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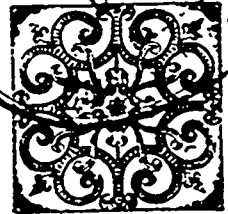
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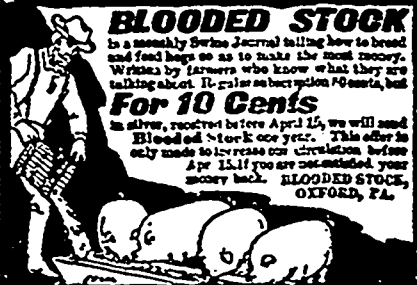
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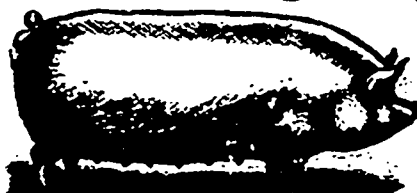


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FARMING

VOL. XVII.

JANUARY 30th, 1900.

No. 21

Pay! Pay!! Pay!!!

In the words of Kipling's "Absent-Minded Beggar" we would like to say to some of the readers of FARMING who have allowed themselves to get into arrears "Pay! Pay! Pay!" Let us put emphasis on these words, and say that we must expect to hear from them quickly—pay, pay, pay.

Springtime and Seed Selection

In a couple of months at most, gentle spring will be here, bringing with it seed-time and the various duties which devolve upon the tiller of the soil, as soon as Jack Frost disappears. Keeping this fact in mind, the farmer should begin now to lay plans for next season's work. There is the rotation of crops to be decided upon and the selection and thorough cleaning of the seed to be sown. It is not wisdom or good policy to delay these matters to the last moment. If you have decided to sow the seed grown on your own land last year, then some attention should be given to selecting the best seeds, and properly cleaning them. Many dirty crops are the result of leaving the cleaning and the selection of seed till the time of sowing, when one is too busy to give any extra attention to thoroughly cleaning it. If you have decided to purchase seed, you cannot begin too early to look for seed of good quality and that is thoroughly clean. In addition to the question of seed selection, there is that of getting the implements ready for work, of planning for the repair of broken fences and the building of new ones, and a hundred and one other little things that have to be attended to when spring comes, which it will pay every farmer to bestow a little forethought upon before the active duties begin. "A stitch in time will save nine."

The Transportation Problem

At the dairymen's gathering at Stratford, a report of which appeared in last week's FARMING, Mr. Andrew Pattullo, M.P.P., stated that transportation is one of the great problems of the future. Never were truer words spoken. Not only is it the great problem of the future, but it is the great problem of the present. We have endeavored from time to time to impress this fact upon our readers. To no other class of our citizens should the question of transportation be of greater interest than to farmers. They are the chief producers of this country, and form about one half of our total population, and any movement that will effect a reduction in the cost of transporting their products to the consumer, wherever he may be found, means increased profit for the farmer.

It is only of late years that the farmers, individually or as a class, have taken any special interest in this great

question. There is, perhaps, a reason for this. In the past the question has been left largely to the politicians to discuss, and has appeared to the farmer largely as a means of furnishing campaign ammunition for the candidates seeking their suffrages. But with the advent of the Farmers' Institute and the numerous agricultural gatherings of to-day the transportation problem has been presented in a way that appeals directly to the farmer's profit and loss account. While the politician has a perfect right to discuss this problem, and we hope he will continue to do so as much as possible, yet the question is one that is away above party politics. It is a great national problem which every citizen of this great and growing country must do his share to help solve. If, within the next ten years, some radical change does not take place in the way of greatly-reduced railway and ocean freight rates in getting the products of our farms to the consumer in Great Britain and elsewhere, we shall despair very much as to the future of this country. But the agitation along this line is growing, and farmers, as well as business men, are turning their energies in this direction, a movement that must result in something definite and practical before long.

As to the importance of cheap transportation to this country, it is not necessary to dwell at length. Everyone must realize that it is of vital importance to every producer. There never was a period in the world's history when there was so much competition among food-producing countries in securing markets for their products as the present. We have, to-day, in addition to the United States and the countries of Europe, Argentina, New Zealand and Australia bending their energies towards securing markets for their products in the Old Land. To compete successfully with these countries we must not only be able to turn out the finest quality of product and to produce it at the lowest possible cost, but we must be in a position to have it conveyed to the English consumer as cheaply as not cheaper than any other competitor, distance, etc., considered. At present we are not in this position. The producer in the United States, everything considered, gets his products to the consumer cheaper than does the producer in Canada. This should not be. We cannot hope to successfully compete with our neighbors to the south in the markets of Great Britain unless we have the same advantages as regards freight rates, etc. There is, however, one way of doing it—that of producing a superior quality of product, as in the case of Canadian cheese.

Storing Ice

If you have not already done so preparation should be made at once to store some ice for next summer's use. There are many luxuries and conveniences possible to the farmer with a supply of ice for family use. Then every farmer who keeps cows and has to care for the milk for factory purposes or to make it into butter at home will find ice of very great assistance. In fact, a supply of ice is almost a necessity on every dairy farm. From five to ten loads of ice will supply about all the average farmer requires for nearly every purpose for which ice might be used on a farm and this quantity can be stored up at very little cost.

An ice-house may be made to cost very little or considerable, according to the size of the farmer's pocketbook. A well-constructed ice-house of good material, painted and shingled, would cost from \$50 to \$100 to have built. But it is not necessary to go to this expense. A few old boards and some two by four scantling for the frame, with plenty of sawdust will serve the purpose and an ice-house about 10 feet square and several feet high can be built at very little cost excepting labor. This would hold from five to ten loads of ice, besides the two or three loads of sawdust required to preserve it.

A farmer gives the following plan for building an ice-house eight by twelve feet, to hold twenty tons, and to cost \$50: Use two by six studding, and cut them about ten feet long. On the outside use good, planed siding, and paint it. The inside of the studding can be boarded up with rough, cheap lumber. When boarding up fill in the place between the boards with sawdust, well tramped down. On a building of this kind I would shingle the roof, and put a ventilator in it. I would also put a good wall under the building, and level the bottom by filling in with small stone.

A location for an ice-house should be chosen with good drainage to carry off the water from the melting ice. When filling with ice, the bottom should be covered with straw, and a few inches of sawdust spread over it. The coarser material at the bottom makes the drainage better. Large blocks of ice squarely cut, of uniform size, pack and keep best, and there will be less waste from melting if ice can be obtained from fifteen to twenty inches thick. After putting in a layer the crevices should be filled with broken ice, and the surface kept level by the use of an adz. A space of a foot or more should be left around the outside of the ice to be filled with sawdust; then cover the top with about eighteen inches of sawdust.

Breeders' Meetings

Stockmen should bear in mind the list of breeders' meetings to be held in Toronto next week. These will begin on February 6th, and continue till the evening of February 8th, as follows: *Tuesday*, at 1 p.m., Canadian Holstein-Friesian Association, Albion Hotel; 2 p.m., Dominion Ayrshire Breeders' Association, Shaftesbury Hall; 6 p.m., Dominion Shorthorn Directors, Albion Hotel. *Wednesday*, at 11 a.m. and 2 p.m., Dominion Shorthorn Breeders' Association, Shaftesbury Hall; 8 p.m., Hackney Horse Society, Albion Hotel. *Thursday*, at 11 a.m., Shire Horse Association, Albion Hotel; 2 p.m., Clydesdale Horse Association, Albion Hotel; 6 p.m., Dominion Horse Breeders' Association, Albion Hotel.

Notes from the Vermont Dairy Convention

By Prof. H. H. Dean.

On January 8th, in the evening, your correspondent took train at Guelph for Brattleboro, Vermont, to see what our Yankee dairymen do, and hear what they say, when in convention assembled. After leaving the Province of Quebec the Central Vermont Railway enters a valley lined on both sides by mountain chains, and its feet are washed by many mountain streams which furnish power for driving machinery and water for the dairy cow. No wonder that Col. Hooker, the genial toast-master at the banquet on Wednesday evening, remarked that it was customary for the choir to sing "Shall We Gather at the River" during the funeral service of many a Yankee milkman.

In spite of the restricted area of farming lands along the mountain sides, the Vermont farmers appear prosperous. The creamery has been the salvation of agriculture in these districts. At St. Albans, the home of the largest creamery in the world, Governor Smith and his accomplished and

stately wife, together with a party of friends, joined the conventioners. (I may mention that the Governors, politicians, etc., always make it a point to attend the Dairy Conventions of the State. It is hinted that they are all experts at milking cows.)

The Dairy Association consists of the joint members of the Vermont Dairymen's Association, The Butter and Cheese Makers' Association, and the Women's Auxiliary. No wonder that the meetings were all lively and full of interest.

The President, Mr. G. W. Pierce, made a model chairman, and had his programme go sharp on time, except at one session, when ex-Governor Hoard was the second speaker but could not be found. A committee was appointed to look up the Governor. They found him closeted behind bolted doors with the Ladies' Auxiliary. When at last the Governor appeared he explained matters by relating a circumstance which occurred in his own town, when a couple of ladies said to his wife on one occasion, "Do you know where I saw your husband last?" "No," said his better half, "where was he?" They replied: "We saw him talking to two very beautiful ladies." The Governor says his wife exclaimed, "Thank Heaven, there were two of them!"

It will be impossible to relate all that occurred. I may mention a few things which forcibly struck the writer:

1. The shrewd Vermont farmers appear to have made a very close study of *individual cows* in the herd. Several men told how many cows they kept, how many pounds of milk they produced, what the milk tested, how much butter they made, what the butter sold for, and how much profit they made from each cow and from the whole herd. The ladies were not behind in this respect. Mrs. Nelson, of Ryegate, stated that she averaged $313\frac{3}{4}$ pounds of butter per cow last year, including heifers. She received \$65 per cow for their product. Our Ontario farmers are behind in this respect.

2. A number of these dairymen gave it as their experience that cows testing under 4 per cent. fat were unprofitable as butter producers. They preferred cows testing between 4.5 and 5.5 per cent. fat. Cows testing 6 and 7 per cent. fat were usually not so profitable as those testing about 5 per cent.

3. The model dairy cow for butter-making, according to one speaker, is of Ayrshire form and characteristic, with the Jersey quality of milk.

4. The use of the Babcock test, and scales in the herd was strongly recommended.

5. Private dairying is apparently more profitable to the Vermont butter-maker than sending to the creamery, where he has the necessary skill in manufacturing and marketing his produce.

6. The State requires every operator of a Babcock tester to procure a license from the Agricultural College. One dollar is charged for such a license, and all licensed operators must pass a satisfactory examination. Of those who had applied for a license, 13 per cent. were found incompetent. The State also requires that all apparatus used in the Babcock testing shall be marked "correct" by the Experiment Station. For this work a charge of five cents per article is made. The law is thus self-sustaining.

There were 125 exhibits of butter, and but 13 of cheese at the convention. It will thus be seen that dairying in Vermont is largely on the lines of making butter. The highest scoring package of butter was 98 prints, the lowest 85. The highest scoring butter was made in a private dairy and was certainly of most delicate flavor. I have not before tasted such a delicate flavor in winter butter. There was \$50 divided *pro rata* among 99 exhibitors. When will our people adopt the plan of giving all deserving exhibitors a share of the prize money, instead of going on the old plan of 1st, 2nd, 3rd, 4th, etc.? This system is out of date and it is time for a change. We are too conservative in this respect.

Personally, I found the Vermonters a little cool at first, but after they got "thawed out" they were most cordial and

neighborly. Their best people have a warm place in their hearts for Canadians, though many seem to think that we in Canada would be glad to annex ourselves to the United States. They don't know us.

Let us Know About Your Cows

In FARMING for January 2nd we published, under "Information wanted," a list of questions with a view to getting some data as to the receipts in milk and money which dairymen received from their cows during 1899. So far we have received two replies to our enquiries, the one published last week, in which an Ontario dairyman realized \$60 per cow, and the other in this issue giving the experience of a Quebec dairyman. We would be very glad to have the experience of other dairymen for publication. Let us know what your cows have done for you. We repeat the questions as follow:

1. What is the size of your farm?
2. How many cows did you keep on it in 1899, and of what breed?
3. Did you supply the milk to a cheese factory or creamery?
4. What was the lowest amount received from any one cow during the year, and what was the largest amount?



Farm Scene at Guelph, Ont., showing James Bowman's Herd of Polled-Angus Cattle.

5. What was the average per cow for the herd?
6. What system of feeding did you follow?
7. What was the cost per cow for feed and care?
8. How do the receipts for 1899 compare with those for 1898?

Texas, or Southern Cattle Fever

Paper Read by L. M. Holmes, of New Orleans, Student of the Ontario Veterinary College, at Weekly Meeting of Veterinary Society.

There is perhaps no ailment to which the ox tribe is susceptible that has such an important bearing upon the cattle interests of the southern states, as Texas or southern cattle fever. It interferes in two ways with the cattle interests of the South.

In the first place, animals raised north of what is known as the tick line, can't be transported south without danger of infection, and such infection generally means the loss of the animals. Secondly, stock raisers in the South are prohibited from shipping cattle north except from Nov. 15th to January 15th, and are thereby deprived from taking advantage of the northern markets.

The disease is caused by a micro organism belonging to protozoa, and known as the "pyrosoma bigeminum." It is supposed to be transmitted to the animal exclusively by the cattle tick. (*Boophilus bovis*, Ritey.)

The animal, after being infested with the ticks, will in the course of 24 hours have an increase in temperature which will soon run up between 105° and 107°F. The temperature in cases which end fatally, generally drops from 2° to 4° degrees below normal just before death.

The rise of temperature precedes all outward symptoms of the fever for several days, and the disease when first noticed appears to come on quickly, and attacks most of the susceptible animals at the same time.

Symptoms.—High fever, pulse 90 to 110 per min. Respirations 60 to 100 per min. Animal generally stands off from the herd, and has a dejected appearance—may have a staggering gait, partial loss of vision, delirium and trembling of the hind quarters. The appetite is generally lacking—the bowels constipated, and in most cases, hæmoglobinuria exists from the time the disease appears to the time that the animal begins to recover, if recovery takes place.

The blood is found to be thin, watery, and pale in color and if examined under the microscope and the red blood corpuscles counted by means of the "hæmocytometer," they will be found to number from 1,500,000 to 2,000,000

to the cubic millimeter, whereas in the healthy animal they number from 6,000,000 to 7,000,000.

The disease is shown to be due to the destructive work of the "Pyrosoma bigeminum." It is the broken up red blood corpuscles that pass off in the urine and give it the characteristic claret color.

Post-mortem appearances.—Are quite constant. The fatty tissues have a yellow tinge. The pericardium and endocardium are apt to have extravasated blood clots underneath them. The spleen is about three or four times its natural size, is dark in color, and resembles blackberry jam in consistency and looks.

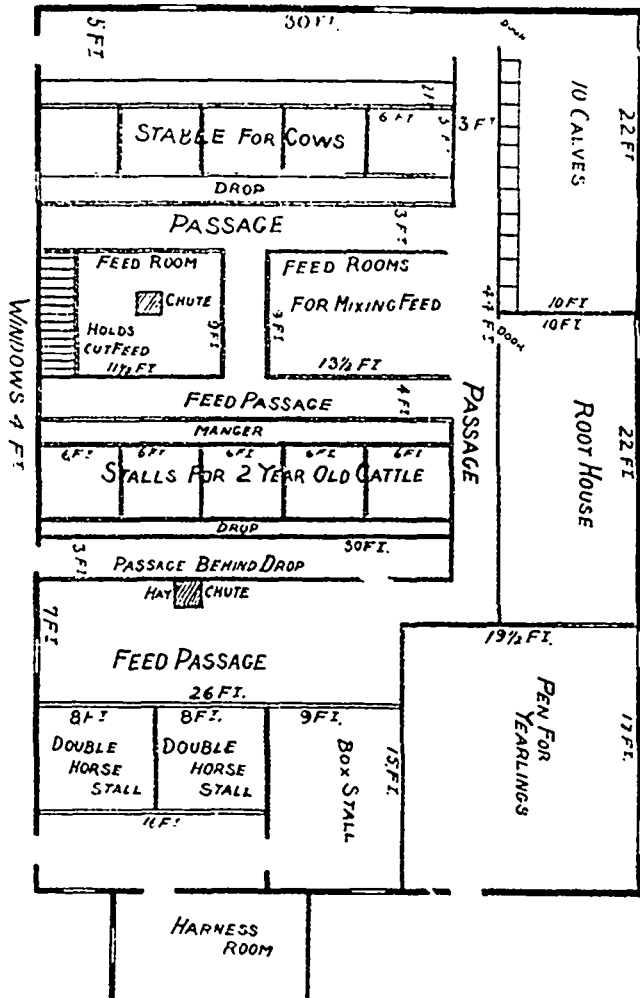
This is due to engorgement with broken-up red blood corpuscles. The liver is enlarged some four or five pounds—congested—injected with bile—shows fatty degeneration—is pale in color and appears mottled. The liver cells may have degenerated. The gall-bladder is filled with bile of a sticky character, which can be drawn out in bands, but if allowed to settle forms flakes. The kidneys are congested. The bladder contains dark urine. The treatment up to the present has been very ineffectual; the latest treatment is to inject into the susceptible animal serum from one which is immuned, and then add the tick to the animal, at the same time continuing and increasing the injection of serum. In the experiments which I saw it was ineffectual treatment and the animals died.

Quinine in 20 to 30 gr. doses, or aconite appears to help

in some cases; the best way to combat the disease is to keep the pastures free of ticks. The disease generally terminates in from 7 to 30 days, and as a rule fatally.

Can This Plan Be Improved Upon?

Mr. Wm. J. Stoneman, Maple Lake Station, Ont., who intends building a new barn next spring, sends us the following plan of the stables to be built under it. He desires to have the plan as perfect as possible and asks for suggestions



from farmers and others as to whether it can be improved upon. We gladly give space to the diagram and will be pleased to publish suggestions or criticisms of it that any of our readers may care to make.

Scientific Aids to Farming

Agriculturists in the West Paying More Attention to the Study of the Soil and Plant Life

Our British Columbia correspondent sends us the following from the pen of J. R. Anderson, Deputy Minister of Agriculture for that province, and which will be of interest in showing some of the agricultural conditions prevailing on the Pacific slope:

During the past season agriculture has been receiving more attention from a scientific point of view than ever before. Farmers are realizing that to make husbandry a paying occupation they must give some study to the details of the chemistry of the soil and plant life; they begin to realize that they cannot make unlimited demands upon

their farms without some reciprocity in the shape of replacing that which is taken away. They are realizing in a greater degree that unless heed is given to the spraying and cultivation of fruit trees they cannot expect profitable returns. This awakening is, no doubt, due in a great measure to the effect of the teaching through the medium of farmers' institutes and the hard lessons of experience; nevertheless, much still remains to be done. The thousand and one details of a life on the farm tending to the improvement or enrichment of the farm, small in themselves, but in the aggregate making a very large total, are but too often disregarded. Farms such as that of Mr. Wells at Chilliwack are object lessons which should be studied carefully.

The season having been exceptionally wet in all the most settled portions of the province, grain has not been saved in as good condition as could be desired. All through the Spallumchee and Okanagan districts during the months of July and August rain retarded harvesting operations materially and in some instances destroyed the grain in the stooks. The consequence was that not only was the quality in a great measure injured but the quantity was reduced, and before it could be taken to the mills the roads became bad and the delivery of the grain is now delayed until snow falls in sufficient quantity to make sleighing practicable. For the same reason the hay on the lower mainland suffered greatly and a considerable quantity has had to be left on the fields. On Vancouver and gulf islands the conditions existed in a lesser degree, resulting in a smaller loss. The large yield of both grain and hay, however, partly compensated for the losses sustained. Root crops gave very large returns of a superior quality. This was evinced by the displays at the agricultural shows, where the exhibits were noticeable for their excellence. From Kamloops, Ashcroft, Chilliwack, Read Island, Nanaimo, and other places potatoes were received by the Department of Agriculture of prodigious size and exceptional quality. The Hon. Sydney Fisher, Dominion Minister of Agriculture, was very much impressed by the displays of vegetables and fruit at New Westminster and Kamloops, and expressed his surprise at the size they attained. Fruit was decidedly variable both in yield and quality, and in fact it ranged all the way from bad to good. In parts of the upper mainland the apple crop could not be beaten, whilst on the lower mainland and islands, some orchards produced good crops and others were almost a total failure. The quality in all cases was scarcely up to the average, the coloring being especially deficient. Some remarkable specimens of apples were obtained from the orchard of Manuel Barcello at Keremeos and sent to the Department of Agriculture by Mr. McKelvie, of Vernon, some of which weighed within a fraction of two pounds. Casts have been taken of the best for exhibition purposes.

The production of other fruit was more evenly divided, but the unfavorable summer weather militated greatly against the successful shipment of stone fruits to the Northwest Territories and Manitoba. The climatological variations are among the most unaccountable phenomena of any country, and this province, with its huge mountainous ranges, deep valleys, innumerable lakes, islands, and fiords, is possibly more subject to such unaccountable changes than most others. For instance, during the last summer, whilst in such sections of the dry belt where the rainfall is usually very small, the precipitation was excessive, and in other portions where the humidity is generally excessive, irrigation had to be resorted to. The latter condition was noticeably the case at Cape Scott.

Amongst the effects of a cold, damp summer the absence of honey in flowers is one of the conditions which directly influence the apiarist. This was greatly felt at Chilliwack, where the honey crop fell from a very large one to nil. On the other hand the excessive wet promoted a fine growth of fodder, so that dairying was proportionately benefited, and as a consequence a large accession of good, sound butter has been placed on the market. This industry has taken great strides of late, and we look to the time not far distant when the importation of this necessary article of

food will not only cease, but it is hoped that enough may be produced for export as well.

Cheese is not produced for the reason that as long as butter can be produced at a much better profit there is no incentive for its manufacture.

The influence of the abnormal quantity of rain has also had the effect of keeping the ranges well supplied with a green growth of grass, which has kept the beef cattle in good condition, this being testified by the excellent quality of beef in the markets.

Poultry is not a branch that is prosecuted to the extent it should be, and enormous quantities of turkeys, geese, ducks, and fowls are imported into the province from the East. This should not be. The climate of the province is admirably suited to the pursuit of this industry, which is most profitable when it is properly prosecuted, and if it is taken hold of in the right way it would no doubt prove highly remunerative.

Much the same may be said of sheep and swine, and although a considerable quantity of these are produced, by far the largest proportion of what is consumed is imported from the other provinces and from the adjoining states.

Our Yeomanry

The Farmer in Peace and in War

By Sigma

It is not very often that the farmer has an opportunity of distinguishing himself, and when it comes he is not always quick to avail himself of it; considering also that agriculture is the most peaceful of avocations, it is strange that the farmer's chance for showing the world what he is really made of should come in war time. Yet so it is. He is then expected to do "yeoman's service," and, as a rule, he does it.

His hard but healthful life, his constant exposure to all kinds of weather; his frugal diet, all combine to strengthen his muscles and to build up an iron constitution which fits him pre-eminently for military service; and when his country calls him there is no man better qualified, or more ready to respond to the call, than the farmer.

Unfortunately, however, he is diffident, and too prone to underestimate his own value, and to forget that his is not only an honorable but the most useful of all callings. He supports the world; but the world, taking him perhaps at his own valuation, assigns to him an undeservedly low position in the social scale.

The "hayseed" is a target for the caricaturist and the humorist. He is even the butt of empty-headed counter-jumpers, who prefer selling tape by the yard or sugar by the pound to tilling the soil, because, forsooth, it is a more *gentlemanly* occupation. *Is it?* Let us consider this for a bit. If you turn to the word "yeoman" in a good dictionary you will find, among other things, that, in the order of precedence, the *yeoman comes next to the gentleman*. Mark that, next in order to the gentleman. After barristers, doctors, and clergymen of the Established Church, who are all gentleman, by special act of parliament he takes (or should take) social precedence of all tradesmen, whether grocers or brewers, or distillers or dry goods men, or of any persons engaged in business, even though that business enables its follower to make more money or to wear smarter clothes than he does.

And such ought to be the case. For, after all, how would the world live without the farmer? We might dispense with tea and coffee and sugar; it is quite possible, and more desirable, to live without beer or whiskey; ribbons and laces, though dear to the female heart, are not absolutely necessary to support existence, and to say that the man who has to stand in a shop and sell these articles is more of a gentleman than he who owns his own land, drives his own team, and is his own master, is simply absurd. On the other hand, bread is an absolute neces-

sity to support life; and to have bread we must have wheat, which the farmer produces.

There is another proof which may be adduced in evidence of the high respectability of a farmer's life; and that is, when *gentlemen by birth* come to this or to any other colony to earn a living, they almost invariably turn to farming in some shape. You find them growing wheat in Ontario and Manitoba, ranching in the Northwest, sheep raising in Australia, New Zealand, and South Africa; but you *very rarely find them in shops*, and then only when fairly driven there by stress of circumstances.

It is a pity that young men in the country do not look at things in this light; if they did so, perhaps they would be content to remain on the farm instead of coming to the city to seek a *more gentlemanly occupation*, save the mark, by selling buttons and tape!

So much for the farmer in peace. Now let us look at him as a soldier.

In the early and middle ages the farmer or yeoman held his land from his feudal lord by military tenure; that is, when his chief went to battle he had to attend him, with such following as the size of his holding called for. He did this instead of paying rent for his land.

The "yeoman's service," which has become a synonymous term for hard fighting, rendered by these men in battle, is recorded by the historian, and has furnished inspiration for the poet's verse. As archers and pikemen they covered themselves with glory wherever the call to arms led them. Later on, Cromwell gained his principal victories by the aid of his "Ironsides," a famous cavalry regiment, composed principally of farmers, or yeomen. At the time of the French Revolution, when Napoleon threatened to invade England, the body of yeomanry which we have now was formed. It consisted then, as now, chiefly of country gentlemen, gentlemen farmers and tenant farmers, who, having used the saddle from childhood, and being accustomed to follow hounds on horseback across country, may be counted among the best horsemen in the world, and will no doubt, if called upon to do so, give as good account of themselves as their forefathers did at Agincourt, Crécy or Poitiers.

The present war in South Africa is being waged against *farmers*, and, however we may feel towards them as enemies of our country and our Queen, it is but fair to admit that they possess both courage and military ability. Anyone who has read accounts of the great Boer Trek of 1834, and of the terrible encounters which they had with overwhelming forces of natives, must acknowledge that, whatever their faults may be, the Boers are a *fighting* as well as a *farming* race.

The Apple Trade

Messrs. Woodall & Co., Liverpool, in their weekly circular of January 6th, give some interesting data as to the condition of the apple trade at that port from the beginning of the season to December 31st last. They sum up the trade for the first part of the season as follows:

"The total imports into Liverpool to December 31st were 435,160 barrels, against 464,954 barrels in the corresponding period last year, showing a decrease on what was a very short supply, thus making the third consecutive comparative failure of the crops, both of the United States and Canada, shipments from Boston and Maine showing the greatest decrease. With the knowledge of this shortage, it was naturally anticipated that a high range of prices would rule; a retrospect, however, tells a sorry story, and from various causes the season to date has been one of the most unsatisfactory known. The poor condition throughout was the uppermost cause of the trouble, and experience proves that a small crop is rarely of good quality, as the shrinkage is generally caused by atmospheric conditions unfavorable to the fruit keeping, added to which, scarcity induces operators to pack inferior and unsuitable fruit."

During September and October the receipts were mostly early varieties, the bulk of which arrived in a more or less

unsatisfactory condition. Of the trade during November and December, the circular reads as follows:

"In November receipts were 145,229 barrels, as against 158,782 barrels in the corresponding period of 1898. During the first week arrivals were the largest of the season—58,486 barrels—not an excessive quantity; but it now became apparent that the crop was of poor keeping quality, as from all shipping points the fruit landed in miserable condition, much of it not worth freight and charges, with the result that the trade became demoralized, and it was difficult to dispose of, even fairly sound, at reasonable rates. During the remainder of the month there was very little improvement in the general condition, although scarcity caused a higher range of prices, and at the close there was a larger proportion of fairly reliable fruit which, being badly wanted, realized satisfactory rates; but the general results were of a miserable character.

"The arrivals during December were 135,869 barrels, against 145,922 barrels in the same period last year, a very moderate quantity to supply the largest demand of the year. There was still much to be desired in regard to condition, which was the case throughout the month, especially with Canadian, the damage to much being increased by the serious delays in transit. The market, however, through scarcity, was getting into a starved position, and buyers began to take everything, bad and good, at a much higher range of prices, which was maintained until the last week, when the quiet tone usually prior to the holidays set in. Final sales were very unsatisfactory, as what offered was unattractive in every respect, so there was no inducement for operators to take a single barrel more than filled their immediate requirements. Thus the first season finished with scarcely a gleam of satisfaction from beginning to end."

British Meat Imports

In a recent issue of *British Refrigeration* some interesting data is given in regard to the imports of meat into Great Britain from which we take the following:

"The figures in connection with the import of meat, dead or alive into Great Britain continue to show that the former condition of the staple is gaining in favor among the importers. The comparison of the returns for the last week of October in 1899 and in the preceding year is distinctly emphatic as to the growth of this preference. In the matter of live stock there were 8,784 cattle imported during the week that year as against 14,167 for the corresponding period of 1898. With sheep we have 7,594 as against 11,424. Turning now to dead meat, the beef, in weight, amounted to 129,204 cwt. for the week that year as compared with 56,110 cwt. in 1898, and mutton 54,360 cwt. as compared with 25,832 cwt. Pork, which only appears in the returns as dead meat, shows a slight decline. The immense increase in the amount of beef and mutton imported, and the equally pronounced decrease in the number of live beasts shipped, make, however, a very gratifying record for those in any way interested or concerned in the refrigerating and cold storage trades."

The Brood Sow in Winter

By John F. Coulter, of Daily, Mich.

The brood sow, after her pigs have been weaned, should not be fed too heavily, but simply kept in a good, thrifty condition. During the fall and fore part of the winter she should be allowed to run on rye, wheat or some other good pasture, and fed a very little grain. Her appetite naturally craves something green as she recuperates after the strain that is necessarily placed upon her in raising a litter of pigs. Too much grain shouldn't be fed in the winter, as the bowels will have a tendency to become constipated—a thing that should be avoided during gestation. In the absence of pasture during the winter months, substitute bran and mill feed, mixed up in a good slop, seasoning it

with sufficient salt to be palatable. It is a good idea to shell what corn you do feed them, boil it and mix with your slop. After breeding your sows in December, if April pigs are desired, which is a good time to have them farrowed in this latitude, she should be fed more slop than corn for best results. The brood sow must not be starved during pregnancy if you wish to have good, thrifty and healthy offspring. It is always desirable to have the young, when first farrowed, as strong and active as possible, and then there is but little difficulty in raising a large per cent. of each litter. Regular feeding and not allowing the sow to become too hungry at any time is also desirable. Good bedding and plenty of it should be provided, changing the same frequently, so as not to allow it to become damp from any cause. Avoid any cold draught in the sleeping apartment during severe cold weather. Hogs should be kept in such comfortable quarters in cold weather that it will be unnecessary for them to huddle together too closely in order to be comfortable. The brood sows should have all the water they desire, but avoid giving it to them too cold.

Pasteurising Skim-Milk

A Minnesota butter-maker gives his plan of pasteurizing skim-milk as follows:

"Every pound of milk that goes back to the patrons is heated to at least 160 degrees, and by utilizing exhaust steam it is nearly free of cost to the creamery. I use a 20-bbl. galvanized steel tank for skim milk, with a tight cover on tank. Inside the big one I have placed a smaller one of about 100-lbs. capacity, size 4x1¼x1¼ feet; this is the heating pan. The exhaust pipe is cut near the engine so as to have two exhaust pipes, with a globe valve on each; one of these pipes extends into the bottom of the heating tank, an elbow is put on and a piece of pipe 4 feet long, fastened to the elbow, is drilled full of ⅜ in. holes (or 30 or 40 holes should be drilled), a cap is put on end of pipe and exhaust steam forced through the small holes into the milk; the skim-milk is pumped to the bottom of heater and flows over the top into the big tank, so the exhaust is always covered at least with a foot of milk, thus insuring thorough heating. All the patrons like it very much."

Improvement in the Horse Market

Mr. W. D. Grand, who conducts large auction sales of horses in New York, gives this substantial testimony as to the present satisfactory condition of the horse market:

"The records of my auction sales in 1899 show an improvement of just about 33 per cent. in values over the sales of 1898. This means something, for the horses came from the same consignors in both years and were virtually the same in point of quality, so there can be no mistake in this estimate. Moreover, the books show that this increase in price is true of each individual consignment, as well as of the whole year's business together. We could have done a much larger business if we could have found the horses to sell. But the fact is, high class horses are becoming very scarce. New York buyers have learned to know a good horse on sight since horse shows became so popular, and they want the best. Only a few years ago you could lead out 100 carriage horses, good and commonplace, and sell them at auction, and there would not be a great difference between the selling price of the best and the poorest of the lot. But the amateurs are expert nowadays. They pick out the really high class horses at a glance, almost, in every public sale, and bid for them accordingly.

"My October sale of carriage horses this year was the best ever known in New York or elsewhere. Forty horses brought an average of \$1,000 each, and 25 of them averaged \$1,560 each. That is away ahead of any sale o.

record. When you remember that all of the horses were American trotters, trimmed up in hackney style, it seems to me surprising that so little was said about the matter in the newspapers. The trotting bred carriage horse of America is the best horse of this kind in the world, and when he beats the world's record in the sale ring it seems to me just to be as big a thing in a way as when he beats the best time ever made on a trotting track.

"I think next year will be the best on record, judging by present appearances."

Milk for Poultry

On every side we hear the warning words "Don't feed any sour food," and in the next moment comes the advice to "give them all the milk, both sweet and sour, they will use." Slop may be the natural food for hogs, but it is not for hens. Milk as a fluid, either sweet or sour, is very good for "mixing ground food for fowls," but when placed in pans for them to eat or drink it is more of an injury than a benefit, for the reason that it soils the plumage and taints the ground, thus attracting the flies and other insects, which bring with them more injury than the good the fowls have received from the milk. One attribute of success, namely cleanliness, is almost an impossibility where milk is used as a drink or fed in pans to the fowls. What can be more disgusting than a lot of half grown chicks besmeared with sour milk and covered with flies! And to add to their sorry plight down comes a misty rain, completing their uncanny appearance.

I have often seen the feeding ground of a lot of growing chicks covered with sour milk and flies, the ground well beaten down with the patter of the feet of both ducklings and young chicks. What can be more disagreeable than the odor of this feeding spot after a shower has been driven away and the warm sun shines upon the ground and proceeds to bring to life the deposit of many insects drawn to the locality by the besmeared condition of the ground? And those who care for these fowls wonder why gapes, diarrhoea and cholera come to their flocks. None so blind as those who will not see. Why not get all the advantage of the milk by using it to mix with their ground food instead of placing it in pans for them to run through and paint the ground to their own destruction?

Cleanliness is the one great thing with poultry. No one can begin to keep their surroundings in even half-way condition who places pans of milk or slop of any kind for fowls. Many writers advocate the plan, and tell us in glowing terms of the benefits to be derived from this feeding of milk as a slop to poultry. If the benefit is to come to them from the milk, use it each day to mix their ground food with, and feed it to them in boxes or troughs, not upon the ground, and provide feeding space sufficient for all to feed at once. Where no ground food is provided for the poultry, better give the slop to the hogs.—*Country Gentleman.*

How to Make Good Roads

The demand for good roads is not confined to the Province of Ontario alone. The agitation is widespread, and people in every progressive country are waking up to the fact that good roads are an essential factor in the prosperity and welfare of any agricultural community. In far-off Texas the demand for good roads is urgent, and one of our exchanges from that State gives the following bit of advice in regard to making good dirt roads, which may be of value here:

"Probably the best that can now be done is to improve our dirt roads; but this cannot be done by men who don't know how; therefore, scientific road-makers must be employed to direct the work, or it had best not be undertaken. The great enemy of roads in clayey soils is water

—not the water that falls on them, but the water that remains on them after falling. Therefore, arrangements must be made for carrying away the water as fast as it falls. It must not be permitted to stand in ditches made for drainage, but must be carried 'out of sight,' so to speak, otherwise the roadbed will take it up by capillary attraction, soften and succumb. But, properly graded and thoroughly drained, we believe the black soils of North Texas will make excellent dirt roads. When dry, our black land roads are the hardest of all dirt roads, just as they are the softest when wet. But this requires expert work, for water sometimes has a perverse way of running up hill, as judged by the eye, and ditches made for drainage often become reservoirs, bringing water in, instead of carrying it away. And, further, no amount of surfacing will be permanent unless the drainage is complete. We knew a case on a large black-land farm where 400 wagon-loads of stone had been put on a piece of very bad roadway less than 250 yards long, and slowly but surely the stone sank and the mud only remained. The writer suggested a ditch and culvert for drainage, which were made, and the road became solid, without a rock surface. Bad roads constitute the heaviest tax borne by traffic, and to get rid of them almost any practicable expenditure would be money profitably invested."

What Breed Lays the Heaviest Eggs?

It is not enough to know which breed of fowls lays the largest number of eggs, but also which breed lays the largest sized eggs. Some breeds may yield more food value in weight contained in fewer eggs than another breed puts into a considerably larger number. Because of this fact we believe all eggs should be sold by weight and not by the dozen. A dozen large eggs are worth just as much more, as they are heavier than a dozen small ones.

In order to collect some data on this point, the North Carolina Experiment Station made careful weights of the eggs from different yards for the first six months of last year, and found that the heaviest eggs are from ducks. These weigh nearly two and a quarter pounds to the dozen. The light Brahma lay the largest hen's eggs, and these are one and three-quarter pounds per dozen. The lightest eggs are from Leghorn pullets, a little under one and one-eighth pounds per dozen. On what other article of food will people be content to pay the same price for what may vary over fifty per cent. in value? Or what producer of merchantable produce of any other kind will consent to supply all the way up to fifty-five per cent. more than market value, and not think to add to the standard price for additional value?

The same bulletin says it is perhaps an open question whether the flavor of articles of food ever reappears in the eggs produced by hens.

The facts will not be denied for milk after a cow has been regaled on a fresh pasture containing wild onions. Neither will it, if the cow is fed turneps or cabbage, within a few hours before milking. The flesh is also probably tainted, and we have heard reports of fried chicken flavored with onion from the recent feeding of the birds.

In March, 1899, an experiment was begun to find if a small proportion of chopped onion salad with the poultry food would flavor the eggs sufficiently to be noticeable; and if so, how long a time would be required to make the flavor noticeable; and, third, how long can the flavor be detected after the onions are left out of food.

The conclusions are that it is probable that no eggs after a week's abstinence are ill flavored with onions; that flavors can be fed into onions, and that to insure fine-flavored eggs it is necessary to restrict runs enough so no considerable amount of the food can be of such a character as to yield ill-flavored eggs.

CORRESPONDENCE

Locate the Winter Show

To the Editor of FARMING:

Regarding the Provincial Fat Stock Show, as a member of the Swine and Sheep Breeders' Associations, I am of the opinion that the show would be much benefited by being permanently located in some central place, and, judging from a personal knowledge of the past shows, I think the city of Brantford is the proper place, and should have the first consideration of the Directors of the Provincial Show.

E. E. MARTIN.

Canning, Ont., January 18th, 1900.

Commercial Fertilizers

To the Editor of FARMING:

I have just been reading an item in your valuable paper of December 5th on commercial fertilizers, headed "A Reply to Veritas," in issue of November 7th, and answered by W. J. Thompson, Esq., whom I notice has several times recommended Thomas' phosphate. Now what I want to know is why this fertilizer is so highly recommended when it contains no ammonia, no potash and no phosphoric acid soluble in water, but contains 3.97 citrate soluble and 11.38 insoluble, and is valued at \$12.34 in the 1899 Bulletin.

Now we know that plants, speaking from a general standpoint, require a well-balanced food of ammonia, potash, and phosphoric acid. I am using one which analyzes in the same bulletin thus: Ammonia, 6.96; potash, 5.60; available phosphoric acid, 7.85, and valued at \$30.10 per ton. "Thomas' Phosphate" sells here at from \$25 to \$35 per ton, while W. A. Freeman's "Sure Growth" brand (which I use) sells at \$30 per ton.

Mr. Thompson recommends 450 lbs. per acre. I used 200 lbs. of "Sure Growth" per acre on part of a field of oats which tested 36½ lbs. per bushel, while the unfertilized tested 31½ lbs. per bushel. A neighbor, Mr. Edward Mitchell, (to whom reference may be made) used 200 lbs. per acre on 10 acres in a 20-acre field of wheat, which was considered all alike. The other 10 acres received no dressing, with a result of 9 bushels 1 peck increase per acre where fertilizer was used.

"Veritas" desires a good catch of clover. This past season I took from less than 6 acres, 16 average loads of hay, composed of timothy, clover and alsike, where I had used 300 lbs. of "Sure Growth" per acre on a clay loam.

Anyone wishing to purchase fertilizers should address Thomas Macfarlane, Chief Analyst, Agricultural Department, Ottawa, for Bulletin on Fertilizers, in which is contained the analysis of each kind sold in the Dominion, of which there were 154 in 1899.

W. A. TOPHAM.

Burgessville, Ont., January 20th, 1900.

In the Maritime Provinces

To the Editor of FARMING:

Just now the reports of the cheese factories are coming in, and the results are even greater than the most sanguine anticipated. The total output of dairy products from P. E. Island for the year ending December 31st, 1899, amounted to \$563,000. Of this amount almost \$200,000 was from butter and the balance was from cheese. This is \$200,000 more from the dairy industry than was received last year. The increase in P. E. I. alone of '99 over '98 was 60 per cent., a most wonderful increase. This, of course, was owing chiefly to the increased value of dairy

products in '99 over '98, but the aggregate quantity was also greatly in excess of the previous year. The average price received from milk for the cheese season was about 80c. per cwt., some factories receiving an average of 85c., while others received various sums below 80c. The dairy has certainly been the saviour of the people of P. E. I. this past season, owing to the low prices of all other farm products without a single exception.

The schoolmaster is manifestly abroad in the land, for the cry for education and better methods in all branches of farming throughout the Maritime Provinces is abounding and the feeling is general. Never were such preparations being made for general provincial gatherings of agriculturists as are being made just now. In P. E. Island a two-day provincial meeting of the farmers and dairymen took place at Marshfield on the 18th and 19th instant. A week later the farmers of Nova Scotia held a three-day provincial meeting at New Glasgow, and the week following again the fruit growers held a three-day meeting at Wolfville. A week or more later the farmers and dairymen of New Brunswick held their annual meeting at Fredricton, the capital, and, sandwiched in between these great meetings, the P. E. Island fruit growers held their meeting at Charlottetown on the 24th and 25th instant. All this bringing together of the farmers, dairymen and fruit growers of the three provinces means a great deal, and shows that the truth is now paramount that no one man knows it all, and that, knowing this, the anxiety to learn of the others is great—that knowledge is power—that the husbandmen of the Maritime Provinces are hopeful in the fact that the following up of better methods will now surely bring ultimate success. As the interests of the Maritime farmers and farming are identical, FARMING will make it a point to be present at all of the important meetings, and reflect in its columns the best—the cream—in the discussions on the various subjects on general farming, dairying and fruit growing.

J. A. MACDONALD.

Hermanville, P. E. I., January 18th, 1900.

A Quebec Dairyman's Experience

To the Editor of FARMING:

In answer to "Information Wanted," I might say that I am not an agricultural writer but will answer your questions as best I can. I farm 110 acres, and had 11 Jersey cows in 1899, some thorough-bred and others high grades. I sold the cream to a city trade at 75c. per gallon during the winter and 60c. summer. I cannot give the lowest amount received from any one cow during the year or the largest amount. The average per cow per head for the herd was \$51.60 in cream, besides 300 lbs. of butter for family use during the year.

The system of feeding I followed was good clover hay, two feeds daily; 2 bush. of ensilage per cow daily, 2 lbs. of bran, 3 of cotton seed meal, 4 of corn meal and 1 lb. of oil meal in two feeds daily. This was the winter ration. In summer I fed from the 15th of July to the 20th of August two feeds daily of oats and vetches cut green. The rest of autumn I fed green corn. I did not feed any grain during summer.

I can hardly say what it cost per cow for feed and care. I had my skim-milk for the calves and pigs. I use the improved United States separator, am 76 miles from city, and freight charge comes out of amount; would say that it would cost about \$25.00 per cow for feed and care. I am counting hay at \$5.00 per ton, cost of producing ensilage \$2.00 per ton, cost of grain 1 cent per lb. Skim-milk is worth 15 cents per cwt. I sent to the cheese factory in 1898, but did not keep an account of what I made. It would hardly pay running expenses.

R. W. FRANK.

Kingsbury, Que., January 22nd, 1900.

Clover and Phosphate

To the Editor of FARMING:

In FARMING for January 16th Mr. T. C. Wallace, writing on clover and phosphates, assumes that clover exhausts the soil of its phosphates. This error pervades not only this letter but nearly all that Mr. Wallace writes, and I am surprised that this mistake is not more frequently pointed out in the agricultural press.

He appreciates the value of clover as a source of nitrogen and humus, and he cannot surely deny that it also renders available large quantities of phosphates and potash that would otherwise remain unavailable, so that for all practical purposes clover may be said to add to the soil not only nitrogen and humus but also phosphates and potash. I venture to say further that the practice of the best farmers as well as the teachings of the Experiment Stations recognize it as the cheapest source of these plant foods, and in fact the only economical source for the growing of coarse grains and fodders, always assuming that these are fed on the farm and the whole of the manure returned to the soil.

In Ontario, where the glacial clays cover the bed rock to the depth of from 2 to 200 feet, every farmer has this depth of material rich in plant food, a portion of which can be rendered available year by year by means of clover and proper culture. This storehouse is practically inexhaustible though the quantity rendered available each year is limited, yet quite sufficient for twice the average crop.

It might not be out of place to point out that agents of potash salts and nitrate of soda are quite sure that their respective fertilizers supply exactly the material most needed by the soil.

A. McNEILL.

Walkerville, Ont., January 20th, 1900.

Government Assistance to the Poultry Industry.

A Practical Poultryman Gives his Views.

To the Editor of FARMING:

As a practical poultryman, and one who earnestly desires the material advancement of the poultry industry, I can not but heartily congratulate you upon the stand you have taken in your editorial in a recent issue of FARMING. I am only one of many who have long regarded the annual grant to the Provincial Poultry Association as having outlived the purpose it was expected to accomplish. Instead of yearly giving renewed impetus to the interest in poultry culture among the farmers, and encouraging the raising of "better poultry and more of it," by them, it has degenerated into a sort of bonus to a few fanciers, who reap the sole benefit. Mr. Gisborne, secretary of the Eastern Association, says in his report that this show is necessary to the existence of the fanciers, and that they cannot do without the Government grant; or in other words they could not make fancy stock pay without this bonus from the Government. In corroboration of this I might say that in 1895 the amount paid in prizes was \$1173 of which \$900 was donated by grant; in 1896 the sum of \$1165 was given; grant \$900.

Estimating the number of farmers and others in the Dominion who keep poultry for meat and eggs alone, at 600,000, which estimate, I am sure, is well within the mark, and allowing the very moderate sum of \$25 each as the amount realized after deducting expenses, the tidy little sum of \$15,000,000 represents the value of this industry to our country from a utility standpoint. Compared with this, the value of the fancy poultry is but as a drop in the bucket.

I attended the annual show in Peterboro', and also the

meeting held to discuss the subject of asking Government aid for local shows. In this meeting a leading fancier took exception to your statement regarding the awards in the purely fancy classes. He conveyed the impression to the meeting that you said, that three men carried away the bulk of the prize money, and he asserted that such was not the case. Having read the article referred to, and having knowledge of how the awards have been distributed for some years, I could not but attempt to correct the erroneous impression he was trying to create; and I also challenged him to show that half-a-dozen fanciers did not carry off one-half of the Government grant (which challenge was not taken up). Perhaps it would interest your readers to examine a little more fully into this statement.

From two annual reports I quote the following: A., at Port Hope, in '96, won 102 prizes; at Guelph, '97, he got 101; B., at Port Hope, won 43, at Guelph, 51; C., at Port Hope, received 54, at Guelph, 52; D., at Port Hope, won 67, at Guelph, 62; E. at same two shows received 140 prizes, and F. got 137; while another received 28 prizes for rabbits alone. Total number of prizes to these six fanciers, at Port Hope 398, at Guelph, 411. Of these a total of 401 prizes was given to pigeons and bantams, a class of exhibits, as you very truly say, "of no more use to the farmer than so many sparrows."

First prizes on poultry are \$2, second prize \$1. Pigeons get \$1.50 and \$1. The reader may thus see what a large sum these men received, as the prizes were about evenly divided between first and seconds. At these two shows about \$40 was given for dressed poultry and eggs, not more than was given at one show for rabbits alone; and who will say that rabbits compare with dressed poultry and eggs in importance to our farmers? One of these six fanciers did not receive a single prize for any useful variety, but carried away 140 prizes for pigeons, rabbits and bantams. Are not such prize lists well worth the consideration of our Government?

Those men, at the Peterboro' meeting, would try to make the Government and our people believe that all was being done that can be done to forward the utility poultry interests among the farmers of this province, and that the Government would not make any grant to local associations for the benefit of the farmers. The best that Mr. Wm. McNeil, of London, could say for them, when the writer urged that their interests were deserving of more consideration, was that "he was tired of hearing about the farmers. The p-o-o-r farmers! God bless 'em!!! The p-o-o-r farmers! God bless 'em!!!" The p-o-o-r farmers! God bless 'em!!! Words fail to convey the contempt the speaker expressed for the farmers.

It was said by members of the Peterboro' association that not more than a dozen farmers had attended this show. And no wonder. In the programme there is no mention of any addresses or essays or any kind of practical work to attract farmers. Furthermore, if the half-dozen fanciers referred to were advertised as lecturers on poultry subjects, they have no reputation as practical men in utility work to induce the inquiring poultry-raiser to go to hear them. Their only object appeared to be to grab all the prize money possible and hustle their useless exhibits home (in some cases before the show was advertised to close) to be heard no more of till another show. I dare venture to assert that not one of the six can take their entire stock and produce a dozen eggs per week in the month of December. They never exhibit dressed poultry or eggs. They claim to be utility breeders, with how much truth the reader may judge. What encouragement is there for the farmers to attend when the prizes for market poultry and eggs, and the best laying strains of different varieties are practically nil? To the disgrace of the directorate of the last show the miserable sum of \$1 was given for first prize; 50 cents for second, for the best dozen of eggs. If this prize were given for the best dozen from each variety, it would do much more to encourage the farmers than the giving of four prizes (equal to \$5) in over thirty classes of pigeons. Especially is this true in view of the fact that our export egg trade runs up into the millions.

There are other ways in which our Government may forward the true utility poultry interests of this province than by continuing the grant to the Ontario, or giving it to local associations, the members of which are principally city, town and village fanciers.

R. C. ALLAN.

Grove Poultry Yards, Cobourg,
January 19th, 1900.

Canadian Farm Products for the Paris Exposition.

To the Editor of FARMING:

In response to the request contained in your note of the 15th inst., I gladly give you a brief report on the character of the agricultural and horticultural exhibits which have been sent from all sections of the Dominion for display at the Paris Exposition.

Beginning with the extreme east of the Dominion, Prince Edward Island has sent three cases containing different sorts of grain in the straw, as well as samples of threshed grain, among which are some very good representative specimens of the production of the island. About twenty-five cases of fresh fruit have also been sent to cold storage in Montreal, the product of Prince Edward Island; these will be forwarded sufficiently early in the year to be shown at the opening of the Exposition.

Nova Scotia has forwarded five cases containing good, representative samples of wheat, oats and barley, collected from different parts of that province, consisting partly of grain and in the straw and partly of threshed grain. Of fresh fruit, eighty cases of very fine apples and several cases of pears have been carefully packed and forwarded to cold storage in Montreal, to represent the fruit-growing industry of this province. These specimens have been collected chiefly in the Annapolis and Cornwallis valleys, and include some magnificent examples, which will do credit to this great fruit-growing section of Canada.

New Brunswick has also sent five cases of cereal products, including samples of wheat, oats, barley, rye and buckwheat, and fifty cases of fresh fruit, including some very fine examples.

Quebec will be well represented. Fourteen cases of agricultural products have been forwarded from this province, including samples of all the principal cereals, both in straw and threshed, gathered from different parts of Quebec. A good exhibit of tobacco has also been sent by the Government, and a selection of grasses.

As regards cereals, the display from the Province of Ontario will be comparatively small. Only four cases of these have been forwarded, one of which came from the Agricultural College and Experimental Farm at Guelph, one from the Agricultural Society of Sault Ste. Marie, and the remaining two contain samples of cleaned grain sent in by individual farmers from different parts of the province.

Ontario will, however, be well represented as regards fruit. A very large collection, consisting of more than six hundred bottles of fruit put up in preserving fluids, has been prepared, under the direction of the Provincial Government, by Prof. H. L. Hutt, Horticulturist of the Agricultural College at Guelph. This will make a very fine display. A good, representative collection of fresh fruit has also been brought together from the Province of Ontario, numbering, in all, about one hundred cases.

The Government of Manitoba has prepared and forwarded a large and excellent display of cereals of the province, consisting of grain, both threshed and in the straw. Thirty-one cases have been received through this source and, as the season there has been very favorable for getting grain of high quality, this exhibit will do great credit to the Prairie Province.

The Government of the Northwest Territories has got together and shipped a very fine series of examples of threshed grain from all the more important grain produc-

ing sections of the territories. These have been secured by offering prizes for the best specimens at the different agricultural fairs during the autumn, and selecting the prize samples.

British Columbia has forwarded sixteen cases in all, comprising a very excellent collection of the cereal and other agricultural products of different parts of the large province. This collection includes fine samples of wheat, barley, and oats; also some excellent examples of tobacco and manufactured cigars from the Kelowna district in the interior of British Columbia.

A large number of samples of fruit—about five hundred in all—have been put up in bottles containing preserving fluids, from the Province of Quebec. Similar collections, but somewhat smaller, have been prepared at the Central Experimental Farm, Ottawa, and at the branch Experimental Farm at Agassiz, B.C.

At each of the five Experimental Farms a large display of agricultural products has been prepared, embracing many varieties which will no doubt prove of great interest to visitors at the Paris Exposition. The Central Experimental Farm at Ottawa has sent twenty-two cases; the Experimental Farm at Nappan, N.S., seven cases; the Brandon Farm, eighteen cases; Indian Head Farm, thirteen cases; and the Experimental Farm at Agassiz, five cases. These are all filled with grain in the straw and threshed grain, and other agricultural productions.

A number of cases of fresh fruit have also been collected at the branch Experimental Farm at Nappan, N.S., to show the products of that part of Nova Scotia; and a large consignment has gone into cold storage representing many different sorts of fine fruits grown on the Agassiz Experimental Farm.

This grand exhibit, when brought together at the Paris Exposition, will be suitably displayed in the space allotted for these exhibits. The horticultural contributions will be tastefully arranged in one of the main buildings which has been set apart for horticulture, and this will give an opportunity of placing our Canadian fruit so that it may be compared with that from other countries.

The agricultural products will be shown in the Canadian Building. A grand central trophy will be erected near the middle of the building on the ground floor, which will be seen from all parts of the structure. A large space has been reserved on the second story for a series of trophies, in which representative products from each of the provinces will be shown. Some of the best of the exhibits will be shown in provincial groups. There will also be a special trophy on which tobacco in the leaf, as well as in different manufactured forms, will be displayed. There will also be a good exhibit of hops, flax, fibre, and wool.

WM. SAUNDERS,

Director.

Central Experimental Farm,
Ottawa, January 18th, 1900.

One Farmer's Wife's Estimate of Free Seeds

A certain Congressman was over anxious to fix himself solid with a certain farmer in his district by supplying quantities of various free seeds at the Government's expense. Mrs. Farmer, being the better and more sensible half of the two, became disgusted and weary of such nonsensical, political ingratiatory proceedings, and went at Mr. Congressman in this manner:

"If you think John can help pay the interest on this farm mortgage with seeds from Washington, you are as much mistaken as if you think that you will gain any votes in this household by sending them. What we want is not seeds but cash, and if you think so much of John as your frequent communications indicate, why send him a \$5 bill. If you are timid about that, or you can't send \$5, why may be you can spare \$2, but don't send any more seeds."
—Exchange.

The Agricultural Gazette

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

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

Annual Membership Fees:—Cattle Breeders', \$1; Sheep Breeders', \$1; Swine Breeders', \$3
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 5th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

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

Pure-bred Stock for the North-west.

A car load of pure-bred stock will be despatched to the North-west Territories in a few days. Two more animals only are needed to fill it. Any one having one or two animals awaiting shipment to Manitoba or the North-west should take advantage of this opportunity to forward them, as they will go at the reduced rate obtained by the Dominion Cattle, Sheep and Swine Breeders' Associations from the C.P.R. From now on, a car will leave for North-western points in charge of experienced men, as soon as sufficient applications for a car lot are sent in to the Secretary, A. P. Westervelt, Parliament Buildings, Toronto, to whom all correspondence on this subject must be addressed.

Lice on Sheep.

There have from time to time lately been detected in the Toronto cattle market a number of sheep, which were, apparently, affected with scab. Investigation, however, shows that the trouble is due to the presence of lice, which irritate the sheep and cause them to rub themselves and lose their wool in patches.

These lice are the small, red kind that are to be found on poultry, and their presence on the sheep is due to the careless methods of some farmers, who have no proper poultry house, and, for that reason, allow their fowls to use the sheep pens as their abode in the winter season. This practice cannot be too strongly condemned. Separate houses must be provided for sheep and poultry, if both are to do their best. It is impossible for sheep worried by lice, in addition to ticks, to thrive. Moreover, the proper temperature of the sheep house is too cold

for hens, if they are expected to lay, while, if the sheep pens are warm enough for the hens, then their temperature is too high for the comfort of the sheep, who do not care for warm premises.

TREATMENT.

This consists in sprinkling the sheep liberally with insect powder during cold weather, or dipping in one of the sheep dips when the weather gets warmer. Whatever treatment is used should be carried out as soon as possible. As, however, prevention is better than cure, let every one see to it that his poultry and sheep are not allowed to run together.

Is the Milk of Tuberculous Cows Infectious?

The prevention and cure of consumption are questions which are of the most vital importance to mankind.

This year the Congress on Tuberculosis was held at Berlin, Germany, the more important sections dealing with the treatment of the disease and sanatoria.

Many speakers dwelt on the importance of educating the public to the fact that tuberculosis is infectious, but it is still difficult to get many people to accept all the scientific conclusions which have been arrived at in connection with the prevention of the disease.

I shall only now mention some results obtained by two German investigators, which emphasize the necessity of having the assistance of veterinary surgeons if the disease is to be thoroughly overcome.

The part which infectious milk may play in the communicability of the disease from animals to mankind has been the subject of numerous re-

searches, and certain instances of this communicability are well established on authoritative evidence, but, unfortunately, a difference of opinion exists upon the infectiousness of the milk of tuberculous cows, *not suffering with disease of the udder.*

All veterinary surgeons know the difficulty of diagnosing tuberculosis in animals only slightly affected; but, thanks to the tuberculin test, these cases are easily isolated. The question that naturally arises is, How are we to regard the milk of these diseased cattle, which show no clinical symptoms of the disease?

Doctors Rabinowitch and Klemperer, of Berlin, have lately published an interesting paper on the subject which I shall here briefly notice.

The results of former investigations may be summed up in the following table:

Author.	Number of cows investigated.	Times tubercle bacilli found in milk.	Per cent.
May	6	1	16.6
Stein	14	4	28.5
Bang	63	9	14.0
Hirschberger	20	11	55.0
Ernst	36	10	28.5
Smith and Schroeder	6	2	33.2
Schroeder	31	2	6.5
Delepine	37	9	24.3
Nocard	54	3	5.5
Rabinowitch and Klemperer	15	10	66.6

The fifteen cows investigated by the last-named authors were examined clinically by Professor Eggling, of Berlin, on three separate occasions, five months elapsing between the first and last examination. The milk of ten of these cows contained tubercle bacilli, and the clinical notes, necessarily abbreviated, were as follows:

1. Only one (No. 12) showed distinct clinical symptoms of udder tuberculosis.
2. Cow 9, at the post-mortem, was found to have tubercular lesions in the udder (not noticed during life).
3. Cows 1, 6, 11 had advanced generalized tuberculosis, but none in the udder.
4. Cow 4 showed slight tuberculosis.
5. In cow 10 the diagnosis of commencing tuberculosis could only be noticed at the second and third examinations.
6. Cow 8 showed at the first examination respiratory murmurs, whilst the two following examinations showed no symptoms of tuberculosis.
7. Cow 2 showed no signs of tuberculosis in the three examinations. Cow 14 showed no visible traces of the disease.

All the above cows gave a positive

reaction with tuberculin, and in all tubercle bacilli were found in the milk.

As the authors remark, these results are considerably different from those of former authors, not only as to the high percentage of infected milk, but also in the clinical results obtained. On most occasions others have found tubercle bacilli in the milk, *only in cases of udder tuberculosis and in very advanced generalized tuberculosis.*

These researches warrant the enunciation of two further conclusions:

1. Cows, with commencing tuberculosis and without demonstrable infection of the udder, may contain tubercle bacilli in their milk. Cows 4, 10 and 8 are examples.

2. Cows with latent tuberculosis, showing *no* clinical symptoms, and the disease *only* revealed by the tuberculin test, may also contain tubercle bacilli in their milk. Cows 2 and 14 are examples.

With regard to the other five cows (more or less diseased) in whose milk no bacilli were found, the authors were hindered by exterior reasons from making repeated experiments with the milk of these animals.

In spite of the small number of the authors' researches they feel themselves justified in stating that:

The milk from tuberculin—reacting cows is to be considered in every case as suspicious, and they recommend besides the clinical examination, bacteriological surveillance of milch animals and the tuberculin test as the most important method of obtaining tubercle-free milk.

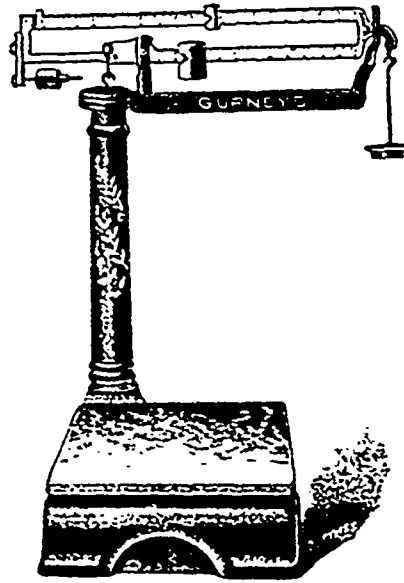
F. C. HARRISON,
Bacteriologist, Ontario Agricultural
College, Guelph.
Berne, Switzerland, Jan. 3, 1900.

Prof. Harrison, the author of the above article, is at present visiting some of the best Bacteriological Laboratories in England and on the Continent. Prof. Harrison is remaining long enough at each place to thoroughly study the methods of work of each institution, and the farmers of Ontario ought to receive much good from the results of his labors. He is paying particular attention to the bacterial growths in milk and milk products, as well as the bacteria that affect animals in health and disease.

An Enterprising Firm.

Among the manufacturing firms that offered special prizes at the last Provincial Winter Fair, and, by so doing, showed that they recognized the value of the exhibition not only to the exhibitors, but to the country at large, mention must be made of the Gurney Scale Co., Hamilton, Ont., who offered a splendid platform scale as a prize for the three best cows or heifers shown by one exhibitor. This prize was won by Mr. G. W. Clemons,

St. George, for a trio of Holsteins. Nor did the Gurney Scale Co.'s enter-



Dairy Scale for use in the dairy test, presented to the Directors of the Provincial Winter Fair by the Gurney Scale Company, Hamilton, Ont.

prise end here, for, having ascertained that the directors of the Winter Fair did not own a scale for weighing the milk in the dairy department of the show, they most generously presented them with a dairy scale of the latest design, which weighs accurately to one quarter of an ounce. The two accompanying illustrations show the platform scale won by Mr. Clemons and the dairy scale presented to the directors of the Winter Fair.

Live Stock Meetings.

Mr Henry Wade, secretary of the following live stock associations, has arranged the dates of their annual meetings, which are as follows:

Tuesday, Feb. 6th.—Dominion Ayrshire Breeders' Association at 2 p.m.

Tuesday, Feb. 6th.—Dominion Shorthorn Directors, 7.30 p.m., Albion Hotel.

Wednesday, Feb. 7th.—Dominion Shorthorn Breeders' Association at 11 a.m. and 2 p.m.

Wednesday, Feb. 7th.—Hackney Horse Society, 8 p.m., Albion Hotel.

Thursday, Feb. 8th.—Shire Horse Association, 11 a.m., Albion Hotel.

Thursday, Feb. 8th.—Clydesdale Horse Association, 2 p.m., Albion Hotel.

Thursday, Feb. 8th.—Dominion Horse Breeders' Association, 6 p.m., Albion Hotel.

FARM HELP EXCHANGE.

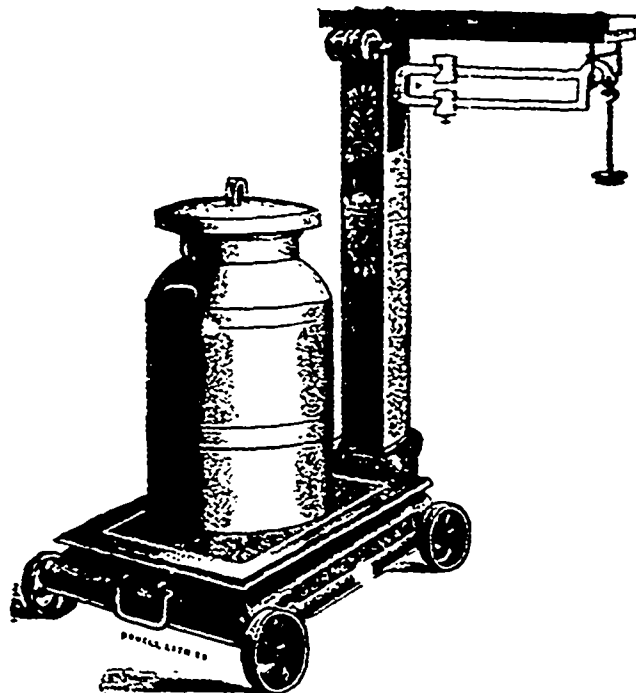
The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars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

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

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

Help Wanted.

Wanted, a married man, good worker, who understands general farming in all its branches, also the feeding and care of stock, and is a good milker. Must be reliable, honest, trustworthy and sober and have no bad habits. Good comfortable house and other



Platform Scale, offered by the Gurney Scale Co., Hamilton, Ont., for three best cows or heifers. Won by G. W. Clemons, St. George, Ont.

privileges given. Good references required. Farm consists of 100 acres. Permanent place to good man. No. 295. a

Steady employment on a 100 acre farm given to a good boy or man. Farm is clean, well fenced and drained and is provided with modern machinery. No heavy work, but milking of cows, and in winter mostly chores. \$130 and board and washing given; yearly engagement. No. 296. a

Wanted, on or before April 1st, six unmarried men, who must thoroughly understand all kinds of farm work. Yearly engagement if desired. Good wages paid to careful and reliable men. Others need not apply. No. 297. a

Wanted, man and wife with no children. Wife to cook for 8 men; man to work among cattle and horses on a ranch in Alberta. Must be a good horseman. Man must be able to cook when rounding-up cattle. One of age between 25 and 40 preferred. Steady employment to a couple who suit; wages \$40 to \$50 a month, board and lodging. No. 298. a

Foreman required at once for a dairy and poultry farm in Nova Scotia, one mile from a town, in one of the best sections of the province. Good, intelligent man wanted, who will devote his best efforts to make things go well. House supplied. No. 299. a

Good, general farm hand required for a farm in Grey county. Will give employment for a year to a suitable person. No. 300. a

Wanted, foreman for farm by April 15th, one who makes a study of the latest ideas in farming and is up to date. Must be a good manager and not afraid of work. Salary \$180 per year and board, without washing. Single man preferred. Further particulars on application. No. 301. a

Wanted, young man or good boy for a year, to commence work next April. Must not have any bad habits, and best of references required as to character and ability to work. State salary expected. Good home to right person. No. 302. a

Wanted, on yearly engagement, single or married man used to all kinds of farm labor and not afraid of work. No. 286. b

Man or young lad, wanted at once. Reasonable wages to a suitable person. No. 287. b

Married man, accustomed to farm work wanted to take charge of team and make himself generally useful on a farm and nursery. Wages \$250 a year and house and garden. No one addicted to strong drink need apply. No. 288. b

Wanted, about March 15th, thorough stockman, who understands the care and management of horses, cattle

and pigs. Single man, of middle age preferred. Permanent situation to suitable person. Must have first class references. No. 289. b

Married man, with small family, required, to do general farm work. Must be a good milker and stock hand. Yearly employment, with good house and garden, given to one who suits. State wages wanted. No. 290. b

Wanted married man for farm in Illinois. Man must be a capable farmer and good with horses; wife a good housekeeper, honest and respectable, as advertiser, being single, will have to board with them. Family with some experience on a farm and with not more than two children preferred. Will pay good wages and give good accommodation to a suitable couple. No. 291. b

Married man, accustomed to stock, wanted for a farm in Ontario. Yearly engagement. House and firewood supplied. No. 292. b

Situations Wanted.

Married man, aged 26, desires position as working foreman. Is capable of doing all kinds of work and handling machinery. Good with live stock and milking. Free house desired. No bad habits. Wages required, \$325 without board, or \$250 with board. No. 303. a

Good ploughman, and handy with horses, requires a place on a farm. Has been on a farm all his life and engagements have been lengthy. References given. No. 304. a

Farm foreman, well versed in all branches of farming, including butter and cheese-making, milk testing and care of live stock wants situation. Strictly temperate and honest. No. 293. b

Man, 25 years of age, who thoroughly understands farming in every respect, and has no bad habits, wants a place on a farm. No. 294. b

DOMESTIC HELP.

A young woman desires employment in British Columbia or Northwest Territories. Is experienced in all branches of home work, and 26 years of age. Would accept position as housekeeper, hired girl or anything in the way of honest employment. State wages given. No. 305. a

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

"I'd like to paint your portrait," said the artist. "Have you ever been done in oil?"

"Yes; I lost a cool thousand in a petroleum speculation once."—*Detroit Free Press.*

Matters of Interest to Institute Workers.

Institute Meetings more Popular than ever.

The Superintendent of Farmers' Institutes has been visiting some of the Institutes in the various parts of the Province during the month of January. All of the delegates interviewed say that they have never seen so much interest manifested in the meetings, nor such active discussions entered into. Where meetings were not so largely attended as they ought to be, the fault could almost always be traced to the officers themselves. Usually the advertising had not been thoroughly done. Most secretaries have done well, and all are to be commended for what they have accomplished, but in a few instances the rules were barely complied with. The secretary who works up the best meetings is not content with publishing and distributing bills and programmes, but he also keeps the local papers supplied with notices for some weeks beforehand. He also keeps his directors at work, and in fact talks "Institutes" everywhere and all the time.

In the Kingston district, A. P. Ketchen and A. M. Campbell addressed some splendid meetings, and, it being a dairy district, they devoted a good deal of their time to this branch of agriculture. They were given good assistance by Joseph Haycock, ex-M.P.P. and Rogers, M.P. The benefits of the Kingston Dairy School are very evident everywhere and the Superintendent and instructors are doing a good work for the dairy interests of the east.

In Hastings county J. E. Orr is talking Fruit and Orchard, and has given some practical object lessons by pruning specimen trees in orchards near the meeting-house. These will stand for the neighbors to see and imitate on their own farms. N. G. Somerville, of Lanark, discussed dairy matters, and he found that the Hastings county farmers were very much alive and earnest in all branches of dairy farming. Some of the herds were visited in their own stables, and the general impression left on the delegates seemed to be that the dairy farmers of the east were rapidly culling out their poor cows, and by careful selection and the use of thoroughbred bulls, whose pedigrees were right, were bringing their herds up to a splendid standard of excellence.

GOOD RESULTS BEING OBTAINED.

In Victoria county T. G. Raynor and H. R. Ross were having successful meetings. Mr. Raynor says the farmers are getting more good out of the meetings than ever before. They are freer in discussions, and the kind of questions asked indicate that they are putting into practice the good ideas they have received at former meetings and from publications issued

by the Ontario Department of Agriculture. Continuing, Mr. Raynor said that at the evening meetings the best results were obtained where the programmes did not contain too many items of a frivolous or a purely amusing variety. Good music was always appreciated, and it acted as a condiment to season the more substantial food supplied by the speakers on agricultural matters. There was a tendency for some Institutes to employ local talent to assist in rendering entertainment only, expecting the delegates to do all of the speaking on the topics relating to the farm. Mr. Raynor says this is a mistake, for a local man knows the needs of his neighbors, and, by introducing subjects of vital interest and leading the delegates to devote most of their time to the discussion of these subjects, the very best good is attained, and one object for which the Institute system was started is accomplished.

Mr. Ross, in his talk on "Breeding Types," laid stress on the fact that a good conformation and other apparent excellent qualities were not in themselves sufficient to warrant the selection of a sire for the dairy herd. "In choosing a bull," said he, "we look first at the record of his mother. Then we make sure that he is strong in those individual points where our cows are weak. He must also be distinctly active and masculine in every feature. We injured our herds by using a bull one season who, though scoring high in a standard scale of points, lacked strong, masculine qualities. The calves in every instance were lacking in nervous force."

John I. Hobson and W. C. Shearer are in Peel, York and Ontario counties. Meeting Mr. Hobson in Peel, his first remark was, "I have been doing institute work now for about twelve years, and I have never seen such enthusiastic audiences as we have had this year." "Mr. McCulloch is a great secretary," said Mr. Shearer. "The halls are always well lighted and heated, the meetings are started on time and the whole thing goes off with a snap and vim that means business right from the start. Peel will have over 500 members this year, and Mr. McCulloch will see to it that each one gets his money's worth. He has engaged me for one other meeting," continued Mr. Shearer, "and I understand Mr. Duncan Anderson and Miss Laura Rose have also been secured. He knows the dairy business too and helps us not a little by his pertinent questions and practical suggestions."

GREEN MANURING.

"Is rye not as good as clover to plough under for green manuring?" someone asked Mr. Hobson. "No, sir," came the reply. "But suppose your land will not grow clover?" "Then grow peas. Peas and clover take nitrogen from the air and store it in the soil. Other crops can then be

grown, feeding upon this new supply of nitrogenous material." "I have improved my land," said one, "by plowing under turnips, yet we are told that turnips contain little else besides water." This was explained by the statement that any vegetable matter turned under would improve the mechanical condition of some soils, and that decayed vegetable made humus. Humus in turn made it possible for certain minute organisms to carry out their work of rendering available for plant growth, good material already present in an insoluble form in the soil.

"In my opinion," said Mr. John McMillan, M.P., to the farmers of Essex, "we are not feeding roots enough to our hogs. In South Huron many of us feed ten pounds of mangels a day. We start with the pigs even before they are weaned. At five or six weeks old they take to roots eagerly and during their entire growing period they can be fed with profit." F. M. Lewis, of Burford, who accompanied Mr. McMillan, says, "I still find too many orchards in the province in grass. We are willing to accept one crop in the shape of grain, hay or roots off the rest of our fields, but expect our orchards, without cultivation, to give us each year an abundant harvest of fruit and a crop of hay besides. More cultivation, better cultivation, and more manure have got to be supplied before we can get the best results from our fruit trees." Mr. Lewis thinks the regulation of "soil moisture" is one of the problems Ontario farmers have to solve. "All plant food taken from the soil by the plant must be in a state of solution. How can we best preserve in the soil just the proper degree of moisture for plant roots to do their best work?" This question Mr. Lewis discussed most intelligently, and the consensus of opinion seems to be that rolling after sowing on most soils is beneficial, but where the land is strong it should be lightly harrowed afterwards.

THE VALUE OF LEGUMINOUS CROPS.

Duncan Anderson says to the farmers of Division 4, "Grow more clover. You can take off a good harvest of this crop and yet leave your land richer than it was before. Take off your crop of clover hay, and with a stubble four inches long and a root growth of from 12 to 24 inches as we find it in the red clover, you have left in actual manurial value \$30 per acre. Three things," continued Mr. Anderson, "we must do to get the best out of our soil.

1. We must grow leguminous crops to restore and maintain fertility.
2. We must cultivate and pulverize well to provide the roots with a loose soil in which to spread themselves.
3. We must always prepare our seed bed well, and keep the manure near the surface that the young plants may get a good start.

"Stunt a plant or an animal," said Mr. Anderson, "and no amount of food or attention afterwards will obliterate the effects of the bad start."

ON DRAINING.

A. W. Peart, of Burlington, says that some lands can never be brought into a proper state of cultivation without underdraining. "There is little use, however, in draining a field unless it is thoroughly done. Lay out the main drains first, and then the laterals. You do not need to go so deep in clay as in sandy soil, and there is some danger of placing your tiles so that the surface water never penetrates to their depth." Mr. Peart finds it best to use a wooden outlet for tile drains, as it is less liable to be broken by stock, and if a square or triangular box, ten or twelve feet long, be used, it cannot be easily obstructed at the mouth by a breaking away of the soil around it. The mouth should be protected by wire or iron bars to prevent small animals from penetrating the drain.

As viewed from the standpoint of an institute worker, the agricultural conditions in Ontario are improving every year. A greater diversity of products and our rapidly increasing export trade have necessitated a changed condition of farm management. The farmer of to-day has problems to solve and enemies to combat that were unheard of twenty years ago. He therefore requires a more technical training, and a better general education. In travelling from county to county and township to township, the two things that impressed the superintendent were the necessity for a deeper knowledge of the scientific principles underlying our business, and the fact that we do not devote more thought to maintaining and increasing the fertility of our soils.

Horse-Breeding.

By Prof. J. Hugo Reed, V.S., Guelph, Ont.

(Continued from last issue)

Saddle Horses and Hunters. Suitable horses of this class are, with few exceptions, the progeny of the thoroughbred. I might here make a few remarks about the term "thoroughbred." There is but one animal in the world that is entitled to the term, and that is the English running horse and his pure descendants. The term is often misapplied, both in print and conversation. We read of thoroughbred cattle, thoroughbred sheep, pigs, fowls, dogs, etc., etc. It should not be; we should use the term "pure-bred." We have pure-bred cattle, pure-bred sheep, etc., etc., and in horses we have pure-bred Clydesdales, pure-bred Shires, standard-bred horses, etc., but the term "thoroughbred" needs no qualifications whatever. It applies to the one animal and to him alone.

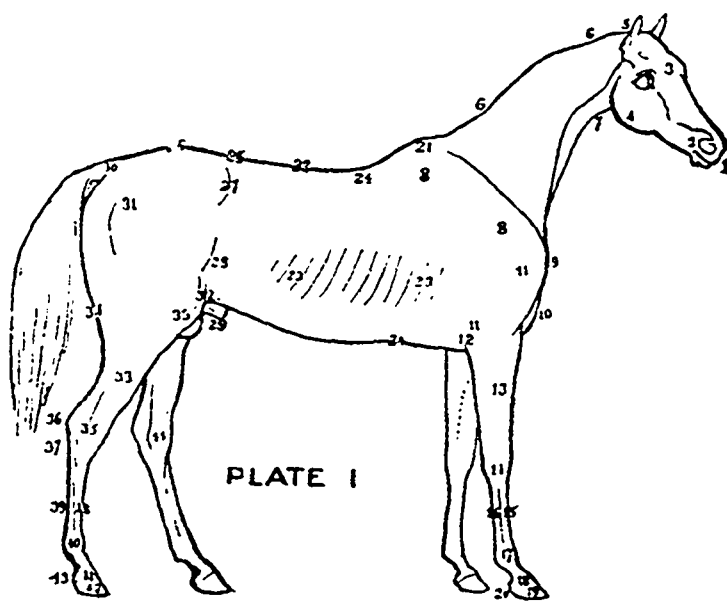
The thoroughbred, we may say,

without danger of successful contradiction, is the purest domesticated animal produced. He has been carefully bred in certain lines for centuries, and careful records have been kept. Doubtless he originated by intelligent crossing; but crossing ceased so long ago that he may truly be called thoroughbred. On account of his careful breeding and strong individuality he has greater prepotency than any other sire. (By prepotency we mean the power, or ability, to transmit to his progeny his own characteristics). On this account we need to be even more careful in selecting a sire from this class than from others—as, if there be any undesirable points or characteristics, whether of conformation or disposition in the sire, they are liable to be even more marked in the progeny. Therefore, we must not breed to a thoroughbred simply because he is thoroughbred, but be careful to select a sire that is of the required size, sound, of good conformation and disposition. We can, as already stated, breed a coarser mare to this horse than to others. His progeny, except from very coarse mares, seldom lacks quality and ambition. Of course, even with this sire, the cross must not be too violent. Violent or too well-marked crosses in any case are seldom followed by satisfactory results. The produce of the thoroughbred generally excels in the saddle, and makes a fair harness horse. He is the best all-round horse. The market for the good-sized half-breed is, always has been, and I think it probable always will be, good. He, with the carriage horse, is the rich man's horse, and when we are able to supply the animal men of this class want price will not prevent his sale. It is not a hard matter to produce small animals of this class, called light weights and medium weights, but the production of a heavy weight hunter, one able to carry up to 220 lbs. or over, is a more difficult matter. For this purpose we should select a large mare, 1,200 lbs. or over, with as much quality and ambition as possible, and breed her to a good big thoroughbred, one of 1,200 or 1,300 lbs. If we have a mare of reasonable quality to cross with a stallion of this description the results will in most cases be satisfactory. While there is a good market for the light weight saddler or hunter of good action and manners, a much longer price can be obtained for the big fellow of the same class. We may say that the larger the animal of this class is, provided, of course, that he has quality, the more money he is worth. There are many large men who enjoy an hour or two in the saddle, either on the flat or in the hunting field, and especially, for the latter purpose it requires a large, strong horse to carry a man of say 220 lbs. or over safely across country, and when a man of this weight, with money and hunting proclivities, sees a horse that has the necessary weight, ambition

and manners to perform well under such circumstances he will pay a long price to secure him. Then again this horse can be also used in the carriage with a fair amount of satisfaction. Of course a first class saddler or hunter has not carriage action, but for the man who likes both riding and driving this is certainly the best horse. A horse with typical carriage action does not answer nearly as well for saddle purposes as a saddle horse does for harness.

Cobs. A saleable cob is a little chunky fellow with extreme action and beauty. He cannot be produced with any degree of certainty. He is sired by the various classes of light horses out of ordinary mares. His production in most cases can be explained by the action of some of the aforementioned laws of breeding. While a

require boots or scalpers to prevent him injuring himself, and may either trot or pace. He is, with rare exceptions, sired by the standard-bred, but can be sired out of a road mare by any of the lighter breeds of sires. In order to produce him with any degree of certainty we require a good sized trotting mare with trotting blood and good individuality to mate with the big, clever-looking trotting-bred stallion, with good action and at least a fair amount of speed. Small animals of this class may be able to go the distance on a good road hitched to a light rig at the required speed, but my idea of a gentleman's roadster is an animal that has sufficient size and strength, combined with speed, to enable him to draw two in a buggy over heavy roads. Unfortunately there are too many roadster-bred horses in the



POINTS OF THE HORSE.

Head.—1. Muzzle. 2. Nostril. 3. Forehead. 4. Jaw. 5. Poll. *Neck.*—6. 6. Crest. 7. Throple or windpipe. *Fore quarter.*—8. 8. Shoulder blade. 9. Point of shoulder. 10. Bosom or breast. 11. 11. True arm. 12. Elbow. 13. Forearm (arm). 14. Knee. 15. Cannon-bone. 16. Back sinew. 17. Fetlock or pastern joint. 18. Coronet. 19. Hoof or foot. 20. Heel. *Body or Middlepiece.*—21. Withers. 22. Back. 23. 23. Ribs (forming together the barrel or chest). 24. The circumference of the chest at this point called the girth. 25. The loins. 26. The croup. 27. The hip. 28. The flank. 29. The sleath. 30. The root of the dock or tail. *The hind quarter.*—31. The hip joint, whirlbone or round. 32. The stifle joint. 33. 33. Lower thigh or gaskin. 34. The quarters, haunch or upper thigh. 35. The hock. 36. The point of the hock. 37. The curb place. 38. The cannon-bone. 39. The back sinew. 40. Pastern or fetlock joint. 41. Coronet. 42. Foot or hoof. 43. Heel. 44. Spavin-place.

good animal of this class sells for a good price I do not think it would be well for any breeder to try to produce him.

Roadsters. A good and saleable gentleman's roadster is not necessarily a racehorse. In fact it is seldom that a racehorse makes a satisfactory roadster. A gentleman's roadster should be of fair size, 15½ to 16 hands, of good and graceful conformation, good color, and a stylish looking fellow, free driver, capable of travelling at the rate of twelve miles an hour or faster, and keeping that clip up for several hours. He must have good action both fore and aft, and must not

country that are so small that, even though they may be tolerably speedy, if not first enough for racing purposes, have really no market value. Therefore, in breeding roadsters for the market we should be careful to produce animals of fair size as well as speed. Such animals can be produced if we are careful in the selection of the parents. Any of the lighter breeds of horses mentioned are very serviceable on the ordinary farm, and can be made to earn their own living from three years old until marketable, say at our or five years.

(To be continued.)

The Farm Home

The Clod and the Genius.

A genius and a clod one day
 Raked the meadow sweet with hay.
 The genius said: "I plainly see
 That hayseed's not the thing for me."
 And he said as his hay rake forth he hurled:
 "I'll go snatch laurels from the world."
 The clod opined that good, green hay
 Was better than laurel any day.
 So the genius travelled wide and soared
 And hocked sweet sonnets for his board.
 The clod's dad died and left a will,
 Gave him a farm and a good grist mill.
 He sold young pigs and cows and beeves
 And never pined for laurel leaves.
 The genius came to the farm one day
 And the clod in the meadow raked the hay.
 The genius had seen some right hard knocks,
 And at the time he was on the rocks.
 He had taken his meals, it was plain to see,
 With great irregularity.
 And a good, old-fashioned mutton stew
 Would beat all the laurel, he thought, that
 grew.
 The clod embraced his long lost twin
 Straightway to the kitchen took him in.
 And he said, as he watched his brother's
 greed,
 That he didn't think laurel was much for
 feed.
 Next day the genius raked the hay
 For the clod at a dollar ten per day.
 And he said as he mopped his sweating brow:
 "Three 'squares' beat laurel anyhow."
 —*Bismarck Tribune.*

A Child's Presence of Mind.

By Meria E. Graham, Ailsa Craig, Ont.

It was a clear, sunny afternoon in the middle of winter, two little girls, Alma, who was only eight years old, and Martha, her six-year-old cousin, who had come to spend a day and a night with her, were playing noisily in the pleasant kitchen of the old farm house.

Alma's parents had gone to a neighbor's to spend the afternoon, and her grown-up sisters, being busy doing the week's ironing and baking many pans of cookies, were not inclined to be troubled with the younger children's games.

They put on their warm cloaks and hoods and their woollen mittens and started them out to the road side to slide on the narrow strips of ice.

They were healthy fun-loving girls, and the cold air only served to deepen the roses in their cheeks as they chased each other up and down and through the snow to a fresh piece of ice.

They kept going farther from the house, finding sometimes smooth ice and sometimes rough; at last Alma said: "Why, Martha, see how far we've come." To which Martha replied: "Oh! we're nearly to our place, let's go on to the creek; we'll get lots of good ice there."

They hurried along and soon reached the top of the high hill which forms the bank of Mud Creek. They climbed the rail fence and began slipping, tumbling and scrambling down its steep slopes. The creek was reached and to their delight, though in places

it was coated with deep snow, it was there covered with ice so clear and smooth that no time was lost in considering its strength and thickness, and they at once slid across, the ice cracking beneath their lively feet.

Now at that particular place the stream is narrow, deep and swift, and though the ice forms it is never thick and strong, nor is it a safe place for any one to cross. These little girls did not know that, nor did they pay any attention to the sound of cracking ice. To them ice was ice so long as it was smooth. They did not suppose the ice would break, and if it did it would only mean another case of wet feet, which is a common occurrence in the busy lives of country children.

They crossed and recrossed the ice until it showed so many cracks that they decided it were safer to go one at a time. Alma quickly slid across, then Martha, when one little foot went through but was out again too quickly for the water to penetrate her coarse laced boot. She laughed and said:

"Who can cross most without getting wet feet?"

Alma shot across above the broken place but this was no better, as her foot too went through; Martha quickly followed. The ice gave way and she was suddenly immersed in the cold, cold water, she as quickly came again to the surface and grasped the edge of the ice, but when she tried to pull herself out the ice gave way beneath her fingers and she again went out of sight.

Alma's cheeks lost their rosiness, and, as if by instinct, she realized that if she remained in an upright position, while trying to save her cousin, the ice would not bear her weight.

She lay flat and carefully and quickly crept forward to the broken place, and when Martha again grasped the thin ice, her hands were seized, thus preventing her from being carried beneath the solid ice by the swiftly-flowing water. With the words, "Do not try to climb out," Alma moved slowly backward and succeeded in pulling her wet companion out of the water and onto the firm ice near the shore.

One half minute later in crawling out, an excited rush towards her cousin as might be expected from a child of eight years, would have caused sad hearts in two homes for a long time. Extraordinary presence of mind prevented serious results.

Young country blood is not easily chilled. They lingered by the creek only long enough to wring the water from Martha's coat and hood, and to put their wet mittens in their pockets. Then in a more subdued spirit they clambered up the hill and over the fence. Then taking hold of hands they started to run for home. They

did not stop when they came to the gate which led to Martha's home, for had she not permission to stay all night with Alma?

They did not run far, however, and the wet clothing was pretty well frozen before their half-mile journey was ended and with but one slide on the last strip of ice, they hurried into the warm kitchen. They found no one there so they decided to say nothing of the adventure.

Coats and hoods were hung before the old fashioned, high-backed stove and shoes and stockings were placed beneath it and when the family returned nothing unusual was noticed. The cousins were seated on the floor beside the glowing fire chatting contentedly and eating cookies.

At bed-time, an inquiry as to damp underclothing, brought out this story. A drink of ginger tea and a warm bed were the only remedies needed and in the morning two merry-faced little girls appeared, with not even a cold to remind them of their adventure. This story though really true has probably been forgotten by all but the present writer, who had the greatest reason to remember it, as it was she whom Alma's presence of mind saved from drowning.

How to Spend the Winter Evenings.

The following paper on this important subject was recently read at a Farmers' Institute meeting in northern Ontario:

Now that the winter has fairly come we want to know how to spend the long evenings.

Darkness settles down about five forty-five p.m., which leaves four or five hours which we must spend in some way before retiring to rest for the night.

Now the question arises how can we employ this time to get the most pleasure and profit out of it. There are a great many ways in which we might answer this question, but, all ways are not practicable in a small country place.

We will try to find out just what is best suited to the tastes and abilities of the young people of the twentieth century, especially those living out of reach of public reading rooms and like advantages of town or city. Do you not think we might have the benefit of good literature, literature that is pure and ennobling and that will elevate all our thoughts and help us to live a better and more useful life? I think we might. We could have a good library composed of books by good authors, both grave and gay, selected with great care, for who can estimate the harm done to young minds by the influence of impure lit-

erature. Then either let us read them at home, or, what I think would be a more interesting way, have a reading circle and meet one evening a week, when a good reader would be selected to read aloud, then all could get the benefit of the book at the same time and also have the opportunity to talk it over, and discuss it with the other members of the circle. I think such a circle should be a source of pleasure to all who would take an active part in it. I think it would not be wise to have more than eight or ten members in such a circle. Now as this would only take one evening of the week what shall we do with the rest?

We might give one evening, at least, to the home. Where can we find so much real happiness as at home? If there are not enough members in the home circle to admit of playing any of the quiet evening games, invite a friend or two to join with you and make the evenings so pleasant that they will be remembered by all as some of the happiest times in their lives. If there is any musical talent in the home so much the better. Use it to good advantage and make the old home nice with happy song and laughter, always remembering to keep all conversation of the pure character.

One evening a week should be given to the weekly prayer-meeting, Christian Endeavor meeting, or whatever religious meeting may be held during the week, as we must never forget that from God our Father comes every good and perfect gift, and we cannot truly enjoy ourselves unless we know Him.

Now if we give one evening a week to self-education along some line that is likely to be of use in years to come, we will have nearly all the time occupied, and any leisure time we may still have can always be filled with the occasional concert or tea-meeting, or spending the evening with your friends in having a good time playing games, chatting and being sociable all round.

Now, girls, I want to say a word to you. Be careful of your influence, for remember, in all these ways of spending the winter evenings I think the young people of both sexes should meet together, and you have a great influence, whether you know it or not, so be very watchful.

And boys and young men be kind, be pure, be true, and each one try to attain the height of perfection in manhood.

And in closing I would say, however we spend our time, let us each try to benefit those around us, and not give all our time to self, for in helping others to have a good time we find true happiness.

John Quarterdollar and Nancy Nichol were married at Providence, R.I., the other day. How like 30 cents they must feel.—*Denver Post.*

Cooking Oysters.

Oysters (Broiled)—Choose large, fat oysters; wipe them very dry; sprinkle salt and cayenne pepper upon them, and broil upon one of the small gridirons sold for that purpose. You can dredge the oyster with biscuit dust or flour, if you wish to have it brown; and some fancy the juices are better kept in this way; others dislike the crust thus formed. Butter the gridiron well, and let your fire be hot and clear. If the oysters drip, withdraw the gridiron for a moment, until the smoke clears away. Broil quickly and dish hot, putting a tiny piece of butter, not larger than a pea, upon each oyster.

Oysters (Fried, to garnish boiled fish)—Make a batter of flour, milk, and eggs, season it a very little, dip the oysters into it, and fry them a fine yellow-brown. A little nutmeg should be put into the seasoning, and a few crumbs of bread into the flour.

Oysters (Stewed)—Drain the liquor from two quarts of firm, plump oysters; mix with it a small teacupful of hot water, add a little salt and pepper, and set over the fire in a saucepan. Let it boil up once, put in the oysters, let them boil for five minutes or less—not more. When they "ruffle," add two tablespoonfuls of butter. The instant it is melted and well stirred in, put in a large cupful of boiling milk, and take the saucepan from the fire. Serve with oyster or cream biscuits, as soon as possible. Oysters become tough and tasteless when cooked too much or left to stand too long after they are withdrawn from the fire.

Cream Oysters on the Half-Shell—Pour into your inner saucepan a cup of hot water, another of milk, and one of cream, with a little salt. Set into a kettle of hot water until it boils, then stir in two tablespoonfuls of butter and a little salt, with white pepper. Take from the fire, and add two heaped tablespoonfuls of arrowroot, rice flour, or corn starch, moistened with cold milk. By this time your shells should be washed and buttered, and a fine oyster laid within each. Of course, it is *selon les regles* to use oyster shells for this purpose; but you will find scollop shells more roomy and manageable, because more regular in shape. Range these closely in a large baking-pan, propping them with clean pebbles or fragments of shell, if they do not seem inclined to retain their contents. Stir the cream *very* hard, and fill up each shell with the mixture, taking care not to spill any in the pan. Bake five or six minutes in a hot oven after the shells become warm. Serve on the shell. Some substitute oyster liquor for the water in the mixture, and use all milk instead of cream.

Oyster Patties—Make a rich paste, roll it out half an inch thick, then turn a teacup down on the paste, and, with the point of a sharp penknife, mark the paste lightly round the edge of the cup. Then, with the point of

the knife, make a circle about half an inch from the edge; cut this circle half way through. Place them on tins, and bake in a quick oven. Remove the centre, and fill with oysters, seasoned and warmed over the fire.—*Ideal Cook Book.*

How a Balky Horse was Conquered by a Girl.

A sound, young horse to be had almost for a song—but a worm lurked in the peach—the worm of balkiness. "Not cannot always make him go, sometime not having pulling empty wagon, and dot sometime coming down hill before coming up," patiently explained the honest old Finn, who owned him.

Elsie looked at the horse thoughtfully. In some points he resembled her mental picture of Black Beauty.

Yes, she would buy him and trust to kindness and patience to overcome his balkiness.

All went well the first week. Elsie drove to the village several times and the horse behaved so well his new mistress began to think he had been maligned.

"I'll be back in two hours, mamma," said Elsie one afternoon as she drove out of the yard, but this time she had reckoned without her horse.

When about half a mile from home, Jet, without any provocation, threw up his head defiantly and refused to take another step. In vain Elsie coaxed and urged. Jet remained obdurate. Elsie took him by the bridle to lead him, but he planted his feet more firmly, tossed his head and drew back his lips in a fiendish grin. After an hour of soothing and fondling Jet started off sulkily, prancing and jumping sidewise. The mode of treatment was new to him. His former master had always whipped him soundly during these little exhibitions, but in the end Jet had triumphed, for, having exhausted his master's patience, he would be released from the wagon and returned to the stable.

Elsie had many exhibitions of Jet's contrariness, and she learned by observation to read the signs of a storm before it broke upon her. Twitching and drooping of the ears, the light, high lifting of the feet were unfavorable omens. When these symptoms were noticed in time, a few kind words and a little fondling often exorcised the evil spirit possessing the horse.

Elsie's brother urged stronger and more heroic measures, but Elsie wished to triumph through kindness, if such a course were possible.

"I should like to go to the village this afternoon, but my wheel is broken," said Frank one sultry day.

"Take Jet; he has been in the best of humor lately," said Elsie.

"Keep on the right side of him," she cautioned, laughingly, as Frank drove off.

An hour later Frank came up the road afoot

"Where, oh, where is Jet?" cried Elsie in alarm, for well she knew Frank's hasty, intolerant temper.

"Down in the field. I wanted to unhitch him, but the vicious thing will not let me get near him. You see it was this way. I wanted to cross the stream and he began to cut up without any provocation, and I, w before I knew it I struck him."

Frank's face reddened as he saw the reproach in Elsie's eyes. "He is always afraid crossing water. With a little patience it would have gone all right. I know though, just how you felt. I have often felt that way, but I think it best to try to control myself before assuming control of an animal. Well, never mind, I'll go down with you, and I am going to take him to town if I possibly can. It will never do to give in to him now," was Elsie's decision.

Jet, standing near a big stump, snorted angrily as he caught sight of Frank, but his whole mien changed as if by magic when he spied Elsie. He whinnied entreatingly, and when she reached his side he rubbed his head affectionately against her. Without appearing to notice that anything was the matter, Elsie went up to the horse, took his quivering head in her hands and talked to him, gently rubbing his head, or patting his nose, until he forgot about his bad temper and allowed Frank to do with him what he liked.

She has now used him over a year, and his balkiness has grown to be a thing of the past.

"That whipping did him some good," Frank often asserts. "It did not make him go, but it showed him the difference between my treatment and yours. Ever since he has known enough to appreciate you, and not attempt his tricks in your presence."

"He taught you a lesson also," Elsie retorts. "I have often noticed you striving to curb that unruly temper of yours."

"You are right, Elsie. Those words of yours about learning to control one's self hit me badly. That lesson alone was worth the price of your horse."

"It was worth more than seventy-five dollars, then, for I refused that for him last week," answered Elsie.—*A. M. Dolinger, in Pets and Animals.*

Not the Only One of the Kind.

"There, sir," said the professional ratcatcher, "I've cleared your premises of the varmints, and I take 'em all away with me. You don't have no bother lookin' after dead rats. The bill is \$3.75."

"Don't I get anything for the rats?" inquired Mr. Tyte-Phist, indignantly.—*Chicago Tribune.*

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Managing Director, D. T. MCMAINS
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QUESTIONS AND ANSWERS

SCOURS IN FEEDING STEERS.

Prof. W. A. Henry, author of "Feeds and Feeding," replies to a correspondent of the *Breeders' Gazette* who states that he is feeding over 300 head of two-year-old steers, which weighed last month about 1,000 lbs. each. When put in the feed-yard they were allowed eight pounds of corn and cob meal with hay and corn fodder for roughage. They are now getting twelve pounds of corn and cob meal daily. Several of the steers are scouring. The cattle have free access to salt and water.

Prof. Henry says: "Scouring may be due to the animals' catching cold, to too much exercise, or to the food being unsatisfactory in some particular. Doubtless it is the last in this case. Twelve pounds of corn and cob meal does not seem a heavy ration, but if the animals do not handle this amount properly, some change should be made. Whenever scouring appears, cut down the grain allowance at once, in order that the digestive tract may have rest. Oats are excellent for checking scouring; supply these to the animals affected if possible. Bran may be used if oats cannot be obtained.

"Not infrequently in a bunch of cattle there are a few animals which cannot stand as heavy feeding as the remainder. Separate these from the rest and feed by themselves; this is far better than to cut down the ration for the larger number. Many cattle are fattened on just such material as our correspondent is supplying, with at least fairly satisfactory results. It would

be better if two or three pounds of bran or oats could be given daily to each animal, cutting down the allowance of corn and cob meal by so much. A mixture of corn and oats or corn and bran, even though the second substance is not in large amount, makes the grain allowance, as a whole, much safer, keeps up the appetite, and ends in heavier gains.

"Scouring is the bane of cattle feeding. Some feeders have little trouble in this direction, while others lose heavily because of it year after year. The experienced feeders generally detect the coming of trouble and avoid it before anything serious follows; novices and poor feeders have more or less scouring with their cattle all the time, or have it at intervals, and when this occurs the profits are seriously impaired. It shows experience and skill to carry a bunch of cattle clear through the feeding season without any setbacks from scouring, but many feeders in the West accomplish this result."

Dominion Shorthorn Breeders.

Henry Wade, Secretary, Parliament Buildings, Toronto, sends us the following notice:

The 14th annual meeting of the above association for the report of business done, the election of officers and transaction of new business, will be held at Shaftesbury Hall, 26 Queen street west, Toronto, on Wednesday, February 7th, at 11 a.m.

Ask for standard certificate at your station to attend Live Stock Convention before leaving, to entitle you to reduced fare home.

Poultrymen to Wait on the Government.

At a meeting of poultrymen held at Peterborough during the Ontario Poultry Show the following resolution, moved by Wm. Collins, Peterborough, seconded by R. C. Allan, Cobourg, was carried by a good majority:

"That in the opinion of the breeders of poultry, assembled at Peterborough on the occasion of the twenty-sixth annual exhibition of the Ontario Poultry Association, it would be advisable to appoint delegates to ask the Government of the Province of Ontario for grants to the local associations, not more than one to each county."

The local association at Peterborough took an active part in calling this meeting and has undertaken to notify all the local poultry associations in the province asking them to appoint one or more delegates to act on a deputation to wait upon the Government at the next session of the Legislature and present the above resolution.

"That grass-widow didn't catch your country cousin with her wile?" "No, indeed. Cousin Joe says he isn't going to get scoled the second time with green goods."—*Philadelphia Bulletin.*

Prizes to O. A. C. Boys at the Dairy Convention.

Last year the Cheese and Butter Association of Western Ontario offered \$200 in prizes for essays on cheese and butter-making, four prizes of \$50, \$25, \$15, and \$10 for each. Of these prizes the Ontario Agricultural College boys took the first and second for cheese and the first for butter, amounting to \$125 out of the \$200.

On cheese-making, C. O. Campbell, who took the dairy course at Guelph last year, received the first prize (\$50), and A. J. Wagg, of Manitoulin Island, in the regular course at the college, the second prize (\$25). On butter making, J. M. Livingstone, of Sarnia, now in the regular college course, was awarded the first prize (\$50), and W. F. Baskerville, of the Western Dairy School, Strathroy, the third prize (\$15).

East Peterborough Agricultural Society.

At the annual meeting of the above society held last week the following were elected officers for 1900: President, F. Birdsall; 1st vice-president, T. Blizard, M.P.P.; 2nd vice-president, W. G. Patterson; directors, J. B. Pearce, Andrew Knox, Charles Nicoll, David Kelly, J. A. Sexsmith, George Elliott, Joseph Johnston, A. Cameron and H. Nielson; honorary directors, C. O'Riely, John Brackenridge and John Knox; secretary-treasurer, W. E. Roxburgh.

Complimentary Banquet.

The enterprise and push of a manufacturing establishment can usually be gauged by the way its employees are treated. The Frost Wire Fence Co., Welland, Ont., seems to be a concern that treats its employees well. A few weeks ago the firm tendered their employees a complimentary banquet at Hamilton's restaurant in that town, and it is needless to say that it was thoroughly enjoyed by those who were favored in being present. The energetic manager, Mr. H. S. Frost, is responsible for the undertaking and for the splendid social gathering which followed. The splendid toast list and graphophone selections were thoroughly enjoyed.

North Leeds and Grenville Institute.

Owing to some misunderstanding on the part of the management there was no provision made by the superintendent to provide speakers for our supplementary meetings.

We were fortunate, however, in securing the services of Mr. and Mrs. Joseph Yuill, of Carleton Place. We held afternoon and evening meetings at the following places: Easton's Corners, Frankville, Burret's Rapids,

PRATT'S POULTRY FOOD



TRADE MARK REGISTERED

Absolutely pure and free from all injurious ingredients. POSITIVELY CURES and prevents CHICKEN CHOLERA, COUP, GAPS and all disorders of the Flock.

Makes Hens Lay Regularly

YOUNG CHICKS grow healthy and free from disease when PRATT'S FOOD is fed regularly. Trial pkt., 8 oz., postpaid, 10c. Regular sizes, 20 oz. pkt., 30c; postpaid, 35c. 5 lb. pkt., 75c; do. paid, \$1.00.

Send two-cent stamp for "PRATT'S PRACTICAL HINTS" about Horses, Cows, Hogs, Sheep and Poultry. Dealers will find this an exceedingly profitable line to handle. If your dealer cannot supply you, send direct to

ROBERT GREIG, 29 Melinda St., TORONTO.

Kemptville and Bishop's Mills. The meetings were largely attended. Mrs. J. Yuill appeared to be the drawing card. Her subjects were, "Raising Young Turkeys," "How to Produce Eggs in Winter," "Fattening Poultry for the British Market," and "Dairying and Housekeeping in all its Different Aspects." Mrs. Yuill is a plain, practical farmer's wife, well acquainted with her subjects.

Mr. Yuill, who is a very successful farmer, and has had a large experience in Institute work, spoke on the bacon hog, and illustrated his address by a chart, showing the value of the different parts of the side of the bacon in England, and advising people to raise the pig which was heavy in the most valuable parts. He thought buyers did not discriminate enough between the typical bacon-hog and the old fashioned chunky pig.

Mr. Yuill also spoke on the care and management of a dairy herd, and gave a thoroughly detailed description of how his own dairy herd was managed. He also told us how to enrich an impoverished farm and how to maintain the fertility of a rich farm. He gave a list of the chemical ingredients and their value that went with the different kinds of produce that were sold off our farms. Also the value of the liquid manure of the different kind of stock, and concluded by saying that farmers should save every particle of solids and every drop of liquid manure made on the farm, and if that was not enough then, and not till then, would he advise investing in artificial manure.

The president, R. Nicholson, the secretary, J. B. Arnold, and Mr. Mosher visited all the meetings. Mr. Mosher and the president entertained the meetings by giving a thoroughly detailed account of each other's failures, which proved very amusing to the audience if not to themselves.

We were well supplied with local talent. At Easton's Corners we had B. Mosher and Wm. Nicholson; at Frankville, H. E. Eyre, Wm. Eaton and E. Soper; at Kemptville, Dr. Ferguson and B. Mosher, and at Bishop's Mills, Wm. Morrison and A. Fawcett.

The meetings were the best attended and the membership showed the largest we have had.

A MEMBER.

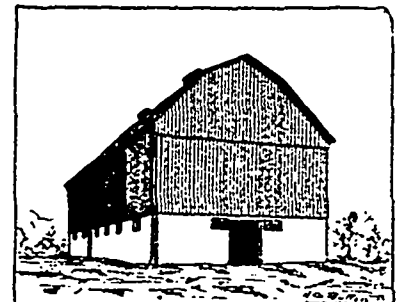
Ontario Agricultural College.

The results of the Christmas examinations at the Ontario Agricultural College were as follows:

Passed in all subjects and arranged in the order of general proficiency.

First Year.—1, Race, W. F., Port Hope, Durham, Ont.; 2, Weekes, H. M., Glencoe, Middlesex, Ont.; 3, Ferguson, J. F., Spring Hill, Carleton,

Thorold Cement....



Do you intend building Barn Basements, or Stable Walls, or Walls of any kind? if so, use "Battle's Thorold Cement," which can truly be called the

Farmer's Favorite Cement

What Mr. T. L. Pardo, M.P.P., Says:

CEDAR SPRINGS, Kent County, Ont., Nov. 21, '99.

I write to say that we have now fully completed the stabling in my new barn, and I am well pleased with the work done throughout the whole building, which is 54x100 feet, with basement wall 9 feet high, and a silo 14x14 feet, same height as walls, built in a corner of the basement wall, there being a concrete floor throughout the whole building. We used in all 200 bbl. of your Thorold Cement in this work, with the result that our walls and floors are as hard as rock itself.

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THOROLD, ONT.**

AUCTIONEERS.

COLCOCK & MORDEN, leading live stock Auctioneers, Niagara Falls, Canada Sales conducted anywhere. If you wish to save money, engage this firm. Terms moderate.

Ont.; 4, Laird, J. O., Blenheim, Kent, Ont.; 5, Elliott, R. L., Seaforth, Huron, Ont.; 6, Atkinson, A., Egmondville, Huron, Ont.; 7, McDonald, W. T., Teesewater, Bruce, Ont.; 8, Gilpin, B. C., Gorrie, Huron, Ont., and Sharpe, T. H., Spanish Town, Jamaica, W.I.; 10, Gunn, W. H., Ailsa Craig, Middlesex, Ont.; 11, Dixon, C. H., Dromore, Grey, Ont., and Elderkin, D., Amherst, N.S.; 13, Galbraith, D. H., Ellesmere, York, Ont.; 14, Bapty, W., London, Middlesex, Ont.; 15, Gardhouse, W. J., Highfield, York, Ont.; 16, Tew, H. G., Washington, Oxford, Ont.; 17, Cutting, A. B., Truro, N.S.; 18, Klinck, L. S. Victoria Square, York, Ont.; 19, Carroll, W. R., Norwich, Oxford, Ont.; 20, Craig, H. A., North Gower, Carleton, Ont.; 21, Reed, P. E., Georgetown, Halton, Ont.; 22, Newman, L. H., Andrewsville, Lanark, Ont.; 23, Russell, C. J., Ballinafad, Wellington, Ont.; 24, Horton, D. H., North Pelham, Welland, Ont.; 25, Peart, H. S., Nelson, Halton, Ont.; 26, Shuh, C., Waterloo, Waterloo, Ont.; 27, Sutherland, A. T., Stratford, Perth, Ont.; 28, Eason, F. A., Keene, Peterborough, Ont.; 29, Higginson, J. A., Chilliwack, B.C.; 30, Broderick, F. W., St. Catharines, Lincoln, Ont.; 31, Johnston, B. C., Fairfield Plains, Brant, Ont.; 32, Sugden, O. W., London, Middlesex, Ont.; 33, Routley, J. G., Lindsay, Victoria, Ont.; 34, Dunning, H. L., Thornton, Simcoe, Ont.; 35, Everest, R. E., Scarboro' Junction, York, Ont.; 36, Craig, C. E., North Gower, Carleton, Ont.; 37, Fairweather, A. W., Alma, Wellington, Ont.; 38, Roberts, W. B., Sparta, Elgin, Ont.; 39, Dryden, W. A., Brooklin, Ontario, Ont.; 40, Sloan, R. R., Blyth, Huron, Ont.; 41, Holgate, T. S., Foxboro', Hastings, Ont.; 42, Miller, T., Bridgeburg, Welland, Ont.

Second Year.—1, Russell, J. M., Freeman, Halton, Ont.; 2, Pickett, B. S., Vittoria, Norfolk, Ont.; 3, Carson, W. J., Vernon, Carleton, Ont.; 4, Harris, G. S., Toronto, Ont.; 5, Moorehouse, L. A., Cairo, Lambton, Ont.; 6, Mills, P. G., Sussex, N.B.; 7, Black, W. J., Stanton, Dufferin, Ont.; 8, Smuck, I., Renforth, Wentworth, Ont.; 9, Murray, J., Avening, Simcoe, Ont.; 10, Hallman, E. C., Washington, Waterloo, Ont.; 11, Hair, S., Watford, Lambton, Ont.; 12, King, T. L., Hickson, Oxford, Ont.; 13, Waters, B., Ivan, Middlesex, Ont.; 14, La Pierre, L. A., Paris, Brant, Ont.; 15, McDermid, H. R., Martintown, Stormont, Ont.; 16, Jacobs, F. S., Minesing, Simcoe, Ont.; 17, Estyhithes, B.; M., Ereklej at Iconium, Asia Minor; 18, Ling, S. M., Guelph, Wellington, Ont.; 19, Christie, G. I., Winchester, Dundas, Ont.; 20, Silcox, F. H., Iona, Elgin, Ont.; 21, Harris, W., Rockwood, Wellington, Ont.; 22, Williams, R. H., Corbetton, Dufferin, Ont.; 23, Woolverton, C. E., Grimsby, Lincoln, Ont.; 24, Rive, H., Eramosa, Wellington, Ont.; 25, Parker, L. N., Dunbarton, Ontario Co., Ont.; 26, Knox, W. G., Belgrave, Huron, Ont.; 27, Cleal, J. P., Dayton, Ohio, U.S.A.;

**HOW LONG
WILL IT LAST?**

We don't know. The first was put up 18 years ago and is in perfect condition yet. We use special wire—none other like it. **Page No. 11 Wire** is as strong as common No. 9. Over 500,000 farmers using **Page Fencing**. They find it to be the best and cheapest. Send for our new pricelist.

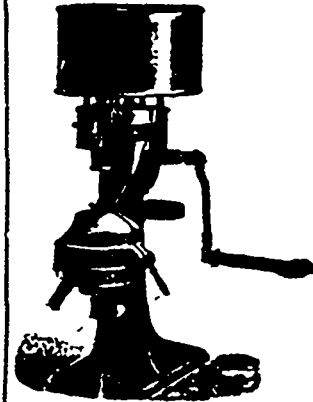
THE PAGE WIRE FENCE CO. (LTD.)
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We ask all intending buyers of Cream Separators to study the merits of the "Melotte," if they want to get the best results. The "Melotte" has beaten all competitors in public working trials. Takes one-third less power. Sent on free trial.

For full particulars apply to
R. A. LISTER & CO., Limited
579 & 581 St. Paul St., MONTREAL, QUE.
Agents wanted in unrepresented districts

SENT ON FREE TRIAL



SATISFACTION GUARANTEED

Mary had a little churn.
'Twas famous as the "Leader,"
And everywhere that Mary went
They praised her lovely butter.

LEADER CHURNS

are supplied with ANGLE STEEL or WOOD FRAMES as may be desired. All have BICYCLE BALL BEARINGS of a superior kind. **FOUR DIFFERENT STYLES**—with Double Levers or Cranks. Patent INTERNAL BREAKERS with all Leader Churns. Practical tests by experts demonstrate that Internal Breakers bring results both as to quality and quantity not otherwise obtainable and also reduce the time required for the operation almost one half. Sold at the same price as other makes.

The Dowsell Manfg. Co. Limited
Eastern Agents—**HAMILTON, ONT.**
W. L. Haldimand & Co.,
Montreal, Que.

GOOD-BYE, CORNS!

The Corn File never fails to painlessly remove corns, bunions and other callousities. Tried, tested and proven, it is the corn cure of the day. Direct by mail, post-paid, for 25c.

The Corn File Co., P.O. Box 477,
Toronto, Canada.

156 POPULAR SONGS

with Words and Music complete, neatly printed and bound in one volume. A grand collection of Musical Gems, sentimental, pathetic, comic; a veritable treasury of the world's popular and beautiful songs. Price, 10 cents, postpaid.

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X-RAYS

Our X-Ray Tube is a wonderful little invention that will both astonish and amuse you. Looking through it you see the bones in your hand, the lead in a pencil, the hole in a pipe-stem, etc., etc. Mailed postpaid for 1c. or two for 25c. Don't send stamps.

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SCHOOLS.
TORONTO

NEW TERM

FROM
January 2nd

in each department of the

Central Business College

...TORONTO...

The largest and strongest school in Canada. Our Calendar tells you why. Write for it.

W. H. SHAW, Principal.

28, Rowat, F. N., Winchester, Dundas, Ont.; 29, Wilson, W. H., Toronto, Ont.

Liverpool Apple Market.

Mr. Eben James, Toronto, sends us the following cable report from Messrs. Woodall & Co., Liverpool, dated January 22nd:

"The market opened weak and closed the same, being very flat except for fine grades of sound fruit, which range from 15s. to 21s., others 8s. to 11s."

Total shipments from Boston last week were: To Liverpool, 523 barrels, against 6,851 barrels same week last year. Statement as to other ports to follow.

Children for Adoption.

Mr. J. Stuart Coleman, Secretary Children's Aid Society, writes us as follows:

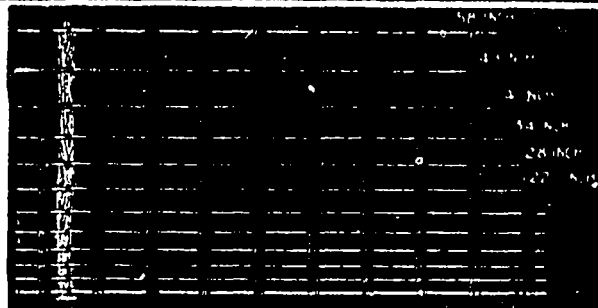
"We desire to again call the attention of those of your readers who may think of adopting very young children to the cases of Pearl and Roy B., four months old, with fair complexion, fair hair, and blue eyes, and Ernest C., seven months, fair complexion, fair hair, and brown eyes.

"These children are very much in need of homes. The twins (boy and girl) might perhaps be adopted by near neighbors. All are in good health, and Ernest is a strong, sturdy little chap. Address, Children's Aid Society, 32 Confederation Life Building, Toronto."

Stock Notes

A NOTED JERSEY BULL.—Messrs. Craig & McCullough, Snell Grove, Ont., have recently purchased from Hood Farm, Mass., a Jersey bull of very rich breeding. His sire is Pedro Signal Landseer, who won first prize in his class and headed first prize herd at the New England Fair, 1894, and is the half-brother of the famous cow Eurotisama, test, 27 pounds 11 1/2 ounces in 7 days; 945 pounds 9 ounces in one year, and at one time the holder of the silver challenge cup for the largest yearly test of any Jersey in the world. Pedro Signal Landseer is a grandson of the famous \$10,000 bull Pedro and of Fancy's Harry, who has 38 daughters in the fourteen pound list. The dam of the young bull is Maquilla, of Hood Farm. She made a test of 21 pounds 13 1/2 ounces on dry feed when she was two years and eight months old, and with her first calf gave in one year 7,281 pounds milk, which tested 512 pounds 13 ounces butter. She is by Fancy's Harry, referred to above, and he is a son of Landseer's Fancy, 29 pounds 1/2 ounce in 7 days; 936 pounds 14 1/2 ounces in one year, the richest cow the world has ever known. She has five daughters in the 14 pound list and 3 producing sons. The dam of Maquilla, of Hood Farm, is Maquilla, 21 pounds 1 ounce, and the dam of 2 in the 14 pound list. It will thus be seen that this bull is strongly bred, and his butter inheritance should be transmitted to his stock.

AUCTION SALE OF JERSEYS.—Messrs. Sills Shaver & Son, Winchester Springs, Ont., purpose offering for sale towards the latter end of February their entire stock of registered Jersey cattle, about fifty in number, besides a few Yorkshire hogs. Breeders of Jersey cattle should bear this fact in mind. Full announcement of the sale will appear later in these columns.



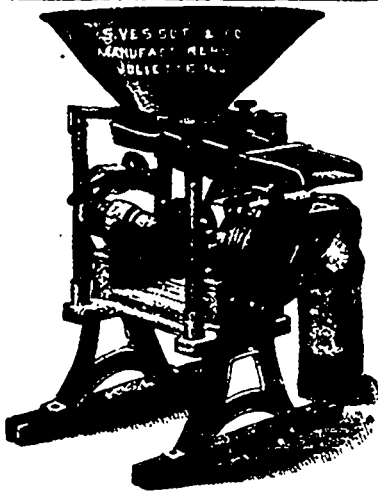
The Fence That Fences

is the fence every fence user is after. For perfect security in the way of a fence, at lowest cost, for a fence that will outlast your lifetime, secure the

AMERICAN FIELD AND HOG FENCE.

Large spring steel wires, heavily galvanized, practically indestructible. Sold by our agents everywhere. If no agent in your town write to

AMERICAN STEEL & WIRE CO., Chicago or New York.



8-inch Champion.

THE Champion Grinder

MODEL '99

Catalogues are Free.

S. VESSOT & CO.,

Joliette, P.Q.

Sole Manufacturers.

is the most improved grain grinding machine on the market to-day. Does the most work for the power used.

MADE IN FOUR SIZES

Each mode guaranteed to give perfect satisfaction.

Agents Wanted.

THE "CLEAN CUT" CAKE TIN



prevents cakes from sticking and produces a perfect cake. It is made of best quality tin with a flat, thin knife, securely riveted in centre and at rim. Simple and durable. Agents send 10 cents postage for free sample and complete catalogue. **UNION SUPPLY SPECIALTY CO.,** Adelaide street east, Toronto



SEND US 15c. and we will send you post-paid the best **SKATE SHARPENER** ever invented—can be carried in the vest pocket—no wearout to it—a keen razor. Works without removing skates from street. **Good Active Agents Wanted.** They sell at night. Here is a chance to make a little pocket money quickly. **Enterprise Mfg. Co.,** Toronto, Ont.

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Publisher's Talks.

"Stop My Paper."

Every newspaper publisher is familiar with the words we have placed at the top of this article. Sometimes they are meant as a strong hint at the publisher, but they fall lightly on his broad shoulders.

"Stop my paper" means, usually, a greater loss to the subscriber than to the publisher. A healthy paper is ever adding new names to its lists to replace those who have fallen out of the ranks, though the publisher is always glad to retain his old friends.

One dollar a year is a small sum for a newspaper of the size and usefulness of FARMING, reaching its subscribers fifty-two times in the twelve months. The one who, for the sake of saving a dollar, stops his paper, loses many dollars in the entertaining reading and useful information that is found in the columns of FARMING. This is a thought that may well be entertained by a subscriber before he drops postcard or letter containing these formidable words.

Readers of FARMING know its value. Look at this—a letter from John O'Brien, stock breeder, London, Ont.: "Please find enclosed \$1.00 for FARMING. I am well pleased with FARMING. I think any farmer that does not take it stands in his own light." Again, from B. A. Leveors, Wallbridge, Ont.: "I think FARMING is a splendid paper. It is always one of the first I take up when the mail arrives."

There is almost no end to letters of this kind reaching the publisher. One or two more may be given. J. Loeftie Wilson, Alexandria, Ont., writes: "I can hardly do without FARMING. No stockman should be without it. Though this is a growing time, the farmer, in order to meet the higher price required to pay for what he must buy, needs more than ever the practical methods outlined in FARMING to make his business pay."

One Word.

In one of these chats of a week or two ago we referred to the carelessness of correspondents in neglecting to give post office address when writing letters. Two letters of this kind have come to us this morning, one from Homer Carl and another from Wm. Eddy. It cannot be expected, in a list running up into the thousands, as is the case with FARMING, that we can have any knowledge of where these letters are from. And yet, because the wishes of these correspondents are not complied with,—we have no place to address them—they will be offended, and be disposed to tell their neighbors how careless are the publishers of FARMING. In time we will hear from them again, scolding us and charging us with gross negligence. Possibly they may give an address when the second letter is written.

Probably all people are forgetful, but there are some things that ought not to be forgotten. The payment of one's subscription to a paper, involving individually so small an amount ought to be made the first charge with the readers of a paper. It comes to them every week as a reminder of the fact that they have forgotten to send their subscription. There are some subscribers to FARMING who need this reminder. It means increased labor and expense to send out subscription accounts. How many of the friends of FARMING, who know they are behind in their subscription will say, "As for me, I am not going to put the publisher to any such expense and will sit down right there and enclose the amount due."

WHEN writing to Advertisers it is to your advantage to mention **FARMING** : : : : :

For Readers of
FARMING
Our Large
Reading Glass

This is one of the most popular, as well as useful, Premiums that we are offering readers. Just see how useful it can be to you.



This cut illustrates our Four Inch Reading Glass at its full size. It also shows how clear small type appears when viewed through its lens. People whose eyesight is not strong will find this Reading Glass a great comfort.

Members of the family also will find it a source of much enjoyment in examining photographs, flowers, etc. We offer a Glass of special value and utility. Fine French glass, lens extra large size, 4 inches in diameter. Metal mountings are nickel-plated.

Specially valuable for examining seeds, insect pests, etc.

- Any Subscriber** renewing his own subscription may receive the reading glass, carefully packed for mail for only..... **\$1.00**
- Any Subscriber** sending us one new subscription may receive the glass for..... **75c.**
- Any Subscriber** sending us three new subscriptions will receive the glass..... **Free**

Regular Price, \$2.50

There is really no family where the Reading Glass will not find a useful and welcome place. Suppose you put in a few hours' time and secure sufficient subscriptions to make the glass yours without any outlay of money.

Address all letters and make cheques, money orders and drafts payable to

FARMING, Confederation Life Building, Toronto

Market Review and Forecast

Office of FARMING,
Confederation Life Building,
Toronto, Jan. 29th, 1900.

General wholesale trade continues fairly brisk for this season of the year, and the tone of business continues in a thoroughly healthy condition. A great many overdue accounts are being paid, which is a good sign. Remittances generally have been more satisfactory of late and, on the whole, the commercial outlook is bright. Money rates are slightly easier and may continue so. Discount rates rule steady at 6 to 7 per cent., as to nature of the account.

Wheat.

The general tone of the wheat market has improved considerably during the week, and cables have shown firmer markets in the old land, which have produced more activity on this side. Whether this improvement is to continue and better prices prevail, is the question many are asking. Those actively engaged in the wheat trade are seemingly as much at sea as to the future as the farmer who has a few hundred bushels to sell. The somewhat bullish nature of the leading speculative markets last week was largely due to reports of considerable damage to the growing crops in Southern Russia and France, and also that the visible supply in Canada and the United States had only increased about 50,000 over the week previous. Receipts in the North-Western States continue light and farmers seem to be holding fast to their supplies, with the result that in some sections millers are crying urgently for wheat. There has been more activity in Manitoba wheat at Fort William, and further business in spring wheat for export at Ontario points, at 64½c. to 65c. f.o.b. east of Toronto. The market here continues dull and easy, with quotations at 63c. to 64c. for red and white west and 65c. for spring wheat east, and goose at 65½c. to 69c. north and west. On Toronto farmers' market red and white brings 69c. to 69½c., spring life 68c. and goose 69c. per bushel.

Oats and Barley.

Canadian oats continue in demand for export. There is reported to be quite a lot of oats moving at Ontario points at about 26c. high freights. At Montreal the market is steady at about 29c. Prices are steady here at 26½c. east and 25c. to 26c. west. On Toronto farmers' market oats bring 31c. per bushel.

Barley keeps dull. Quotations at Montreal are 47½c. to 48½c. for choice malting barley. Quotations here are 35c. to 39c. for No. 2 west and 35c. to 36c. for feed barley. On farmer's market barley brings 41½c. to 44c. per bushel.

Peas and Corn.

The market for peas is steady, with some movement at Ontario points on a basis of 58c. to 58½c. high freights. The market here is steady at 58c. to 58½c. east and 58c. west. On farmers' market here they bring 60c. per bushel.

Western feeders are still buying corn freely. American corn is quoted here at 40c. to 42½c. as to quality, on tracks, Toronto.

Bran and Shorts.

Ontario bran is selling in car lots at Montreal at \$14.75 to \$15 and broken lots at \$15.35 to \$15.50 per ton, and shorts at \$16 to \$17. City mills here sell bran at \$15 and shorts at \$16 in car lots f.o.b. Toronto. At points west of here the quotations are \$13 to \$14 in car lots.

Eggs and Poultry.

The egg market continues strong and active and farmers who have a good supply of new-laid eggs to dispose of will reap a rich reward. At Montreal prices are firm and the market has an upward tendency. Stocks are being gradually reduced with large shipments

of held stock to Great Britain. New-laid eggs are quoted at 26 to 28c. in large lots at Montreal. The supply of new-laid eggs here has been larger during the week and prices are 21 to 23c. for new-laid and 17 to 18c. for held stock in large lots. On Toronto farmers' market new-laid bring 25 to 30c. per dozen.

The dressed poultry situation has improved during the week and stocks are being pretty well cleared up at country points. A large Ontario shipper is reported to have had to go to the United States to fill his orders for dressed chickens for the British market. Montreal quotations are: Turkeys \$4 to 9c., chickens have sold at 6 to 6½c. for young, but old fowls and scalded stock are quoted at 4 to 5c., geese sold at 5 to 6½c., and ducks at 7½ to 8½c. Choice fresh killed chickens have sold at 8c.

Supplies here are not large with prices more or less nominal. On Toronto farmers' market turkeys bring 11 to 13c. and geese \$ to 9c. per lb. and ducks 75c. to \$1, and chickens 60 to 85c. per pair.

Potatoes.

Farmers' deliveries have been a little more liberal east. Montreal quotations are 42 to 45c. in car lots. The market here is dull at 38 to 40c. in car lots and on farmers' market 45 to 50c. per bag.

Apples.

There have been large quantities of apples exported during the past few weeks owing to better advices from the other side, but the local markets are quiet. At Montreal good sound stock is held at firm prices, namely, \$3 to \$3.50 per bbl., and \$2 to \$2.25 for second quality. Quite a lot of stocks are reported to be held there with too much of second quality. On Toronto farmers' market apples bring \$1.50 to \$3 per bbl.

Hay and Straw.

The general hay market continues firm with good business reported at country points, east at \$7.50 f.o.b. for No. 2 quality. At Montreal the quotations for baled hay are: No. 1, \$10 to \$10.50; No. 2, \$8 to \$9, and clover, \$7.50 per ton in car lots. Car lots of baled hay are quoted here at \$8.50 to \$9.50, and \$4.50 to \$5 for straw. On Toronto farmers' market hay brings \$10 to \$12; mixed, \$9 to \$10; sheaf straw, \$7 to \$8.50, and loose straw, \$4 to \$5 per ton.

Seeds.

The seed market appears to be a little flat at Montreal where quotations are: Timothy \$1.30 to \$1.75, and red clover \$4.50 to \$5.25 per bushel. On Toronto farmers' market red clover brings \$4.75 to \$5.50, alsike \$5 to \$7, white clover \$7 to \$8 and timothy \$1 to \$1.35 per bushel.

Cheese.

While the cheese market continues steady the advance in price that was expected at the beginning of the year has not come yet. Despite light stocks and a very good retail demand in Great Britain, prices there do not seem to make much headway, probably due to the determination of buyers only to order as they require the goods. Prices on this side are now 1½c. per lb. more than they were a year ago. There is an active demand reported for the cheaper quality of goods for export, but as these are getting scarce buyers will have to pay better prices for finer quality. Prices rule at about 11½ to 12c. for fine quality, and most holders are asking the latter figure with some fine lots going off on that basis. The situation, however, is hopeful, and with light stocks the new season is likely to open up in good shape and with an active demand.

Bu.ter.

While the market on this side remains firm and steady, with a local demand equal to the

supply, the English market shows an easier tendency. The *Trade Bulletin's* London cable, January 25th, reads thus:

"The market remains quiet, and prices are on the easy side. The few lots of Canadian now here are not of the finest, sales of which were last reported at 98s. for best offerings. Anything really choice would bring more money.

Arrivals of Australasian have been liberal, and these form the great bulk of foreign supplies just now. Some American creamery has been sent back to New York."

Receipts at Montreal have about doubled during the week, yet they are all wanted for the local trade. The demand continues good, and all desirable lots are picked up at 22 to 22½c. and seconds at 21 to 21½c. New York market has declined 6½c. during the week, to 24½ to 25c. for finest creamery. This will make it unprofitable for Canadian shippers to ship to the other side, and may have a tendency to increase supplies here and produce an easier tendency. There are, however, no signs of it yet. Dairy butter is scarce and wanted at Montreal, with sales reported at 18 to 20c. for Western for good to fine in tubs. The market here continues steady, and all receipts appear to be wanted. Quotations for creamery are 21 to 23c. for tubs and 23 to 25c. for prints. Dairy tubs are quoted at 18 to 20c. and dairy rolls at 19 to 20c. in large lots. On Toronto farmers' market pound rolls bring 20 to 25c. each.

Cattle.

Generally reports from outside markets show the demand not as strong as usual, though really prime beef cattle are steady but scarce. The *Chicago Drovers' Journal* sums up the situation as follows: "The general demand for beef cattle was not strong from any source, but choice cattle, which were scarce as usual, were taken quickly at strong prices. One exceptional lot of 61 head sold at \$6.50. The great bulk of the supply was made up of medium to pretty good cattle, which sold rather slowly and generally weaker than Monday's average, but fully as good as yesterday. Exporters were not extensive buyers, and competition was still less for steers of inferior quality." Cable quotations on Friday were steady. On Toronto market on Friday receipts were light with firmer feeling on that account. The quality of fat cattle was only fair, with few exporters offered. Choice picked lots of butchers' cattle ruled firm. Ocean vessel space is still scarce and quite a few exporters are being fed longer than they would otherwise be on that account. This seems to have a depressing effect upon the market for both export and butchers' cattle.

Expert Cattle.—Choice lots of these sold at \$4.60 to \$4.85, and light ones at \$4.25 to \$4.60 per cwt. Heavy export bulls sold at \$4 to \$4.25, and light ones at \$3.25 to \$3.50 per cwt. Loads of good butchers' and exporters' sold at \$3.75 to \$4 per cwt.

Butcher's Cattle.—Choice picked lots, equal in quality to the best exporters, and weighing 1000 to 1100 lbs. each, sold at \$4.12½ to \$4.40 per cwt.; good cattle at \$3.50 to \$3.75; medium, \$3.25 to \$3.50, and inferior to common at \$2.50 to \$3 per cwt.

Feeders.—Few heavy feeders are coming forward, but choice fall bred steers weighing 1050 to 1200 lbs. are worth \$3.80 to \$4 per cwt. Light steers weighing 800 to 950 each are scarce, with prices firm at \$3.60 to \$3.75 per cwt. Feeding balls bring \$3 to \$3.50 per cwt.

Stockers.—Choice well-bred stockers are firm. Yearling steers weighing 500 to 600 pounds bring \$3 to \$3.50 per cwt., while inferior quality of the same weight bring only \$2.25 to \$2.75 per cwt.

Milk Cows.—There were about ten cows

and springers offered on Friday at \$30 to \$55 each.

Cattle.—These are in fair supply at Buffalo with a good demand. Prices are steady here at \$4 to \$12 each.

Sheep and Lambs.

At Buffalo on Friday the market was generally excited and higher on desirable grades. Choice to extra lambs were quotable at \$6.70 to \$6.85; good to choice, \$6.50 to \$6.70; common to good, \$5.75 to \$6.50; mixed sheep, choice to extra, \$4.50 to \$4.75; yearlings, \$5.50 to \$5.75, with one sale at \$5.00. The offerings were pretty well cleaned up, and the close was full steady. The advance today was 10 to 15c. Lambs were firmer here at \$4.50 to \$4.90, the bulk selling at \$4.75 per cwt. Sheep seem steadier at \$3 to \$3.50, the bulk selling at \$3.25 per cwt. Bucks sold at \$2.50 per cwt.

Hogs.

The hog market here has advanced another 12 1/2c, and select bacon hogs were quoted on Friday at \$4.75 per cwt. To secure this hogs must weigh not less than 160 nor more than 200 lbs. each. Thick and light fats sold at \$4.25 per cwt. The bulk of unculled car lots sold at \$4.50 per cwt. Buffalo quotations for the same day were: "Heavy were quotable, \$4.90 to \$4.95; mixed, \$4.90; yorkers, \$4.80 to \$4.90; pigs, \$4.75, generally; roughs, \$4.10 to \$4.40; 5 ags, \$3.25 to \$3.75." The Montreal market is firmer at \$4.50 to \$4.65 for selected and \$4.25 for heavy to common hogs. The *Trade Bulletin's* London cable re Canadian bacon, of January 25th, reads thus:—"The market is firm under a good demand for Canadian, and the late advance is well maintained.

Chicago Horse Market.

Jan. 25th.—Receipts are abnormally heavy, but the large attendance of buyers is preventing any congestion of the market. There has been freer buying on export account and farm chunks are ruling stronger. The draft classes of medium weights, 1,200 to 1,500 lbs. are meeting with a better inquiry than very heavy weights, and selling relatively to better advantage.

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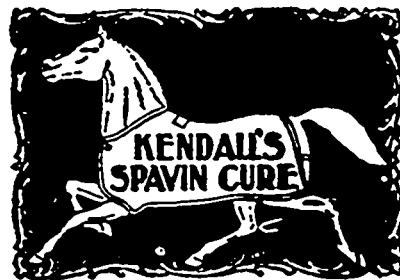
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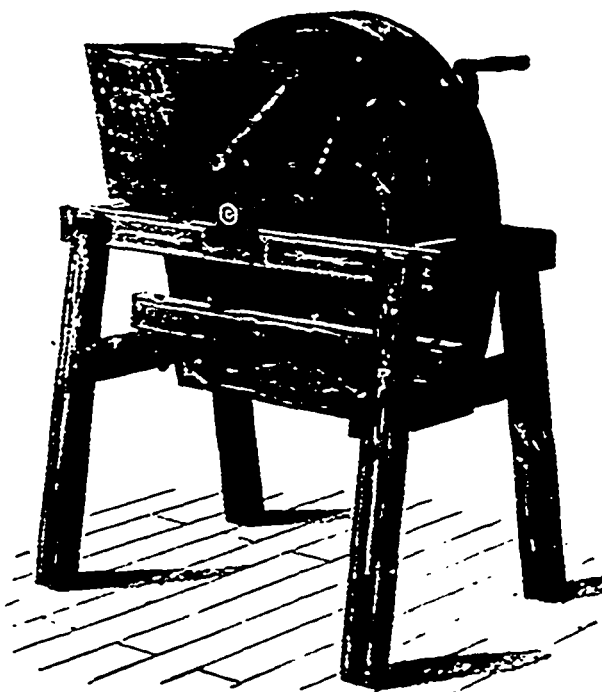
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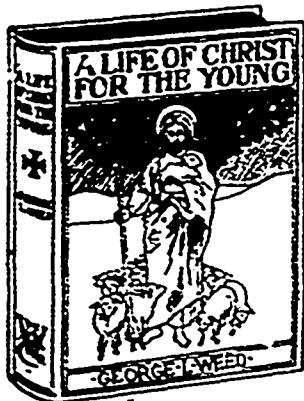
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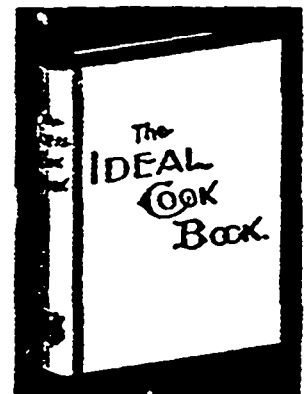
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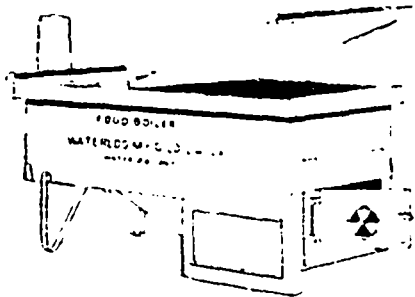


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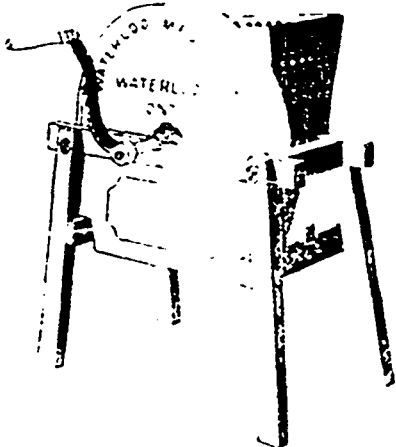
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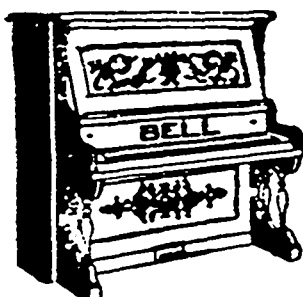


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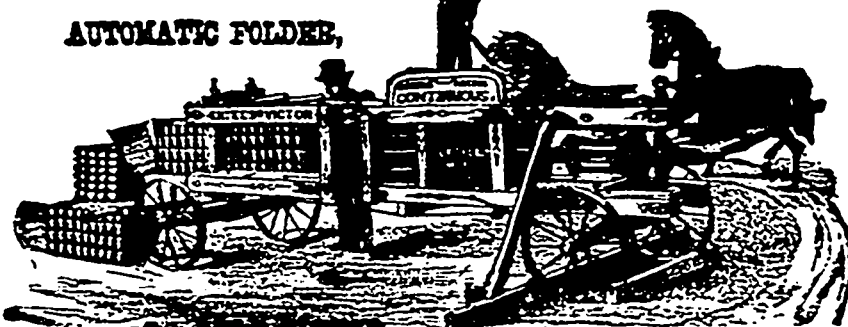
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