so common in the daily diet of America, as are their equivalents in that of Europe, are so usually products of the soft-wheat flour that the latter is quite generally designated in the markets as "pastry" flour. The common cracker, with its innumerable variations, such as biscuits, wafers, etc., makes its way to almost every table in the land, and is in steady demand as a staple throughout the year. The proper color and texture, or crispness, for goods so thinly rolled and thoroughly baked, are said to be produced only with soft-wheat flour; consequently we find the great cracker factories in or near the soft-wheat regions, upon which they depend for supply. By extended reduction and bolting, hard-wheat flours may be made to resemble the soft in color and feel, but composition determines a definite use for each, and in such proportion as the world's taste demands.

Advice on Peach Culture.

J. H. Hale, who is recognized as the "peach king" of Georgia, where he has orchards with hundreds of thousands of peach trees, and who also has extensive orchards in Connecticut, from both of which he ships the enormous peach yields, gives the following in Green's Fruit Recorder:

First Question—What is your opinion of the gas tar remedy for peach borers?

Reply—Never mind the gas tar remedy; if the borers get in, dig them out and smash their heads.

Second—What is your opinion as to the value of banking up the trees in June, after digging out the borers, to prevent their gaining access to the lower part of the trunk about the roots?

Reply—Banking the trees not later than May 20, and leaving them banked up until into August, is the easiest way to keep out the borers, but even then you will have to dig a little.

Third—Are you troubled much at North or South with peach yellows and have you found any other remedy than digging out the diseased trees?

Reply—We have no peach yellows in our Georgia orchards, and I have never seen a case anywhere in the State of Georgia, although I believe it has occasionally appeared in the mountains of north Georgia. Here in Connecticut we watch for the first signs of the disease and pull up and burn the trees, and probably don't lose more than one per cent. of our trees annually; while in nearby orchards, where the rooting out is neglected, the loss is ten to twenty per cent. annually.

Fourth—Do you consider bees injurious to peaches?

Reply—Yes, I know that bees do seriously injure peaches, bee experts to the contrary notwithstanding. Perhaps they don't puncture the skin, but many of our luscious early varieties often crack their own skins at ripening time, and bees destroy a lot of fruit that would otherwise go on the market or table in practically sound condition. However, as bees are valuable in assisting pollenization they probably pay all right for the fruit they destroy.

Fifth—Is there much danger of over-production of fine specimens of peaches, considering the large plantations being made in the South, West and elsewhere?

Reply—Yes, the present tendency is to overproduction of peaches in many sections of our country. Just at the present time there are sections of the South and Southwest where Elbertas are being planted by millions, and the supply of this popular variety in two or three years is bound to make a break in the markets, and I look for general demoralization and heavy loss to the Southern peach business for some years to come. There should be a general note of caution as to overplanting peaches everywhere.

Sixth—Can you state why you prefer large peach trees to smaller trees for planting an orchard?

Reply—I prefer large peach trees because long experience has taught me that they have more vigor stored up in their trunks and heavier roots, and will make very much larger and stronger growth the first year than will smaller size trees. If a man wants to make a commercial orchard and is after the profits in the business, he had better pay \$12 to \$15 per hundred for good, healthy, strong peach trees than to have a lighter size given to him for nothing. I have planted nearly three hundred thousand peach trees of all sizes in orchards, and the above statement is based on actual experience and results.

Turkeys for Profit.

It is surprising to find so many jumping at the conclusion that there is no money in raising turkeys, others claiming them to be hard to raise, etc., as their reasons for not raising them. It is a fact that turkey raising requires careful management and judicious mating. The breeder who sells off all the nice, large, early birds and retains those that are too small or too late to be salable kills the goose that lays the golden eggs. It is not economy or good judgment to sell off those that show quick growth and are the largest birds in the flock because they bring a few more dollars. Those birds (there are just such birds in almost every flock) are just the ones most desired for your next year's breeders. Late hatched immature turkeys cost less but are the dearest in the long run. The practice of retaining late, immature turkeys is not confined to the least intelligent people as one would expect, but is toler-

Poultry and Eggs

Advertisements under this head one cent a word. Cash must accompany all orders under \$2.00. No display type or cuts allowed. Each initial and number counts as one word.

BROWN Leghorns, Prolific early layers; Strain won at Pan-American. Stock for sale—Minorcas, Barred Rocks, Chieftain Strains, Eggs in season.

JOHN B. PETTIE, Fruitland, Ont.,
BUFF ORPINGTONS, imported this season from England, 8 birds costing \$125. Solid buff eggs \$3 per 13. Also breeder of Brown Leghorns, continuous layers. Barred Rocks, E. B. Thompson's White Wyandottes, Indian Games, true blocky type for export. I won leading prizes and sweepstakes at the Ontario and Bradford shows. Incubator eggs \$2.50 per 100. J. W. CLARK, Importer and Breeder, Oquandax, Ont.

ated by those well informed and willing to pay a good price for a horse or cow. If such a course were followed by the fancier the best turkeys in existence would be ruined in a few generations.

When our flock is growing we watch those birds that seem to be the hardest, grow fastest, having the largest bone, plumpest body and in every way the best birds. We just pick them up and mark such ones as we think we will need, and by careful selection for generations and by buying the best toms we have bred a most profitable flock. At one of our poultry shows last winter we saw a nice large standard bred Mammoth Bronze tom sell for \$50 spot cash. Now to the amateur this seems a large price for a turkey, but there are sales made every year that put even \$50 in the shade. No one can say this lady could have received such a price for a scrub tom. She told us she had been a turkey breeder ever since she was a little girl with her parents and had used great care every year in selecting her breeders and now she is reaping the harvest for her extra expense and trouble. Had she adopted the haphazard plan she no doubt would be repeating what a great many other careless people say: "There never was any money in turkey raising for us." The best of it is we noticed the price she named for her stock, was the price she always received. A number of would-be customers were disappointed to find she was sold out. Most any one can do as well if he will adhere to the laws of mating and breeding. If you adopt first-class standard bred stock and keep nothing but the best you can never supply the demand. Our experience with high class stock has been the demand far exceeded the supply and we have arrived at the conclusion it will always remain such. As our supply increases each year the demand increases. This is a fair evidence that there will always be a great demand for strictly first class poultry, so if you are not in the swim now is the time to come in and secure standard bred birds as you will find it much more profitable than raising mongrels and scrubs.

J. C. Clipp, Indiana.

Mickey—Hully gee! If dat ain't a shame! Sixteen men and four ole ladies has slipped down on dat spot in de last twenty minutes, an' now dat lobster is puttin' ashes on it!"
 —Puck.

The Sugar Beet World

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

Edited by JAMES FOWLER

Sugar Beetlets.

Harrow the soil until it looks like an onion bed.

It is better to seed too much than not enough.

It will take about 16 pounds of seed to the acre.

Let the soil dry and then roll, so it will become pulverized.

The more labor you put on your beet fields the better the returns.

Roll the last thing at night, so it will be good and damp for the seeding.

Do not roll the land after seeding, and let the seed go in about an inch deep.

No one ever regretted using too much seed, but many a farmer has suffered from using too little.

If the plants are too thick they can be thinned, but if too thin there is no remedy for them.

Seeding should be done early in May, and the land should be cultivated the day before seeding.

About four days after seeding the leaves should be up, and every seed should send up 3 or 4 plants.

Some farmers last year raised as high as 30 tons of sugar beets to the acre, are you going to do as well?

Fifteen tons is a good average per acre, if you get that you are doing well, but do not be satisfied with less than 20 or 25 tons.

A practical farmer can use his judgment about cultivation, but experience shows that you should cultivate, cultivate and cultivate.

Do not let your land get weedy because it will cost you a large sum of money per acre to put it in shape for the cultivation of sugar beets.

Look carefully after the weeding and trimming. When thinning, use a hoe about five inches wide, and bunch your beets about 7 inches apart.

Berlin

The directors of the Ontario Sugar Company, visited the works during the past week, and expressed themselves, as being very well satisfied with the progress being made. The foundations for the main building are all completed, also the foundation for the diffusion batteries. The lime kilns are well under way, the foundations for them have been completed some time, as has also the foundations for the boilers and engines. The machine shop is completed and most of the machines installed. The foundations are now being built for the seed house and coopeage shop and the warehouse. Founda-

tions also for the silos are completed. The G. T. R. will have their siding completed this week, when 140 cars of material will be unloaded upon the ground. Tenders are being asked for the masonry and some other parts of the work, by the contractors. 300 men are now employed upon the works and 200 more will be added to the force as soon as the material is unloaded. The seeding has been finished, over 5,000 acres having been planted, and in most cases the plants are ready for weeding. 300 Indians are employed for the purpose of weeding, bunching and thinning and there is an abundance of help for this very necessary work. There is no doubt that the factory will be completed by Oct. 1st, and from the general appearance of the beets, The Ontario Sugar Company's factory will be first to turn out sugar in the Province of Ontario.

Value of Stocks

It has been very difficult to ascertain the value of beet sugar stocks in the United States. As a rule most companies are close corporations, and there is no stock for sale in any of them, with few exceptions. The following quotations are from the Salt Lake Herald of April 27th, giving the value of the stocks in that section, as follows:—

Logan Sugar Company, par value, 100 quoted at 120.

Ogden Sugar Company par value 100 quoted at 195.

Greely Sugar Company in progress of erection, 122.50.

Le Grande Sugar Company 105.

Utah Sugar Company par value \$10.00 a share 16.70.

No quotation of any other factory is obtainable, but this will give Canadians an idea of the values, in one portion of the United States.

Wiarnton

Work at this point is still progressing favorably. An order has been recently given to a Michigan firm, for 29 large tanks for the factory. Some disappointment is felt from the action of the Masonic Grand Master in cancelling the arrangements for laying the corner stone of the factory with Masonic honors, but the corner stone will be laid with due ceremony by the contractors and directors. An excursion is to be run, and it is expected that nearly all subscribers of Wiarnton Sugar Company stock will be present on the occasion. The season has been a little backward for seeding operation, but the agriculturist expressed himself as being extremely well satisfied with the

prospects for the season. Nearly 3,000 acres have been contracted for, and it is expected that sufficient amount of beets will be available for a full season's operations.

Beet Crop

Parties securing acreage for the different factories in progress of erection in different parts of the province, are much surprised at the ease in which such large amount of acreage has been secured, judging from the different experiences in Michigan along that line, one factory in Michigan extended over 7 counties and it is reported that another factory at the present time extended over an area of 13 counties, to secure their supply. In this province, the Wallaceburg factory has secured about 2,500 acres in the immediate vicinity of the factory, and the balance sufficient to make 5,000 acres has all been secured in territory within about 100 miles of the factory. For the Dresden factory nearly 2,000 acres has been secured adjacent to the factory, the balance being spread out within a radius of 80 to 90 miles of the factory, about 4,000 acres has been secured at various points and will be brought in by boat and rail to supplement the local supply. At Berlin 5,000 acres has been secured within wagon haul distance of the factory and beets from neighboring towns have been refused.

This, securing of acreage, is much better than has been done in any state of the Union, where beets are grown the first year and much better than a great many of the factories are doing even after several years of operations.

Beet Pulp.

What James Wilson, Secretary of Agriculture, U. S., says of beet pulp:

The farmer can make first rate butter from the turnip but I could make the finest flavored butter from the sugar beet and you can do it from the sugar beet pulp, and your sugar business ought to be conducted so that the farmer who has a dairy of cows should grow patches of beets for the very purpose of getting the by-product to feed to his domestic animals. He cannot do as good work in fattening any animal on the farm without that pulp as you can do with it, and if you will thoroughly appreciate the value of that by-product, feed it to every animal on the farm. It will save you from buying the by-products from the mills. You don't have to buy bran, oil meal or any of those meals.

The Contractors Win.

The litigation between Bartlett, Hayward & Company, of Baltimore and the West Bay City Sugar Company, was settled by a verdict in favor of Bartlett, Hayward & Company after a trial of eight weeks' duration. The plaintiffs built the factory for the defendants in 1899, operating it in an unfinished condition at the close of that year in order to save for the plaintiffs a quantity of beets which they had had delivered and were in such bad condition that they could not be moved or utilized elsewhere. The defendants were saved a very considerable loss at the expense of the plaintiffs, notwithstanding which fact upon the completion of the campaign and while plaintiffs were engaged in finishing the work on the factory, their employees were forcibly ejected and suit was brought by the plaintiffs for balance due them under the contract, the defendants ignoring all that had been done for them, claiming that the factory was to have been finished at a specified time, notwithstanding a distinct clause in the contract to the contrary. The result of the suit fully established all of the plaintiffs' claims and the defendants themselves acknowledged that the factory has been operated at a factory cost of 85.100 cents per pound for sugar manufactured, and it is quite evident from the voluminous testimony given in this case that the factory is the equal if not better than any one of a similar capacity in the country and unquestionably cost to the owners less money than any factory of similar capacity in existence.

Cultivating and Thinning Beets.

BY C. T. RICHARDS, MICH.

As soon as the beets are large enough to see the rows commence the cultivators and keep them going until some time in August. Use a two or four row cultivator. We purchased four rows because we can make a two row from a four row, and if the ground is level there are many times after the beets get large when just as serviceable work can be done with a four row as with a two row, getting over twice the ground with the same labor.

The cultivators in use are all much the same in principle and when you have used them for a while you will change them so the manufacturer would scarcely know them, cutting off part of the scalper and substituting wider shovels for the bull tongues. The weeder is also an excellent tool to use in the cultivation of the crop. It should be used before thinning and its use is to break the crust and stir the ground in the row where the cultivator cannot touch.

The thinning of the crop is another matter that will require some caution. Don't leave your beets too thick; this is apt to be the trouble with new growers. It seems to them a waste of beets to

cut out so many. The first year we grew beets a four inch hoe was used, the next year a six inch hoe the past season a seven inch hoe and next year we shall use an eight inch hoe altogether. This leaves the beets about nine inches in the row, and with the rows 18 inches apart, they are none too thick. The thinning is one thing that must be attended to on time, for every day's delay after the beets have attained the proper size for thinning, which is about the fourth leaf, means dollars out of your pocket.

This work requires considerable labor. It is amusing, however, to note the difference now and when the industry first started. I remember hearing the statement of a prominent agriculturist of this state that it required $7\frac{1}{2}$ days labor to thin an acre of beets. Last season two of our neighbor's boys took a job of thinning $6\frac{1}{2}$ acres of beets commencing Monday morning and they finished Saturday noon. Of course this is a little extra, but many thin an acre in three days. In our section most growers hire by the row, a standard price being $12\frac{1}{2}$ cents for 40 rods. This amounts to \$5.50 per acre. Boys and girls can make any where from one to two dollars per day.

The different growers have different methods of thinning. Some use long handled hoes and space, then follow and thin. Others space and thin at the same time. With us we find the most satisfactory method is space and then thin, as it is more restful to the worker and I think a more satisfactory job can be done in that way.

After thinning all that need be done is to keep the cultivator going, and if any weeds appear, pull them out, as weeds sap the moisture that is needed for the beets, also shade the beets so that they will not yield the percentage of sugar that would otherwise be, as they depend upon the sunshine for their sugar.

Selecting and Preparing Soil for Beets

The first important factor for a successful crop of beets is the selection of the soil, and in the beginning let me caution you, if you have a light sandy soil that has been cropped and unfertilized, then leave the beets alone for your results will be unsatisfactory and you would probably condemn the whole industry as unprofitable.

But if you have a good clay loam, clay or black sand loam soil, then establish a rotation with beets and you will be more than satisfied with the results. Of any of the soils I have mentioned the best results are obtained from clay loam. The black sand loam generally produced good tonnage, but the beets are apt to be sprangly and covered with fibrous roots.

The question may be asked here as in many other places: "What results are obtained from such soil?"

This depends considerably upon

the depth of the muck and its state of decomposition. If it is not too deep and is thoroughly decomposed and mixed somewhat with the subsoil, then muck may be all right for beets, otherwise, I would leave them alone on muck soil.

After you have decided that your farm contains the right kind of soil, and what I have seen of the lay of the land, I judge that you have as good soil in Macomb county for the production of beets as can be found in the state, then arises the question—In what fields shall I sow them? This largely depends upon what rotation you wish to follow, for to be continuously successful a rotation must be established with clover as the important element.

Our own rotation consists of clover, corn, beets, and oats or barley, leaving out wheat, as we consider taking one year with another, wheat to be unprofitable; however, wheat might be established making a five year rotation, or corn might be left out, making a three year's rotation, following clover with beets.

Or, if you have not established a rotation and have a wheat, oat or barley or pea stubble, any of these are excellent to follow with beets.

The manure of the farm put on the clover sod and put to corn and wheat again, plowed for beets, you have the manure accessible and an excellent seed bed for the beets. Or contrary to the opinion of many agriculturists, manure may be plowed under or even a light top dress without deteriorating the quality of beets and greatly increasing the tonnage.

On the preparation of the soil, too much cannot be said. If any of the before mentioned crops are to be followed, if possible the ground should be fall plowed. Corn ground is not so necessary to fall plow as the frost will leave out the stubble, necessitating an extra amount of labor picking them off. Some agriculturists contend against fall plowing, claiming certain elements are lost by washing and leaching when the ground is exposed and bare.

But I believe more elements are made accessible by allowing the frosts to slacken and pulverize the heavy clay lumps than are lost by the washing and leaching. Another advantage of fall plowing is, you are enabled to turn an inch or two of raw soil, giving it time to be subdued during the winter, thus giving a good deep seed bed. This extra deep plowing should not be done in the spring.

In discing fall plowed ground or in spring plowing, follow closely with that cheapest and more effective farm tool, the float or plank drag; by so doing the ground is pulverized before the lumps become hardened, giving a firm seed bed. Furthermore, don't make the mistake of thinking that if the soil is well firmed, that the beets cannot penetrate down deep, but use the roller and drag; firm the ground much the same as you would for

wheat. I have noticed that invariably the best beets of the field were found in the ends where the ground was packed the hardest.

Just previous to sowing the seed use a weeder or light spike tooth drag giving the soil a smooth surface, yet leaving a light mulch to conserve moisture and prevent crusting. — C. T. Richards.

Digestibility of Beet by Products

Some years since it was declared that the water from the presses contained certain nutritive elements. Stammer was the first to demonstrate that such was not the case, the loss of nitric elements was only 0.03 to 0.04 p.c. of the weight of the cossettes, furthermore 100 parts of dry matter of the cossettes before pressing contained 7.4 p.c. albumin, and for the pressed residuum it was 6.56 p.c. Another authority discussing the question of the feeding value of the residuum cossettes declares that the product when fresh contains more albumin than the siloed, the difference being 1-10 which is lost in the silos. The fresh cossette contains a very little acid while after several months' keeping five parts of the dry substance are changed into acids, which have less nutritive value than the carbohydrates. It is interesting to note certain experiments made to determine the digestibility of beet cossettes. Some authorities after a series of experiments declare that the residuum is not easily digested as many suppose. With sheep there was only 45 p.c. of the nitric substances digested. On the other hand 84 p.c. of the nitrogen free extract was digested, and other more important experiments show that 76 p.c. of the nitrogenous substances is digested. These two figures are given mainly to show how at variance are the leading authorities. Cattle in general can eat large quantities of residuum cossettes, but it is desirable to put certain restrictions on the quantity given, as the heavy percentage of water would bring about intestinal complications. When feeding cattle with cossettes it is desirable to commence with about 30 lbs. of the residuum per 1,000 lbs. live weight. During this period salt is allowed ad libitum, as its action is found to be most beneficial. The allowance of the residuum for milch cows varies very considerably in the countries visited by the writer. Some farmers declare that 70 lbs. per diem is an outside limit, and if exceeded the milk will not contain more than 2.2 p.c. of fatty substances. As the cossettes contain very little lime the milk has not the desired keeping qualities. (?) Such views have never been satisfactorily proven to be correct. Evidently it is a mistake to feed the product after it has undergone the slightest organic change in the form of decomposition. It may happen that the cossettes are not as fresh as they should be, when certain micro-organisms are formed which bring about certain compli-

cations in the manufacture of butter and cheese. Cows during their calving should be very sparingly fed with the cossettes under consideration. Oxen may receive 100 lbs. per diem with great beneficial effect. Sheep may receive 20 lbs. of the residuum for 100 lbs. live weight (?) Frozen cossettes should not be fed in that condition, they should be thawed with steam or hot water; some authorities declare that the freezing diminishes the digestibility of the product.

With the view to determining just within what limits the residuum may be compared with forage beets when fed to milk cows, a series of experiments has been made. The result was that cows fed on forage beets gave 1,137 quarts of milk with 79 lbs. fat, while the residuum fed cows gave 1,105 quarts with 75 lbs. fat. The difference is so slight that they may be considered identical. The forage beet ration consists of 72 lbs. beets, 8 lbs. clover, 6 lbs. chopped straw and 5 lbs. oil cake for 1,000 lbs. live weight, while 80 lbs. residuum cossettes were combined with 8 lbs. clover, 9 lbs. chopped straw and 4 lbs. oil cake per 1,000 lbs. live weight. Experiments in Germany demonstrate that the cossette feeding is the most economical.—The Sugar Beet.

No Book Learning Needed

During a school tea the other day a kindly old doctor was regarding one of the young guests with evident alarm. Undismayed by the doctor's glances, the young scholar rapidly demolished plate after plate of bread and butter and cake. At last the doctor could stand it no longer. Going up to the young rascal he said:

"My boy, have you ever read any book which would tell you what to eat, what to drink, and what to avoid?"

"Lor' bless yer, sir," replied the young gentleman, with his mouth half full of plum cake, "I don't want no book. Why, I eats all I can, I drinks all I can, and I avoids burstin'."

Greek and Greek

The village wit seats himself at the Easter social table.

"One oyster—two soups!" he gurgles to the waitress.

Now, the waitress has her opinion of him and the joke. Without going to the kitchen to give the order, she raises her voice so that it is heard over the hall, and remarks. "One lobster, two soups!"

Copper and Brass Work

Of every description. Special attention given to plants for Beet Sugar Factories, Glucose, &c. Get our quotations.

COULTER & CAMPBELL

158-7 GEORGE STREET, TORONTO, ONT.

The Booth Copper Co., Limited

COPPERSMITHS

Established 1864

COPPER WORK FOR **Sugar Houses
Breweries
Distilleries, Etc.**

115-123 Queen Street East, TORONTO, CANADA

E. H. DYER & CO.

BUILDERS OF

SUGAR MACHINERY

CLEVELAND, OHIO

Will contract to build complete beet sugar plants, including all machinery and buildings; also furnish the necessary technical and skilled help to operate them.

Now Building the Factory at Berlin.

The Summer Fallow.

The summer fallow though less in use than formerly in Eastern Canada is growing in favor in the West. The following is the method of summer fallowing used at the Experimental Farm, Indian Head, N.W.T.:

First method—Ploughed deep (6 to 8 inches) before last of June surface cultivated during the growing season, and just before or immediately after harvest, ploughed 5 to 6 inches deep. Result—Too much late growth if the season was at all wet; grain late in ripening, and a large crop of weeds if grain was in any way injured by the winds. Second method—Ploughed shallow (3 inches deep) before last of June; surface cultivated during growing season, and ploughed shallow (3 to 4 inches deep) in autumn. Result—Poor crop in a dry year; medium crop in a wet year. Not sufficiently stirred to enable the soil to retain moisture. Third method—Ploughed shallow (3 inches) before last of June; surface cultivated during the growing season, and ploughed deep (7 to 8 inches) in the autumn. Result—Soil too loose and does not retain moisture. Crop light and weedy in a dry year. (The crop on the farm destroyed by winds and dry weather this year was on land worked in this way. The soil was too loose, dried out too easily and was blown away.) Fourth method—Ploughed deep (7 to 8 inches) before last of June, and surface cultivated during the growing season. Result—Sufficient moisture conserved for a dry year, and not too much for a wet one. Few or no weeds, as all the weeds near the surface have germinated and been killed. Surface soil apt to blow more readily than when either of the other methods is followed. For the past 13 years, the best, safest and cleanest grain has been grown on fallow worked in this way, and the method is therefore recommended.

Fallows that have been ploughed for the first time after the first of July, and especially after July 15, has never given good results; and the plan too frequently followed of waiting till weeds are full grown, and often fully ripe, and ploughing under with the idea of enriching the soil, is a method that cannot be too earnestly advised against.

In the first place, after the rains are over in June or early in July, as they usually are, no amount of work, whether deep or shallow ploughing, or surface cultivation, can put moisture into the soil. The rain must fall on the first ploughing, and be conserved by surface cultivation.

Weeds, when allowed to attain their full growth, take from the soil all the moisture put there by the June rains, and ploughing under weeds with their seeds ripe or nearly so, is adding a thousand fold to the myriads already in the soil, and does not materially enrich the land.

The American Construction & Supply Co.

Main Offices: 71 Broadway, New York, N. Y. Western Department: 305 Telegraph Block, Detroit, Mich.

Specialties:—BUILDING OF BEET SUGAR FACTORIES;
AND BEET SUGAR FACTORY SUPPLIES.

We have the record of building modern equipped and economical running factories. More than 20 years' experience in this special business. Correspondence solicited.

We are also sole representatives of BUETTNER & MEYER, Urdingen, Germany, manufacturers of the best pulp drier in the world. This drier received the prize of 20,000 marks offered by the "Centralverein für die Rubensucker-industrie" in Germany.

Bartlett, Hayward & Co.

ESTABLISHED 1832

Designers and Constructors

Beet Sugar Factories

RESULTS GUARANTEED

Works and Main Office:
BALTIMORE, M.D.

Branch Office:
100 Broadway, NEW YORK, N. Y.

The Kilby Manufacturing Co.

FOUNDERS AND MACHINISTS

Corner Lake and Kirtland Streets, Cleveland, Ohio New York Office: 220 Broadway.

Builders of Complete Machinery for Beet, Cane and
Glucose Sugar Houses and Refineries.

America Copper, Brass and Iron Works

OTTO MEINSHAUSEN, Pres., Treas and Mgr

113-119 Michigan St., cor. La Salle Ave., CHICAGO, U.S.A.

Cable Address: "MEINSHAUSEN" A.B.C. Co's.



Will Contract for complete Plants in any part of the world for Brewers, Distillers, Beet Sugar Factories, Refineries, Glucose Works, Etc., Etc.

The Agricultural Gazette

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

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

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

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

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

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

The name and address of each member, and the stock he has for sale are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

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

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. F. Westervelt, Secretary, Live Stock Association. 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.—A man with knowledge of gardening, milking and general farm work, with no bad habits. Wages \$18.00 to \$20.00 a month. No. 100. a.

Wanted a young man with some experience to work on a farm in Simcoe county. No. 962. b.

Wanted.—A trustworthy and reliable man and his wife to work on a 100 acre farm in the United States. The man must be capable of taking care of a valuable pair of horses and must be willing to follow the instructions of the foreman. The woman must be neat and thrifty and willing to do as she is taught. Comfortable home. Wages \$30.00 a month each. No. 963. b.

Wanted.—Right away a reliable man with no bad habits, one who can milk and do general farm work \$18 per month for 7 months or \$165 per year. No. 964. b.

Situations Wanted.

Wanted.—A position, by a middle aged man, on a farm where the work is not too heavy. No bad habits and is quick and understands farm work thoroughly, the care of horses, cattle, etc. Can furnish the best of references. No. 600. a.

Wanted.—A position on a farm by a middle aged woman with husband. Woman is accustomed to

farm work. Husband is crippled by paralysis but can do light chores around buildings. A good home will be appreciated more than high wages. Can furnish good references if desired. No. 601. a.

Wanted.—A position on a farm in Manitoba by a man who has had years of experience in taking care of stock and general farm work and is competent of taking full charge of a large farm. No. 999. b.

Wanted.—A position on a farm by a young Englishman who has had no experience but is very anxious to learn farm work. No. 1000. b.

Wanted.—A position as farm manager on an up-to-date farm by a man who has full knowledge of farm work. No. 1001. b.

Wanted.—A position on a farm by a young man who has had no experience in farm work but who is very anxious to learn farming in all its branches. He is sober, industrious, and willing to learn. No. 1002. b.

Wanted.—By a married man, aged 38, a position on a farm in Manitoba as manager or otherwise. Well up in carpentering. No. 602. a.

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

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter 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 in 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

Orchard Meeting Notes.

We had a call last week from Mr. McNeill and Mr. Carey on their return from their series of orchard

meetings. They report excellent meetings, and in spite of the pressure of work at this busy season from thirty to one hundred eager fruit growers attended each meeting. The most pleasing feature of these meetings, said Mr. McNeill, was the intelligent interest taken in the discussions back and forwards of each disease, defect, and insect that might be found in passing through the orchard. Then the principles of orchard cultivation would be taken up and specific instructions given in the practice of pruning. This kind of instruction has double the value of that given at indoor meetings, in that one cannot only hear, but can actually see the thing done.

Mr. Carey took up the apple question from the packer's and shipper's standpoint, explaining how the fruit could best be handled from the time it was taken from the tree until it was packed and labelled or left the grower's farm. He pointed out that the salableness of fruit is affected by being picked too early or too late in the season. It is better, said Mr. Carey to harvest the fruit in two or at most three weeks while it is in the pink of condition, than to have the picking season extended from the first of September until the last of November and get too green and over-ripe fruit. One should study his land and locality and then get the right varieties. We want a large, vigorous, productive tree, an apple of red color, and one that on being bruised will dry instead of rot. A shipping apple of this kind will rarely be classed as "slack" and will give a minimum amount of waste in re-packing. On being asked what variety he would recommend as having those characteristics, Mr. Carey said, "From twelve years experience as a shipper, I like the Phoenix, they handle well, and as a packer, I always liked to get into a Phoenix orchard."

Secretary Mitchell, of the Port Elgin branch of the Lake Huron Fruit Growers' Association reports lively interest in the orchard meetings in his section and sends a list of new membership.

W. W. Hilborn, of the Essex Experiment Station, writes:—"I believe these orchard meetings do much good to help farmers to adopt more careful methods of orchard treatment. In travelling over the country, one sees much need of this, for neglected orchards are everywhere apparent. Many orchards get no trimming but the browsing of the cows, and it is little reason therefore, that the trees are dying out and the investment becoming an unprofitable one. The time has come when to grow apples successfully, we must give proper cultivation, and annual pruning and spraying. There is no other line of fruit growing to-day that requires so much attention as

the apple and few crops that can be more easily injured by improper methods of cultivation. Just in this connection one sees the value of such instruction as that given in orchards now by Mr. McNeill. If we had more men doing work like Mr. McNeill, I think apple culture would receive more attention. I Mr. McNeill, I think apple culture in Canada is brighter than for any fruit we grow, if we can induce the growers to give as much thought to their apple orchards as they do to other farm crops.

Clover

BY T. H. MASON, STRAFFORDVILLE

The value of the clover crop to the farmers of Ontario is very generally recognized by all of us, 1st, as a stock food. The plant being rich in nitrogenous or flesh forming material is especially well adapted for forming part of the bulky portion of the ration and in this way is very valuable for feeding along with corn in any form, as the corn plant is deficient in these important constituents.

2nd As a soil renovator, clover plays a special part in Ontario agriculture. It possesses in an especial manner the power of converting the free nitrogen of the air into soluble nitrates suitable for plant food, and for storing them up in tissues of the plant. Being a deep rooted plant the roots penetrate deeply into the subsoil opening it and rendering it more porous and drawing stores of fertility to the surface for the use of shallow rooted plants. The necessity of having a crop of this character to keep the soil in proper mechanical condition and to add humus to the soil thereby increasing its actual fertility and its water holding power is admitted by nearly all of us. Our leading agricultural authorities all tell us to sow more clover and we believe this advice to be scientifically correct, but if they would only tell us how to make it grow after we have sown it, they would be conferring a great favor to many in Southern Ontario.

We find in many sections of this province, that owing to local conditions such as reduced rainfall, soils deficient in fertility and water holding power, there is a constantly increasing difficulty in obtaining a catch of clover. This is especially true of the belt of country lying along Lake Erie and the Niagara peninsula. While there has not been much difficulty experienced on rich deep loams in getting a catch by following ordinary methods yet in sandy, gravelly, and heavy, hard clays it has been almost impossible (during the last four years,) to get a catch. Our rainfall during the growing months of June, July and August has been under three inches, and one year under two, so it may be understood what conditions we have had to face.

A synopsis of the numerous conditions that have come to my knowledge may prove of some service to the country.

As to previous conditions of cultivation, the best general success has been obtained on land that has been ploughed out of sod, manured, and planted with corn or root crops, kept extremely well cultivated and not ploughed that fall, but cultivated in the spring thoroughly and not more than two inches deep and a grain crop sown very sparingly, using not more than one bushel of seed per acre. After the seed is sown, if the land is in good shape, roll, and then go over it with the harrow or weeder, to make the surface fine and prevent evaporation. By this plan the largest possible amount of humus from the rotting sod and manure is rendered available. The soil by the previous thorough cultivation made thoroughly compact, capillary attraction with the subsoil moisture well established and then by the shallow cultivation given in the spring, broken off near the surface rendering the moisture available to the young plants while they are yet small is a plan that has given very fair satisfaction, although not always successful.

When we meet with failure as we sometimes do, then the most satisfactory plan to be adopted is as follows: As soon as the harvest is taken off, plow with the common plow, or gang plow, very lightly, not more than three inches deep, rolling and harrowing each day's work before leaving the field at night to prevent loss of moisture. Usually late in August there will be late showers, and by watching chances and sowing clover and timothy alone, excellent catches are secured. Our experience of this plan has been so satisfactory that many of our farmers are not sowing in the spring at all, but prefer to take their chances in the fall. Sowing in this way should not be done later than September 10th, so that the clover plants may get a good strong start before winter sets in. Sowing in the stubble and harrowing in after a partial failure is sometimes resorted to, but unless the season is exceptionally favorable, it is not usually successful. We find it better to plough up and reseed the whole field.

Some farmers have been quite successful (on light soils) in sowing clover in the autumn with fall wheat or rye. In order to succeed, the land should be in a good state of cultivation and the seed should be sown not later than the first week of September, preferably a good deal earlier. Better results are given where a light seeding of grain is used.

Where none of the above methods have succeeded owing to poverty and dryness of soil, such as on sandy and gravel ridges, or run down fields, then sowing in the spring on well prepared firm land without crop of any kind and with a top dressing of barnyard manure will almost always succeed.

Coolness and absence of heat and haste indicate fine qualities. A gentleman makes no noise; a lady is serene.—Emerson.

Ordinary Diseases of the Stomach of the Ox

BY G. H. REED, V.S., GEORGETOWN

As a rule, I do not think it wise for a farmer to act as his own veterinary surgeon, but now that the feeding of cattle, both for dairy and beefing purposes is so generally practised through the country, I think every farmer should endeavor to know something of the diseases of the stomach of cattle, so that in case of emergency, he could be able to do something for the animal until professional help could be obtained.

When cattle are highly fed, the stomach has a very hard task to perform and it is little wonder that it sometimes gets out of order. In order that we may more readily understand the diseases of the stomach, I shall briefly describe the arrangements of the organ and the process of rumination or chewing the cud. The ox is usually said to have a poor stomach, but that is not really the case. The organ is divided into four compartments, which for simplicity we will call 1st, 2nd, 3rd, and 4th stomachs. The gullet enters the 1st stomach, or paunch, the capacity of which is very great. The 2nd stomach opens from the first and is sometimes called the honey-combed from the appearance of its surface, then comes the 3rd stomach called manyplies from its resemblance to the leaves of a book. The first three stomachs prepare the food for the fourth, which is the true digestive stomach.

We will now consider the normal or healthy process of digestion. When the food is taken into the stomach, it is but very imperfectly masticated and the greatest portion of it passes into the paunch. Some fluid or very fine portions may pass to the third or fourth stomach. While the food is being chewed in the mouth it is mixed with large quantities of saliva, a fluid thrown out by the salivary glands in the mouth. In the paunch it comes in contact with another digestive fluid secreted from the walls of that organ, and the whole mass is thoroughly mixed by the contracting walls of the stomach. After the animal has finished his meal the process of rumination begins. This act is performed by the contraction of the walls of the paunch forcing the food up against the gullet where an opening is provided, which grasps a portion of the partly-digested food and by a regurgitating process is forced back to the mouth, where it is chewed again, much more thoroughly than the first time, and when swallowed the second time passes to the 3rd stomach. Some coarse portions of food may pass to the paunch the second time to be further prepared for digestion. The final preparation of the food for the true digestive stomach takes place in the 3rd sack, where it is drawn between the leases of folds and reduced to a very fine state be-

fore passing to the 4th stomach.

In order that digestion may be properly performed, the muscular coats of the 1st and 2nd sacks must be active and able to contract upon their contents as they collect. If from any cause those coats become inactive and the animal continues to eat, the contents will accumulate, the process of rumination will cease or the animal will have "lost its cud" as it is often expressed.

Now if this food be of a nature that will ferment easily, such as fresh clover, turnip tops, rape, or heavy meal, such as pea or corn meal, then we have a case of bloating shown by an enormous distention of the left side which presents a more or less drum like appearance. The animal will show signs of distress such as tramping about in the stall, slobbering at the mouth, tongue protruded, etc. When the above three symptoms are present treatment must be prompt, or often fatal results will follow very quickly. In a milder form of bloating, a dose of purgative medicine, 1 or 2 pounds of epsom salts will usually effect a cure, being always careful not to let the animal have any more food until the bowels have been freely moved. In the next severe form of bloating we have to give relief by puncturing the stomach from the outside, a trocar and canula is the proper instrument to use, but as farmers do not usually have one, a knife may be used with safety. Make the opening on the left side about six inches downward from the hip bone. Keep the lips of the wound apart until the gas escapes, the animal will experience immediate relief, and, as a rule, will not be any the worse for the operation. Always follow up with a dose of purgative medicine and give no food until the bowels act freely.

When the stomach becomes overloaded with food that does not easily ferment, we have what is called impaction on the paunch. The stomach is not quite so full looking as in bloating and the same difficulty in breathing is not noticed, rumination ceases and, as a rule, the patient is constipated. This trouble is usually overcome, if taken on the start, by giving a good brisk physic, from 1 to 2 pounds of Epsom salts and giving no food until the bowels move freely. Always let the patient have what water he wants in small quantities, and as often as he wants it. Sometimes an animal's stomach becomes so overloaded that medicines have no action whatever and an operation is necessary. An opening is made right into the paunch and the contents removed by the hand, but, of course, none but an expert could perform such an operation. Inapaction of the third stomach, or mannyplies, is called fardel-bound, and consists of an impaction of food between the leaves of the sack. The symptoms of this disease are not alarming, indeed are

hardly noticeable for some days. The animal may be a little off her food for a day or two. If a milch cow she will fall off in her milk some and the nose will become dry. If taken in the first stages, a good purgative dose, and no food for a meal or two, will generally effect a cure, but if allowed to run on for a week or so before treatment is adopted, the result is frequently fatal.

I wish to emphasize what I have said about feeding an animal that is a little off his food. If a well-fed animal does not want its food then take at all away and do not give any more until he does want it and give a dose of purgative medicine.

Question.—When a farmer finds a beeing steer a little off his feed, what had we better give him to eat and what treatment, if any, should we adopt?

Answer.—Give no food of any kind for twenty-four hours and give in a drink two pounds of salts, start him off on scalded bran or roots or some easily digested food.

Question.—Why is an over feed of turnip tops or rape likely to kill by bloating?

Answer.—Because they ferment easily and gasses are formed which cause bloating.

Question.—Which is the best for cattle, Epsom of Glauber salts?

Answer.—Epsom salts, decidedly.

Question.—Can any operation be performed for the relief of impaction of the 3rd stomach?

Answer.—No.

Egg Preservative.

We are asked for the "Havana process" of preserving eggs. This is the formula: Take twenty-four gallons of water, twelve pounds of unslaked lime and four pounds of salt, or in this proportion, according to the quantity of eggs to be preserved. Stir well several times a day and then let stand until perfectly clear. Dip off carefully the clear liquid, leaving the sediment at the bottom. For the above quantity take five ounces each of baking soda, saltpeter, cream of tartar and borax, and one ounce of alum. Pulverize these and dissolve in one gallon of boiling water. Put this into the clear lime water in a barrel. Put into this mixture perfectly fresh eggs, as they are gathered, and keep in a cool place. Be careful not to put in any cracked eggs and use care not to break any in putting into the preservative. Keep the liquid one inch or more above the top of the eggs, and when the barrel is full put a cloth over the eggs and cover this with the sediment left from slaking the lime. Jars or kegs may be used for a small number of eggs.—Com. Poultry.

"Well, the child's getting its teeth."

"Is it? What a pity a child doesn't get its teeth first and its voice afterwards."

SHEEP

At the Fat Stock Shows

A LETTER FROM A WINNER OF REDS

I have been frequently asked about my method of feeding, and it may interest some to know that I largely attribute my success to Herbageum, which I have used during several years, and during the last two years have used a considerable quantity. Especially have I had good results with lambs that were being fitted for exhibition purposes. Other lambs not getting it were frequently troubled with ticks, but we have never found any trouble with ticks when sheep or lambs were fed Herbageum.

I only feed a teaspoonful to sheep and rather less to lambs once a day.

Three sheep that I bought in 1900 were fairly alive with ticks. I put them with my other show sheep and gave them Herbageum, and when sheared, about the middle of March, 1901, they were perfectly free from ticks, and they had no sheep wash nor other remedy or preventive than Herbageum.

I may further say, that the sheep which were fed Herbageum were in so much better condition than my other sheep which were not fed it, that when sheared the clip averaged 2 lbs. each more than the others.

I have also used it with cows and other stock to good advantage.

Yours sincerely,

(Signed) JOHN ORR.

Lakeside Farm, North Dumfries,
County of Waterloo, Ont.
Feb. 19th, 1902.

NOTE.—Mr Orr has for a number of years been a winner of Reds at Toronto, Chicago, Guelph and elsewhere. In 1901, at Toronto, he took first on pair of wether lambs, and second on pair of yearling wethers. At Chicago Exhibition, Autumn of 1901, he took first and second on single lambs, and first on the best five lambs, also first on yearling and championship on yearling. This yearling took the sweepstakes wherever exhibited, and wound up at Guelph Fat Stock Show, Dec., 1901, with first in his class, and first for best carcass.

Mr. Orr was also winner of a number of prizes in breeding classes at Toronto, 1901.

Young Husband—I'm just about dead, putting down this carpet.

Wife—The carpet is not heavy.

"No, but I have to work in such a cramped position."

"Nonsense. Just imagine you are on your bicycle."

"Katie McCoy, have you had any experience as a cook?" "No, sir."
"What did you do at the last place?" "Oi was oculist at the kitchen."
"Oculist of the kitchen?" "What in the world did you do?"
"Oi removed th' oyes from the potatoes, sir."

The Farm Home

The Echoes from the Old Home.

There's a sound that rings in my ears to-day,

That echoes in vague refrain,
The ripple of water o'er smooth-washed clay,

Where the wall-eyed pike and the black bass play,

That makes me yearn, in a quiet way,

For my old fly-rod again.

Back to the old home haunts again,
Back where the clear lake lies;

Back through the woods

Where the blackbird broods,

Back to my rod and flies.

I'm longing to paddle the boat to-day

Through water-logged grass and reeds;

Where the muskrat swims and the cat-tails sway;

Where the air is cool, and the mist is gray;

Where the ripples dance in the same old way,

Under the tangled weeds.

Back on the old oak log again,

Back by the crystal brook;

Back to the bait,

And the silent wait,

Back to my line and hook.

I wish I could wade by the water's edge,

Where the fallen leaves drift by;
Just to see, in the shadow of the ledge,

How dark forms glide, like a wood-man's wedge,

Through driftwood piles and the coarse marsh sedge,

And to hear the bittern cry.

Back where the tadpoles shift and sink,

Back where the bullfrogs sob;

Back just to float

In the leaky boat,

Back to my dripping bob.

Oh, it's just like this on each misty day,

It's always the same old pain
That struggles and pulls in the same old way

To carry me off for a little stay
By the water's edge, in sticky clay,

To fish in the falling rain.

Back to my long black rubber boots,

Back to my old patched coat;

Back to my rod

And the breath of God—

Home—and my leaky boat.

—F. Colborn Clarke.

"Pa" and Polly.

The girls were having a good time in the sitting-room. It was well warmed and lighted, and there was a sound of laughter and the hum of merry voices. Someone was tuning a mandolin to the piano and there was a fluttering of music leaves. Company had come in as

usual, to spend the evening. The Moberly girls, that is, the three older ones, all had light hair, blue eyes and lively, vivacious manners that proved very attractive to the young people in the quiet village.

"Pa" Moberly nobody knew much about. He sat out in the kitchen most of the time. It was a dingy little room, and often in the evening he had no light; only the dull glow of the stove and the red sparks of his old-fashioned pipe.

"Pa" Moberly was a little, timid, shrinking man. He had faded blue eyes, bent shoulders and toil-worn hands. He had worked hard for his girls. He had ungrudgingly given them his best. It seemed too bad that now he was old and they were grown to womanhood, they did not care.

When Mrs. Moberly was alive things were different. He had his comfortable easy chair then in the sitting-room; his slippers, too, and there was the lounge to rest on when he was tired.

But his girls grew up, pretty, strong-willed and altogether self-fish. "Pa" Moberly found himself banished from his comfortable quarters. A number of cushions, too fine for use adorned the old sofa, and his armchair had three tidies on it. He was soon made to understand that he was not wanted.

It was not long before he began to stay in the kitchen, and by-and-by he sat nowhere else. He knew every figure on the dingy papered walls, and the only chair he had to sit in was a straight-back wooden one, in which he could not rest.

He used to long sometimes for his old corner in the sitting-room, with its lights, its laughter and its music, but to his gentle hints the girls gave scant encouragement. "They didn't want pa around," they told themselves.

The lonely, tired old man had many thoughts as he sat in the kitchen night after night in solitude, and he used sometimes ponder the question in his gentle heart as to whether, after all, it paid to bring up girls who were ashamed of you when you were old.

Polly did not know about the changed condition of affairs. Polly was the youngest, and more like her mother than any of the others, being small, quiet and brown-eyed.

She had been staying for three years out in Pennsylvania with an invalid aunt for whom she had been named. Poor Aunt Bassett was dead now, and to-day Polly had come home again. She was upstairs now, busy in the small back room that the girls had forgotten to make ready for her.

As "Pa" Moberly sat alone in the kitchen to-night he was thinking of Polly. In his yearning, fatherly heart there was a faint stirring of hope.

There was a chance that he might take some comfort with this, his youngest daughter. He

had felt that from the time she was born. She wasn't like the other girls, and she had seemed so unfeignedly glad to see him. He felt the pressure of her young arms yet about his neck, and her kisses still lay warm upon his furrowed cheek.

In the darkness of the old kitchen he brushed a tear from his eye. He was thinking of Ma Moberly, too, and of her gentle, tender, womanly ways. He wished the girls were more like their mother. Just then Polly came in. She went quickly to his side.

"Why, pa," she cried, "what are you sitting in the kitchen for, and in the dark, too? Is anything the matter?"

In the friendly darkness Pa Moberly took the little hand and stroked it. "Nothing Polly," he said. "I—I always sit here."

Polly seated herself on his knee. "Always sit here?" she cried, in surprise. "Don't you go into the sitting-room evenings as you used to?"

Pa Moberly shook his head. "No," he faltered.

"But why?" insisted Polly. "You don't mean to tell me you don't sit in your old chair any more?"

Pa Moberly's chin quivered. Polly did not know, and it was hard to tell her. Polly was like her mother.

"Alice likes to keep that chair for company," he said, slowly. "Oh I don't mind the kitchen so much, now," he added as cheerfully as he could. "At least I won't now, since you've come home. I do miss the old chair some, but it's all right."

"The girls don't want me in there, Polly," he went on, huskily. "They're young, and there's always company, you know. I don't know as I blame 'em much. I'm old and worn out and behind the times. No, I can't say as I blame 'em."

Polly laid her soft cheek suddenly against the wrinkled one.

"You're not old or worn out or behind the times, either!" she said. "It's a shame for you to stay out here!" Her sweet, girlish voice was full of indignation.

"But never mind, pa," she went on. "I tell you there are better days ahead. I've come home now, and I'm going to look after you, see if I don't. What would ma think if she were here, to see you sitting here all alone in this dark old kitchen? Why, it would break her heart! Come with me, pa!"

"Where?" said Pa Moberly, hesitatingly, in his surprise. "Into the sitting-room."

"Oh, I can't go there, Polly; they don't want me."

"Yes, you can. I want you. You would not refuse me anything on this, my first night home?"

When washing greasy dishes or pots and pans, Lever's Dry Soap (a powder) will remove the grease with the greatest ease. 23

Pa Moberly got up. The old wooden chair was uncomfortable, and he rose stiffly even with the help of Polly's arm.

"No, I couldn't, Polly," he said. "You—you're too like your mother."

As they left the dark kitchen together Pa Moberly grasped Polly's hand tightly. "I'm afraid, Polly," he whispered. "We'd better not."

But Polly only squeezed his hand in a reassuring clasp, and somehow Pa Moberly left stronger.

Polly opened the sitting-room door, and a stream of light flashed out into the little dark entry. The girls were having a good time, indeed.

A young lady in a blue dress occupied the piano-stool. A young man with his hair plastered down over his forehead occupied Pa Moberly's armchair. He had a mandolin in his hand, and was strumming it to the young lady's accompaniment. Alice and Belle and Harriet were sitting about with the liveliest air of enjoyment.

As Polly and Pa Moberly entered their complacency suddenly faded into astonishment and dismay. What did Polly mean, and what did Pa mean, by intruding on their company in this fashion?

Polly advanced steadily into the centre of the room, still holding her father's hand.

How little and shy and bent Pa looked, the girls thought, and how determined was the air Polly wore—like a young captain going into battle. It was as if Ma Moberly had come to life.

Alice arose. The young lady at the piano turned, the young man stopped his mandolin. In all the months he had come to the Moberly house this was the first time he had ever seen the little, white-headed man who lived there. And who was that pretty brown-haired girl with flashing eyes?

Alice broke the silence. "My sister Polly, Mr. Bryant," she said, a little nervously, "and—my father. And this is our old friend Eva Brent. Pa, you know Eva?"

Pa nodded cordially; so did Polly. But something wholly unusual was in the air, and everyone felt it.

Polly led Pa Moberly up to the young man reclining in the chair. "Do you mind taking another chair, Mr. Bryant, she said, pleasantly. "You see, this one is Pa's favorite. Ma gave it to him."

Alice and Belle and Harriet flushed, but Polly was quite undisturbed. The young man was astonished, but he rose quickly, with a stammered apology, and Polly calmly wheeled the chair nearer the pleasant fire.

"Sit here, pa," she said, affectionately, "and let me turn the light so it won't hurt your eyes."

She adjusted the light to her liking, then pushed Pa Moberly gently into his old place. His white hair shone in the lamplight, and his lips trembled.

"There!" said Polly, in a pleased voice. "Isn't that better?"

Regardless of all onlookers, she stooped and kissed the withered cheek; then she turned to the others.

"Go on with your playing, won't you, Eva?" she said gently.

Nobody spoke; then the young lady turned to the piano and the restraint was quickly over.

Pa Moberly's eyes grew moist. How soft the chair was, and how pleasant the fire, and how comfortable was the touch of the little, firm hand upon his shoulder!

And there was something else. He knew and everyone else knew that his lonely hours in the old kitchen were over.

To-morrow the straight-backed wooden chair would be pushed back, to be occupied no more. The firelight could play on the dingy walls, the mice could scamper at will over the floor. Pa Moberly would not be there to see. Polly had come home to take care of him, and Polly was brave. It was as if Ma Moberly had come to life again.—Susan Hubbard Martin, in *Youth's Companion*.

A Housekeeper's Tragedy.

One day as I wandered, I heard a complaining,

And saw a poor woman the picture of gloom,

She glared at the mud on her doorstep ('twas raining),

And this was her wail as she wielded the broom:

"Oh! life is a toil, and love is a trouble,

And beauty will fade and riches will flee,

And pleasures they dwindle, and prices they double,

And nothing is what I could wish it to be.

"There's too much of worriment goes to a bonnet;

There's too much of ironing goes to a shirt;

There's nothing that pays for the time you waste on it;

There's nothing that lasts but trouble and dirt.

"In March it is mud; it's slush in December;

The midsummer breezes are loaded with dust;

In fall the leaves litter; in muggy September

The wall-paper rots, and the candlesticks rust.

"There are worms in the cherries, and slugs in the roses,

And ants in the sugar, and mice in the pies;

And rubbish or spiders, no mortal supposes,

And ravaging roaches and damaging flies.

"It's sweeping at six and dusting at seven;

It's victuals at eight, and it's dishes at nine;

It's potting and panning from ten to eleven;

We scarce break our fast ere we plan how to dine.

"With grease and with grime, from corner to center,
Forever at war and forever alert,
No rest for a day lest the enemy enter—

I spend my whole life in a struggle with dirt.

"Last night in my dream I was stationed forever

On a little bare isle in the midst of the sea;

My one chance of life was a ceaseless endeavor

To sweep off the waves ere they swept over me.

"Alas! 'twas no dream—again I behold it!

I yield; I am helpless my fate to avert!"

She rolled down her sleeves, her apron she folded;

Then lay down and died, and was buried in dirt!

—E. L. Turner.

Sociability in the Home.

A stranger might often infer that we came together at dinner simply to feed and were unable to relax in mind until the feeding operation was done. For the sake of good digestion as well as good fellowship, let us have a cheerful, bright interchange of ideas at our table. We may not all be brilliant conversationalists, but it will be strange if we cannot think of some kind and pleasant remarks, some curious and laughable incidents, or bring some interesting and fruitful result of our experience from the busy world outside. In one home every person is required to tell some funny story at dinner and no one is heard if he utters words of fault-finding. Dinner here is an event welcomed by each member of the family, and for that time are saved all the interesting incidents of the day. This is a custom which might profitably be adopted by others. Even a child, if properly encouraged and never snubbed, will learn to talk well and to find a bit of news or story worth telling.—Selected.

A Quick Cure for Bee Stings.

First pull the sting from the flesh, then bruise the fresh leaves of the common weed known as vervain and rub the wound well with them, after which bind to it a plaster of the crushed leaves well moistened. This will prevent swelling and ease the pain. Vervain may be used in its dry state by steeping the leaves in hot water. It is gathered in September by negro nurses in the South and hung up to dry for winter use.—*May Ladies' Home Journal*.

This notice is posted up in a wayside station in Ireland: "If the gentleman who left a baby in a third class railway carriage on the 26th ult., does not claim the same within a fortnight it will be sold to defray expenses."—*London Mail*.

Hints by May Manton.

WOMAN'S BOX PLAITED SHIRT WAIST, NO. 4098.

Box plaits are among the features of the season and are seen upon many of the latest shirt waists. The novel and attractive model shown exemplifies their use and is admirable for many materials. The original is made of white mercerized chevot and is worn with a tie and belt of black liberty satin, but madras, chambray, percale, linen, dimity and the like as well as flannel albatross, tafeta, peau de soie and all waisting cloths and silks are appropriate.

Both the fronts and the back of the waist are laid in narrow box



4098 Shirt Waist, 32 to 40 Bust.

plaits that are stitched for their entire length and are drawn in gathers at the waist line to give a tapering effect to the figure. The sleeves are plain, in regulation shirt style, and are finished with straight square cornered cuffs. At the neck is a plain stock that closes at the back. The closing is effected by means of buttons and buttonholes worked in the centre box plait.

To cut this waist in the medium size 4 yards of material 21 inches wide, 3½ yards 27 inches wide, 2½ yards 32 inches wide, or 2 yards 44 inches wide will be required.

The pattern 4098 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.

An Emergency Meal.

By Carrie L. Marshall, in American Kitchen Magazine.

Lizzie, there's the minister and his friend, that Mr. Snow who spoke at the conference meeting, going in at Brown's gate; they'll be certain to call on us next, and as they've walked a mile and a half to get here, we must ask them to stay to tea. And as far as I

know, there's nothing in the house but tea. It's dreadfully inconvenient, this living so far from a market."

"There are a few things besides tea, Annie. I can think of bread, butter, milk, eggs, and canned corn, but that's about all, I must admit."

"Not a very promising list, but you have mother's instinct for getting up a palatable meal out of materials that would seem almost hopeless. I do wish we lived nearer the markets; then we'd not be frightened at the sight of unexpected visitors."

"I am not frightened at them, Annie, and if we lived nearer the markets we'd be tempted to spend more money than we can afford, so get yourself into a proper frame of mind to receive the visitors and leave me to battle with tea, poverty, and canned corn as a basis for a presentable meal. And remember, I shall be really disappointed if they don't stay."

"Oh, I'll be properly hospitable, never fear. If I tremble they shall not know it, for it is you who bears the heroic part."

"No," Lizzie returned slowly, with the rapt look of one who sees visions; "there are onions in the cellar, and cold boiled potatoes in the pantry," she presently proclaimed, as one of the results of her visions, "that means a salad. There, go, Annie, they are coming out of the gate. The Browns must be away from home."

"How did you achieve so correct a tea, so entirely appropriate, with only the materials that you had on hand?" Annie inquired of her sister, in a tone of awed admiration, after the two gentlemen had taken their departure.

"The canned corn was my sheet anchor," Lizzie confessed. "Weren't those pancakes delicious?"

"Yes. Tell me how you made them. Some day the Philistines may be upon me when you are not by to help."

"I'll tell you, but you'll be sure to forget."

CORN PANCAKES

"To one pint of corn—pint cans being the usual size—add two well-beaten eggs, a piece of butter the size of a walnut, half a teaspoon salt, the same of sugar, a pinch of pepper, four tablespoons milk, one heaping tablespoon flour. Beat

Clothing is worn more in the wash than in use where common soap is used.

SUNLIGHT SOAP REDUCES EXPENSE

Ask for the Octagon Bar

all together thoroughly. Have an iron skillet ready on the range, just as you would for frying ordinary pancake batter, but use a tablespoon of lard or drippings to each set of cakes in cooking. You will find it all taken up when the cakes are done. Fry to a golden brown and then turn them just as you would batter cakes. Put on a hot platter and keep them in the oven until all are done. Do not pile one above another, or they will steam and become sodden.

"I think I shall recollect that. But I could hardly keep from telling you at the table how nice the honey was."

"That was nothing more than a heavy syrup of granulated sugar with the half of an orange steeped in it and taken out as soon as I found by testing it that the syrup had acquired the right flavor. When it comes your turn to get up an emergency meal, you may use vanilla or lemon flavoring and a half cup desiccated cocoanut in your syrup if you do not happen to have an orange. It will not be strained honey, but it will make a passable dessert."

"Poverty sharpens the inventive faculties," murmured Annie.

"Also the appetite," Lizzie amended.

Life.

"Life is a leaf of paper white, Wherein each one of us may write His word or two, and then comes night.

Greatly begin! Though thou have time

But for a line, be that sublime— Not failure, but low aim, is crime."

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

The Farming World.

A PAPER FOR FARMERS AND STOCKMEN.

D. T. McAINSH, PUBLISHER
J. W. WHEATON, B. A., EDITOR.

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 publisher 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 addresses 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.

American Holstein-Friesian Association.

The seventeenth annual meeting of the American Holstein-Friesian Association will be held at Syracuse, N. Y., on June 4th, next. Some important amendments to the constitution will be made.

English Shows.

The Royal Counties Agricultural Society hold their annual show this year at Reading, on June 10th to 13th. The English Royal Show will be held at Carlisle, on July 7th to 11th, 1902, and the Highland and Agricultural Shows of Scotland, at Aberdeen, on July 15th to 18th next.

Brandon Fair.

Western Manitoba's big fair will be held at Brandon this year, on July 29th, 30th, 31st and August 1st, 1902. The prize list is now out and will be found of interest to both Eastern and Western breeders.

Manitoba's Grain Act

The amendments to the Manitoba Grain Act of 1900, embody three things: The building of flat warehouses, the erection of loading platforms and the equal and just distribution of cars among intending shippers. Under the old act one warehouse was all that could be erected at a station. This restriction is now removed and railway companies are now compelled to provide suitable locations for these warehouses at a nominal rate. Any ten farmers living within fifty miles of a shipping point can compel the erection of a suitable loading platform, which must be erected within thirty days. In regard to the third feature elaborate provision is made by the new law to safeguard the rights of even the smallest shipper to his fair share of cars.

Destroying Potato Bugs

Mr. W. B. Roberts, Sparta, Ont., sends us the following item from the Maine Farmer. It refers to the effectiveness of Bug Death in destroying potato bugs. Mr. Roberts will be glad to give any information he can regarding this substance:

Ralph E. Gould has given us some valuable information in regard to the value of Bug Death, both as an insecticide and preventive against rust. As stated last summer, I used poisoned ashes with perfect success, sprinkling the tops with it as then described, and after going through the piece several times two or three days afterwards, without discovering a live bug, but myriads of dead ones, became convinced more firmly than ever, if possible, that was the material to use.

In regard to rust, it did not strike my potatoes until they got ripe, and they were never more mealy or of finer quality than today. I have no ax to grind in this matter, nor am I like the man who said he always held himself open to conviction, but he would be d—d if any live man could convict him.

When in peace is the time to prepare for war; and although the potato bug war is over for the present, it will be on again in due time, and then we shall all need the very best weapon for fighting the enemy. Bug Death has not been used about here, to my knowledge, probably on account of its high price; but still if it will do what Mr. Gould claims for it, there seems to be no reason why it should not come into general use. Is there any secret about its composition, and if not, what are its constituents?

Veterinary Inspection of Stallions

A writer in the English Live Stock Journal gives the following pertinent paragraph in regard to the veterinary inspection of stallions:

"In your last issue it is stated that the Devon County Council wish to prohibit the use of unsound sires by legislation. Surely the endless worries and ill-feeling produced by such a course can be avoided, however praiseworthy the object. This is a matter entirely in the hands of horse-breeding farmers. Let them refuse to use a stallion unless the groom can produce a certificate of soundness, and unsound sires will soon be stamped out. No owner of a sound stallion would object to the trivial expense of a veterinary examination. Those farmers who would willfully use an unsound stallion must be so blind to their own interests as to be hardly worth legislation. Private enterprise has always triumphed over legislation in horse breeding in England, and the longer it does so, the better for all concerned."

Poor Soils

are made richer and more productive and rich soils retain their crop-producing powers, by the use of fertilizers with a liberal percentage of



Potash.

Write for our books—sent free—which give all details.

GERMAN KALI WORKS,
93 Nassau Street, New York City.

FISTULA AND POLL EVIL

Fleming's Fistula and Poll Evil Cure is a new, scientific & certain remedy. NO COST IF IT FAILS. Write today for important circular No. 312 FLEMING BROS., Chemists, 38 Front St., West, Toronto, Ont.

Cured in 15 to 30 Days



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



"Mamma, here's a letter from the dead letter office," said intelligent little Clarence.

"How do you know, dear?"

"It has a black border all round the envelope."—Judge.

Some Defects in Horse Shoeing.

There is no doubt a great amount of injury is caused to many horses throughout the country by bad horse-shoeing done by persons who do not understand the anatomy of the horses foot or the functions of the various parts. Farmers should be careful on this point and have the shoeing done in a way that will cause the least injury to the foot. The following by an expert in the business may be found of value:

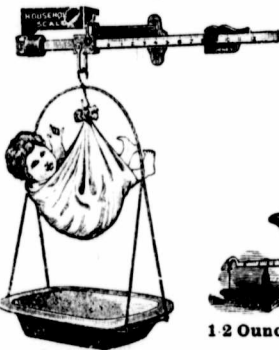
The hoof of a horse is the representative of the claws and nails of other animals. The last bony segment of the limb is expanded to form a foundation for the hoof and this foundation is increased by two plates of cartilage, which are situated laterally and posteriorly to this bony part, the cleft between them being occupied by a fibrous and fatty body. Over this foundation the skin of the limb is continued and variously modified to form different structures of the foot. The derma of the skin of the limb has become the pododerm of the foot, and completely surrounds the internal structures above mentioned, secreting the external horny parts which correspond to the epiderms of the skin of the limb. The horny capsule thus formed and known as the hoof is tough and elastic, and in the living animal forms one continuous piece, but after maceration may be separated into the crust or wall, the sole, and the frog portions. Now, not only the lower edge or bearing surface of the wall

\$50 Round Trip to California.

Chicago & North-Western R'y from Chicago, May 27-June 8. The New Overland Limited, the luxurious every day train, leaves Chicago 8.00 p. m. Only three days en route. Unrivalled scenery. Variable routes. New Drawing Room Sleeping Cars and Compartment Cars, Observation Cars (with telephone). All meals in Dining Cars. Buffet Library Cars (with barber). Electric lighted throughout. Two other fast trains 10.00 a. m. and 11.30 p.m. daily. The best of everything. Daily and personally conducted tourist car excursion to California, Oregon and Washington. Apply to your nearest ticket agent or address. B. H. Bennett, Gen'l. Agent, 2 East King Street, Toronto, Ont.

Scales FOR EVERY PURPOSE SPECIAL PRICES EASY TERMS

By a special arrangement with one of the oldest and most reliable scale manufacturers in Canada we are able to furnish Dairymen, Stockmen and others with Scales of any style or capacity at exceptionally close prices, and on small monthly payments. This arrangement has been made in the interest of the readers of THE FARMING WORLD, and no special inducements can be offered to anyone whose subscription is not paid in advance.



Household Scale
Cheap, convenient, and accurate, capacity 12 lbs, no loose weights, requires no table room, always ready for use.



Family Scale
Half Ounce to 240 Pounds



1 2 Ounce to 20 lbs



600 lbs.
1,000 "
1,200 "
2,000 "
3,000 "

Dairy Scale

The Live Stock Scales
have a capacity of from one pound up to 4,000 pounds



Government Inspection Certificate forwarded with each Scale.

If you need a Scale, large or small, for any purpose, fill out the following blank and mail to us. We can save you money. Anyway it won't cost you anything to get our terms:-

THE FARMING WORLD,
Confederation Life Building, TORONTO.

Please send me particulars, price, terms, etc., for a Scale which will weigh about..... lbs., and suitable for weighing.....

NAME.....

P O.....

It is understood that this is not an order.

MILK TICKETS

EVERY PATRON OF EVERY FACTORY

Should insist on receiving a monthly statement of the milk delivered from his farm.
Our Ideal Milk Ticket is used by all the best factories. 25¢ a hundred. \$2.00 a thousand.

Sample Card Free

Address
THE FARMING WORLD

Confederation Life Building,
Toronto

Low Round Trip Rates, Via Union Pacific, from Missouri River,

- \$ 15.00** To Denver, Colorado Springs, and Pueblo, Colo., June 22 to 24, inclusive, July 1 to 13, inclusive.
- \$ 19.00** To Denver, Colorado Springs, and Pueblo, Colo., June 1 to 21, inclusive, June 25 to 30, inclusive.
- \$25.00** To Salt Lake City and Ogden, Utah, August 1 to 14, inclusive.
- \$25.00** To Glenwood Springs, Colo., June 22 to 24, inclusive, July 1 to 13, inclusive.
- \$30.00** To Salt Lake City and Ogden, Utah, June 22 to 24, inclusive, July 1 to 13, inclusive.
- \$ 31.00** To Glenwood Springs, Colo., June 1 to 21, inclusive, June 25 to 30, inclusive.
- \$32.00** To Salt Lake City and Ogden, Utah, June 1 to 21, inclusive, June 25 to 30, inclusive, July 14 to 31, inclusive.
- \$45.00** To San Francisco or Los Angeles, Cal., May 27 to June 8, inclusive, August 2 to 10, inclusive.
- \$45.00** To Portland, Ore., Tacoma and Seattle, Wash., May 27 to June 8, inclusive, July 11 to 21, inclusive.

Full information cheerfully furnished on application to

G. G. HERRING, G.A.,
126 Woodward Ave., Detroit, Mich.

Toronto Incubators



Absolutely self-regulating, supply their own moisture. Will hatch every hatchable egg. Used by largest breeders. Catalogue free.

T. A. WILLETT,

514 Dundas Street, Toronto

THE BEST BUTTER

Can only be secured by close attention to every detail. Much of the paper sold as vegetable parchment for wrappers is only imitation, and quite liable to impart a bad flavor to butter. We import large quantities of the genuine article direct from Germany. We supply it plain or printed. Write for samples and prices.

Sentinel-Review Co. Ltd.,
Box 724, Woodstock, Ont.

BRITISH COLUMBIA FARMS

If you are thinking of going out to the Pacific coast, try British Columbia. A delightful climate, no extremes of temperature, fertile land, ample rainfall, heavy crops, rapid growth, and splendid market for everything you raise at good prices. The celebrated valley of the Lower Fraser River is the garden of the province. Write for farm pamphlet telling you all about it and containing a descriptive list of farms for sale. **The Settlers' Association of B.C.,** Box 540, Vancouver, B.C.

WOOD ENGRAVING,
PHOTO ENGRAVING,
HALF TONES
168 BAY ST.
J.L. JONES ENG. CO.
TORONTO

portion of the hoof should support weight, but also the frog portion, which covers the above mentioned fibro-latty body or cushion and occupies the centre of the posterior part of the foot should come in contact with the ground and form a part of the surface of support, serving, as it does, in virtue of its elastic nature, to expand the hoof at all times when weight is thrown upon the limb, and alternately, to permit a return of the parts to their former shape and position when relieved of weight. If when weight is thrown upon the limb no support is obtained by the frog from below its compression and consequent lateral expansion will not take place. The interference with this important function of the frog brought about by faulty and bad shoeing and by the ruthless cutting away of its substance by ignorant shoers, is responsible for a majority of the ills of hoof feet. When thus deprived of its functional activity, the frog becomes shriveled from disease, no longer serving its office of expansion and permitting a contraction of the hoof. Also the failure to give any support to the navicular mechanism leads to strains and inflammations of those structures, resulting in the so-called navicular disease. Various inflammations of the pododerm are directly due to cutting away and weakening the sole and the bars, especially when associated with destruction of the functions of the frog. Laminitis or founder is sometimes attributable to the above causes. Corns or bruised sole, are expressions applied to inflammations and hemorrhages of the pododerm and are largely due to excessive cutting away and weakening the quarters, sole, bars and frog. Thrush is a diseased condition of the frog characterized by the collection of a dark colored, ill-smelling liquid in its median fissure or lacuna. It may be attributed to bad shoeing and excessive paring of the frog, thus causing its atrophy and disease.

Besides the diseased condition briefly noticed above, which follow directly and surely in the wake of the drawing-knife and rasp in the hands of the wrongly instructed and mistaken smith, the weakening and thinning of the protective coverings of the foot render it much more liable to accidental injury, such as picked up nails, bruises, etc., and when associated with bad shoeing, occasion various defects of gait, as forging, interfering, etc.

Many smiths rasp away portions of the surface of the wall as well as destroy the sole and frog, and when this destruction of the natural protective surfaces is associated with the consequent lack of exercise of the foot structures, their naturally large blood supply is diminished and the foot is subjected to a drying out process which is the great enemy of a sound hoof.—The Agricultural Student.

NEW BOOKS

FOR THE

Business Farmer

Animal Breeding. By Thomas Shaw, Professor of Animal Husbandry at the University of Minnesota. Author of *The Study of Breeds, Forage Crops Other Than Grasses, Soiling Crops and the Silo, etc.*

This book is, beyond all comparison, the most complete and comprehensive work ever published on the subject of which it treats. It is the first book of the kind ever given to the world which has systematized the subject of animal breeding. It includes thirty chapters, each of which treats of some particular phase of the subject. Illustrated, substantially and handsomely bound in cloth, 5 by 7 inches, 405 pp. Price, postpaid, \$1.50. One new subscription to THE FARMING WORLD and "Animal Breeding," both for \$2.00.

The Study of Breeds. By Professor Thomas Shaw.

Origin, history, distribution, characteristics, adaptability, uses, and standards of excellence, of all the pedigreed breeds of cattle, sheep and swine in America. The accepted text book in colleges, and the authority for farmers and breeders. 372 pages, 12 mo., by 8 inches, 60 full page plates. Price, postpaid, \$1.50. One new subscription to THE FARMING WORLD and "The Study of Breeds," both for \$2.00.

Soiling Crops and The Silo. By Professor Thomas Shaw.

The growing and feeding of all kinds of soiling crops, conditions to which they are adapted, their plan in the rotation, etc. Not a line is repeated from the Forage Crop book. Best methods of building the silo, filling it and feeding ensilage. Illustrated, 12mo, 5 by 8 inches, 264 pages, Price, \$1.50. One new subscription to THE FARMING WORLD and "Soiling Crops and the Silo," both for \$2.00.

Forage Crops Other Than Grasses. By Professor Thomas Shaw.

How to cultivate, harvest and use them. Indian corn, sorghum, clover, leguminous plants, crops of the brassica genus, the cereals, and the fruiting roots. Intensely practical and reliable. 208 pages, illustrated, 12 mo, 5 by 8 inches. Price, \$1.00. One new subscription to THE FARMING WORLD and "Forage Crops Other Than Grasses," both for \$1.70.

Milk and Its Products. By Henry H. Wing, Professor of Dairy Husbandry in the Cornell University.

A treatise upon the nature and qualities of dairy milk, and the manufacture of butter and cheese. 12mo, cloth, Price, \$1.00. One new subscription to THE FARMING WORLD and "Milk and Its Products," both for \$1.70.

Fruit. A Practical Guide to the Picking, Storing, Shipping and Marketing of Fruit.

The subject has been treated strictly from the standpoint of the fruit producer. The commission business, for instance, is thoroughly and fairly discussed, and the commission man can hardly help but be pleased with the advice given, yet it is all plainly directed to the benefit of the fruit grower. Evaporating and canning are handled the same way—not by telling how to run a canning factory or a commercial evaporator—but by explaining those points which are of interest to the man who grows the fruit. The whole subject is tersely, plainly put and adequately illustrated. It is a book which every one can read and enjoy, and which no fruit grower, large or small, can do without. Illustrated, 5 by 7 inches, pp. 250. Cloth, price postpaid, \$1.00. One new subscription to THE FARMING WORLD and "Fruit," both for \$1.70.

Cabbage, Cauliflower and Allied Vegetables from Seed to Harvest. By C. L. Allen.

A practical treatise on the various types and varieties of cabbage, cauliflower, broccoli, Brussels sprouts, kale, collards and kohlrabi. An explanation is given of the requirements, conditions and general management pertaining to the entire cabbage group. After this, each class is treated separately and in detail. The chapter on seed raising is probably the most authoritative treatise on this subject ever published. Insects and fungi attacking this class of vegetables are given due attention. 50 cents. One new subscription to THE FARMING WORLD and "Cabbage, Cauliflower and Allied Vegetables, from Seed to Harvest," both for \$1.25.

Prize Gardening. How to Derive Profit, Pleasure, Health, from the Garden. Compiled by G. Burnap Fiske.

Five thousand gardeners all over America kept a daily record of the methods and results for a whole season, and reported thereon fully in competition for many and large prizes. They represented all grades from the small amateur to the professional market gardener. This unique book summarizes the most useful of all this experience. Illustrated with many charts, sketches, etc., from original photos, 323 pages, 5 by 7 inches, bound in cloth. Price, \$1.00, postpaid. One new subscription to THE FARMING WORLD and "Prize Gardening," both for \$1.70.

ADDRESS—

THE FARMING WORLD
Confederation Life Building, Toronto.

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

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

Horses

We had a pleasant call last week from Mr. J. B. Hogate, one of Canada's largest importers of Clydesdales and Shire horses. He reports a splendid demand for horses and has sold this spring in all, 38 stallions, including 12 imported by him this season. Farmers are now using a higher class of stallions for breeding purposes than ever before, and the outlook for a great improvement in the quality of Canadian horses is very bright. For a really first-class horse, it is no trouble to get from \$15 to \$20 as service fee. Mr. Hogate sails for England about the first of July to look up another importation. He will attend the Highland Show at Aberdeen on July 15th to 18th, and expects to bring to Canada about forty stallions next fall and winter. He may also visit Spain for the purpose of securing a number of Spanish Jacks for use in this country.

Mr. Hogate is well pleased with the returns from his advertisement in *The Farming World*, it having brought him a number of buyers for some of his best horses. Parties on the lookout for first-class imported Clydesdales and Shires should put themselves in communication with Mr. Hogate.

An important Government sale of stallions was held at Fredericton, N. B., on May 23rd. There were sold three Clydesdales, two French Coach, one Hackney and one thoroughbred hunter. These stallions were recently purchased by the New Brunswick Government, and were sold on condition that they be kept in the province for breeding purposes for at least five years. The service fee to be charged shall not exceed \$10 for Clydesdales and not over \$15 for other breeds. It is hoped in this way to improve the breed of horses in the province.

Cattle

During the three months ending March 31st, 1902, there were exported from Great Britain a total of 74 Shorthorns. Forty-two of these were sent to South America, one to Australia and thirty-one to Canada.

The big ranchmen of the South have caught the Canadian fever, and are now turning to the vast and fertile grazing lands of the West to relieve them from the encroachment of settlement in the great cattle states, the movement extending as far south as Texas. What this may mean to Canada may be judged from the fact that a fortune of \$60,000 is to be ex-

pendent in removing one herd, the particulars of which enterprise is told by the Review of Sweetwater, Texas, in the following paragraph: "L. H. Prait, a large ranchman near Snyder, will ship 6,000 head of cattle to Medicine Hat, Canada, early in May. It is said he will drive to Amarillo and ship from there, over the Fort Worth & Denver. To transport this herd will require about 200 cars, or ten trains. The expense will be in the neighborhood of \$10 per head, and the trip will take about three weeks. Quite an undertaking."

The Experimental Farm Report

The fifteenth annual report of the Dominion Experimental Farms appeared a few days ago and is now being distributed. This report, which is for the year 1901, is a particularly large and valuable one. It includes detailed reports of the various departments of the Central Farm at Ottawa together with summaries of the work at the different branch farms. In these will be found the results of many important and carefully conducted experiments in agriculture, horticulture and arboriculture, the outcome of practical work in the fields, barns, dairy and poultry buildings, orchards and plantations at the

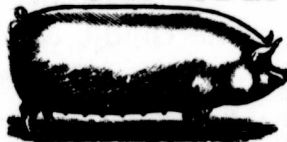
PAIR

Angora Goats

FOR SALE

H. NEWELL, Kilbride, Ont.

OAK LODGE YORKSHIRES



Years of CAREFUL BREEDING have made the OAK LODGE YORKSHIRES the Standard of Quality for IDEAL BACON HOGS.

The championship against all breeds has been won by this herd for 4 years at the Provincial Winter Fair, on foot and in dressed carcass competition.

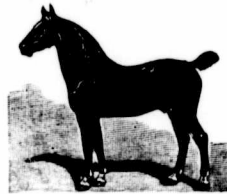
Prices are reasonable.
J. E. BRETHER, Burtford, Ont

AYRSHIRES AND YORKSHIRES

FOR SALE

I have a number of choice cows and heifers, 2-year old heifers in calf, and bull and heifer calves sired by "Blair Athol of St. Anne." Breeders will find this a rare opportunity to get choice Ayrshires at low prices. I have three choice litters of Yorkshire pigs, six weeks old, ready to ship. Quick buyers will get bargains.

JOHN H. DOUGLAS, Warkworth, Ont.



WILL NOT SCAR OR BLEMISH.

GOMBAULT'S CAUSTIC BALSAM

is the safest and most effective lotion or blister for ailments of

HORSES and CATTLE

and supersedes all cauters or firing. It is prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc. it is invaluable. 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 COMPANY, Cleveland, Ohio,
OR 21 FRONT STREET WEST, TORONTO, ONT

JOHN DRYDEN

BROOKLIN, ONTARIO

BREEDER OF

CRUICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP

Choice Young Bulls and Ram Lambs for sale. Write for prices.

QUEENSTON HEIGHTS SHORTHORNS.

Scotch and Scotch-topped choice young cows and heifers for sale at moderate prices.

HUDSON USHER,
Queenston, Ont.

DAVID McCRAE, Jansfield, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

When writing to advertisers always mention THE FARMING WORLD.

several experimental farms; also of scientific investigations in the chemical laboratory and the information gained from the careful study of the life histories and habits of injurious insects and the methods by which noxious weeds are propagated and spread, together with the most practical and economical measures for their destruction. In the report of the Entomologist and Botanist will also be found particulars of the experiments and observations which have been made during the past year in connection with the Apiary.

The report is well worth most careful study by every farmer. Copies may be had on application to the Central Experimental Farm, Ottawa.

Feeding Young Chicks

The following is our method of feeding young chicks. Out of one hundred and eighty hatched we have lost but four, so we think it a very good way to feed. After taking the chicks from incubators our feed for the first two weeks is oat meal and three hard boiled eggs once a day cut in halves and let chicks pick from the shell, the three eggs for about fifty chicks. When two weeks old we make Johnny cake the same as for ourselves, omitting the sugar, egg and shortening, crumb it up and feed it with some wheat and a little oat meal. The oat meal soon gets too small feed for them. We feed the Johnny cake till they are about seven to eight weeks old, then our feed is wheat and cracked corn. We feed no wet food. We feed plentifully three times a day and give fresh water three times a day. To one quart of water we add four drops of carbolic acid to keep them healthy. Have plenty of coarse sand by them. They are very fond of lettuce once a day. If it is a cold stormy day we do not let them out of the brooder. When the grass is wet in the morning we keep them shut in till it is nearly dry.

Mrs. W. P. Russell.

Answered the Purpose.

Alice, who was 5 years old, was often asked to run errands for her mother. She went very willingly if she could pronounce the name of the article wanted, but she dreaded the laughter which greeted her attempts to pronounce certain words. "Vinegar" was one of the hardest for her. She never would go for it if she could help it, but one morning her mother found it absolutely necessary to send her.

On entering the store she handed the jug to the clerk and said:

"Smell the jug and gimme a quart."

Idleness is only the refuge of weak minds and the holiday of fools.—Chesterfield.

**Kills the Bugs.
Feeds the Plant.**



Pat. in Canada Nov. 2, 1897, Jan. 25, 1900.
NON-POISONOUS. PREVENTS BLIGHT.

**Insure
Your Crop**

Against destruction by bugs or worms by using

"BUG DEATH"

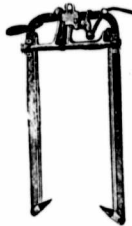
It kills potato, squash and cucumber bugs; currant, gooseberry and tomato worms, and all bugs and worms that eat the leaves of plants.

Bug Death increases yield. It pays to use in every way.

Send for free booklet.

Bug Death Chemical Co., Limited
St. Stephen, N.B.

**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.



HIGHEST QUALITY HIGHEST SPEED LOWEST COST

EASIEST OPERATION and ADJUSTMENT
are the Strong Points in the

London Fence Machine

and Fence Woven with It.

No higher quality nor lower cost can be had than with the London. It is beyond comparison ahead of all others for speed, quality of work, and easy adjustment. If you have not yet considered it, write for our catalog and estimates of cost, or wire in 12 styles of fence.

LONDON FENCE MACHINE CO.

London, Canada

Limited.

**FOR POWER ON THE FARM THERE IS NOTHING
SO CONVENIENT AS A GASOLINE ENGINE.**

The Goldie & McCulloch Co. Limited

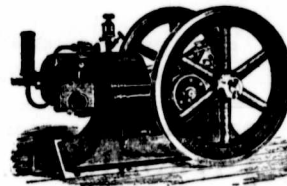
GALT, ONT.

DEAR SIRS,—

Please send me a catalogue describing your

GASOLINE ENGINES

for farm use, also prices of same.



Name

P.O.

This is not an order.

Province.

Cut this out and mail to above address.

Market Review and Forecast

Office of The Farming World, Confederation Life Bldg.

Toronto, May 26th, 1902.

General trade continues in a satisfactory condition and the outlook most encouraging. Money is in good demand and rates of interest are steady at 5 per cent. on call. Discounts remain at from six to seven per cent. The stock market was a little easier at the end of the week and C.P.R. dropped a couple of points.

Wheat.

Generally speaking the wheat situation shows little change. The effect that the improved condition of the growing crop has had on the speculative market has been counteracted by the reports of a scarcity of old wheat in farmers' hands chiefly in the Western States. Already harvesting has begun on the winter wheat crop in Texas and it is expected the new crop in Kansas will be ready in a couple of weeks. With harvesting operations so near at hand only very great injury to the crop can have much influence on prices. Cable reports remain steady but it is thought that the top has been reached. The chief business during the week has been in Manitoba wheat a great deal of it going forward via American ports. Locally the market is firmer and higher at most Ontario points due largely to the local demand from millers. Quotations here are 80c for red and white, 68c to 69c for goose, and 76c to 77c for spring at outside points. On Toronto farmers' market red and white bring 72c to 85c, goose 68c to 70c and spring fine 67c to 74c a bushel.

Oats and Barley.

Canadian oats continue in good demand in England at an advance of 2d. Here the market is firm and prices good at 44c to 45c for No. 2 middle freights. On the farmers' market oats bring 48c to 48½c per bushel.

There is nothing doing in barley and prices are nominal at last week's quotations.

Peas and Corn

The pea market is quiet though steady here at from 78c to 79½c at outside points. On the local farmers' market here they bring 84c per bushel.

The corn market remains steady with no special change to report. At Montreal car lots are quoted at 71½c to 72c on track. Here Canadian No. 2 mixed is quoted at 61c and No. 2 yellow at 62c west in car lots.

SEEKING AN INVESTMENT?

If you have money you wish to invest safely we should like you to consider our

FOUR PER CENT. BONDS

They are much in demand by prudent investors who prefer unquestionable securities for their capital. We shall be pleased to send a Specimen Bond and all information on receipt of address.

Head Office:

TORONTO ST.,
TORONTO

The Canada Permanent and Western
Canada Mortgage Corporation.

Bran and Shorts

Bran supplies seem scarce. Car lots of bran are quoted at Montreal at \$19.50 to \$20.50 and shorts at \$22.50 to \$23.00 per ton. City mills here sell bran at \$19.50 and shorts at \$21.50 in car lots f.o.b. Toronto. Manitoba millfeeds are reported very firm here at \$22.00 for car lots of shorts and \$20.00 for bran in sacks, Toronto freights.

Potatoes

The potato market keeps strong. Car lots of good to choice quality are quoted at Montreal at 90c to 95c a bag. The market here is firm with a good demand at 85c in car lots on track. On Toronto farmers' market potatoes bring 75c to \$1.00 a bag.

Hay and Straw

The hay market continues active with a lot of business doing at points east on export account. The demand for Canadian hay in England is increasing and prices there last week were increasing. When the government received orders to cease buying hay for South Africa, there were a number of dealers who had secured a lot of baled hay for this trade. These last week received orders to ship all such hay so arranged for. The exports of Canadian hay for the nine months ending March 31st last were 319,577 tons valued at \$3,227,210 as against 185,313 tons valued at \$1,483,166 for the same period a year ago. Of this lot, the direct shipments to Great Britain totalled 154,771 tons and those to South Africa 113,287 tons. The United States took 49,958 tons during the same period.

Prices at Montreal for baled hay are higher and the market firm at \$9.50 to \$10.00 for No. 1 timothy, \$8.50 to \$9.00 for No. 2 timothy, \$8.25 to \$8.50 for clover mixture, and \$7.50 to \$8.00 per ton for clover in car lots on track. The market here rules steady at \$10.25 for car lots of timothy on

track. On Toronto farmers' market timothy sells at \$12.00 to \$13, clover \$8.00 to \$10.00 and sheaf straw \$8.00 to \$9.00 per ton

Eggs and Poultry

Eggs are higher, under large buying for English account and because of reported shortage in supply. At Montreal the market is firm at 14c. in case lots. At country points east 12½c to 13c., f.o.b., have been paid for fresh eggs. Though offerings are large here, there is a good demand at 13½c. in case lots. On Toronto farmers' market, new laid bring 13c to 15c a dozen.

The Canadian Produce Co., Ltd., 36 and 38 Esplanade St. East, Toronto, will pay until further notice for live chickens, 8c., for ducks and turkeys 11c., for geese 6c. per lb. All must be young birds. For hens 4c. per lb. Dressed poultry, dry picked (except hens), ½c lb. higher. Broilers (under two pounds in weight 20 cents per pound.) These prices are for weight on arrival. Crates for live poultry supplied free, and express paid up to 50c per 100 lbs. of chickens. No thin birds will be taken.

Cheese

Prices at the local cheese markets took quite a drop last week, and factorymen were glad to accept from ½c to 1c less per lb. than the week previous, the ruling figures ranging from 10½c to 10½c early in the week, down to 9½c and 10½c towards the end. There is nothing discouraging in this, however, as it was not expected that prices would maintain the very high level of 11c to 11½c very far on in the season. The cheese situation, generally speaking, is strong, and cable reports show no decided weakness in the English market, though prices are a little lower than a week ago. The high prices so far will induce many factories

POULTRY, BUTTER AND EGGS

We will be pleased to receive shipments of Poultry (dressed or alive), Butter and Eggs in any quantity, and will forward, upon application, empty crates and egg cases. Payments weekly by Express Order.

Toronto Poultry and Produce Co. - Office, 470 Yonge St., TORONTO

WANTED—BUTTER, POULTRY, EGGS

We have a large outlet, having Twenty-one Retail Stores in Toronto and suburbs. Payments weekly. Established 1854.

The WM. DAVIES CO., Limited

Head Office—Retail Dept.
Correspondence invited. 24 Queen St. West
TORONTO

to make cheese that formerly made butter, and to bring out a larger supply of milk, so we may soon see the make increase very rapidly. Exports since May 1st, from Montreal, show an increase of nearly 25,000 boxes over those of last May. But the shipments from the United States for the same time show a falling off of over 32,000 boxes, so, on the whole, there has been a decrease of over 7,000 boxes as compared with last season.

Butter

The butter market ruled steady early in the week under good enquiries for export, but towards the end was easier with lower cable reports. The Trade Bulletin has this to say of last week's trade:

"Up to the present the export demand has been sufficient to absorb all finest offerings of creamery, which have sold on this market at 19½c to 19¼c, a few lots of fancy being taken at 20c. The firmness of the market has, no doubt, been assisted by the continued cold weather and absence of the necessary moisture to bring the pastures into better condition. There is, however, a slightly easier feeling at the close of to-day's market owing to a falling off in cable orders and an increase in offerings from the country. A very fine lot of Eastern Townships' creamery sold this afternoon to an exporter here at 19½c, for which 19¼c was refused on Monday last, and a lot of over 100 packages of very good seconds brought 19c for which 19¼c was refused yesterday. The unusual cold spring throughout Great Britain has retarded home production, and helped to sustain values there. Prices, however, of even the finest butter have been checked by the importation of Russian goods and the prospects of much larger imports to follow."

There is a strong demand here for choice quality of both creamery and dairy, but while offerings are large, comparatively little really choice quality is offering. Creamery prints are quoted at 19c to 20c, and solids at 18½c to 19c. Choice dairy pound rolls and large rolls sell at 15c to 16c in jobbing lots. On Toronto farmers' market, choice lb. rolls bring 18c to 20c, and crocks 15c to 18c per lb.

Wool.

The season for the new clip of wool is at hand and more interest will be taken in this staple for a time. Just now wool is about the lowest product the farmer has

Snakes, Centipedes and other poisonous things may assail you in your walks through field and forest. Be sure to have a bottle of Perry Davis' Painkiller in the house and you run no risk. Directions on the wrapper.

to sell, 12c per lb. being about the present value of washed fleece wool in the country. There is said to be a considerable quantity of old fleece wool in Ontario, which will have some effect upon the value of the new clip. Quotations here are 13c for washed and 7c for unwashed fleece.

Cattle.

The cattle market continues strong and active, and though supplies were fairly large during the week, there was on the whole a firmer market than the week previous. On Friday the run of live stock on Toronto market was fairly large comprising 167 cattle, 3,000 hogs, 313 sheep and lambs, and about 15 calves. The quality of the fat cattle offered was fair. The market was strong with a good demand for all classes. All offerings were quickly bought up, and the prices obtained were uniformly high, with the exception, perhaps, of butchers' cattle, which were only steady. Exporters led the market, several sales occurring at \$6.35 for choice. Picked lots of butchers' cattle sold well, but the other grades were dull.

Export cattle.—Choice loads of heavy shippers are worth from \$6.00 to \$6.40 per cwt., medium exporters \$5.60 to \$5.90. Heavy export bulls sold at \$4.75 to \$5.15 and light ones at \$4.25 to \$4.35 per cwt., choice export cows sold at \$4.65 to \$5.00 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, weighing 1,100 to 1,150 lbs. each, sold at \$5.40 to \$5.65 per cwt. Choice picked lots of butchers' heifers and steers, 925 to 1,025 lbs. each sold at \$5.00 to \$5.40, good cattle at \$5.25 to \$5.40, medium at \$4.85 to \$5.25 and inferior to common at \$4.10 to \$4.75 per cwt. Loads of butchers' and exporters' mixed sold at \$5.25 to \$5.50 per cwt.

Feeders.—Light steers, 900 to 1,000 lbs. each sold at \$4.25 to \$5.00 per cwt.

Stockers.—Well bred young steers weighing 400 to 850 lbs. each sold at \$3.50 to \$4.40, and off colors and those of inferior quality at \$2.75 to \$3.00 per cwt.

Calves.—At Toronto market good to choice calves bring \$4.00 to \$6.00 per cwt. and \$2.00 to \$10.00 each.

Milch Cows.—These sold at \$35 to \$48 each.

Sheep and Lambs.

Trade in sheep and lambs was steady and good. Offerings were light and the demand good. Yearling lambs sold at \$5.00 to \$5.50 per cwt., and spring lambs at from \$2.50 to \$5.00 each. Sheep were steady at \$4.00 to \$4.50 per cwt., for ewes and \$3.00 to \$3.75 for bucks.

Hogs

During the early part of the week hogs remained at the high figures quoted last week, but on Friday, owing to the large run, they fell off 25c per cwt., select bacon hogs selling at \$7.00, and lights and fats at \$6.75 per cwt.

The Flow of Milk will be increased.

Why go to all the trouble of keeping cows and get only about half the milk they should produce.

Dick's Blood Purifier

strengthens the digestion and invigorates the whole system so that the nutriment is all drawn from the food. It takes just the same trouble to care for a cow when she gives three quarts as when she gives a pail. Dick's Blood Purifier will pay back its cost with good interest in a few weeks.

50 cents a package.

Leeming, Milles & Co., Agents,
MONTREAL.

Write for Book on Horses and Cattle free.

CANADIAN PACIFIC RY.

WILL RUN HOME-SEEKERS' 60-day EXCURSIONS To the Canadian North-West at return fares.

Winnipeg...	Regina...	\$30
Waskada...	Mooselaw...	
Estein...	Yorkton...	\$35
Egin...	Pr. Albert...	
Ar.ola...	Macleod...	\$40
Moosomin...	Calgary...	
Wawanesa...	Red Deer...	\$40
Binocarth...	Stath...	
Minota...	Swan River...	

Going JUNE 3rd, returning until AUGUST 4th (all rail or S.S. Alberta). Going JUNE 24th, returning until AUGUST 21st (all rail or S.S. Alberta). Going JULY 15th, returning until SEPTEMBER 16th (all rail or S.S. Alberta). Tickets are not good on "Imperial Limited." For tickets and pamphlets giving full particulars, apply to your nearest Canadian Pacific Agent, or to A. H. NOTMAN, Asst. Gen. Pass. Agr., 1 King Street East, Toronto.

WILSON'S HIGH-CLASS SCALES

SPECIAL PRICES THIS MONTH

On 2,000 lb.

Diamond Steel Bearing
SCALES

Write Today.

C. WILSON & SON

50 Esplanade St. E., TORONTO, ONT.

SHIPPED ON APPROVAL and Ten Days Free Trial to any person in U. S. or Canada. No cost deposit required on our Bicycles in advance.

1902 Models, \$9 to \$15

1902 '01 Models, best makes, \$7 to \$11

500 Second-hand Bicycles all makes and models, good as new, \$3 to \$8. Great Factory Clearing Sale at half factory cost. Tires, equipment & sundries, all kinds, half regular prices.

EARN A BICYCLE distributing 1000 copies on our new plan.

A RIDER AGENT in each town can make money fast on our standard 100 proposition. Write at once for lowest net prices to agents and our special offer.

MEAD CYCLES CO. CHICAGO, ILL.

For the week ending May 31st, the Wm. Davies Co., Toronto, will pay \$7.00 per cwt. for select bacon hogs, \$6.75 for lights, and \$6.75 for fats.

The Trade Bulletin's London cable of May 22nd, re Canadian bacon, reads thus: "The market is weak and lower under increased offerings, and prices here and in Liverpool have declined 2s per cwt."

Horses

The races interferred somewhat with the horse market here at the end of the week. Sales at Grand's were well attended, but not by buyers. Most of those present being visitors to the races. About 75 horses in all were sold during the week. Prices in most cases, were lower than the week previous. This is the season, however, when trade slackens and prices fall off somewhat. Good heavy draft horses sold at from \$135 to \$180 each, or \$10 to \$20 lower than the week previous. General purpose horses sold at from \$100 to \$140 each.

The Horse Blew First.

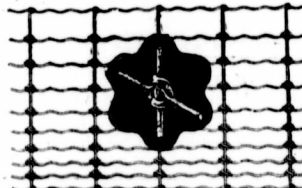
An Irish horse owner whose horse had been prescribed for by a veterinary surgeon ran into the latter's office, and, with tears in his eyes and his face the "pitchur of bad luck," cried: "Oh, Mr. Moriarity, I'm poorly. The powder's kilt me entirely!"

"The powder!" cried Mr. Moriarity. "Why, I didn't tell you to take the powder, I told you to place it in a paper tube and put one end in the horse's mouth and blow hard."

"Yes, sorr," cried Pat. "I put the powder in the chube, and I put the end of it in the horse's mouth, with the other end in my own, but, begorra! he blew first."—London Answers.

Ideal Woven Wire Fencing Complete in the Roll

A heavy one-piece stay that will not buckle up and cannot slip. Note the lock. No. 9



hard spring wire throughout. A fence that will last.

McGREGOR, BANWELL FENCE CO., Limited
Windsor, Ont
Coiled spring and other fence wires.

JOSEPH STRATFORD, at Brantford, has for immediate disposal three car loads and sacks of **Scotia Brand Thomas-Phosphate, \$16.50 per ton**

delivered any point in Ontario, providing unsold on receipt of 7 pty. This is considered the best of all the Phosphates and the most largely used in Scotland and Denmark.



Trees! Trees!! Trees!!!

We have a full line of Fruit and Ornamental Trees for Spring, 1902, at lowest possible prices. **Headquarters for packing dealers' orders.**

Farmers wishing to buy first-class stock absolutely first hand and without paying commission to agents, should write to us at once for a Catalogue and Price list.

Don't wait until the last minute, as you will be disappointed. Place orders early and secure the varieties you want. Correspondence solicited.

WINONA NURSERY CO., Winona, Ont.

U S U S U S U S U

Four Reasons Why
The U.S. CREAM SEPARATOR
Will Pay for Itself Every Year.



First.—You can get all the cream out of the milk; which is not the case with other systems.

Second.—separator cream sells for more than hand-skimmed cream, and butter from separator cream sells for more than from hand-skimmed.

Third.—The skim-milk, while fresh, warm and sweet, is worth three or four times as much to feed to your calves and pigs.

Fourth.—Time and labor is saved by not having to wash so many milk pans; which makes it much easier for the women of the house.

The U.S. SEPARATOR saves in actual cash results \$10.00 or more per cow per year, and makes dairy work a source of profit and satisfaction, instead of unending drudgery.

270 **VT. FARM MACHINE COMPANY, Bellows Falls, Vt.**

S U S U S U S U

"EAGLE" in 100's and 200's. "VICTORIA"

E. B. EDDY'S PARLOR MATCHES

Are put up in neat sliding boxes convenient to handle. No sulphur. No disagreeable fumes. Every stick a match. Every match a lighter.

---- For sale by all first-class dealers. ----

THE WONDER OF THE AGE
ALL EYES ARE ON THIS INVENTION
HARVESTING PEAS



The Genuine Tolton Pea Harvester With New Patent Buncher at Work

1. Harvesting in the most complete manner from eight to ten acres per day.
2. Harvesters to suit all kinds of mowers.

Every Machine Warranted. Our Motto: "Not how Cheap, but how Good."

No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send them direct to

TOLTON BROS., Guelph, Ont.

The Cabinet Sewing Machine

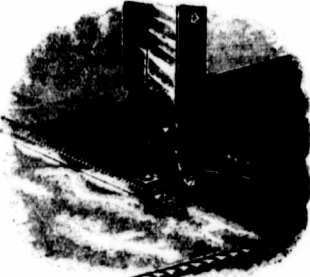
Sold at HALF PRICE. Wholesale Profits and Agents' Expenses Cut Off.

High Grade Guaranteed.

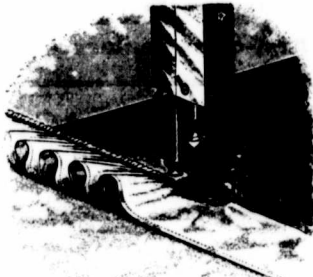
A Five-Year Warranty furnished with each Machine. Money back if not as represented.



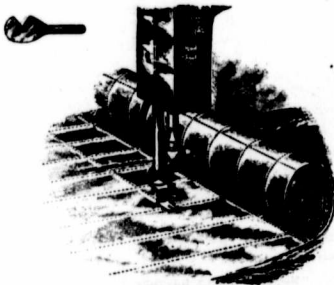
NARROW HEMMING



TUCKING



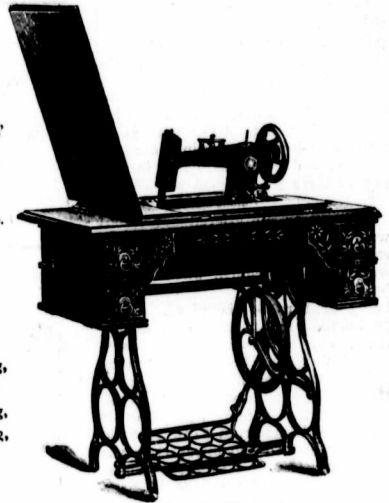
GATHERING



QUILTING

What it Will Do :

Hemming, Felling,
Tucking Binding,
Ruffling, Hemstitching,
Puffing, Shirring,
Quilting, Under Braiding,
etc., etc.



Cabinet No. 1

Handsome Oak Finish, with drop head and folding leaf. When the machine is not in use the head is out of sight and secure from dust. The stand forms a handy and ornamental table.

REGULAR PRICE, \$50.00

Strong Points

Light Running.
Great Durability.
High arm.
Self-threading Shuttle.
Full set attachments free.
Instruction Book free.
Handsome Oak finish.



Cabinet No. 2

Same as No. 1, without drop head, but with neat protecting hood.

REGULAR PRICE, \$45.00

Special Half-Price Offer

No. 1—\$25, Payable \$5 down and \$2 a month for 10 months.
No. 2—Payable \$4.50 down and \$2 a month for 9 months.

A five-year Guarantee with every machine. Your money back if you want it.
*(If full price accompanies order we will add two years to your subscription).

THE FARMING WORLD

Confederation Life Building, Toronto.

I am a paid up subscriber to your paper and enclose \$..... for one
Cabinet Sewing Machine, No.....

I will remit \$2.00 a month until \$..... has been paid.

Name.....

P.O.....