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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

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Vol. XLIV.

LONDON, ONTARIO, JANUARY 28, 1909.

No. 853

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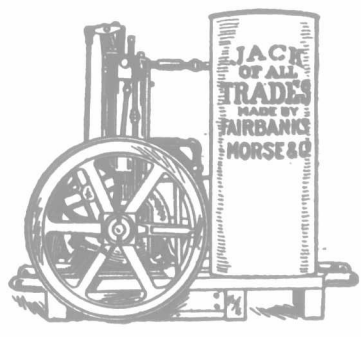
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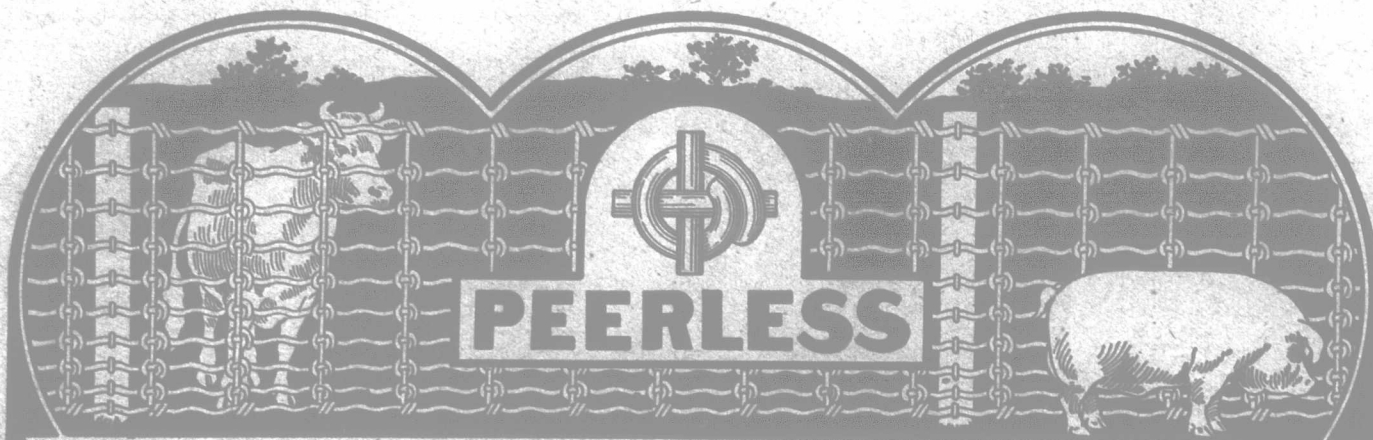
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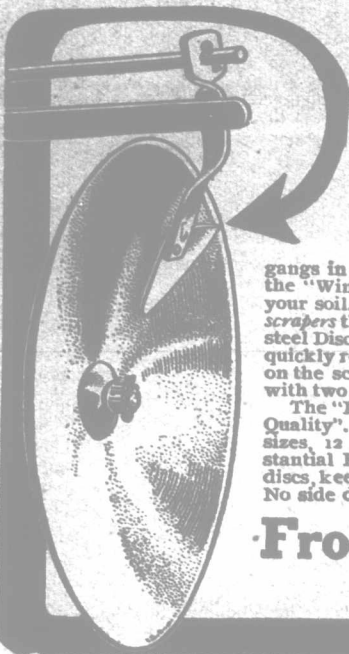
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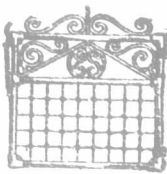


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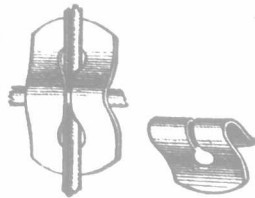
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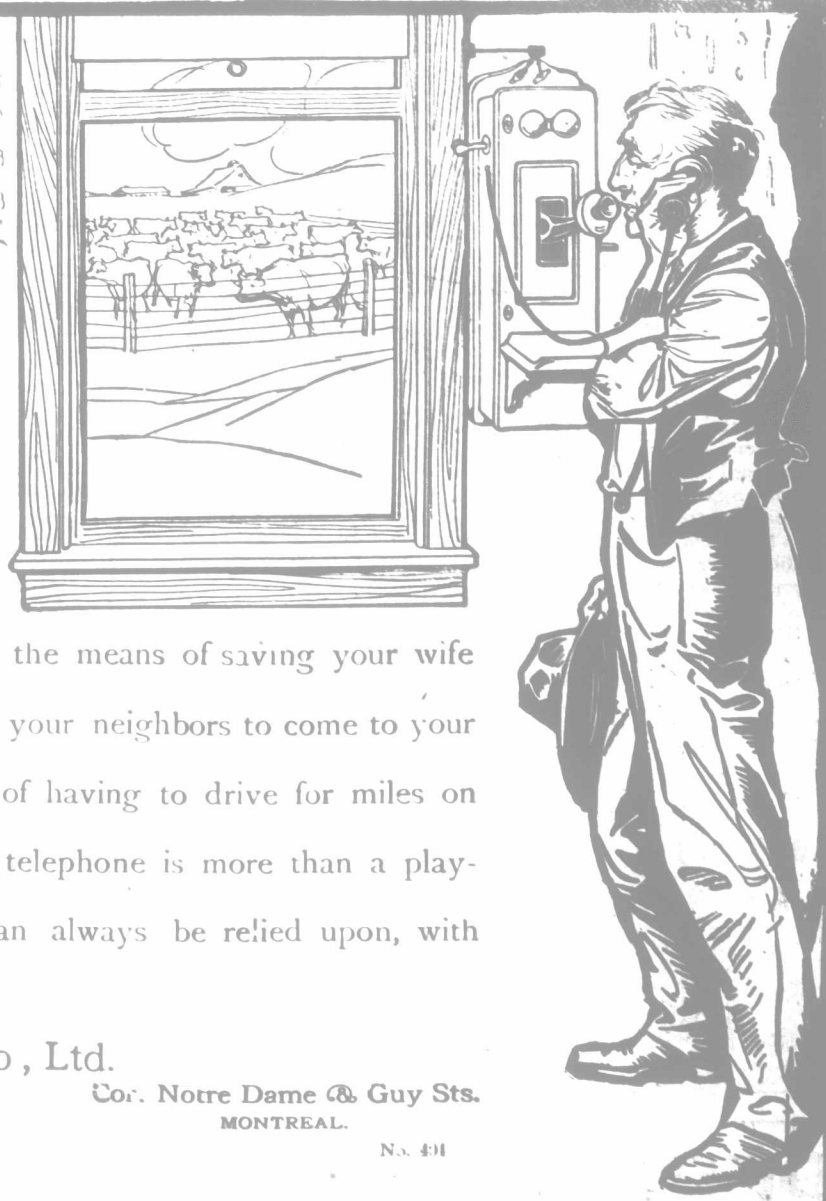
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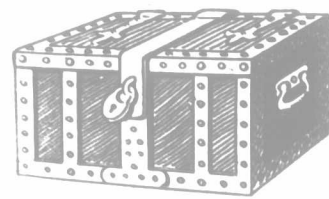


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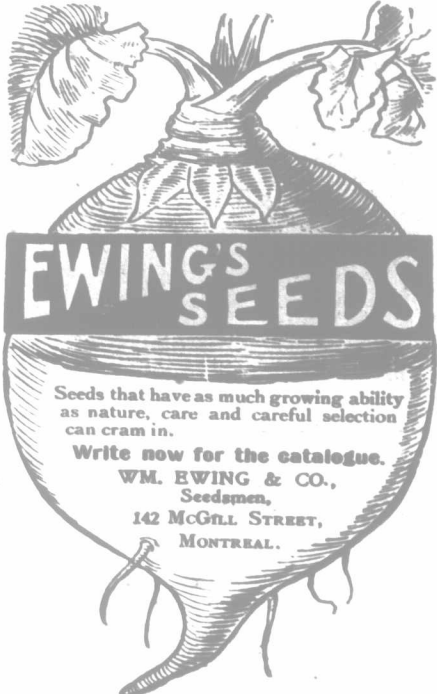


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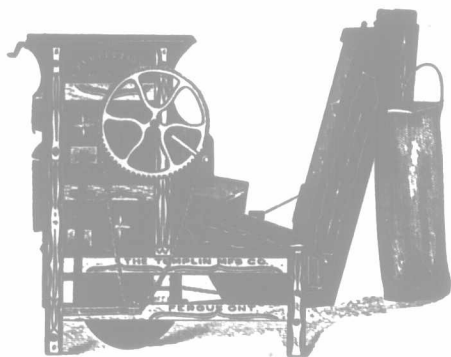
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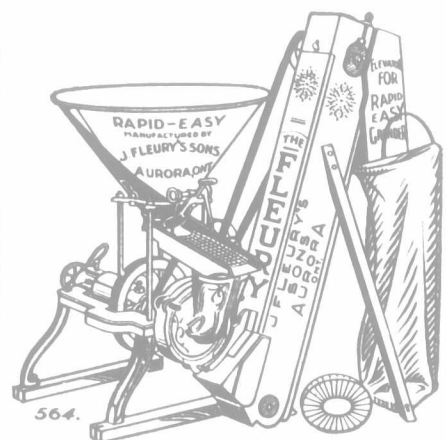


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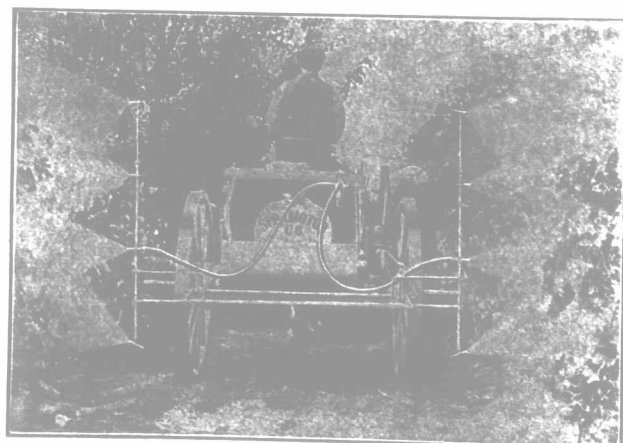
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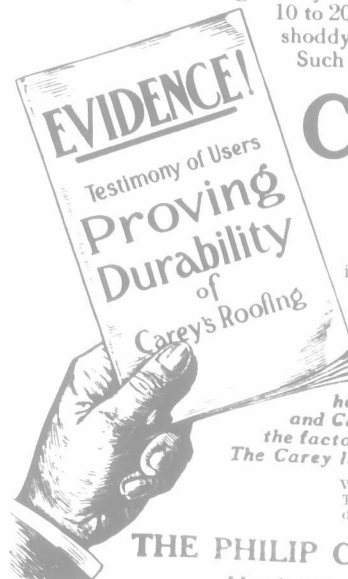
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# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

Established 1866.

Vol. XLIV.

LONDON, ONTARIO, JANUARY 28, 1909

No. 853

### EDITORIAL.

#### Licensing Cheese and Butter Factories.

Time sifts and evolves ideas. In 1904 "The Farmer's Advocate" aroused widespread interest by launching editorially a proposal to license cheese factories. One of the particular objects in view at that time was to extend the system of dairy instruction to all cheese and butter factories instead of leaving it confined to the three-quarters or so which had hitherto voluntarily paid to the Ontario Dairymen's Associations the requisite instruction fee. Another purpose was to place in the hands of the Provincial authorities a means of insisting upon satisfactory sanitary conditions, such to be stipulated as a condition of license.

These two objects have since been achieved in Ontario without licensing, by the Provincial Government taking over from the Dairy Associations two years ago the work of instruction, administering it from Toronto, through the two Chief Instructors at London and Kingston, and at the same time making each instructor a sanitary inspector, with power to insist on cheese factories, creameries and patrons' dairies being kept in satisfactory sanitary condition. This proposal, by the way, was also first publicly launched through "The Farmer's Advocate," although it had been discussed for years among the instructors and leaders in the dairy industry.

But while all the factories now receive instruction and sanitary inspection, there still remain one or two strong reasons to be urged on behalf of the licensing system. One is the threatened increase in the number of factories in districts already well served. In the eastern extremity of Eastern Ontario, one of the greatest drawbacks to progress has been the large number of small cheese factories, entailing a high cost per cwt. for manufacture, tending to the employment of cheap, comparatively inefficient makers, and rendering unduly burdensome and expensive the introduction of such improvements as cool-curing rooms.

If reports are to be relied upon, the high prices for dairy produce that have prevailed of recent years, have led to proposals to erect several new factories in Western Ontario, some of them in districts hitherto lacking in co-operative facilities, but others in districts already well served by factories or creameries. If such is the case, the effect will be not only to impose a hardship on those who have invested good money in building and equipping the existing factories, but to entail a whole train of unfortunate consequences on the industry in general. Needless duplication of cheese factories involves increased cost of making, tends to the employment of inefficient makers, retards the introduction of improvements in equipment and methods, and works out badly in every way. The maintenance of as large creamery and cheese-factory districts as are consistent with economical hauling, is a condition to be desired. How can it be secured?

It has been suggested that if a law or regulation were enacted, designed to bring prospective builders and organizers into touch with the Provincial dairy authorities before taking action, persuasion and reasoning would, in most cases, avail to head off the erection of factories in districts where they were not needed. Where persuasion did not avail, recourse might be had to authority. A system of licensing, with a nominal license fee, would accomplish this object. At the same time, suitable conditions as to site and sanitation could be stipulated.

A good deal of interest attaches to the dairy policy of the Saskatchewan Department of Agriculture, which has adopted what is virtually a

licensing system. In Saskatchewan there are no cheese factories, and in the case of creameries a policy of centralization is being encouraged. No creamery may be built within twenty miles of an existing one without special permission from the Dairy Commissioner, and not only location, but plans and site must be approved. Before a permit is issued the milk of 400 cows must be guaranteed by the prospective patrons. The Government gives the makers a minimum monthly guarantee of salary, and is prepared to assist the enterprise by a loan of \$1,200 at 3% interest, repayable in instalments within five years, and secured by a first mortgage on the property.

The Saskatchewan legislation may not be entirely applicable to Ontario and Eastern conditions, but it would seem as though something along the same line is needed. A drastic law, prohibiting the erection of a new factory within a specified distance from an old one would not be advisable, as it would tend to monopoly in the business, and would place a lever in the hands of proprietors and makers who might be disposed to take advantage of their patrons, but a moderate measure, leaving the matter of a permit at the discretion of the Provincial authorities, would be largely free from such objection. Furthermore, it is understood that a licensing system would not aim at closing any existing factory, but merely at preventing the development in other sections of conditions which have proven a bane to the industry in the East. At the Dairymen's Convention in Brantford, Geo. A. Putnam, Director of Dairy Instruction, intimated that while the Government would probably not see its way clear to initiate legislation, it would be open to consider suggestions emanating from the dairymen themselves. The subject will bear discussion.

#### The Senate's Responsibility.

The Dominion Senate must be thoroughly proud of itself over the recent accident at Grimsby, Ont., when a sleighload of people was struck by a G.T.R. express at an unguarded level crossing, four of the party being instantly killed, one dying shortly afterwards in hospital, and the two others sustaining injuries liable to prove fatal. This is the second serious accident at the same crossing, three young men having been sacrificed there in 1902. It seems that in this location a train approaching from the west cannot be seen, owing to the blocking of the view by the station building, and a high east wind is supposed to have prevented the victims from hearing the whistle.

There are a large number of other crossings in Canada which are veritable death traps, and numerous fatalities are constantly occurring, while many narrow escapes are made, and a great deal of suspense and discomfort entailed besides, owing to the danger. In 1907 the number of people killed at these crossings was 73, 74 others being injured. For the years 1905, 1906 and 1907, one person was killed for every 17 such crossings.

With a view to minimizing this awful toll of death, E. A. Lancaster, M. P. for Lincoln and Niagara, has for years past been pushing a bill in Parliament designed to protect level crossings in the neighborhood of towns and villages. After four years of hard fighting the bill passed the Commons, only to be thrown out by the Senate, upon which body, therefore, jointly with the railroads, responsibility for these accidents must rest. Thus does the second chamber thwart the will of the people, yielding rather to corporate pressure and the corporate point of view. In effect the Senate says railroad dividends are above human safety and human life. How much longer will the people of Canada permit an irresponsible appointed body of senile obstructionists to brook the popular will?

We sympathize with Mr. Lancaster's reported wish that it had been seven senators who were struck, and can only hope public opinion will rise up in its might and insist on the abolition, not only of unguarded level crossings, but of the Dominion Senate as well. If the Senators' salaries and the incidental expenses of the second chamber were applied to the protection of crossings, it would be much more in the country's interest.

In the Eastern United States separation of grades has become an accepted policy. In Massachusetts and New York the expense is divided among the railways, the State and the municipality, the share of the latter being small. Whatever the arrangement deemed equitable in Canada, something must be done, and done at once.

#### Store Ice.

Next to more scrupulous cleanliness, the greatest need of the co-operative dairy industry in Canada is the cooling of milk and cream by cheese-factory and creamery patrons. Cleanliness and cooling are the two requisites for the delivery of satisfactory milk or cream. The more cleanly one's dairy practice, the less the need of ice; but, with the very best of care, some bacteria will gain access to the milk, and, to prevent or retard their development, prompt cooling is necessary. Careful experiments, made by Geo. H. Barr this past summer, under farm and factory conditions, indicate the immense importance of prompt cooling of milk, and establish the principle that cooling, and not aeration, is what milk requires in order to make it keep well.

There are various means of cooling milk, but, on not a few farms it is impossible to lower the temperature as quickly or as thoroughly as should be done, without the use of ice; while, for the deep-setting system of creaming milk, as well as for the keeping of cream to be delivered for creamery or city trade, ice is almost a necessity, unless one is so fortunately situated as to have an abundance of cold spring or well water.

And not only in the dairy, but in the kitchen and house-cellar, a supply of ice is of great advantage. For keeping butter, cream, milk, meat and other victuals in hot weather, a supply of ice and a homemade refrigerator would often go quite a way towards repaying the cost of storing the whole supply, to say nothing of the immense convenience to the housewife and comfort to the family.

An icehouse is one of the simplest structures on the farm. A shell of a building, with an ante-room in front for the storing of sawdust, is all that is required. In some parts of Eastern Ontario they are building a platform in front of the icehouse, this being enclosed by latticed work, making a sort of combined icehouse and milk-stand. The roof should be shingled, and the site reasonably well drained. Sawdust is the best material to keep the ice away from the warm air. A foot of sawdust in the bottom, eighteen inches of it at the sides of the ice, and two feet or so on top, will answer. A little less will do in a cool or shaded location. Some ventilation should be provided to allow circulation of air above the ice, otherwise the air in the gable will become heated by the summer sun, thus warming the sawdust on top, and melting the ice faster than would otherwise be the case.

The cost of cutting, drawing, packing and sawdust should not, under ordinary conditions, exceed \$1.00 per ton of ice, as the work can be done in a slack time; and twenty tons of ice will suffice for an ordinary dairy and farm household, one to two tons per cow being a reasonable allowance for the dairy. Can you invest twenty dollars a year to better advantage? Prepare to



## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,  
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do your share in the great dairy business, and provide your wife with the boon of an ice supply. Once with ice, always with ice, as the medicine vendors say. January and February is the time for the work. Do it now.

### Time to Act.

It is to be hoped that the 1909 annual meeting of the Dominion Shorthorn Breeders' Association will be marked by a practical step towards the establishment of a record, in the form of an appendix to the Herdbook, or otherwise, for the dairy performance of Shorthorn cows in officially supervised yearly tests of milk and butter-fat production. All the special dairy breed societies in Canada have made provision for such official testing and record of performance. The Holstein and Ayrshire breeders are availing themselves of the privilege, and if breeders of the Red, White and Roans are to continue laying claim to dual-purpose quality or attributes in their cattle, they must fall in line. Talk does not develop milking quality in a breed, neither does talk maintain it. United effort is required, and as a guide to such effort, as a premium upon it and as an evidence of success in developing or maintaining milking quality, the keeping and publishing of authentic records of milk and butter-fat production is necessary. Farmers in search of herd leaders are becoming increasingly disinclined to accept dual-purpose claims on trust. They rightly insist on figures as evidence. Shorthorn breeders must make up their minds either to go in for the development of milking quality in earnest, or else witness their breed decline steadily in popular favor; its field restricted on the one hand by the special dairy breeds, and on the other by competition from the Dobbies, and to a less extent from the Herefords and Galloways. On the other hand, let the breeders of Shorthorns develop a liberal degree of milking quality in their cattle, while retaining the beef conformation, of course, and they will be able to preserve and widen their field of usefulness, because a dual purpose stock is absolutely necessary for the economical breeding and raising of good beef on ordinary high-priced land.

Beef may be profitably produced on cheap land with a class of cows that give merely enough milk to suckle their calves. It may be produced to a limited extent with such cattle on grain farms, particularly those devoted to the raising of that great beef-making feed, corn. But when it comes to such conditions as prevail in Eastern Canada, commercial beef cattle cannot be economically bred by using only a special-purpose beef breed, and the alternative plan of crossing beef bulls on dairy herds to produce feeding cattle, is not, on the whole, a very advantageous line of breeding to follow up. We need a dual-purpose breed, and will need it worse as farm lands increase in purchasing and rental value. If the Shorthorn is not bred and handled to fill the bill, other breeds will be. Why, a short time ago we quoted an American Aberdeen-Angus breeder who urged the more general development of milking quality in the polled cattle in order better to meet corn-belt conditions. Whatever it will be—Aberdeen-Angus, Hereford, Red Poll, Holstein—the beef stock of the future, good or bad, will be largely bred from cows that can milk. What is more, we can get milking quality, combined with good beefing conformation and quality, if we place proper emphasis on milking capacity, develop the heifers, record the performance of good dairy stock, and then breed judiciously, with an eye to beef form, combined with milking capacity, as indicated by scales and Babeock test. A Record of Dairy Performance for Shorthorns is the first and a most effectual means to such end. The Dominion Department of Agriculture stands ready to assist. It remains for the breed association to make the move, and open the way for effective individual effort. There is not a year to lose. Now is the time to act.

### Breeders' Meetings.

The numerous annual meetings of breed societies, announced to be held in Toronto next week, should appeal to the membership to indicate an active interest in the objects and aims of these organizations, and to add to their usefulness in improving the character of the live stock of the country, on which the profit and success of its agriculture so largely depends. The markets of the present time are growing more discriminating than formerly, demanding a better quality of product in all lines, and only by the use of the blood of the pure breeds of stock, coupled with intelligent management and judicious feeding, can the best meat types, milk producers and quality be obtained.

The main objects of these breed societies are the improvement of the various classes of farm stock, advertising and popularizing the breeds, by means of pedigree records and exhibition premiums, and the securing of favorable transportation rates, all of which have, by organized effort, been, to a gratifying extent, achieved in the last decade or two, but are yet capable of improvement and worthy of careful consideration. Some of the regrettable features of these annual meetings are the comparatively meagre attendance of the membership, and the tendency in some to run into ruts to re-elect directors who have failed to bring strength to the society, or have apparently shown more concern to advance their personal interests, or those of their friends, than those of the association as a whole. New blood is needed from time to time, and may be useful in suggesting improved methods of management, as well as in inspiring confidence in the disinterestedness of the directorate.

Since the funds of these societies are made up mainly of fees contributed by the membership scattered over the whole Dominion, it would appear that any surplus accruing over and above the necessary expenses of administration should be distributed with a view to equalization, whether in the form of a lowering of the fees, or the offering of prizes at leading fairs in the various Provinces, in proportion to the membership in each Province. While in some of the associations this idea has been partially adopted, there is reason to believe that in others little effort has been made to meet this reasonable contention, with the result that considerable dissatisfaction is from time to time finding expression through the press and otherwise. The magnitude of distances of the Dominion render it expensive for members of the

extreme East and Western Provinces to attend meetings which are held in Ontario, owing to the much larger proportion of members in this Province, in the case of many of the societies. These two facts, minority of membership and expense of attendance, logically account for the limited attendance from the outlying Provinces, and should appeal to the generosity of those more favorably situated, in regard to distance from the place of meeting, to deal liberally with those less strongly represented numerically in the councils of the society.

### Still the Banner Province.

There is a tendency in some quarters to speak as though the welfare of Canada depended on the Western grain crop. The West is all right, and the filling of the Western Provinces helps industry in the East, but the prosperity of Canada does not by any means hang on the Western grain crop. The Province of Ontario produced last year half as much again as all the three Western Provinces together. Ontario has possibilities of a more varied nature than any other Province or State. The West may beat us in wheat production, and California can raise oranges, but in no other section of America can so many lines of agriculture be equally well developed. Ontario is all right. J. C. James, Deputy Minister of Agriculture for Ontario, before the Western Ontario Dairymen's Association.

### Co-operation Between Town and Country.

The farmer has been judged by the city man as being mean and close in money matters, forgetting that until recent times the farmer has not had much money to handle. He dealt in produce, and the little cash he got naturally looked large to him. But while not flush with coin or bank notes, he has always been generous with what he had. His house and barns have been open to the visitor to come and stay and put up his horse, and no questions asked. We must not say the city man is generous and the farmer stingy. Say they are both generous, and let us seek to get them together, said President G. C. Creelman, of the Ontario Agricultural College, at the Dairymen's convention in Brantford. He suggested that Boards of Trade might reach out and take in farmers, interesting themselves in such enterprises as establishing cheese factories and creameries, and similar allied industries. The need is for closer co-operation between farmers and city men.

## HORSES.

### Choice Brood Mares Needed.

Among the interested horsemen in attendance at the Ontario Horse-breeders' Exhibition at West Toronto recently was R. H. Taber, of Condie, Sask. Discussing the horse industry with a representative of "The Farmer's Advocate," he was most emphatic in his plea for brood mares of the very best type. "If farmers are to make satisfactory progress in improving their horses," said Mr. Taber, "they must refuse any price for a mare that has size and quality. The main factor in improvement is choice brood mares. Without them we cannot improve. On the average farm we find small general-purpose mares instead of strong, heavy ones that will rear colts of substance that command a high price on the market. When a man decides to raise colts he should raise either heavy or light. In any case, there will be enough misfits to supply the general-purpose class. Then why not use either the best light mares or choice draft mares, and breed them to the best stallions of the same breed that can be found?"

"It is absolute folly to cross breeds. Why should any man breed a heavy mare to a Hackney stallion? Every man, in order to succeed, must have before him a definite aim, and an ideal to which he gradually works. Without this ideal much time will be lost, and the improvement will be slow. There is no reason why the average man on a hundred-acre farm should not keep three or four good mares for breeding purposes."

Few good draft mares are exported from Canada, but the loss is the same as if they had been exported when they are sold to be used as work horses in towns and cities.—W. F. Kydd, Norfolk, Ont.



**Favors the Coach Horse.**

Editor "The Farmer's Advocate":

Being a subscriber to your excellent paper for a number of years, I thought I would try to give the little experience I have had in regard to horses for general farming. We bought a farm when I was twelve years of age. Father being a blacksmith and following his trade, the farm was let on shares for some two or three years, after which time we undertook to work it ourselves. I started with what were called Indian ponies, and kept on changing till we had them up to the heavy draft. I have had for the past seven years a pair of French coach mares, standing about 15 and 15½ hands high, and weighing about thirteen and a half hundred pounds when in good working condition. They are nine and ten years old in the spring, and I have never had to call in the veterinary to them yet (but cannot tell how soon I might). I think they are a hardier breed of horses than the heavier classes, and I can do just as much work on the farm with them as any heavy ones we ever had, and they are much better on the road. I have a pair of colts from the one mare, and by a German Coach horse, weighing about fifteen hundred pounds, which I think will make a fair general farm team. Now, some will think I am all one-sided, but it would not do for all to think the same. In raising horses for the market, I will admit that the heavy class is more profitable, as there seems to be more demand for them, but I think fair profit can be had by raising the right stamp of coach horses. I noticed in January 7th issue a writer, signing himself Horse-shoer, and having a little experience in horseshoeing, as I do our own, I agree with his idea of fitting the shoe. Wishing "The Farmer's Advocate" and its staff of employees a Happy and Prosperous New Year. FARMER BOY. Lambton Co., Ont.

**Quality with Size Essential.**

Editor "The Farmer's Advocate":

I notice an article in a recent issue relative to Clydesdales, "Is Substance Lacking in Clydesdale Horses?" I think your correspondent brings out some very good points. I certainly would say with him, as regards action and quality, but the horse that has those qualities generally has fair weight, say from 1,500 lbs. upwards. A horse of the right quality, weighing up to 1,500 lbs., in fair condition, will, when he is matured and fitted, make an 1,800-lb. horse, and, in my limited experience, that is large enough for all practical purposes. The horse built on those lines, and up to 1,800 lbs., is of more value in any country than the horse your correspondent speaks of as of sufficient size, but defective in a few points, as they usually are if up to 2,000 lbs., they generally having softer bones and being looser built, and if they are owned by good feeders they may be brought out to look well, but they, as a rule, will not stand the work that the firm, blocky 1,800-lb. horse will. Of course we all know stallions forced by feed may come to 2,000 lbs., but they, as a rule, are overfed. I judge your correspondent has not tried the importation enough, or he would know which kind is hardest to buy. In conclusion, I would say with him, get the quality and all the size possible, then we have what we want. ROBERT NESS. Howick, Que.

**LIVE STOCK.**

**Live Stock Worth \$530,000,000.**

According to the Bureau of Census and Statistics, the average value of farm land for all the Provinces of Canada is \$35.70 per acre. In five Provinces it is placed under \$30, being \$27.30 in Manitoba, \$25 in Nova Scotia, \$21.10 in New Brunswick, \$20.40 in Saskatchewan, and \$18.20 in Alberta. In Prince Edward Island, the average is \$33.70 per acre, in Quebec \$41.90, in Ontario \$47.30, and in British Columbia \$76.10. The high valuation in the latter Province is explained by the fact that a large percentage of the farm land is in orchards and small fruits. The average value of horses in the Dominion is computed to be \$16 for those under one year, \$100 for those one to under three years, and \$143 for those three years and over. Milch cows average \$31, ranging from \$29 in Prince Edward Island, to \$36 in Ontario, and \$18 in British Columbia. Swine are estimated at \$5.86 per cwt. live weight, and sheep at \$5.23 per head. The total value of farm animals in the Dominion, computed on the foregoing averages and the number of animals on the farms in June, is placed at \$530,000,000.

**"The Farmer's Advocate" to "Do Things."**

I received answer to my questions regarding grant, and want to thank you for your promptness and promptness regarding same. It certainly makes "The Farmer's Advocate" to "do things." FRED WELLS. Ontario Co., Ont.

**Sheep Husbandry in Canada.**

Such is the title of an exceptionally able, useful and interesting treatise, prepared by J. B. Spencer, B. S. A., of the Live-stock Branch of the Department of Agriculture, Ottawa, published by authority of Hon. Sydney A. Fisher, Minister of Agriculture, and printed for distribution as Bulletin No. 12.

Mr. Spencer is well qualified, by training, experience and observation, for the preparation of such a treatise, being brought up on a farm on which sheep-husbandry was made a specialty and a success, graduated from the Ontario Agricultural College, and having an extended experience in agricultural journalism previous to entering upon his present position. This production is, in character, quite beyond the usual style of Government bulletins, being a work of 125 pages, filled with helpful information, and liberally illustrated with over seventy high-class photogravures of representatives of the principal breeds of sheep, plans of sheep barns, dipping plant, pens and tanks, etc. In the introduction, the various reasons advanced for the falling off of sheep-keeping in Canada are dealt with. From this we quote: "No end of effort has been made to assist the hog industry, and the keeping of cattle, but sheep are so easily kept, and so harmless, that they have been allowed to drift with the current of indifference. . . . The sheep that is able to return two crops in a year, under semi-neglect and poor housing, has not called for a fight for its perpetuation, and has suffered in consequence. There is probably no country in the world better adapted than Canada to sheep-raising, and no country offers greater opportunities for the development of the industry. The physical features, the soil, the climate, and the agricultural population, are all favorable to the production of mutton and wool of the highest quality."

above in feeding results. At Christmas we sold to a gentleman from Montreal a Duchess of Gloster bred Shorthorn steer, 1 year and 11 mos. of age, that weighed, after a five-mile trip to the station, 1,770 pounds.

Ontario Co., Ont. DAVID BURRELL & SON.

**Michigan Stockmen Discuss their Problems.**

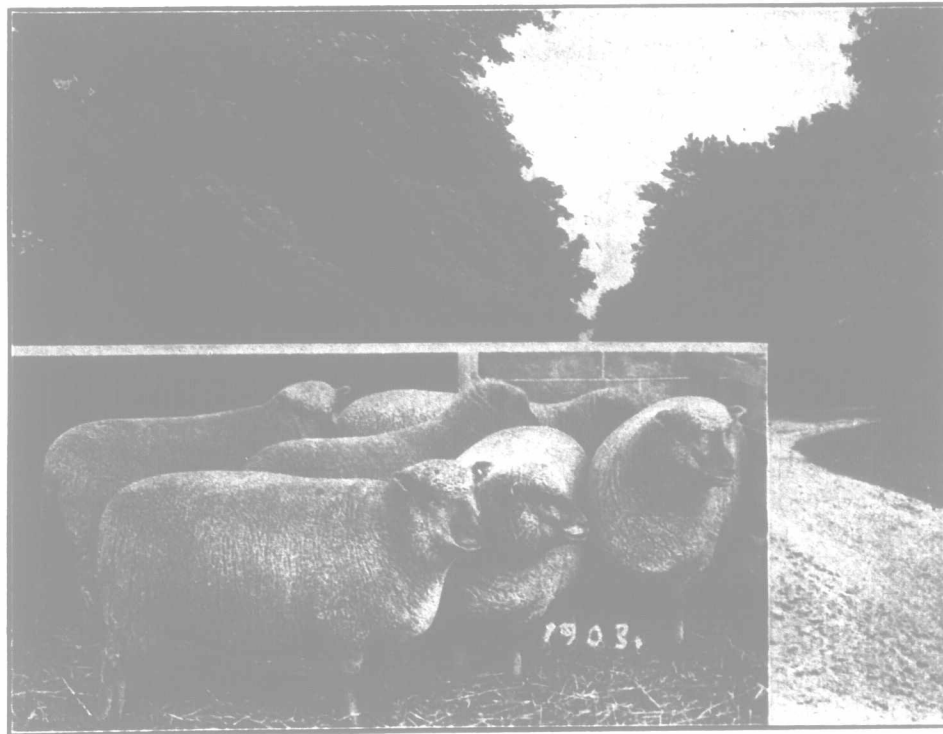
Eighteen years ago the breeders and feeders of the State of Michigan formed an organization for the purpose of improving the live-stock industry of the State. Like many similar organizations, it has had its ups and downs, but is now firmly established. The meeting held at the Michigan Agricultural College, Lansing, on January 12th and 13th, was a large and enthusiastic one. Some 500 persons were in attendance on the second day, chiefly, so I was informed, farmers and breeders from various parts of the State. I was also told that this organization does not receive any grant from the State Legislature, but is entirely self-supporting, which is a hopeful sign. When farmers free themselves from Government grants, we may expect more progressive and independent action, whereas, in any association depending on legislative money grants, the tendency is to do and say those things which are likely to have the least adverse effect upon the size of the grant.

The two most important discussions of the meeting were those relating to the tuberculosis problem, and to the breeding and feeding of live stock, together with a brisk and short tariff-reform debate.

The former question was introduced by Dr. Marshall, of the Bacteriological Department of

the M. A. C., followed by a spirited address from J. J. Ferguson, of the Swift Co., Chicago, who is a graduate of the O. A. C., Guelph, Canada.

Dr. Marshall gave some startling figures regarding the ravages of tuberculosis among humans and animals in the United States. He pointed out that the State of Minnesota had spent in one year over \$60,000 in testing, disinfecting and compensating for the disease. He was doubtful if a law of compensation was practicable in the State of Michigan. He also said that very few persons or animals escaped the disease in some form. This was corroborated, with reference to animals, by Mr. Ferguson, who said that most animals slaughtered showed signs of the disease, past or



A Corner in Southdowns.

Chapters in this bulletin are devoted to the origin, development and characteristics of the leading breeds of sheep, with illustrated scale of points for judging; establishing a commercial flock; types of mutton sheep; handling sheep, feeds, feeding and management; sheep barns; diseases of sheep, their prevention and treatment; the Canadian wool industry, etc., the whole making a very important and valuable contribution to the available fund of information upon an industry in which Canadian farmers generally should evince greater interest, and which has proven profitable beyond any other branch of farming to those who have given it intelligent attention and stayed with it. This bulletin is for free distribution to those applying for it to the Minister of Agriculture, Ottawa, by letter or post-card.

**A Heavy Yearling.**

Editor "The Farmer's Advocate":

I notice in your issue of January 7th, the report, as given in "Scottish Letter," of the winners in the fat classes at some of the late English and Scotch shows, to wit: The British champion at London and Birmingham, and champion at the Highland and Smithfield in the feeding classes, was an Aberdeen-Angus; that at 2 yrs. 8 mos. and 3 days of age weighed 1,680 lbs.; also, that the reserve champion at London, an Angus-Short-horn cross, at 9 days less than 3 years of age weighed 1,696 lbs. Now, while we probably expect a great deal too much from the motherland, my own experience of late entirely overshadows the

present. Mr. Ferguson gave a brief account of the work being done by his firm in co-operating with Federal and State officers in eradicating the disease. He said that the "Packers" welcomed the fullest investigation and inspection in their work. He told how they were in constant touch with State officials, and when they found a large number of infected animals coming from a district, their inspectors at once "got busy." A carload of hogs, received at one of their plants, was found, on slaughtering, to have over 50 per cent. which had to be "tanked." They traced the hogs to a district where the skim milk from a certain creamery was being fed to the hogs. He said that hogs were very liable to contract the disease from contaminated dairy by-products, and also where hogs followed cattle to consume undigested grain. The pasteurization of skim milk, buttermilk and whey was necessary to prevent contagion.

Other practical suggestions were the use of the tuberculin test, the prevention of the entry of animals from another State unless tuberculin-tested, and more sanitary laws, to be enforced through a State commission, with power to quarantine infected farms.

On the question of compensation to owners of destroyed stock, a very warm discussion took place. The Holstein Association passed a strongly worded resolution recommending State compensation, and this view of the case was very forcibly presented to the Convention by a member, who argued that, taking human nature as we find it, unless the State paid for slaughtered stock, little or no progress would be made, because it would be asking the individual to con-



tribute funds for the benefit of the public, which the individual would not do. He contended that it would be cheaper for the State to pay such loss than to run the risk from infected stock.

Another member argued that, in the case of a man having diseased stock through imperfect, badly-ventilated stables, the owner of such stock, and not the State, should bear the loss.

The questions of the laws of breeding and feeding were also fully discussed. The writer took the ground that old theories of breeding will not bear investigation, and that variation is the hope of the breeder. While some were opposed to this new view of the question, the majority were inclined to accept this interpretation.

Prof. Burnett, of Nebraska Station, gave an account of the feeding experiments in his State, whereby alfalfa hay and corn silage, with some meal, had enabled the feeders to lessen very materially the cost of beef and milk production. He favored the use of liberal amounts of protein and a careful study of "balanced rations." Others were of the opinion that palatability was of more importance than formulas in the practical feeding of live stock.

Our own judgment is that the "balanced-ration" theory has been overworked, and that it is more important to balance a ration with good sense than with any stated number of pounds of protein or any other nutrient. A balanced ration was never intended to be slavishly followed, but is given as a guide to the feeder.

One other breezy discussion took place at the close of the meeting, when one of the farmer Representatives in the State Legislature read a motion asking the Association to bring to the attention of Senators and Congressmen the need of securing an extension of the markets for farm products, by maximum and minimum tariffs, or otherwise. He claimed that the American farmer needed better and more extended markets for his produce, and that the man on the farm deserved some consideration at the hands of the tariff reformers. Manufacturers had held farmers by the throat long enough, and they (farmers) demanded some relief. A member jumped up at once after the resolution had been read, and said he was a "stand-patter," and advised farmers to have nothing to do with "tariff tinkers." He claimed that protection was necessary in order to obtain funds to meet the expenses of government, and that home markets were of more value to farmers than any foreign markets. When the motion was put, on a standing vote, the secretary declared a tie. A motion "to lay the resolution on the table" was finally carried. We were surprised to hear the Michigan farmers complain of their markets. We had supposed that they had one of the best markets in the world. Many Canadian farmers have looked with longing eyes towards the market in American cities, but it would seem to be another case of "Far-away hills looking green," and of "Distance lending enchantment to the view."

A hasty look about the Michigan Agricultural College convinced us that a wonderful growth has taken place during the fifteen years or more since we last visited the institution. The new agricultural building will be, when completed, one of the very best among the fine buildings devoted to a study of agriculture by the various States of the Union. Michigan seems to be going the other States one better. In live stock, the College seems to be strong. The appearance of the animals and stables reflect much credit upon Prof. R. S. Shaw, a former Canadian, and Prof. Anderson, of the Dairy Department, as well as upon their assistants. The large farm, of 700 acres, supplies plenty of food for the large stock, and seems to be well managed. President Snyder is to be congratulated on the large attendance of students (some 1,400, fifty per cent. of whom are taking agriculture), and upon the excellent work which this, the oldest of American agricultural colleges, appears to be doing. H. H. D.

### Supplementary Cattle Feeds.

The subject of cattle feeds, with particular reference to the several classes of mill by-products, was discussed in a very acceptable address by Prof. Harcourt, of the Ontario Agricultural College, before the Western Ontario Dairymen's Convention, at Brantford. While, as Prof. Harcourt said, the practice of some experienced feeders leaves little to be desired, they having probably learned much from their forefathers, besides their own long experience, supplemented by the natural instinct of the feeder, yet there are many farmers who have not been bequeathed any valuable experience, and, further, there are on the market to-day many new feeds about which very little is known. Hence, there are many reasons why we should examine into the question of the composition of cattle foods.

#### FUNCTIONS OF FOOD CONSTITUENTS.

The parts of foods which furnish the materials for body tissue, for milk-making, and for heat and energy production, are: (1) protein, (2) fat, (3) carbohydrates, (4) ash material.

Protein, so far as foods are concerned, is made

up of two classes of substances—albuminoids (proteids) and amides. The amides are found in immature plants, and are not so valuable as the higher proteid materials. The albuminoids, which occur in grain, roots, and other forms of vegetable foods, are similar in composition to those found in milk, blood, and flesh. They are commonly called the "flesh-formers," as they are the only materials in the food which the animal can construct into flesh. They are also the source of such materials as hair, wool, hoof, horn, etc. Further, by the combustion of the albuminoids in the body, heat and mechanical force are developed, and, under some circumstances, they are split up with the formation of fat, but fat and carbohydrates, especially the latter, are the cheapest materials for this purpose.

The fats found in food are similar in composition to such substances as lard, tallow, etc., which are the common fats formed in the animal body. The fat may be either burnt in the animal system to furnish heat and energy, or deposited on the body as fat. As a heat and force producer, fat has a greater value than any other ingredient of the food.

The carbohydrates of the food are chiefly starch, sugars and celluloses, and form the largest part of vegetable foods. The latter substances form the stiff framework of the stems of plants and the hulls of seeds, and are only partially digested. These carbohydrate bodies are not permanently stored in the animal body, but serve, when burnt in the system, for the production of heat and mechanical work. They are also capable, when consumed in excess of immediate requirements, of conversion into fat.

The ash materials present in the food are the same as those found in the animal body; all that is accomplished by the animal is to select from the digested ash constituents those of which it is in want.

#### COMPOSITION OF FOODS.

The feeding value of a food is largely determined by two factors: (1) Its composition, (2) its digestibility. The first of these deals with richness of the food in protein, fat, carbohydrates and ash materials. The second determines the extent to which these various constituents become available in the body. A knowledge of the composition of a food is important, if it is to be used intelligently. Those foods which contain the largest amounts of the protein and fat, and the smaller percentage of crude fibre, are the most valuable. The following table gives the percentage amount of the various food constituents present in a number of the most common foods:

#### COMPOSITION OF CATTLE FOODS.

	Water.	Crude Protein.	Fat.	Soluble Carbohydrates.		Crude Fibre.	Ash.
				drates.	Fibre.		
Wheat	10.5	11.9	2.1	71.9	1.8	1.5	
Oats	11.0	11.8	5.0	59.7	9.5	3.0	
Barley	10.9	12.4	1.8	69.9	2.7	1.8	
Corn	10.6	10.3	5.0	70.4	2.2	1.5	
Peas	14.0	22.5	1.6	53.7	5.4	2.8	
Timothy Hay	13.2	5.9	2.5	45.0	29.0	4.4	
Clover Hay	15.3	12.3	3.3	38.1	24.8	6.2	
Alfalfa Hay	8.4	14.3	2.2	42.7	25.0	7.4	
Oat Straw	9.2	4.0	2.3	42.4	57.0	5.1	
Corn Silage	79.1	1.7	0.8	11.1	6.0	1.4	
Mangels	90.9	1.4	0.2	5.5	0.9	1.1	
Turnips	90.5	1.1	0.2	6.2	1.2	0.8	
Wheat Middlings	10.1	15.5	3.9	62.5	4.3	3.7	
Wheat Bran	10.4	15.0	3.8	57.0	8.7	5.1	
Cotton-seed Meal	5.9	44.2	13.6	24.6	4.8	6.9	
Linseed Meal	9.1	30.4	7.1	36.9	10.6	5.9	
Gluten Meal	7.1	38.8	3.4	47.6	2.0	1.1	
Gluten Feed	8.6	25.0	4.6	54.8	5.9	1.1	
Brewers' Grains	6.6	14.6	6.6	58.1	12.8	1.3	
Oat Hulls	8.1	2.2	0.9	53.9	28.1	6.8	
Dried Beet Pulp	2.9	8.5	1.1	65.9	15.2	6.4	

The valuable forage plants of this country belong mostly to two families—the grasses and the legumes. June grass, red-top, timothy, and the cereal grain plants, are types of the former; and the clovers, alfalfa and peas of the latter. The most essential difference between the members of the two families of plants, when considered as feeding stuffs, is in the larger proportion of the protein in the legumes. For this reason they are very justly regarded as the better foods for growing stock and for general use on dairy farms.

#### EFFECT OF MATURITY ON COMPOSITION.

The composition of all dried fodders and roots, foods that are fed in an immature state, is liable to considerable variation. We find that the composition depends largely on the stage of maturity at which they are cut, and also upon the character of the manuring. In general, it may be said that, as a plant matures, the proportion of water, protein and ash matter decreases, while the proportion of carbohydrates, especially of fibrous material, increases. As this latter substance is largely indigestible, fodder crops deteriorate towards maturity. Young grass is much richer in albuminoids, and contains a smaller proportion of indigestible fibre than older grass, and is, consequently, more nourishing. The

same comparison may be made between young clover and that which is allowed to mature for hay. It follows that fodder crops should be cut for hay before they reach maturity, and experimental work and general experience has fully demonstrated that these crops should be cut immediately full-bloom is reached. Alfalfa is an exception to this, because it very rapidly becomes fibrous, and should be cut in the early blossoming stage to obtain the best results.

Regarding the root crops, it has been found that, while fodder crops deteriorate towards maturity, because of the conversion of soluble forms of carbohydrates into the insoluble and indigestible fibre, roots crops, such as mangels and potatoes, improve, owing to the carbohydrates produced in this case being sugar and starch, both of which are of great feeding value.

The root crops do not contain a very large amount of the valuable food constituents, but, when fed along with the dried fodders, they probably have a food value much greater than their composition indicates. This is due to the increased succulency which they impart to the ration. The same applies to silage.

#### THE PURPOSE OF CONCENTRATED FEEDS.

The place of grain in a ration is to increase the proportion of protein and other digestible materials; or, in other words, to make the ration more concentrated. It is generally agreed that cows of 1,000 pounds weight need, approximately, 16 pounds of total nutrients daily. Animals that are thin in flesh, especially when fresh in milk, can consume two or three pounds more to advantage. Of these 16 pounds, approximately 2.5 pounds of protein is necessary, in order to enable the cow to produce large and continuous yields of milk. If a cow is fed all hay, she cannot eat enough of the food to obtain the amount of the nutrients mentioned. Thus, suppose a cow should be fed all she can consume of any palatable, dry, coarse fodder, such as good hay, she would have at her disposal the following digestible nutrients, approximately: Protein, 1.4 lbs.; fat, 0.4 lbs.; carbohydrates, 12.4; total, 14.2. It is clear that such a ration lacks in protein, as well as in total digestible matter. In order to overcome these deficiencies, recourse is had to the concentrated feeds, rich in protein, and sufficient is added to increase the protein to the desired amount. It is, of course, evident that the cereal grains, as corn, oats, wheat, etc., are not sufficiently rich in protein to very materially increase its proportion in the diet, though they increase the total amount of protein consumed per head. But these foods are rich in nitrogen-free-extract or carbohydrates that are easily digested, and are very useful when fed along with the coarser foods, which contain much fibre.

#### IMPORTANCE OF PROTEIN.

Pea meal, linseed meal, gluten feed, wheat bran and middlings are foods rich in protein, and are, therefore, most valuable components for a ration intended for dairy cows. On the other hand, it is evident that oat hulls, dried beet pulp, corn bran, and such low-grade materials cannot build up the protein side of the ration. They are also entirely unfit to be used as substitutes for linseed meal, gluten meal, gluten feed, and such nitrogenous materials.

What has been said serves to draw attention to the point, that, when purchasing foods, the percentage of protein they contain is of prime importance. The home-grown crops, especially the grasses and cereal grains, are more likely to be deficient in this than in any other constituent, but when clover or alfalfa hay are used as the coarse foods, the use of concentrates especially rich in protein is not so necessary.

#### WHAT TO BUY.

The shortage of coarse foods and grains the last few years has been the means of causing many feeders of live stock, particularly dairymen, to consider the advisability of purchasing certain of these mill by-products, for which, heretofore, they have had little or no use. Dairymen, too, are recognizing the fact that, in order to secure the best results from their cows, they must feed a ration richer in protein than can, as a rule, be compounded from the grains, hay and straw raised on the farm. The by-products best adapted to enrich the diet in protein are the residues from the manufacture of some specific product from the seed or grain, as, for example, oil from cottonseed and flaxseed, starch and sugar from corn, beer from barley, and flour from wheat, rye and buckwheat. All these by-products, which include cottonseed meal, linseed meal, dried brewers' grains, gluten meal, gluten feeds, and the various kinds of bran, middlings, etc., are very much richer in protein than the original seeds or grains, because the substance extracted from them consists of fat, in the case of the first two, and of starch or products rich in starch in the case of the others, thus proportionately increasing the protein in the residues. For this reason, all of these by-products have been found to serve an excellent purpose in the building up of rations. They are generally palatable and healthful and, if judiciously used, do not con-



tribute any undesirable qualities to the products, beef or milk; besides, they possess the further advantage in that, in many cases, the cost of the ration is reduced by their use. Their intelligent purchase and economical use, however, requires that the purchaser shall possess a definite knowledge of their composition; that is, he should know, first, not only how much protein and fat the genuine products, cottonseed meal, linseed meal, gluten meal, gluten feed, bran and middlings contain, but also whether there is reasonable uniformity or wide variation in respect to these compounds in the composition of the products of the same kind or name; secondly, whether any of them are liable to be reduced in value by the addition of cheaper substances.

VARYING ANALYSES OF FEEDING STUFFS.

We have endeavored to collect some definite data regarding the character and composition of these by-products. For this purpose, we gathered a large number of samples and analyzed them, the results of which were published in Bulletin No. 138. Since this bulletin was published, we have analyzed many more samples, and the results show that a large number of the various products offered for sale are of good quality, but that those of the same kind from different manufacturers vary quite widely in composition. Further, we have found that in some cases there is a tendency to mix residues of one grain with another, and sell them under a trade-name, or to add low-grade by-products to those with which the farmer is familiar, as, for example, oat hulls to wheat bran. With these facts before us, it is evident that the purchaser cannot form a correct idea of the composition or value of a food from the name given it, and that steps should be taken to have these concentrated feeds sold in such a manner that the percentage composition, rather than name, will be the guide to their value.

LEGISLATION NEEDED.

Laws have been passed in many of the States of the American Union making it compulsory for the seller of these mill by-products to print on the bag the guaranteed minimum percentage of protein and fat, and the maximum percentage of crude fibre, and also the grains from which the feed was made. In this way the farmer knows exactly what he is buying, and if he is familiar with the composition of his own feedstuffs and the requirements of the animals he is feeding, he can purchase his supply of concentrates intelligently, and with every assurance that he is getting full value for his money. It will pay farmers in good hard cash to make a thorough study of the whole subject of cattle-feeding, and to make themselves familiar with the nature of the various feedstuffs now on the market, in order that they may not only feed more economically, but that they may intelligently assist in the procuring of laws similar to those now in operation in the United States, which would make it possible for one to purchase feeds with a guarantee as to the amount they contain of the essential food constituents.

Q. What is the difference in value between old and new process oil-cake meal?

A. In the old process the oil is removed by means of pressure. By the new process, the fat is more thoroughly extracted by means of solvents.

Q. What about cottonseed meal?

A. Cottonseed is one of our richest and most concentrated meals, but is not a safe feed for calves or pigs.

Q. How much linseed (oil cake) meal would it be advisable to feed to a cow?

A. I would never recommend more than two pounds of linseed meal per head per day, and would start at much less than that.

Q. Would it pay to feed linseed along with alfalfa hay?

A. If one has a good quality of alfalfa hay, it is doubtful whether it would pay to purchase the more concentrated feeds, such as linseed or cottonseed, unless in moderate quantities. For dairymen, especially, no better roughage can be given than alfalfa.

Q. What should be fed with good silage and clover hay?

A. With such a ration, there would be less need of bran as a laxative, though I know of good results from the feeding of bran and oats along with such roughage.

Q. Will you explain how we can calculate a ration, so as to know when we are feeding our cows a balanced ration?

A. Having a table showing the digestible constituents in the various foods entering into the composition of the ration, multiply the pounds of fat by 24, add it to the number of pounds of soluble carbohydrates, and into the sum of these divide the number of pounds of protein. The result should be, approximately, 5, indicating a nutritive ratio of 1:5. It may vary a little one way or the other, but should approximate this proportion. Prof. Harcourt cited an experiment on the home farm, years ago, when they had an abundance of potatoes, which could only be disposed of by feeding to the cows. Along with

a liberal supply of potatoes, they fed concentrates quite rich in starch, but deficient in protein, with the result that the milk flow immediately dropped. Not only was the supply of protein inadequate to furnish the needs of the cows for milk-making purposes, but the excessive proportion of starchy elements lessened the digestibility of the ration.

Q. What about ground flaxseed?

A. Ground flaxseed is very rich, and should be fed with care. It contains a rather lower percentage of protein than oil-cake meal, but a great deal of oil or fat.

Q. How do the values of gluten meal and linseed (oil cake) meal compare?

A. If one could be sure the gluten meal were true to name, he could afford to pay as much as for the oil cake, but it is hard to be sure of it. They had analyzed samples of gluten meal, so-called, at the College, ranging from 15 to 34 per cent. protein, with an average test of only 24.96 per cent. On the other hand, they had analyzed 17 samples of gluten feed, average 25.65 per cent. protein. The inference was that a good deal of gluten feed is wrongly labelled gluten meal.

Q. Could a miller be sure just what he was selling in the way of these by-products?

A. A miller would know what he was selling, because he would know how he had made it, though he would not know the precise composition, unless an analysis were made.

Q. Do not gluten meals make the butter oily? We have found it so.

A. Possibly, as the gluten meals are derived from corn, and the oils of corn are soft.

Q. If a man had a sample of linseed or gluten meal analyzed, would he be fairly sure of getting a similar composition from the same mill thereafter?

A. If the sample were fairly representative of the run of the mill, yes.

Prof. Harcourt announced that the Department of Chemistry at the O. A. C. were willing to undertake the analysis of a limited number of samples of feeds sent in to them just now. Replies need not be expected by return mail, but the work would be performed with all reasonable despatch.

Scotch Feeding Practice.

Editor "The Farmer's Advocate":

The time has again come to renew my subscription for your breezy and up-to-date paper. That was a very useful discussion you started on "Economizing the Meal Ration." It brought out some very good papers, which I hope will prove useful to your readers, even when grain and other feedstuffs are not so dear. If young, growing stock are fed too much starchy food, it is not only a waste of money, but it puts the system in that condition that they actually take longer to feed off afterwards. It is different with oil cake. Any one is quite safe to feed it at any time, summer or winter, from the time the calf is weaned until it is finished by the butcher, with nothing but beneficial results. It will pay, too, with judgment. Never feed cottonseed to any animal under about two years. The system some of the best feeders here follow with the cattle they feed off about April or May, at two and a half years old, or thereabouts, is: Once they are fairly shut in for the winter they get a pound of linseed cake and a pound of cottonseed cake once a day, with plenty of turnips and straw. Along about the middle of January they begin to give some meal, gradually increasing the feed and giving it at two feeds. For a tonic they give a pound a day of molasses. But a great deal must always be left to the judgment of the individual.

A SUBSCRIBER IN SCOTLAND.

Ventilation of Manitoba Stable.

Editor "The Farmer's Advocate":

In regard to the ventilation of stables, my stable has joists running from side to side, which hold up the upper floor; and, by enclosing two of the joists, by nailing boards underneath, leaving a space about a foot wide in the center, and cutting a hole in each side of the barn, I have a good cheap ventilator, and one that gives better satisfaction than any I have seen, because one has full control of it, by having a slide door in the center, and also little doors on the outside. One can put as many of these in as the size of the barn requires. The cost of construction is very small.

I believe in a good roomy barn, with high ceiling, and lots of room between the stock. I like to have a stable so that the walls are dry and don't cover over with frost in cold weather. And when the stock get a run out every day for an hour or two, and the stable doors are open for a little while every day, I don't think there is much danger from lack of ventilation. I found, when we had ventilators running up through the roof, they would fill with frost in cold weather, and then, when it warmed up a little, they would melt out and make things sloppy, while the ventilator I described doesn't do that. In my barn, 30 feet wide and 50 feet long, potatoes have lain

on the floor in one of the stalls every winter for the last five years, and they never have frozen, and we have a good healthful stable.  
Provencher, Man. WM. SHIELDS.

Causes of Loss in Flocks.

The loss of thousands of lambs and hundreds of ewes during the lambing season of 1908 in the State, led Virginia Agricultural and Experiment Station to investigate the causes of this great mortality. Lack of shelter during the severe weather of January and February was known to be a common defect in sheep-raising, but it was considered that many other causes were responsible for a large percentage of the loss.

The report appears in Bulletin 178, and contains the following summary, by W. J. Quick and A. P. Spencer, who conducted the investigation:

1. There are in Virginia 355,366 sheep of all ages, with an assessed value of \$1,007,915.
2. During the severe weather of January and February, 1908, the loss of lambs was exceptionally severe. In seventy-three flocks visited, 961 lambs were lost, out of 5,252 dropped, or 19 per cent. In sixty-five flocks reported by letter, 1,478 lambs were lost, out of 8,068 dropped, or 18 per cent.
3. Figuring on this basis for the State as a whole, 70,147 lambs, valued at \$350,375, were lost in Virginia during the lambing season of 1908.
4. The estimated loss from natural and unpreventable causes was 14,029 lambs, valued at \$70,145. The estimated loss from preventable causes was 56,118 lambs, valued at \$280,590.
5. Averaging the reports by letter and the reports by personal inspection, we find that the losses were due to the following causes: (a) Cold and exposure, 40 per cent.; (b) lack of milk, 31 per cent.; (c) weakness, 9 per cent.; (d) disease and accident, 3 per cent.; (e) worrying by dogs, 1 per cent.; (f) natural causes, 16 per cent.
6. Many Virginia shepherds should provide better shelter. A shed protected on the north, east and west, with an open southern exposure, is best. Allow twelve square feet floor-space per sheep.
7. Attention to the feed of the ewe for a month previous to lambing will insure an abundance of milk. Give feeds rich in protein, and supply succulence.
8. Maintain strong vitality in the flock, and hence ability to resist severe weather, by selecting strong, pure-bred rams, and keeping over only the strongest young breeding ewes.

With a Bull in a Ten-acre Field.

Editor "The Farmer's Advocate":

It is seldom a year passes without it being necessary to record an accident or fatality by cross or vicious bulls, and it is just possible that the experience of a young man who had an encounter with one may be of use to others who may be called upon to defend themselves against the attack of a ferocious bull, with no weapon of defence except that which nature gave them. The incident related occurred in September last.

The bull, a full-grown Ayrshire (full of vigor), had been turned into pasture for use, with a chain sufficiently long and heavy to keep him safe; but the chain got broken close by the ring, which let him free. The encounter took place in the middle of a ten-acre field, the young man having nothing with which to defend himself except an athletic and powerful physique. The bull, perfectly savage from the first, came with a rush. It was easy to side-step the first two or three times when he came past, but when he found he had been deceived he closed in, and began to spar for position, then tossing, thrusting and lunging. The young man managed to evade the attack, but was eventually thrown from his feet. Again and again the mad brute attempted to pin him to the ground with his horns, but each time he managed to roll quickly to the side, while the bull buried his horns in the turf. It was while he had missed one of these thrusts, and was lying on the ground, with the bull on his knees boring into the turf, that the young man grabbed him by the nose, ring and all, sprang to his feet, and as quickly caught his off-side fore foot and rolled him over. The fight was now over, but he was still alone in the middle of a ten-acre field, and if allowed up he might renew the attack. A few yards away he saw a stone about the right size. After a time, allowing him up and giving him a good warning with the boulder, took him home and put him into the stable. When the encounter was over the young man was stripped to the waist, as though he had been in a prize-fight, with only a few bruises.

The foregoing account is quite true in every detail. Although I did not see the encounter, I know the young man very well, and have often seen the bull, which is a big, powerful specimen of the breed.

Montreal, P. Q. SUBSCRIBER.



### Doors, Windows and Feed Chutes as Ventilators.

Editor "The Farmer's Advocate":

In your issue of January 7th several questions are asked on the subject of ventilation, and it is well worthy of serious consideration; also, the different systems mentioned. While I have not the least doubt that any or perhaps all of those work satisfactorily, I think it will take a terrible lot of preaching to instil it deep enough into the minds of the majority of stable-owners to persuade them to instal such systems. I am not speaking of prospective builders, but those who have stables already fitted up, especially when they think it possible to get good ventilation and pure air into their stables with the system that is already installed in all basement stables, namely, doors and windows, and feed chutes, mixed with a little judgment and common sense. But, in the case of a great many stables that have not been refitted, and still have the old plank or paved floors, which have become badly out of repair, soaked and filled to overflowing with the accumulations of a stable, it would be impossible to get pure air if all those systems were installed. A good floor is one of the great essentials to pure air.

The writer has a stable, 40 x 60, inside root-house and feed-room included, in which there are at present 31 head of cattle and five horses, with no system, except three doors, windows, and four feed chutes; and, by regulating those so as to avoid drafts, finds no trouble in keeping the stable in good healthful condition. I think a great many of the stables are kept too warm. We endeavor to keep the temperature about 45 or 50 degrees. At this there is never any moisture on the walls (which are stone) or ceiling, the latter being as dry as the outside of the doors. Also, when entering, do not meet a gust of foul air waiting a chance for escape. When the stock are out for water or exercise, they do not shiver, as when kept too warm. This temperature may appear to be rather low to some of your readers, but I find by experience the animals do better than if kept too warm.

As to what are the benefits of ventilation, it would be impossible to exist without some form of ventilation. Animals of any kind could not live for any length of time in a close room; the oxygen would soon be all turned to carbonic-acid gas, which is very poisonous. It is, therefore (if not the greatest), one of the greatest essentials to good health in man or beast.

The advantages of my particular plan are that it is cheap and effective, if handled rightly (as all systems have to be governed to be effective), and the essentials are present in every basement stable, which means a great deal. No matter how strongly those other systems are advocated, it will be many a long day before they are installed in every stable, though I have not one word to say against other systems or of what benefit they may be. JNO. R. PHILLIP.  
Grey Co., Ont.

## THE FARM.

### How the Old House was Improved.

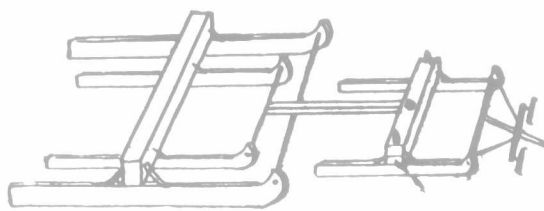
Anent the question of improving the old farmhouse, the writer has some experience to relate. The house in which most of my life was lived was built of brick, in 1840, the year in which I was born, and, having been well built, is still in use as a farmhouse, and in fairly good condition. When built, and while the family was small, it was not considered inconvenient to work in; indeed, in some respects it was too convenient, one feature being a well under the kitchen floor, and, as later an endless chain pump was installed, there was no need of an alarm clock to wake the family, as paterfamilias started the pump at five o'clock in the morning. But when the family grew to a baker's dozen, and half a dozen or more hired men had to be housed and fed, an extra kitchen was added, and, as the rear side of the house was but one storey high, it was decided to build a storey-and-a-half kitchen as an L to the main structure, the two rooms in the rear of the latter being turned into one large dining-room. The pump in that place being removed, and the well covered, but a plank cistern, which in time proved a greater nuisance, was placed under the new kitchen floor; and when, in the course of time, the planks rotted, the cistern leaked, and occasionally flooded the cellar, which, with a clay floor, was at such times in anything but a comfortable condition, as there was no drain leading from it. This was the condition of things when the farm came into the possession of the writer. The first improvement made was the tile-draining of the cellar, which required a drain of only about two hundred feet. Next was the building of a cement cistern outside the kitchen wall, and installation of a pump at the opposite side. Later, a cement floor was laid in the cellar, and life began to be worth living in the old

though bedrooms had been arranged for the men over the new kitchen and woodshed, there was a scarcity of chambers over the main portion of the house for the accommodation of a later, ambitious family growing up, and we began to study the possibilities of making improvements in the arrangement of rooms, with the result that, from two large rooms upstairs, three fair-sized ones were made, the center one being lighted by a pediment window, which made a gable in the roof, and considerably improved the outer appearance of the house. At the same time, the long room below, which, when the house was first built, served as a kitchen and dining-room, was divided, by means of folding doors, into dining-room and sitting-room, or library, and, on special occasions, was readily thrown into one large room. The entrance door to that portion of the house was strangely placed in one corner of the long room, and there was nothing in the way of a hall or vestibule, and no place to hang coats or hats, save on hooks along the walls of the room. There was, however, a space under the stairs, formerly used as a pantry, with a trap-door over the cellar stairs. This, in the remodeling, we utilized for a side entrance, the doorway in the corner being closed, and the door placed where the window of the pantry had been. A good-sized porch was built over the door, and we had then a respectable entrance, and a suitable place to hang coats and hats. A door was also opened from this entrance hall to the front parlor, the inside entrance to which was originally from a dark landing at the foot of the stairs, in the center of the house, the door at that point being now closed, supplying a clothes-closet for a ground-floor bedroom. Of course, after all these changes, the house was far from being perfect, but the improvements were real, and added much to the comfort of the family, to the convenience of working, and to the pleasure of the young people, to say nothing of the improved outward appearance of the house, making the home more attractive, and inciting ambition to keep it so. As it is over thirty years since these changes were made, I can give no definite figures as to the cost, but I estimate roughly that the whole expense was not over two hundred dollars, and it was certainly worth much more than that in saving of time and labor in the housekeeping, and especially in regard to sanitation, secured by the improved condition of the cellar. It may not be possible to make as many improvements in all old houses, even if required, but it is probable that in most houses, by a study of the conditions, considerable improvement may be effected, at a moderate cost. J. C. S.

### Improved Device for Sleighs.

A correspondent of "The Farmer's Advocate and Home Journal," of Winnipeg, writes to thank that paper for the description given last winter of a sleigh with a pair of runnets on the outside of the hind bob. He says:

"I built one after the description you gave, just to use about the farm, as the boys were always getting into trouble with the ordinary sleigh when hauling in hay and straw. Now they



use the new sleigh for everything, as it is so much safer and handier, so I have ordered another for my own use. It certainly solves the problem of keeping roads in shape in winter, and good roads mean light work on horses, as well as a saving in time. This is the best thing I ever saw in a farm paper."

The design from which the accompanying cut was made was supplied by a North Dakota reader, who is very enthusiastic about it, especially for hauling out grain loose in the box, as he says it never upsets.

### How to Renew.

A \$1.50 paper for \$1.25 is the bargain that may be obtained by a subscriber who will send on three other renewals along with his own. In clubs of four renewals or over we will accept \$1.25 per name.

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## THE DAIRY.

### Western Ontario Creamery Conditions.

There were 77 creameries in operation in Western Ontario in 1908, four more than in 1907. Nine of them made both cheese and butter. Milk and cream is sent to these 77 creameries by 14,115 patrons, only 2,150 fewer than are sending to the 217 cheese factories. This makes a total of 30,440 patrons producing milk and cream for the factories of Western Ontario, according to the report of creamery instruction by Chief Instructor Hems. In 1907 there was produced 2,932 tons of butter; in 1908, 3,270 tons, being a gain of 338 tons. Sixty-eight creameries collect cream, nine receive both cream and milk. There are no entirely milk-gathering creameries in operation. Sixty-five creameries pay by the Babcock test and only 12 by the oil test. Seven creameries are using the scales for sampling cream for testing, as against only four in 1907. Seventy-two creameries are using the combined churn, the box churn having practically gone out of use. Fourteen creameries are using a pasteurizer, 7 more than in 1907. Thirteen creameries are using large cans for collecting cream, 12 using individual cans, 6 using jacketed cans, 15 ordinary cans, and only 18 now use cream tanks. Thirty-eight creameries have first-class cream haulers, 36 only have fair-class haulers, 16 of which have a very poor class of cream haulers. The cream hauler has a wide influence among the patrons, since on him depends to some extent, at least, the responsibility of getting the patrons to handle the cream in better condition, and he should be well informed on creamery conditions, and other practical points, in order to give the patrons necessary information for improving the quality of the cream. Twenty-five creameries are using the cooler. The average temperature of the storages was 49.1 degrees. This is far too high, and some effort should be made to maintain a lower temperature, as butter soon loses its fine flavor if allowed to stand even for a short time at high temperature. Twenty-seven creameries kept the buttermilk tanks clean, 22 in fair condition, 21 in very bad condition. An effort should be made to keep these tanks clean as far as possible. The average per cent. of fat in the cream was 22%; for the northern creameries, 20%; for the southern creameries, 24%.

More uniform methods should be adopted by the creamerymen. It would be well to cut out measuring the cream in inches and adopt the plan of weighing. Decide on a uniform system of paying patrons with butter-fat or pounds of butter. Do away with the oil test, and all adopt the Babcock test. Have a system as nearly alike as possible in charges for manufacture. Then the patrons would know that every creamery was trying to do a good straight business.

Six hundred and forty-eight tests were made by the Beaker method for moisture in the butter; the average per cent. of moisture for the season was 14.33%. There were 61 samples with over 16% of moisture. These 61 samples, however, came from 19 creameries—6 in the northern group and 13 in the southern group.

Further improvements are reported in the quality of the cream, in the quality of the butter, and in the general equipment of the factory. The total amount of money expended in creamery improvements was \$8,240.00.

### Cheesemakers' Difficulty.

The quality of the cheese up to the end of June was fine, but when hot weather came in July there was the same difficulty as in 1907, at a few factories, with small round holes in the cheese. This difficulty was discussed at the district meetings, and the general opinion seemed to be that the remedy was to get a better quality of milk, cut the curds fine, using the 1/4-inch curd knife; get the curds firm before acid came on; not draw the whey to the surface of the curd too soon; get rid of all surplus moisture in the cooking if possible, and by stirring the curds sufficiently in the sink before piling, holding a little longer before milking, getting the curds well flaked, and give plenty of time before salting to get the curds well matured and free from moisture. Some of the late-fall cheese do not get sufficient attention in the matter of curing before being shipped. Some of the buyers complained bitterly of the neglect on the part of some of the makers along this line. The fall cheese should not be allowed to go below a temperature of 58 or 60. The boxes in one section were also complained of by the buyers. Very few acrid cheese were reported. The finish is improving, and the August and October makes were exceptionally fine. If we can ever get the milk in hot weather coming in good condition, and cooling rooms established, there is no reason why most cheese could not be made during the whole season. In visiting cooling rooms during the very hottest weather, one could not help but notice the fine smooth texture of the cheese. Chief Instructor Frank Hems, before the Western Ontario Dairyman's Convention



**Pasteurization of Whey.**

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of December 31st, on page 2030, a report is given of the discussion on "The Pasteurization of Whey," at a meeting held during the course of the Winter Fair.

Lest the following remarks should be misinterpreted, the writer wishes to place on record that he believes in the pasteurization of whey; in fact, has advocated this method of dealing with whey, both from the platform, and also in the publications of the Ontario Department of Agriculture.

In an investigation, which included the bacteriological analyses of can-washings of every can which carried milk to the Innerkip factory, it was found that yeasts which produced undesirable flavors in the factory were present in every can, the only exception being the cans belonging to a farmer who did not use his milk can for transporting the whey back to his farm. Although pasteurization was recommended to the patrons of this factory at the time, yet it has taken several years before the farmers could be induced to carry out this important and needed reform.

With these few remarks, let me call attention to one or two statements in Mr. Herns' address.

A pasteurizing temperature of 155 to 160 degrees F. is advocated, because higher temperatures cause the whey to become slimy and precipitate the albuminoids; but in Mr. Herns' opinion, this temperature is sufficient to kill all the bacteria and yeasts that are apt to bother the cheesemaker by causing abnormal flavors in his product. In fact, he considers that whey is rendered "germ free" by this process.

This statement, however, is apt to be misleading; it does not take into account the extraordinary resisting power of many organisms, and also fails to recognize the fact that a temperature of 155 degrees F. lies near the lower limit of the killing effect of heat.

When we wish to destroy micro-organisms by means of heat, we must take into consideration not only the degree of heat, but the length of time of the exposure, and the reaction of the liquid in which the bacteria are suspended. These are very important points, and, unfortunately, there is at present little information available. How long does the whey hold its temperature above 150 degrees F.? Probably not longer than 15 or 20 minutes, even when there is a considerable body of liquid in the tank. The acidity of the whey is also a valuable factor, because it increases the effectiveness of heating to a marked degree.

Every housewife knows that it is easier to can tomatoes than either peas, or corn, the reason being that the acidity of the tomatoes helps to kill the bacteria that may be present. There is experimental evidence to show that peas which had soured after heating for 30 minutes at 236 degrees F., could be killed in the presence of the acid by heating for a few minutes at 212 degrees F. Therefore, the amount of acid present in the whey, which varies from .2 to .5, probably plays a not unimportant part in increasing the effectiveness of the pasteurizing temperature of 155 to 160 degrees F.

The writer, however, desires to utter a note of warning to cheesemakers, not to expect that the temperature recommended will kill invariably all harmful bacteria and yeasts; unfortunately, some are very resistant.

A glance at some of the results of various pasteurizing temperatures may be of interest in this connection.

The New York Experiment Station made a number of tests of a Danish pasteurizer, at a temperature of 158 degrees C. The efficiency of the continuous pasteurizer varied greatly from day to day. Tests upon 14 different days gave an average of 15,300 living germs per cubic centimetre (16 drops) left in the pasteurized milk, with a maximum of 62,800 and a minimum of 120 germs.

At the Wisconsin Station it was found that there was considerable variation in the effect of heating at temperatures ranging between 153 to 165 degrees F. In some cases, as many as 40 per cent. of the bacteria survived, and in the tests published, the average number remaining in the pasteurized milk amounted to 2,000,000 germs per cubic centimetre.

At the Pennsylvania Station, whilst no numerical results are given, it is stated that heating to this temperature (155 to 158 degrees F.) in a continuous pasteurizer, it was found by culture plates that few, if any, of the bacteria present in the milk were destroyed.

At Guelph, the writer made a number of tests of the efficiency of two makes of pasteurizers. The average of thirteen tests, at temperatures ranging from 140 to 146 degrees F., showed that 2,000 bacteria per cubic centimetre were found in milk pasteurized at this heat. The milk had an acidity of .18. In the discussion of the results, emphasis is given to the fact that the effect of a temperature of 140 to 146 degrees F. is on the border between efficiency and non-

efficiency, and that the lactic-acid bacteria are the first to succumb, and that certain undesirable bacteria, hardier, and more resistant to adverse influences, are either not affected or only to a slight degree by this temperature, and if left even in moderate numbers, they rapidly increase, and may give rise to "off" flavors.

Mr. Herns mentions that pasteurizing whey gets rid of yeasty and bitter flavors, caused by various species of yeast. The thermal death-point of the yeast which produces bitterness and yeasty flavor in cheese is 145 degrees F. for 10 minutes, and if this temperature (145 degrees) is maintained in the whey tank for the length of time mentioned, this troublesome visitor would, if present, be killed.

To sum up:

1. The temperature recommended for the pasteurization of whey (150 to 160 degrees F.) lies near the lower limit of the killing effect of heat.

2. This temperature can only be efficient when the whey is held at the heat recommended (150 to 160 degrees F.) for a definite length of time—at least 15 to 20 minutes.

The other point mentioned by Mr. Herns, that the writer would like to discuss, is the suggestion that pasteurization of whey at 150 to 160 degrees F. would destroy the tuberculosis germ. This statement is, however, not definitely made by Mr. Herns, but this meaning might be taken from his account. The writer does not wish to accuse Mr. Herns of casuistry, or think his declaration an example of a guarded statement, like Gladstone's assertion, made to a supporter whose favorite measure he had promised to put in the forefront, and then dropped; that the forefront is not a point, but a line. A statement of this character, however, should be well supported by experimental evidence, otherwise we might acquire a false sense of security, at variance with the real facts.

The determination of the thermal death-point of the tubercle bacillus in milk has been the object of many researches. According to the researches of Theobald Smith and others, 20 minutes, at 140 degrees F., is sufficient to kill the tubercle bacillus, provided the milk is kept stirred, so as to prevent the formation of a skin on the surface. Bang has shown that a temperature of 185 degrees F. in a continuous pasteurizer kills this organism, and this temperature (185 degrees F.) has been taken as the Danish legal temperature for heating all the by-products of milk that are to be returned to the farm for feeding purposes.

Park gives the following figures for the killing of the tubercle bacillus:

- Heated in milk at a temperature of 121° F., 4 hours.
- Heated in milk at a temperature of 140° F., 30 min.
- Heated in milk at a temperature of 149° F., 15 min.
- Heated in milk at a temperature of 168° F., 10 min.

Thus, the question of the destruction of this disease-producing organism in milk hinges on the duration of time of the exposure, at the pasteurizing temperature of 150 to 160 degrees F.

In conclusion, the writer would suggest that the inspectors in the various districts take careful note of the temperature of the whey in the tanks, and note what length of time it remains at temperatures above 145 degrees F. The acidity of the whey should be ascertained.

With some data on these points, it would be easy to outline a series of experiments in order to

find out if any bacteria, associated with injurious fermentations in cheese, can survive the pasteurizing temperatures employed, and also to see if the tuberculosis germ survives this treatment. The writer considers the latter question very important, as there is considerable tuberculosis amongst swine, as evidenced by the testimony of the veterinary inspectors stationed at various Canadian abattoirs.

The Bacteriological Department of Macdonald College would be very pleased to conduct a series of experiments along any of the lines mentioned, in collaboration with the inspectors of factories.

F. C. HARRISON, Prof. of Bacteriology, Macdonald College, P. Q.

[\*It is only fair to Mr. Herns to state that, in preparing the copy of his paper for the printers, a couple of verbal errors occurred, which had the effect of misrepresenting his utterance on this point. In the original paper, the characterization, "germ-free whey," was qualified by the phrase, "so far as possible." In the same paragraph, four sentences above, an indistinct type-written character was interpreted as an n, whereas it had been intended for a y. This caused the sentence to commence, "When flavors develop in cheese," instead of "Whey flavors develop in cheese."—Editor.]

**Pasteurization of Whey and Feeding Value of Whey Fat.**

Decided advantage from the pasteurization of whey, and a serious loss in the feeding value of whey when the fat is skimmed off to be made into whey butter, are the two outstanding points in an address prepared by Prof. H. H. Dean, of Guelph, for the Eastern Live-stock and Poultry Show, held at Ottawa last week. From a synopsis of this address, kindly furnished us by Prof. Dean himself, we quote the following important statements, setting forth, among other facts, the results of an O. A. C. experiment, last season, in comparing the feeding value of skimmed with unskimmed whey.

**WHAT PASTEURIZATION IS.**

Pasteurization means the heating of a liquid (in this case, whey) to a temperature of 140 degrees F., to 185 degrees F., and afterwards cooling the liquid. The term arises from the name of a noted French scientist, Louis Pasteur, who devised the process known by his name. The object of pasteurization is to free the liquid partially or entirely of germ life. This is accomplished by means of heat, preferably moist heat, such as steam. Time and temperature are important factors in destroying the minute plant-life known as bacteria. A temperature of 150 degrees F., to 160 degrees F., for several hours, such as is the practice when pasteurizing whey, is as effective as a higher temperature for a shorter time. If the whey tanks are kept reasonably clean, and are covered, so as to retain the heat overnight, the patrons ought to be able to obtain practically sterile whey the following morning. This means that the danger of spreading bad flavors to the milk or disease germs to stock on the farm through the medium of the milk cans, where whey is returned in them, is reduced to almost the vanishing point.

**COMPOSITION OF WHEY.**

By whey, we mean the by-product, or what is left from milk after the rennet has coagulated or



Turning Out the Cows.



curdled the casein, enclosing most of the fat contained in the milk, some of the other milk solids, and a proportion of the water of milk. The feeding value of whey is largely found in the fat and solids not fat. Of the latter, the chief constituent is milk-sugar, which, when milk sours, is changed into an acid, known as lactic. While the latter has little or no direct food value, it seems to exert a beneficial effect upon food digestion in older animals. For young stock, however, the dairy by-products are more valuable without the lactic acid. In tests made at Western Ontario factories, it was found that whey unpasteurized contained from 1 to 1.7 per cent. lactic acid; whereas, whey pasteurized contained but .4 per cent acid, and in some cases as low as .25 per cent.

There is another beneficial effect of pasteurization, in that it prevents the fat separating from the other solids and the liquid, thus insuring an even distribution of the fat contained in the whey among all the patrons, and preventing that greasy mess in the whey tank, or in one or two patrons' cans, which is an abomination to those who have to wash tank or cans.

#### FEEDING VALUE OF WHEY FAT.

During the season of 1908 we conducted rather extensive experiments at the O. A. College regarding the whey-butter question, details of which can be found in the annual report of the College. In conjunction with the Animal Husbandry and Farm Department, we carried on a series of experiments to ascertain the relative feeding values for hogs of whey containing an average of about .25 per cent. fat, and similar whey from which the fat had been practically all extracted by means of a cream separator.

Prof. G. E. Day has kindly furnished the following summary of the results with pigs:

"Eleven pigs were fed ordinary whey and meal, ten pigs were fed separated whey and meal, and twelve pigs were fed water and meal, as a check group. The meal consisted of ground barley, frozen wheat and middlings. The experiment lasted 120 days.

"On ordinary whey, the average daily gain per pig was 1.16 pounds; for separated whey, 1.07 pounds; and for meal alone, .7 pounds.

"The feed consumed per 100 pounds gain for ordinary whey was 269 pounds of meal and 747 pounds of whey. For the separated whey, it was 297 pounds meal and 774 pounds whey. For the group fed meal alone, it required 430 pounds meal.

"From these figures we deduce that, if the value of separated whey be represented by 100; the value of ordinary whey would be 125, or 25 per cent. higher.

"I may say that, in this experiment, we found an abnormally high feeding value for both kinds of whey, and the only reason I can give for this state of affairs is that we fed a very small proportion of whey to meal. On an average, we fed hardly two and three-quarter pounds of whey for each pound of meal, and it is a well-known fact that, where small proportions of dairy by-products are used, they give a much higher feeding value per 100 lbs. than when they are used in larger quantities. As whey is ordinarily used, a much lower feeding value per 100 pounds would be obtained. In our experiment, however, we were anxious not to have any of the pigs put off their feed, and consequently we kept the whey down in quantity. Though the results show a higher feeding value for whey than normal, at the same time I think that the method of feeding should not affect the comparison of the two kinds of whey."

#### DIFFERENCE IN VALUE OF ORDINARY AND SEPARATED WHEY.

Assuming that live hogs are worth \$5.50 per 100 pounds, and that the meal cost \$1.50 per 100 pounds, we have a value of 18.2 cents per 100 pounds, for ordinary whey, and 13.4 cents, for whey from which the fat has been extracted—a difference of 4.8 cents per 100 pounds in favor of the whey containing the fat.

This means that in a factory where the fat is separated from the whey, or where the fat rises to the top of the whey in the tank, and is practically lost for feeding purposes, that the loss in feeding value is nearly five cents per 100 pounds whey.

#### THE WHEY-BUTTER QUESTION.

Looking at the whey-butter question for a moment, and taking the average of experiments made at the O. A. College during 1908, where the amount of whey butter made averaged from 2½ to 3 pounds per 1,000 pounds whey, we can see that whey butter must sell for an exceptionally high price to give any profit. Assuming that the yield be 3 pounds butter per 1,000 pounds whey, at 20 cents per pound, we have a value of 60 cents. According to the prices for butter as quoted, the difference in price between ordinary and separated whey is 48 cents per 1,000 pounds, or only 12 cents per 1,000 pounds whey for milk butter. If the price of the butter increases, the profit margin is greater, being 27 cents per 1,000

pounds whey, if the butter sells for 25 cents per pound, and 42 cents if 30 cents be received for the butter. These facts may very well cause farmers and factorymen to consider carefully whether or not it pays to manufacture whey butter.

The estimated cost of pasteurizing whey at the cheese factory is from 50 cents to \$1.00 per ton of cheese. Considering the enhanced feeding value of the whey, the reduction in risk of spreading bad flavors and disease, and the greater ease with which tanks and cans may be cleaned, we strongly recommend the cheese-factory managers of Eastern Ontario to make the necessary provision for pasteurization of whey during the season of 1909.

#### How a Prizewinning Herd was Handled.

Being unable to attend the Western Ontario Dairymen's Convention, owing to sickness in his family, Mr. John W. Cornish, of Harrietsville, Middlesex Co., winner of first prize and silver medal in the cheese-factory patrons' branch of the dairy-herd competition, sent Secretary Hems the following notes as to how his herd had been handled during the season. After thanking the President and Directors of the Association for the very satisfactory way in which they had handled the competition, he proceeded:

"My herd consists of eight grade Holsteins, one of which is a three-year-old heifer. Three of my cows freshened in March, the other five during April and the first week in May. About three weeks before freshening I gave a ration consisting of silage, straw or clover hay, and about a pint of oat chop, with a little oil cake added. Of course, the grain ration varied, according to the condition of the cow. After freshening, I increased the grain ration to three or four quarts per cow, at the morning and night feedings, and continued the silage and clover hay until they were turned out on grass, from which time I reduced the grain to one or two quarts per cow, and changed to bran or shorts in place of oat chop.

"I had half an acre of Hungarian grass convenient to the stable for green feed during the dry spell in the summer. I commenced feeding it as soon as it began to head out; always fed in the stable morning and evening. This feed lasted until my corn crop was available. We then fed corn morning, and roots at night.

"Another point that is very important is to salt and water one's cows often and regularly. I salt mine three times a week, and always water during the warm weather three times a day. We always milk at the same hour night and morning, and have the same person milk the same cow.

"I always send the laziest man on the farm after the cows—I generally go myself. I never allow the dog to accompany me, as I believe better results will be secured by slow driving of my cattle before milking. The more kindness you bestow upon your herd, along with proper feeding, the better will your herd results be."

#### Uses for Ice on Farm.

Among the uses for ice on the farm may be mentioned:

1. To put in tanks of water for cooling the cans of milk as soon as milked. If the ice be broken into small pieces, it will cool the milk more rapidly, because it melts more rapidly.

2. To cool water for raising the cream on milk set in deep cans, by gravity. Ice is almost a necessity for this form of creaming milk.

3. For cooling cream as soon as the milk is separated with a cream separator on the farm. Most of the troubles in cream-gathering creameries are caused by patrons neglecting to cool the cream at once after separating. Cream allowed to stand for some time after separation, without cooling, sours quickly, and usually develops a bad flavor.

4. For keeping butter, cream, milk, meat and other perishable household necessities in hot weather. A great deal of food is wasted in the average house in summer because of lack of ice to keep the food cool, thus causing a loss of what otherwise would be valuable human food.

5. For making cooling drinks in summer. While it is an error to pour icy-cold water down one's oesophagus, a cool drink in hot weather is always refreshing.

The storing of ice on the farm is not increasing as rapidly as it should, neither is the building of cooling rooms. These are two points where a determined effort should be made to secure incentives for improvement. The benefits of storing ice on the farm do not seem to be fully appreciated by the average patron; he needs to be reminded, as the city resident, to preserve food for the winter. (Ed. H. H. H.)

#### Udder and Its Affections.

(Abstract of a paper prepared by Dr. F. L. Russell, University of Maine, and given before the Maine Dairymen's Association at Dexter.)

First describing the structure and function of the udder, Dr. Russell divided its diseases into two classes—local, which affect no other part of the cow, and general, in which the udder is only one of the organs affected. Touching the first class, the following, with their remedies, were considered: Warts are not serious, though sometimes unsightly, and if they bleed at time of milking are decidedly objectionable. A little grease after milking will cause them to disappear.

Sore teats are frequently caused by exposure, or by the teeth of the sucking calf. A little vaseline applied after each milking, when the trouble first begins, is often all that is needed; the more serious cases yield readily to oxide of zinc ointment in place of the vaseline.

If a cow is such a hard milker that she is valueless to the dairyman, or if in the case of a heifer the upper valve is too rigid or is closed by a membrane, the teat bistoury should be used to remedy the conditions. It can sometimes be used to advantage in removing an obstruction in the duct of the teat. In the latter case it is sometimes necessary to use a milking tube until the quarter is dried off, when the obstruction can be cut out.

Fistulas can be dissected out with a sharp knife, or cauterized with a piece of large wire heated red hot. When the resultant wound heals the opening will be closed. Cows that are heavy milkers are often affected with bloody milk. This condition is due to the rupture of small blood vessels, and pulling down on the udder when milking is likely to aggravate it. The trouble may result from swollen or injured udder, or from abrupt increase of rich food. Sometimes it is necessary for the cow to go dry, but usually restricted diet and careful milking will lead to recovery in from three to ten days.

In the case of torn or cut udder, the wound must first be thoroughly disinfected, when stitches may be taken near together to close it. A disinfectant must be used as a wash while the wound is healing. Superficial wounds may be treated with creoline or zinc ointment.

In the case of congested udder, which is liable to affect heavy milkers just after calving, careful treatment is necessary or a valuable cow may become permanently injured. The feed should be laxative, and not too abundant; the udder should be bathed frequently with hot water and rubbed a long time with the bare hand. Camphorated oil may sometimes be applied to advantage. More can be accomplished the first day or two than is possible later if neglected at first. Some of the more serious cases require daily doses of an ounce of saltpetre and 20 to 30 drops of aconite.

In the second class of diseases, Dr. Russell placed milk fever, cow pox, tuberculosis and simple and contagious garget.

Milk fever has lost most of its terror, for now recoveries are the rule. The treatment consists in filling the udder with sterilized air, after which the cow may be expected to regain her normal condition in from eight to ten hours. A comfortable bed and warm clothing are desirable for the cow, yet not essential. The preventive for this disease consists in leaving the udder partially filled with milk until the calf is three or four days old.

Cow pox is characterized by considerable fever and sores on the udder or teats of the cow, and it is not usually considered a dangerous disease. These sores begin as small tender red spots, that later break and discharge, then gradually scab over and heal in about 20 days. The use of a milking tube and antiseptic washes hastens healing. It must run its course, and treatment is along the line of preventing its spread in the herd.

Tuberculosis of the udder is not very common. Hard, slightly tender lumps in the glands grow more or less slowly until the whole quarter may be filled, while the milk is normal in appearance. It is, of course, unfit for food, and the cow must be destroyed.

Garget is one of the most troublesome diseases that the dairyman has to contend with. In its mildest form it manifests itself in a scant supply of milk from one quarter of the udder, which may contain thick, stringy particles. In more severe cases all quarters of the udder may be seriously swollen and hot, and the secretion almost entirely suspended. The cow will be stiff and lame, with little appetite. The disease results from mistakes in feeding, but it may be produced from direct injury of the udder. Rough milkers have more trouble with garget than careful ones. The first attack, even if severe, usually yields to a moderate dose of physic, and daily doses of an ounce of saltpetre, with light laxative food. Sometimes distending the udder with sterile air is beneficial. Old cows that have frequent attacks of garget are best treated by sending to the butcher.

Contagious garget manifests itself at first as a hard, hot, painful swelling at one end of the teat, caused by the presence of certain bacteria. A frequent use of disinfectants on the outside and



in the milk duct will effect a cure in a few days. Neglected, the disease will creep into the udder and permanently destroy the quarter affected.

M. B. A.

## GARDEN & ORCHARD

### Opportunity for Ontario Fruit-growers.

The success met by the Short Course in fruit-growing, instituted a year ago at the O. A. C., has led to renewed efforts in 1909, with the result that a splendid practical programme is now being carried out. The course commenced on January 26th, and is to run until Feb. 5th. The features yet to come are, briefly, as follows:

On Friday, Jan. 29th, "Pruning," by W. T. Macoun; "Commercial Pear Culture," by J. E. Orr; "Top-working," by W. T. Macoun; "Fertilizers," by R. Harcourt.

Saturday, 30th (forenoon only), "Management of Bearing Orchards," by H. S. Peart; and Question Box.

Monday, Feb. 1st—"Insects Injurious to Fruits," by T. D. Jarvis, and "Orchard Diseases," by L. Caesar, O. A. C.

Tuesday, Feb. 2nd.—A general conference on the preparation and application of spraying mixtures, with demonstrations on a commercial scale.

Wednesday, Feb. 3rd.—A conference on "Varieties Worth Knowing"; "Thinning Fruit," by J. Gilbertson and Wm. H. French; conference on box and barrel packing; demonstrations conducted by A. McNeill.

Thursday, Feb. 4th.—"The Fruit Crop of 1908 and Its Disposition"; "Experiments with Long-distance Shipments," by J. B. Reynolds; "Cold Storage for the Fruit-grower," by J. A. Ruddick.

Friday, Feb. 5th.—Conference on co-operation; a thorough discussion by managers of co-operative associations and other experts.

The evenings will be devoted to special discussions, and to addresses by prominent speakers, including Prof. John Craig, A. McNeill, Prof. H. L. Hutt, T. D. Jarvis, and R. M. Winslow.

This is a meaty programme which no one interested in fruit-growing should miss if he can help it. The only necessary expense is for board, which can be obtained in the city near-by, and railroad fare—single-fare tickets on standard-certificate plan.

### Fertilizers in German Orchards.

Address by Prof. R. Harcourt, before the Ontario Fruit-growers' convention, 1908.

Statistics show that, while one-sixth of the cultivated land in Germany is devoted to the growing of potatoes, sugar beets, turnips, cabbage, etc., only one-fiftieth is in orchards and gardens. This statement gives some indication of the relative importance of fruit-culture in Germany.

Fruit-growing is most successful in the middle and southern part of the Empire, especially in Saxony, Franconia, and the Rhine Valley. But I did not see whole districts devoted to fruit-raising, as may be seen in some parts of Ontario. An exception must be made in the case of the grape, which is the most important of the fruits grown in Germany. It is found most extensively cultivated in the Rhine Valley, the valleys of the Moselle and the Neckar, where all the lower slopes of the hills are literally covered with vines. Grapes of somewhat inferior quality are also grown in the valleys of the Saale and Elbe, near Dresden. A comparatively small amount of these grapes are used for general household purposes; they are almost entirely converted into wine. To show the extent of this industry, it is only necessary to state that recent records prove that the annual production of wine in Germany is about one thousand million gallons.

My observations of actual orchard conditions in Germany were almost entirely confined to the neighborhood of Dresden, Leipzig, and Halle, or what might be called Central Germany. The roads in this part of the country, like those in almost all parts of the old land, are narrow and winding, a noticeable feature being the absence of fences along the lines of travel. But in many districts, a row of fruit trees, principally apples, plums and cherries, flourish on either side of the driveway, and when in bloom they make an exceptionally fine appearance, and take the place of unproductive ornamental trees, such as are seen in many parts of the Old Land. These fruit trees are the property of the municipality, corporation, or person who owns the road.

The common practice of the country is to sell the crop of fruit early in the summer, just after the fruit is set. The ordinary price is about twenty-five or fifty cents per tree, the purchaser taking all risks of the fruit being stolen, and to do all work in connection with spraying, picking,

### PLANTING ON HILLSIDES.

The same evidence of thrift is manifested in planting the sides of gullies or ravines with

fruit trees. On one farm visited there were 16,000 trees planted on the steep sides of a ravine. The place where the tree was planted was terraced, and kept free from grass. The fruit from these trees was sold in the same way as that along the roadsides, and the otherwise waste land—for no stock is pastured—was made to do its share in increasing the profits of the farm.

One feature of the cultivation of the soil, everywhere in evidence, was the thoroughness with which it was done. The German farmer has not as many labor-saving implements as we have, but labor is cheap, and they do not hesitate to make use of it. As an instance of this, I may cite the case of one 2,000-acre farm visited. On this farm there were several hundred acres of potatoes and sugar beets, nearly 100 acres of peas and beans for canning, 90 acres of asparagus, besides rye, wheat, barley, and oats. All the crops, with the exception of rye, were hand-hoed, and the ground was as clean and as free from weeds as a well-kept garden. On this farm there was no orchard, but the sides of the lanes and rough places were planted with fruit trees, which were both ornamental and profitable.

Another point that is particularly striking to a stranger is the amount of trellis work in orchards and on their fruit experimental grounds. On either side of the main drive at the Diemitz Fruit Experiment Station there are rows of trellised apples and pears. These may or may not be profitable, but they show the methods of doing this work, and certainly add variety and beauty to the orchards. The trellising of fruits, as, for instance, pears, on the sides and ends of old buildings, is very common, thus serving the double purpose of covering up the wall and improving its appearance, and of increasing the total revenue of the farm.

### EXTENSIVE USE OF FERTILIZERS.

By way of further increasing the returns from the land, it may be interesting to know that fertilizers are quite extensively used on all farm crops. But the Germans admit that they have not studied the characteristic food requirements of the fruit crops so fully as those of the cereal and root crops. The subject, however, is receiving a great deal of attention, and, as a result, many valuable conclusions have been reached. It was my good fortune to visit several farms where fertilizer experiments on fruit crops had been carried on for several years. Among the most interesting of these was a series of experiments that had been carried on for sixteen years on an orchard at the Diemitz Fruit Experiment Station. The object of the experiment was to ascertain the effect of each of the important fertilizer ingredients on the growth of wood, and the color, size, flavor and yield of fruit. In other places there were special experiments with the various kinds of small fruits.

It is impossible to deal with the results obtained in each individual experiment, but I shall endeavor to give, in a general way, some of the impressions gained as a result of my observation and through conversation with those in charge of the experiments.

In the first place, it would seem to be fairly established that the manurial constituents required per acre for the full development of fruit trees does not materially differ from that required for root and vegetable crops. But extensive experiments have repeatedly indicated that hoed crops, such as potatoes and sugar beets, make a better use of farmyard manure than fruits. It is further agreed that commercial fertilizers cannot take the place of stable manure, but that the best results are obtained when both are used, the one supplying humus and some plant food, and the other supplementing the deficiencies of the mineral constituents in the stable manure.

### RESULTS FROM MIXED FERTILIZERS.

At Diemitz and Stassfurt, I had a good opportunity of observing the results of the application of fertilizers on the apple orchard, which, after grapes, is the most important fruit of Germany. In both places, experiments have demonstrated that mixed fertilizers, containing the three essential manurial constituents—potash, phosphoric acid, and nitrogen—can be used with profit, but that the lack of potash affects the results more than any other one constituent. Where potash was not supplied, even though light dressings of stable manure were made every three or four years, the trees have assumed the appearance of those grown under adverse conditions on poor soil; i. e., the growth of wood is arrested, the leaves are small, and have an unhealthy color, and are covered with yellow spots. After the fruit is matured, there is some growth of wood, and the next spring there is put forth an abundance of blossoms, of which, however, few develop, owing to the lack of proper nourishment. In spite of the fact that there is an abundance of phosphoric acid and nitrogen in the soil, most of the fruit falls off during the summer; and, in consequence, the yield obtained when potash is not supplied is very little greater than when no fertilizers are used. I may say, however, that

these conditions are not general, certain varieties showing a marked ability to thrive under unfavorable conditions. In fact, a number of these varieties, which were pointed out to me, form strong wood and large leaves, and apparently possess the ability to throw off the superfluous fruit which the tree is not capable of fully maturing. Lack of nitrogen in the soil has been shown to have a somewhat similar effect upon the development of the fruit, although not so pronounced, while the absence of phosphoric acid is even less noticeable.

Experiments have fully demonstrated that the use of a complete fertilizer will more than double the yield of plums. Where nitrogen was omitted, the yield was much lower; and where phosphoric acid was lacking, it was still lower. In fact, the results of German investigations appear to indicate that the yield of stone fruits is more influenced by phosphatic and nitrogenous manures than core fruits. It is quite possible that this is due to the fact that stone fruits have a large kernel, which is rich in phosphoric acid, and, as the proportion of the kernel to fruit is much larger in stone fruits than in core fruits, the former have a greater need for phosphoric acid.

The results of fertilizer experiments with gooseberries indicate that potash is the most important constituent in influencing yield. With some varieties phosphoric acid stood second and nitrogen third, and with others the nitrogen ranked second, and the phosphoric acid third. It would, therefore, appear that, while different kinds of fruits make use of the various manurial constituents in different proportions, the different varieties of one kind of fruit also have their own peculiarities, which have to be studied.

### RESPONSE FROM STRAWBERRY PATCH.

Strawberries have been found to respond readily to the application of commercial fertilizers. The study of their requirements is not so difficult as are those of other fruits. This is partly because they come into bearing quickly, and partly due to the fact that they are generally grown in rotation with vegetables. Experiments have demonstrated that the complete mixture of fertilizers give the largest yields, and that, on ground in good condition, the plot that received no nitrogen gave nearly as good results; while, if either potash or phosphoric acid are omitted, the yield is seriously diminished.

From these observations, it is not surprising to find that the general opinion among many German fruit-growers is that potash and phosphoric acid are of the utmost importance in the development of fruit-bearing trees and bushes. Even if these constituents are applied in excess, no harm will be done, whereas an excess of nitrogen may injure the trees, and, besides, exert an unfavorable influence on the composition of the fruit. Large applications of nitrogen to strawberries, especially if the season happens to be a wet one, causes the berries to begin to decay early. Apples are said to be similarly affected, while gooseberries, raspberries and currants are affected to a lesser extent.

Regarding the quality and flavor of fruit, the results of German investigators show that the presence in the soil of an abundance of phosphoric acid and potash is extremely important. On the other hand, where nitrogen is somewhat deficient, the effect on the quality was scarcely perceptible.

### INFLUENCE ON SIZE OF FRUIT.

Considerable work has been done on determining the influence of the several ingredients on the size of individual fruits. With core and stone fruits, the experiments are not far enough advanced to warrant definite conclusions, but with berries a greater number of results have been obtained, and these appear to indicate that the lack of phosphoric acid did not materially decrease the size of the berries, as compared with those grown where a complete mixture of fertilizers was used; but when potash was not applied, the berries were smaller; and where the nitrogen was left out, they were still smaller.

Another question which is receiving a great deal of attention is whether a different action is detectable when nitrogen is applied as nitrate of soda, or sulphate of ammonia, or horn meal, the phosphoric acid as ground bone or superphosphate, or the potash as the chloride or sulphate of potash. So far as I was able to learn, no definite results have been obtained.

The problem of what quantities of fertilizers must be used to force maximum crops, and whether these large quantities will sufficiently increase the yield to pay for the extra cost of the fertilizers, is also being studied.

Laboratory investigations are being made to ascertain the amount of the fertilizing constituents in the various fruits, and the distribution of these in the plant.

In conclusion, I may say that the Germans appear to have proved to their own satisfaction that the use of commercial fertilizers on general farm crops is profitable, and they are now making a serious effort to gather sufficient data to enable the fruit-grower to use these substances intelligently.



## DISCUSSION.

Q. Is it the practice of the general fruit-grower in Germany to use commercial fertilizers largely?

A. So far as I could judge, they are used generally all over the country.

Q. What is the value of wood ashes?

A. Ashes are something like a pig in a bag. As a rule, good unleached wood ashes should contain 5 to 6 per cent. potash, though they have analyzed as low as 1½ per cent. It is a mistake to allow ashes to go out of the country. Potash, in the form of chloride or sulphate, costs 5 to 6 cents a pound. It is safe to say that the fruit-grower can afford to pay 5 cents a pound for the potash in wood ashes; thus, ashes analyzing 5 per cent. potash would be worth 25 cents per cwt. for their potash alone. In addition, they contain 40 to 50 per cent. of lime and a little phosphoric acid. Taking everything into consideration, good ashes are a safe investment at 12 cents per bushel of 60 pounds. The value of wood ash depends quite largely upon the particular kind of wood, some kinds of trees yielding an ash much richer in potash than others. The soft woods, as a rule, make a light, fluffy ash. Hence, it is more satisfactory to buy by weight than by measure.

## POINTERS.

Muriate of potash should not be used for potatoes when quality is a consideration. Some other form of potash—for instance, sulphate of potash—should be used for this crop.

Apply potash early in the season. Manures and fertilizers can be of use to the roots of a plant only as they branch out and take up what has been distributed through the soil.

It is better that bone meal should be ground quite fine.

Q. What about the use of raw, ground rock-phosphate?

A. I would not hesitate to use raw ground rock-phosphate on a soil rich in humus. Untreated rock-phosphate is not readily available, but application of it may be all right as a means of getting a reserve supply of phosphorus in the soil.

A. W. Peart—I have three acres of grapes on a sandy, gravelly loam. Once in five years it has received an application of barnyard manure, the rest of the time 200 pounds muriate of potash per acre. The last time I used sulphate of potash, thinking possibly the sulphur might tend to reduce the mildew in the vineyard. Whether it did this or not, the general results of the above system of fertilizing that grapeery have been good.

Q. What about the value of rotted, as compared with fresh manure?

A. The greatest fertilizing value is derived from manure immediately applied to the land. There is something beneficial in manure beyond the fertilizing constituents contained. It is supposed that the application of manure introduces into the soil bacterial activity which assists in the liberation of other plant food already in the soil. In any case, manure has a good effect on the physical condition of the soil.

Q. What about the relative value of manure from different classes of stock?

A. In full-grown animals, 90 to 100 per cent. of the phosphoric acid, potash and nitrogen in the grain consumed goes into the manure; with young animals and cows, perhaps not over 60 per cent. goes back. Manure from fattening animals is thus more valuable than that from young and growing ones.

A member referred to some experiments with raspberries in New Jersey, in which one dollar's worth of manure gave a return of \$6 in fruit, while one dollar invested in commercial fertilizer gave a return of \$15.

Prof. Harcourt—The Germans have found that vegetables made better use of barnyard manure than did fruits. However, one may get fertilizer experiments to tell him almost anything he likes.

Q. What about the effect of fertilizing on color of fruit?

A. In a general way, the experience in Ger-

many seems to have been that, when they have abundance of potash and phosphoric acid, they are much surer of color than otherwise. Plenty of exposure to sun is also important.

## Model Orchards in P. E. Island.

The attempts of the Provincial Government in Prince Edward Island to promote orcharding seem to have been attended by uncertain results. The enthusiasm appears to have died as soon as the orchards were planted. It is claimed that the Government had agreed to attend to the cultural operations, but instead this work was left to the owners of the farms on which the orchards were set. All but two of the orchards were neglected, and the net result is that the model orchards have been a hindrance rather than an aid to horticulture.

In dealing with one of the two orchards that were well cared for by those who owned the land, Prof. Theodore Ross, of Charlottetown, writes:

"In 1903 a model orchard was set out on the farm of John A. Annear. It consisted of 2 Northern Spies, 3 Astrachans, and 5 each of Baldwin, Wealthy, Gravenstein, Ontario, Stark, Ben Davis and King varieties. The soil, which had been well prepared the previous year by bearing a crop of potatoes, was a sandy loam, and sloped gently to the south-west. A strip 4 feet wide on each side of the rows has always been kept clean till about the middle or last of July, when cover crops of different kinds have been sown. Up to the present 5 Baldwin, 4 Stark, 4 Gravenstein, 2 Ben Davis and 1 King have died, and have been replaced by 5 Northern Spy, 5 Wealthy, 5 McIntosh Red and 1 Peewaukee.

"Owing, perhaps, to the shelter on the north, this orchard has been badly injured by sunscald. All varieties have been found to be not equally subject to it. In order of resistance they stand, King, Astrachan, McIntosh Red, Ben Davis, Spy, Wealthy and Ontario. The Baldwins and Gravensteins were winter-killed, and the Ontarios were frozen back very badly. The Starks died the second year; probably they were too much dried out before planting. The King was killed by the oyster-shell bark-louse.

"The Astrachans, Ben Davis and Wealthy are making the best growth, while the Kings and Spies are making the slowest. Only the Astrachans and the Wealthies first planted have yet come into bearing. The former have produced a few for each of the last three years, while the latter have borne about 1½ bushels per tree this season.

"This orchard is having an excellent effect on the surrounding community, and already many trees have been planted in the neighborhood, and orchards that have been planted are receiving better care. Chief McNeill, of the Fruit Division, says, in his report of a meeting held in this orchard: 'It is a pleasure to report the very great interest taken in orcharding in this neighborhood.' The value of the meeting was greatly enhanced from the fact that it was held in an orchard which may be pointed to as a model worthy in every respect of the best fruit-growing districts in any of the Provinces."

## Niagara District Fruit-growers' Problems.

## TRANSPORTATION GRIEVANCES.

It was clearly brought out at the annual meeting of the Niagara Fruit-growers' Association, held in Grimsby, Ontario, on January 14th, that growers and shippers have cause for complaint in regard to the way their goods are handled by the express companies. Considerable evidence was submitted by a large number of the members, which goes to show that the general rates are unreasonably high; that there are many irregularities in the tariff, and that considerable pilfering is done to fruit in transit, particularly at small places. These matters have such an important bearing on the fruit industry that it was decided by the association to take immediate steps with the object of securing redress if possible. Con-

sequently, a committee, composed of representative growers and shippers from the Niagara district, was appointed to meet with representatives from the Ontario Fruit-growers' Association, at Toronto, on January 15th, and present their grievances before the Railway Commission.

The meeting on the 14th was largely attended, it being the first annual meeting of the association since its reorganization a year ago. W. H. Bunting, President of the Association, in his opening remarks referred briefly to the growth and influence of the association, and touched upon the chief point at issue, the tariff of the express companies. This point was further enlarged upon by E. D. Smith. One grievance of the growers, he said, was the inequality of the tariff. In many instances there was a difference of 50% in the rates between places equal distances apart. The chief grievance was, however, the unreasonably high rate charged. "There should be a general reduction all round," he said. "We have no grounds for asking for a general reduction in rates. We believe them to be too high, yet the company claim they are not making more than 6% profit at present rates. Considerable of the public money has been expended in the building of railroads and inaugurating express systems, and, consequently, they have a right to good and reasonable service at the hands of the express companies. It should be the duty of the railway board to investigate and find out if the express companies can afford to lower the rates." Another grievance pointed out by Mr. Smith was the losses resulting from causes believed to be in the control of the railway companies. We should insist upon a ruling, he said, in presenting our case before the Railway Board, that the company be made liable for the destruction of fruit delayed in transit.

President W. H. Bunting, speaking on this matter, stated that one result of the high express rates was that growers have been obliged to send goods in carload lots to large centers, to the detriment of the smaller places, and loss to the express companies. It was pointed out that as far as our Western trade was concerned we could compete with California in those fruits that could be shipped by freight. In respect to peaches and other more perishable fruits, that had to be shipped by express, we could not compete in the Western country owing to the high express rates.

Mr. Thompson, of St. Catharines, referred to the pilfering of fruit in transit, and the lack of accommodation and shelter at many shipping points. A number of growers submitted testimony regarding pilfering, evincing a willingness to furnish such evidence before the board if necessary.

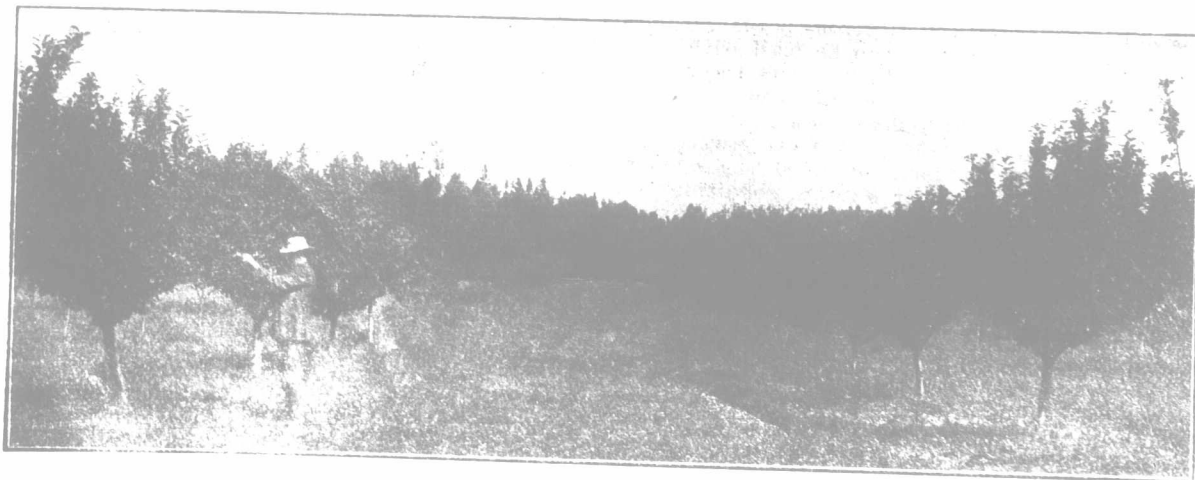
Major H. L. Roberts pointed out that the 6% profit referred to by the company probably covered the whole business of the company, and if so the profit on fruit alone would exceed this figure. Another point brought out was that the present rates, which were fixed a number of years ago, included the returning of empties to the shippers. This was not done now by the companies. Again, owing to more compact packages now in use, space in cars could be used more economically now than formerly, the capacity of cars being thereby increased. Evidence of the inequality in rates was furnished by some St. Catharines growers, who stated that they had a 30-cent. rate to Toronto, whereas the rate from Winona and Grimsby is 40 cents a hundred.

The committee appointed to place the case before the Railway Board was named as follows: F. A. Goring, A. E. Kimmins, T. H. P. Carpenter, Murray Pettit, J. M. Metcalf, J. W. Smith, H. Burchholder, W. Hendershot, H. Fleming and H. L. Roberts. In order to strengthen their position, they were backed up by the following resolution, expressing the feeling of the meeting: That in the opinion of this meeting it is desirable that every effort be made to bring to bear upon the Railway Commission the importance to the industry of the following points: 1, Reasonable express rates; 2, graded rates in larger shipments and car lots; 3, that pilfering and rough handling be eliminated; 4, that responsibility regarding delays be fixed, also a proper method of settling just claims within a reasonable period; 5, that proper accommodation, both as regards cars and shelters at points of shipment, be provided.

A resolution respecting a regular grant to the association was passed, in effect that the President, Secretary, C. E. Fisher and E. D. Smith, be a committee to interview the Minister and endeavor to get a suitable grant for educational purposes. The amount named was \$300. This grant is to be used in securing speakers for the annual meetings in March.

## EXPERIMENTS WITH SPRAY MIXTURES.

A spray committee, appointed at the last annual meeting, to experiment with the Cooper's fluids and commercial lime and sulphur, reported quite favorably on Cooper's fluids, particularly the V1. It had killed the scale on peach trees that were marked for destruction without doing any apparent injury to the trees. Different results, however, had been secured by A. H. Pettit. He had used the V1 on peach trees while dormant, and had noticed no particular advantage. He then applied the V2 solution on May 1st, and



General View of a Prince Edward Island Model Orchard.

REPEATED



again early in June, with the result that the foliage was practically all burned off the trees. Some others had secured similar results, even when only  $\frac{1}{2}$  strength had been used. Mr. Pettit said that he had used the fluids on some cherry, plum, peach, pear and apple trees. The plum was slightly burned, the peach seriously injured, while no results were noticed on apples and cherries. In view of this, the contention of the meeting was that great care must be exercised in the handling of these mixtures. The commercial lime-sulphur solution was not considered equal to the boiled mixture, and was much more expensive.

E. D. Smith will be the next President of the Association. The following directors were appointed: Niagara Township—F. A. Goring, A. Onslow, W. O. Burgess, H. Fisher, W. Armstrong. Grantham—W. H. Bunting, Geo. A. Robertson, F. G. Stewart, W. C. McCalla, R. Thompson, Louth—S. H. Rittenhouse, J. H. Broderick, C. M. Honsberger, F. Blaikie. Pelham—G. A. Brown, A. Railton, D. Lightle. Clinton—S. M. Culp, W. J. Andrews, W. B. Rittenhouse, H. S. Peart, J. Brennan. N. Grimsby—A. H. Pettit, J. M. Metcalf, H. L. Roberts, T. Wolverton, A. J. Pettit. Saltfleet—J. Carpenter, J. W. Smith, E. D. Smith. Murray Pettit, J. E. Henry, Erland Lee. Wainfleet—C. Henderson, L. Weaver. S. Grimsby—A. E. Adams, J. Ayson Merrit. Barton—Geo. Aurey, Thos. Maclem, H. Burcholder, R. H. Lewis. Ancaster—J. T. H. Regan. Stamford—C. F. Munroe, Thos. Berriman.

A resolution was passed, giving power to vote to as many directors as were present at a directors' meeting from any municipality, so long as the total number of votes to which that municipality is entitled is not exceeded.

The following spray committee was appointed to supervise the work with new spraying mixtures this year: H. S. Peart, R. Thompson, W. C. McCalla, J. W. Smith and Jos. Tweedle.

J. Nelson, of Toronto, stated that rates on manure from that place were likely to be raised, and he advised the association to act accordingly. In regard to this matter, it was resolved that, in the opinion of the association, the rates on manure were excessive. G. H. C.

## POULTRY.

### Turkeys Need no Housing.

In the opinion of D. A. Graham, of Lambton County, Ont., turkeys thrive much better in the open than when housed. For over twenty years large flocks of bronze turkeys have been raised each season. About 20 hens are wintered, and one gobble kept for each seven hens.

"My turkeys always are outside," said Mr. Graham to "The Farmer's Advocate" recently, "and I am never troubled with disease. To provide roosts I simply put four posts in the ground and fasten rails, about six feet from the ground. A hopping rail is placed lower down. There is no difficulty in inducing the birds to roost here. They prefer to go higher, but by having a yard twenty feet square, or larger, and keeping the mother hen and her young there during early summer, they recognize this as their home. For a time after the young birds begin to roost they remain on the hopping rail, but before long they mount higher. Some people claim that turkeys do not come home at night, but I find no fault with them in this regard. For two or three days I watch that they do not wander too far, and I always see that some grain awaits them in the evening.

"Eggs should be put to hatch as early as possible in the spring. It is remarkable the adverse treatment turkey eggs will withstand. Frequently I have known eggs laid in a brush pile to lie in snow and wet and still remain fertile. It is well to start hatching in an incubator, and then before they are hatched the turkey hen will have taken to the nest and the eggs can be placed under her. The youngsters can take care of themselves as soon as they are big enough to run through the grass. An old turkey gives ample protection in wet weather. I do not recommend the use of ordinary hens as foster mothers. Very frequently lice are transmitted to the newly-hatched turkeys, with disastrous results. Many cases of scours are due to lice. I believe fully two-thirds of the mortality in young turkeys is due to lice rather than to disease. As a general rule, turkeys reared around the house do not thrive as well as those that run through the fields. When they are not with a hen turkey tendency is to go to roost while too young, and in many instances crooked breast bones are developed.

"As to feeding, nothing is better for newly-hatched turkeys than curdled milk. It is not a softening food. Hard-boiled eggs and rolled oats can be used to advantage, but granulated oat meal is more desirable. After a time wheat can be given. Turkeys require dry food. Curdled milk is good at all times, and for all sizes of turkeys."

### Farm Poultry Account.

Editor "The Farmer's Advocate":

In a recent issue you ask for the account and experience of poultry-keeping.

Last winter I sent you the results of the winter months, with method of feeding, plans and description of the poultry house, so will now send you the year's account. On January 1st we started with 30 Barred Plymouth Rock pullets, 1 cock and 1 cockerel. During the summer 7 of the (now) hens died or were killed by a ravenous brood sow, which was in the barnyard, which leaves 23 hens; so that our flock now consists of 23 hens, 24 pullets and 3 cockerels, which are not akin to either hens or pullets.

I might just say that during the winter the pullets were fed a warm mash in the morning, with some poultry food (which was omitted after the pullets were in a good laying condition), and a feed of mixed grain, mixed in the litter of chaff on the floor, at noon; a medium-sized mangel every day, and an occasional feed of meat scraps, grit and fresh water always being before the fowl. After the ground was dried in the spring the fowl were fed on the ground out of doors. The following is the monthly egg record, and the account in full: Jan., 93; Feb., 336; Mar., 539; Apr. 516; May, 358; June, 297; July, 388; Aug., 339; Sept., 235; Oct., 125; Nov., 38; Dec., 27; total, 3,321.

#### RECEIPTS.

	Average price.	
145 dozen sold at	18 38/145c.	\$26.48
7 settings of 13 each, at	25c.	1.75
67 eggs, for hatching, at	25c.	1.30
117 1/2 dozen consumed, at	18 38/145c.	21.42
24 pullets, valued at	50c.	12.00
16 cockerels, at	60c.	9.60
1 setting eggs, 15, at	\$1	1.00
Total		\$73.55

#### EXPENDITURE.

25 cwt. of mixed grain and chop, at \$1.20 per cwt.	\$30.00
10 bush. of mangels, at 10c. per bush.	1.00
Poultry food	1.00
Meat scraps, bread for chicks, etc.	3.00
Total	\$35.00

#### SUMMARY.

Receipts	\$73.55
Expenses	35.00
Profit	\$38.55

The chicks were all hatched by hens, and the labor in caring for them is not counted in the account. Hoping that this may be worth publishing, and wishing you every success in the future. Perth Co., Ont. GEO. S. HAMMOND.

### Poultry and Incubator Experience.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of December 24, contributions are invited from those who have been keeping poultry, and who have been keeping track of what they were doing as to profit or loss. I do not profess to be an expert at all, and my experience may seem to some quite commonplace; but at the same time, in the hope that it may prove of interest to some of your large circle of readers, I give it for what it is worth. I may say I have been keeping poultry for years, but what I wish to speak of here is principally the experience of the past year, with a flock of incubator-hatched chickens, of the Barred Rock persuasion. In past years I changed breeds sometimes. I started with Barred Rocks. They got so broody in summer I lost patience, and crossed them with S. C. White Leghorns. The pullets from this cross were good layers from early spring until late summer, or, rather, fall, but did not do so well in winter; yet this flock made a profit of a dollar each over cost of their feed for the year. I tried Wyandottes for a few years, but finally came back to the Barred Rocks, and perhaps there is no better all-round breed, if rightly handled and cared for.

I had no end of trouble trying to raise chickens in the natural way by means of the hen; and right here I do not wish it to be inferred that I do not consider it the best way, providing you are successful. But in my case the hens insisted on sitting in the henhouse—quite natural, too—where they had been laying their eggs. But it's a bad place to brood in. The other hens insist on laying in the same nest, and break the eggs, or often get the brooding hen shuffled off to another nest, and the eggs are spoiled. If you shut them off from the interference of the others, you have to take them off for feed and water every day, and see that they get back again all right. Getting them induced to sit in another building, by removing them at night, and setting them on china eggs for a few days at first, etc., is a mighty sight easier said than done, so that some years we had scarcely any chickens at all.

So we resolved to try artificial hatching, and in the spring of last year bought an incubator and brooder, but by some mischance the machine

was delayed in transit so long that it was on in the month of June before we got our first hatch out. We immediately started a second one, and in both cases got a 75-per-cent. hatch, which was not bad for beginners. Our machine is a 100-egg one, of Canadian make, uses hot water instead of hot air for heating, which, I think, must be an advantage, as it is very easy to maintain an even temperature in it. The chicks were healthy and strong, and thrived remarkably well. They were fed granulated oatmeal, hard-boiled eggs (those infertile eggs that have been tried out of the incubator are all right for this purpose), stale bread soaked in sweet milk and then squeezed dry, finely-chopped onion tops, etc. They were supplied with plenty of grit. This I consider very important with very young chicks. When they were removed from the brooder they were put in a covered pen, where they had room to move about freely without crowding, and were soon afterwards placed in yards enclosed with poultry netting, and with a covered shelter in one corner for protection from rain, etc. They were fed wheat as their principal grain food after removal to the yards, and often some of the butchers, such as finely-chopped liver, etc. As soon as mangels were available they were fed some, which they seemed to relish. Grit was kept before them always, and they had always as much skim milk as they could drink. Under this treatment they continued to thrive very well. When winter approached I had some difficulty in housing them. My poultry house was built many years ago, and not up-to-date or large enough, so I had to make the best I could of an empty hoggpen as an improvised chicken house. I had a lot of cockerels which should have been coop fattened in the fall. I made the mistake of keeping these until January, all running with the pullets. Kept in this way the cockerels were not properly fattened, but they weighed from four to five pounds dressed, and sold at 14c. per pound. We killed some of them for our own use, which is not taken into account. After these were disposed of we had 64 pullets, and it is with the performance of these as layers that I purpose particularly to deal. Owing to the lateness of the hatch, and being in rather crowded quarters previous to the disposal of the cockerels, these pullets did not commence to lay until well on in February, and then only a few of the oldest ones. By the middle of March they were doing fairly well, and through the months of April, May and June the 64 averaged 50 eggs a day. They did nearly as well in July and August, and kept up a good average until they began to moult late in the fall, and even then they still continued to lay a few, so that egg production never entirely stopped. Their total production for the year was 840 dozen. In early spring the price was 25c., then dropped to 20c., but during summer never below 15c., and that only for a short time. In the fall they gradually rose again to 20c. and 25c. We use a large quantity of eggs ourselves, and it is only fair to put these at the selling price, and a fair average price for the year would be 18c. per dozen, which gives a total of \$151.20 for eggs alone. To this add \$34 for dressed poultry, making a total of \$185.20. As up to the time the cockerels were marketed they and the pullets were fed together, it is difficult to arrive at correct estimate of the cost of feed for each. But as near as I can figure out cost it is safe to say that these pullets have made a net profit of \$1.27 per head. There was very little profit on the cockerels, if any, as they eat nearly twice as much as pullets. However, this on the whole is not a bad showing, and goes to prove that even under adverse conditions there is profit in poultry. The adverse conditions in this case were lateness of the hatch, keeping the cockerels too long, and rather crowded quarters.

This last year we hatched early, and the pullets began to lay in December, and the cockerels were shipped alive in August, and brought nearly as much money as the others that were kept until winter. Now, a word as to the feed and treatment of the laying hens. Usually the morning feed was a mash, made of a mixture of finely-chopped oats and barley mixed with shorts, to which was added oil-cake meal. The mixture was scalded and then mixed and stirred until nearly dry. The grain feed was varied for the evening meal, using wheat, oats and barley. They had grit and crushed oyster-shells constantly before them, and all the time as much skim milk as they would drink. They got no cut bone, and seldom any meat of any kind, but they had plenty of room to range all through the summer and fall. Their quarters were kept fairly clean, the dropping boards under roosts cleaned off frequently and sprinkled with land plaster. Did they get broody? Yes, of course they did, although pullets are not so bad as older hens are. I manage them by taking them off the nest as soon as they begin to sit, and shutting them in a pen with an active young cockerel. This usually breaks them up in three or four days, and they go to laying again. This is the best remedy I have ever tried. I would sometimes have a half dozen in the pen at once. The cockerel kept for this purpose should be well fed, and let out of the pen occasionally for a day or two.



I want to emphasize in this article one fact gained from experience in feeding for egg production, that is the value of oil cake as an egg producer. I have never heard any professors or poultry experts recommend it, nor have I ever seen it recommended in the agricultural press; but I am satisfied there is nothing to equal it for that purpose. Cut green bone is, no doubt, excellent, but if you have not got it keep oyster-shells before them and all the skim milk they will drink, and you won't miss the bone very much. Cut green bone is for sale by the abattoirs, but the price is out of sight—won't pay. They should never be allowed to run out of grit during winter, and in localities where the surrounding surface soil is clay, they should have grit in summer too. I use mica crystal. It should be crushed fine for young chicks in the brooder, and, of course, will do to be coarser for full-grown ones.

The hen is naturally an active creature, and the long term of confinement during our winter season is against her. If building a poultry house, be sure to arrange for a scratching pen. Active exercise is most essential to the health of the hen. If there is no scratching pen, do the next best thing (as I had to do), keep a few inches of chaff or short straw on the floor, to be renewed as often as it begins to get foul, and scatter some grain in it every day. A dust bath in a broad, shallow box, where the sun will shine on it on bright days, is much appreciated. For green feed in winter, I give pulped mangels and cull apples, twice or thrice a week.

Long-bodied pullets are usually the best layers—they stay with it. I have never coop-fattened any cockerels, so I do not know what there is in it, but am inclined to believe it best to hatch early and sell them as broilers.

One of the main points in profitable egg production is to never let the hens get old. Two years is enough to get the best results in eggs. When they are fattened and killed at two years they are about equal to chickens in quality of flesh. I have seen nice pullets sold at stock credit sales for less than 50c. each. Take 50c. as the price. If with proper care and a little attention to details you can make a net profit of \$1.27 on a 50-cent investment in a year it's a good financial proposition. Poultry will pay if handled right.

G. C. CASTON.  
Simcoe Co., Ont.

### Woman's Experience with Turkeys.

Editor "The Farmer's Advocate":

I was a school teacher, but married a farmer. My parents were farmers, but I knew very little about the work, although I was always assured there was lots of drudgery, with little pay.

My first experience in the poultry line was with a small turkey hen. People told me young turkeys were hard to raise. I saw, with the very best of attention, they did not do well, so as soon as the birds were two days old I let them away with the mother. I brought them back and fed them at night for a few nights, and then they came of their own accord. I rarely lost a turkey. They grew well, and the heaviest rains did not hurt them, although I had been repeatedly warned by farmers' wives that even the dew would kill them.

Farming is becoming more interesting to me every day. I do not now look altogether at the money side of it. When, by experimenting, I unearth a fact unknown to me before, I feel as if I had the pure gold in my hand.

I notice, if I throw down a bone of meat to my hens, it will be cleaned off in a few minutes by the strongest birds; but if I hang it by a string to a peg, just so that they can get a peck at it, all the birds will get a chance at it. They will not eat it too fast, and they exercise themselves in following its motions.

SIMPLICITY.

## THE FARM BULLETIN

### P. E. Island.

Very fine weather so far this winter, with very good sleighing for some weeks, till the 7th of January, when there came a great rainstorm, and left fields and roads bare. Stock is wintering finely so far, and more butter is being manufactured than in any previous winter. Cows are being well fed, and are milking extra well. Quite a large percentage of the cheese companies are running butter plants this winter, and the dairy cows are paying their owners a good profit. Our dairy companies are beginning to hold their annual meetings, after having paid off the patrons in full for the summer cheese and butter season. The price of cheese for the season was 12c., and milk at the factories averaged a little over 90c. per 100 pounds. The butter factories also gave good returns. Some of the smaller factories on the Island have gone out of business; being placed so near together, their milk supply was not sufficient to enable them to do a profitable business. Factories well situated, with plenty of

territory to work in, are increasing their output very considerably. On the whole, the dairy business has had the most profitable season it ever had, and we look for a healthy growth along this line in future. Much more attention is being paid now to keeping only the cows that return a good profit. Formerly, too many unprofitable cows were kept, but, as the dairyman learns more about his business, he keeps fewer cows and produces more milk.

There has been nothing done here yet in the matter of pasteurizing whey, but I think it is time the dairy companies were adopting this improvement. One trouble in introducing it would be that the boilers in many of the factories have not sufficient power to do the work well. It is slow work educating the average patron in the matter of quality in dairy products. The most of them look only to quantity for a profit. It will take some time yet to convince them that this is a short-sighted policy that will sooner or later injure their business.

The breeding of heavy horses will receive quite a stimulus from the sale here, recently, of some 30 three-year-old Clydesdale mares, imported from Scotland. They were nearly all in foal, being bred before leaving Scotland to sires of good breeding. The nineteen sold in Charlottetown, at an auction, realized an average of \$302. Those sold in the Prince County capital made a slightly lower average. The bidding was brisk, and many more might have been disposed of at about the same prices. This is the first importation of pure-bred Clydesdale mares to come to this Province, except one or two brought here some years ago by private parties for their own use. We



J. T. Donnelly, Union, Ont.

Cheesemaker, winner of highest score on cheese at the dairy exhibition in connection with the Western Dairymen's Convention at Brantford, 1909. Score, 95.82 points, on September colored cheese.

will look for other importations, as these are said to have realized a good return to the importer. We have some very good draft sires on the Island, and now that we have begun to invest in pure-bred draft mares, we expect a boom in the raising of draft stock that will be a profitable branch of our agriculture. Our next exhibition will have a class for pure-bred mares and foals.

A large number of young farmers left on the first of the year to take the short course in agriculture at Truro. The Provincial Government is assisting them, by paying part of their expenses. This school is becoming quite popular with our young farmers, and we feel assured that P. E. I. agriculture will receive much benefit from it.

The Institutes here are carrying on their winter campaign, and farmers are discussing agricultural matters and comparing notes on their doings of the past season. One result of this is a friendly rivalry, and a determination among farmers to do as well next year as the best have done last.

Our new Commissioner of Agriculture, John Richards, of Prince County, who has recently assumed office, is, we believe, a man well fitted for the position. He has for years been an importer, as well as a skillful breeder, of pure-bred stock, and is a practical farmer. We will expect to see agriculture receive the attention it deserves in this purely agricultural Province during the next four years.

Considerable quantities of dressed beef are going forward to Maritime markets just now, and our winter steamers are making regular trips.

W. S.

### To Our Club-raisers.

There are thousands of farmers who do not know what they are losing every year through not being subscribers to "The Farmer's Advocate and Home Magazine." Therefore, we want all readers of "The Farmer's Advocate" to act as club-raisers this year, and send us large lists of NEW SUBSCRIBERS.

If you send us two new names and \$3.00 to cover same (each new subscriber paying \$1.50), we will mark date on your paper forward one year as remuneration to you; or, for each single NEW NAME, accompanied by \$1.50, we will advance the date of your address label six months. Cash commissions or premiums, as preferred, for larger lists of new names.

In clubs of FOUR RENEWALS OR OVER, we will accept \$1.25 each.

Premiums not included in club offers.

Start raising your club immediately. Get "The Farmer's Advocate and Home Magazine" into every household in your locality.

### Forthcoming Events.

- Feb. 1st, 2 p. m.—Annual meeting, Dominion Cattle-breeders' Association, Temple Building, Toronto.
- Feb. 2nd, 7 p. m.—Annual meeting, Ontario Large Yorkshire Swine Breeders' Association, Palmer House, Toronto.
- Feb. 2nd.—Annual meeting, Dominion Shorthorn Breeders' Association, in Toronto.
- Feb. 3rd, 9.30 a. m.—Annual meeting, Dominion Swine-breeders' Association, Temple Building, Toronto.
- Feb. 3rd, 1.30 p. m.—Annual meeting, Ontario Berkshire Society, Palmer House, Toronto.
- Feb. 4th.—Annual meeting of Canadian Jersey Cattle Club, Walker House, Toronto.
- Feb. 4th.—Canadian Holstein Breeders' annual meeting, 9 a. m., in Association Hall, corner Yonge and McGill Streets, Toronto.
- Feb. 4th and 5th.—Annual convention of Canadian Seed-growers' Association in Ottawa.
- Feb. 5th, 9.30 a. m.—Annual meeting, Ontario Sheep-breeders' Association, Temple Building, Toronto.
- Feb. 5th, 1.30 p. m.—Annual meeting, Dominion Sheep-breeders' Association, Temple Building, Toronto.
- Feb. 10th and 11th.—Ontario Fairs Association, City Hall, Toronto.

### Protection and Farm Values.

Editor "The Farmer's Advocate":

In your issue of Dec. 17th correspondents are asked to write on this subject. I see an article in same issue signed "Pro Bono Publico." I would like to draw his attention to some matters in connection with higher protection. Some 30 years ago, a man whom I knew well bought a farm next to his own, containing 100 arpents, or French acres—it is about 88 English acres—for the sum of \$12,000. No doubt you will think this was an outrageous price, but several farms in the neighborhood had sold at this figure, so that the price was not out of the way for the time. The man who purchased had a farm right alongside, equally as valuable, so that he had a property worth \$24,000. He did not have sufficient funds to pay cash; he paid \$4,000 cash, and the balance was to be paid by installments, with interest at 5 per cent., until paid.

It took him about 16 years to make up the \$8,000 and the interest, he paying altogether about \$12,500. At the end of the sixteen years, when he had paid it all, his property was worth only about \$11,000 or \$15,000.

What was it that reduced the price of farm property in those years? Was it low tariff?

During the past twelve years, the high tariff has been lowered, postage has also been reduced, and the wheels of commerce have been a-rolling, and the same property is worth to-day nearly as much as it was 30 years ago.

To my mind, had we free trade, the property would be equal to-day to the value it was at that time.

Protection makes the rich man richer, and the poor man poorer, while free trade keeps the rich man from growing too rich, and the poor man has better times.

I see where Mr. Carnegie is now advocating free trade in his line. Of course, he is rich enough, and does not care.

A QUEBEC FARMER.



## Eastern Ontario Winter Fair the Best Yet.

If the specimens on exhibition at the Eastern Ontario Live-stock and Poultry Show, at Ottawa, last week, were a barometer of the general quality of the animals in the eastern part of the Province, there would need be little to fear for the future of the stockmen. If the attendance at the same show is a barometer of the interest taken in stock-improvement, there is yet a great work to be done before this now great exhibition fills the place it is intended to fill. Thanks to the untiring efforts of Peter White, of Pembroke, the President, and D. T. Elderkin of the Department of Agriculture, Toronto, the Secretary, this year's attempt to provide something attractive and instructive has not been in vain. Superior merit was the rule in every department.

The incorporation of the horse exhibit proved to be a popular feature. Clydesdales comprised one of the best strings ever shown in one ring in Canada, with fifteen good strong and active stallions answering the call in the aged class. They were a uniform lot, and most difficult to place. Other sections, though not so big in number of entries, were equally noteworthy in point of uniform excellence. Locally, a strong attraction was provided in a contest open to geldings or mares suitable for hunters. There were 13 entries, almost any one of which would have done no discredit to a first-prize ribbon.

In the cattle classes, too, particularly Short-horns, competition was keen among high-class animals typical of the breed. The milking competition extended over a period of 72 hours, instead of 48, as formerly, and resulted in some extremely high yields. Hogs and sheep both were stronger than last year. In poultry, also, a noticeable improvement was seen, both in numbers and individual excellence. Several breeds included prizewinners from the Boston Show.

In addition to the live-stock display, there was a series of addresses on the various phases of agriculture by men competent to discuss the questions. Practical demonstrations were given where possible. The display of oats from the competitors who won in the Field-crop Competitions, held under the auspices of the Agricultural Societies' Branch of the Ontario Department of Agriculture, was an education and an inspiration. Owners of the best samples made large sales, at high prices.

With such variety of educational features in such a magnificent building, it is unfortunate that those who should be interested do not turn out in greater numbers. Ottawa has provided a building second to none on the continent. Comfortably warm and thoroughly ventilated, sufficiently large and perfectly lighted, with few improvements to be suggested worthy of mention, save greater distance between the lecture-room and the crowing of roosters, it is a structure of which any city or any country should be proud.

Then, why do not the agriculturists flock to Ottawa, and give the most substantial token of appreciation? It must be admitted that former exhibitions were not strikingly successful. Those who came in past years were not so enthused as to return, and bring their neighbors. This year, however, the story is changed. Those who attended will make neighbors sorry they stayed at home, and next year should find the Eastern Ontario Live-stock and Poultry Show in the class to which it really belongs.

The dates selected proved to be most unfortunate. During the entire week the ice-races were a counter-attraction, and on Wednesday the attendance was still further decreased by the fact that it was the opening day of the Dominion Parliament. Considerable comment was heard regarding the number of farmers who spent their time at the ice-races and surrounding wheels-of-fortune. Various measures were suggested as to advisable steps in putting a stop to the gambling devices at such events.

Despite the counter-attractions and the indifference of a certain percentage of those who should have attended, this year's show was a success. Accompanying the encouraging improvement in all departments, are gate receipts almost double those of a year ago.

When such men as Peter White lend their time and energy to work connected with the show, farmers should feel in duty bound to be present at the different sessions. If he can be prevailed upon to continue another year as president, the success of the exhibition is assured. Mayor Hopewell also deserves special thanks for the manner in which he supported the management in every particular.

### OFFICIAL OPENING.

A happy choice was made when President Falconer, of Toronto University, was secured as chief speaker at the opening ceremonies. His broad-minded interest in agriculture was displayed, as he showed the connection between rural development and the growth of a university. Farmers were urged to study the problems of the farm, and to make farming a business. The motto given was "Industry, Intelligence and Integrity."

Another motto suggested for home and farm life was given by Dr. James Mills, formerly President of the Ontario Agricultural College. It ran: "Not well enough, but the best possible."

Hon. Jas. S. Duff, Minister of Agriculture, referred to the lack of common interest between university, city and country people, that was so desirable in the development of true national life. The importance of such fairs as the one now opened in drawing the different classes of people closer together was pointed out, and the management congratulated on the splendid advance over last year.

Mayor Hopewell and Senator Derbyshire, of Ottawa, also gave brief addresses. President White was in the chair.

### HORSES OF QUALITY.

While horsemen are inclined, perhaps, to overestimate the part played by the horse exhibit in the improvement of the show, it cannot be denied that the presence of the equine family was a popular feature. This was demonstrated by the crowds that watched the judging and applauded the popular winners. Conditions for exhibiting were almost ideal. Although the classes were not all as full as could be desired, almost every stall was occupied. The efficiency of the lighting was proven by the fact that judging was carried on from 8 o'clock to 10 o'clock at night, as successfully as in the middle of the day. All classes of heavy horses were judged by John Gardhouse, of Highfield, Ont.

CLYDESDALES.—In the aged-stallion class of Clydesdales, all that is necessary to show the horseman that the quality was par excellence is the list of names of horses entered. Although nine were placed, there were excellent horses without honors. Canadian rings have seen superior individuals, but seldom, if ever, has one contained as many animals of sufficiently high quality to make them worthy of top places in the prize-list. Smith & Richardson's President Roosevelt was in fine condition, and his massive body and sound underpinning put him on the top, and later made him the grand champion. Duke of Malton, from the same stable, was given second place by the average man at the ringside, but there was great speculation as to where the judge would go for the balance of the winners. Judge Gardhouse, after a most careful scrutiny, gave Cecil third, Baron's Treasure fourth, Adam Bede fifth, Lundie sixth, Sir Henry seventh, The Percy eighth, and Acrobat ninth.

Four superior stallions foaled in 1905 were shown. First went to Black Ivory, winner at Toronto the previous week. Barber's Baron Elrig was a close second. He is an exceptionally strongly-built horse, with sound legs and feet. Again, in stallions foaled in 1906, the contest was between Smith & Richardson and Barber. Barber's Royal Hall came in for third place. In the class for stallions foaled in 1907, too, Smith & Richardson got first, this time on Dunure Wallace. Ness' Indomitable was a good second, and with 50 or 100 lbs. more flesh would have in all probability been given the premier prize.

Four stallions from Smith & Richardson's stables entered the ring for the Clydesdale championship. The contest was between President Roosevelt and Black Ivory, and as this pair never had met before, those acquainted with the horses were greatly interested. The former was given the ribbon.

Exhibitors were: Smith & Richardson, of Columbus, Ont.; J. J. Black & Son, of Winchester, Ont.; R. Reid & Co., of Ottawa, Ont.; R. Ness & Sons, of Howick, P. Q.; Wm. Meharey, of Russell, Ont.; Thos. McDowell, of Shawville, P. Q.; Robt. Hunter & Sons, of Maxville, Ont.; Wm. Hodgins, of Portage du Fort, P. Q.; C. W. Barber, of Gatineau Point, P. Q., and T. Burke, of South March, Ont.

The awards were: Stallions foaled previous to Jan. 1st, 1905—1, Smith & Richardson, on President Roosevelt, by Marcellus; 2, Smith & Richardson, on Duke of Malton, by Sir Everest; 3, R. Reid & Co., on Cecil, by Macara; 4, W. Meharey, on Baron's Treasure, by Baron's Pride; 5, J. J. Black & Son, on Adam Bede, by Baron's Pride; 6, Wm. Hodgins, on Lundie, by Sylvander; 7, Smith & Richardson, on Sir Henry, by Prince Thomas; 8, W. Meharey, on The Percy, by Historian; 9, Robt. Ness & Son, on Acrobat, by Alexander Everest. Stallions foaled in 1905—1, Smith & Richardson, on Black Ivory, by Everlasting; 2, C. W. Barber, on Baron Elrig; 3, Smith & Richardson, on Inheritor; 4, Robt. Ness & Son, on Fusilier. Stallions foaled in 1906—1, 2 and 4, Smith & Richardson, on Dunure Pebble, Prince Ascot and Dunure Acknowledgment; 3 and 5, C. W. Barber, on Royal Hall and Ascog Pride; 6, T. Burke, on Lord Kintore. Stallions foaled in 1907—1, Smith & Richardson, on Dunure Wallace; 2, R. Ness & Son, on Indomitable. Champion stallion—Smith & Richardson, on President Roosevelt.

SHIRES were represented by a solitary pair of stallions, owned by Wm. Hodgins, of Portage du Fort, P. Q. Both were very fine horses. Coleshill's Royal Albert, a large, strong, black, rangy and active horse, with good bone, was placed first, and Royal Fortune, a bay, of blocky type, second.

CANADIAN-BREDS.—The standard among Canadian-bred Clydesdales and Shires was only fair. Hunter's two-year-old stallion, Kamaya, has magnificent limbs and feet, but lack of flesh makes him appear high up and somewhat shallow. He is a good colt, however,

and with an extra 100 pounds of avoirdupois would stand well in any competition. The mares were, on the average, superior to the stallions. Three nice females answered the call for those foaled previous to Jan. 1st, 1906. Princess May, a black, owned by Wm. Hodgins, was given highest honors in a close class.

The ribbons were placed as follows: Stallions foaled previous to Jan. 1st, 1907—1, R. Hunter & Sons, of Maxville, on Kamaya; 2, D. G. Boyd, of Kars, on Stanley Prince; 3, W. T. Hodgins, of Hazeldean, on Whittrigg; 4, J. J. Black & Sons, of Winchester, on Gladden's Pride. Stallion foaled in 1907—1, Smith & Richardson, of Columbus, on Hurlford; 2, Geo. A. Hodgins, of Carp, on Prince of Huntley. Females foaled previous to Jan. 1st, 1906—1, Wm. Hodgins, of Portage du Fort, P. Q., on Princess May; 2, Nixon Scharf, of Cumming's Bridge, on Hattie McIntosh; 3, I. L. Wilson, of McGarry, on Lady Avondale. Females foaled in 1906—1, Smith & Richardson, on Lady Glenlivet; 2, J. R. McCurdy, of Hazeldean, on Her Pretty Macqueen. Champion stallion—R. Hunter & Sons, on Kamaya.

GELDINGS AND MARES.—Four very good specimens, none of which were in show condition, answered the call for heavy-draft geldings or mares in single harness. J. J. Black & Son, of Winchester, got first and third; W. T. Hodgins, of Hazeldean, second, and A. M. Stewart, of Dalmeny, fourth.

The teams, too, were hard to judge. Lack of condition and absence of similarity in type among the four pairs were most noticeable. Adam Scharf, of Cumming's Bridge, secured first on his blocky bays; the Geo. Matthews Co., of Hull, P. Q., second; J. H. Fee, of Manotick, third, and W. Gilchrist, of Kinburn, fourth, on an energetic pair of sorrels showing Percheron blood.

HACKNEYS.—The honors for Hackneys were sought by J. J. Black & Sons, of Winchester, and Robt. Ness & Sons, of Howick, Que. Hon. Robt. Reith, of Bowmanville, gave the award to Black's Rillington Grandee over Ness' Rydale Revival. Both were fine stallions, but the former excelled in substance, and, perhaps, slightly also in action.

OTHER LIGHT HORSES.—The awards in the light-horse classes were placed by Dr. J. G. Rutherford, of Ottawa. In Standard-bred stallions, any age, R. W. Stewart, of Ottawa, had an easy winner in Pilot Chimes, a nice bay, of good breed type and excellent bone. A. H. Skuce, of Carsonby, got second on Prince Ambrose, an animal of considerably more weight and heavier bone. Third went to J. J. Black, of Winchester, on Deveras.

A pair of ordinary stallions represented the Thoroughbreds. The Ottawa Hunt Club got first on Kirkfield, and second on Javelin.

Geldings or mares suitable for hunters brought out a strong class of thirteen, all of which were said to be one-half Thoroughbred or better. Dr. R. E. Webster, of Ottawa, won first, second and third; J. B. Duford, fourth, and His Excellency Earl Grey, fifth.

### CATTLE.

Cattle classes could have brought more competitors into the ring, but there was little room for improvement in quality. In many cases six or eight magnificent specimens showed the excellence of the Short-horns of the Province. W. C. Edwards & Co., of Rockland, and Peter White, of Pembroke, had representatives showing the calibre of their herds. In addition, entries came from the stables of A. A. Armstrong, of Fergus; Reid & Co., of Hintonburg; Ormiston & Son, of Columbus; J. W. Barnet, of Brooklin; Jas. Leask, of Greenbank; Wm. Wallace, of Kars, and L. Parkinson, of Eramosa. The awards were made by Robert Miller, of Stouffville, and Jno. Gardhouse, of Highfield, and before the animals left the ring Mr. Miller dealt with the placing and gave reasons, pointing out desirable conformation as well as defects that governed the judgment.

In pure-bred Shorthorn steers, two years old, Peter White secured first on an even, smooth, growthy son of Marigold Sailor, a champion at Toronto. In the section for steers under a year, James Leask was winner with the steer Dunrobin Villager, fed by R. E. Gunn, of Beaverton, and pronounced champion Shorthorn at Guelph in December. In two-year-old heifers there were four superior specimens, first going to the heifer that won at Toronto last fall.

The awards for Shorthorns were: Steer, 2 years and under 3—1, Armstrong; 2, Reid & Co.; 3, Barnet. Steer, 1 year and under 2—1, White; 2 and 5, Ormiston & Son; 3 and 4, Armstrong. Steer under 1 year—1, Leask; 2 and 3, Edwards; 4, Parkinson; 5, Barnet. Heifer, 2 years and under 3—1, Edwards, on Nonpareil Countess; 2, White, on Beatrice 25th; 3, Leask, on Mayflower Girl. Heifer, 1 year and under 2—1, Edwards, on Emma 47th, by Missie Champion; 2, White, on Rosa Hope 17th, by Nonpareil Archer; 3, Edwards, on Zoe of Pine Grove 8th, by Royal Favorite; 4, White, on Mary Ann, by Treasurer. Heifer under 1 year—1, Edwards, on Missie of Pine Grove 9th, by Missie Champion; 2, Leask, on Roan Lily, by Gloster's Choice; 3, Edwards, on Ruby, by Chief Ruler; 4, White, on Belmar Blythesome, by Scottish Royal; 5, Wallace.

Galloway classes were filled by D. McCras, of Guelph. First and second prizes were awarded on worthy representatives of this breed.

### GRADES OR CROSSES.

The red ribbon fell to B. Slattery, of Ottawa, for two-year-old and three-year-old steers, on animals pur-



chased from Jas. Leask, of Greenbank, at the Winter Fair at Guelph. For the remaining sections Leask was in the lead. The awards were: Steer, 2 years and under 3—1, B. Slattery; 2, Ormiston & Son; 3 and 5, Armstrong; 4, Leask. Steer, 1 year and under 2—1, Slattery; 2, Armstrong; 3, A. Dynes, of Hintonburg; 4, Armstrong; 5, Leask. Steer under 1 year—1, Leask; 2 and 3, Barnett; 4, Reid & Co.; 5, Wallace. Heifer, 2 years and under 3—1 and 5, Leask; 2 and 3, Armstrong; 4, Reid & Co. Heifer, 1 year and under 2—1 and 2, Leask; 3 and 4, Armstrong; 5, Reid & Co.

Twenty-one growthy, sappy steers demonstrated the capabilities of Eastern Ontario in fitting cattle for export. Each bunch comprised three specimens. First money went to a lot of Aberdeen-Angus grades, from the same sire as the grand champion of the Guelph Winter Fair. Although not large, they were uniformly well finished, and would dress to a high percentage of carcass. The remaining entries were grade Shorthorns. The second prize went to a weighty trio, fairly well fattened, and third to smaller animals of fair quality. Some entries fell low because of lack of finish, and the presence of one animal greatly different from the other two in size and condition.

The awards were: 1, Armstrong; 2, 3 and 5, Dynes; 4, Ormiston & Son; 6, Reid & Co.

A special, donated by the Traders Bank, for beef steer any age, exhibited by a resident of Nepean or Gloucester townships, went to B. Slattery, on his thick-fleshed red.

The Dominion Shorthorn Breeders' Association special for grade steers, sired by pure-bred Shorthorn bull, found three sons of Leask's producer of prizewinners, Gloster's Choice, in the money. The entry list comprised the white three-year-old winner at Guelph, and his half-brother, a red animal, winner in two-year-old class, as well as a yearling from Leask's stable, and also by Gloster's Choice. The red won the highest premium, because of slightly less roughness, particularly about the tail-head, than his white half-brother. Third fell to Leask, on a full brother of the choice red.

#### SHEEP.

In no other department of the show was so decided an improvement over last year observable, the long rows of stalls being well filled with exceedingly high-class representatives of the various breeds.

**SHROPSHIRE.**—This favorite breed was exhibited by J. & D. J. Campbell, of Woodville, Ont.; A. M. Stewart, Dalmeny, Ont., and W. A. Wallace, of Kars, Ont. Wether under 1 year—1, 2 and 3, Campbell. Best 3 wethers under 1 year—1, Campbell; 2, Stewart. Ewe under 1 year—1, 2 and 3, Campbell; 4, Wallace; 5, Stewart. Best 3 ewes under 1 year—1, Campbell; 2, Wallace; 3, Stewart.

**COTSWOLDS** were exhibited by J. W. Lee, Simcoe, and John Sockett, Rockwood, Ont. Wether under 1 year—1, Lee; 2, Sockett. Sockett being the only exhibitor in the other sections of the class was awarded all the other ribbons.

**LINCOLNS.**—L. Parkinson, of Eramosa, Ont., was the only exhibitor of Lincolns, with a fairly good representative lot.

**LEICESTERS.**—G. & W. Parkinson, of Eramosa, Ont., was alone in this breed, and, of course, got all the awards, in some cases on animals that would have won in strong competition.

**DORSETS.**—The only Dorsets out for honors were the entries of R. H. Harding, of Thorndale, Ont., and fully sustained the reputation of excellence of his noted flock.

**OXFORDS.**—Again a single exhibitor was out with this very favorite breed, J. W. Lee, Simcoe, Ont., who made a most creditable showing.

**SOUTH DOWNS** were exhibited by Telfer Bros., Paris, Ont., and Thos. Baker, Simcoe, Ont. Both had out some extra choice individuals, that showed careful fitting. Wether under 1 year—1, 2 and 3, Telfer; 4 and 5, Baker. Three wethers under 1 year—1, Telfer; 2, Baker. Ewe under 1 year—1 and 3, Telfer; 2 and 4, Baker. Three ewes under 1 year—1, Telfer; 2, Baker.

**GRADES OR CROSSES.**—Wether under 1 year—1, 4 and 5, Campbell; 2, L. Parkinson; 3, Lee. Three wethers under 1 year—1, Campbell; 2, Lee; 3, Parkinson. Ewe under 1 year—1 and 2, Baker; 3 and 4, Campbell. Three ewes under 1 year—1, Baker; 2, Campbell; 3, L. Parkinson.

The judge for Shropshires and grades and crosses was Prof. Grisdale, Ottawa; for all the other breeds, Joseph Barnett, Brooklin, Ont.

#### SWINE.

The swine exhibit showed a most decided improvement over that of the last few years. The pure-bred classes were represented by the Yorkshires, Berkshires and Tamworths, the grade or cross classes being exceptionally well filled.

**YORKSHIRES.**—Seldom indeed has a more representative class of this large English bacon breed of hogs been seen at any show in Ottawa, the exhibitors being P. O. Collins, Bowesville, Ont.; J. Featherstone & Son, Streetsville, Ont.; A. Dynes, Hintonburg, Ont.; A. H. Foster, Twin Elm, Ont. Every class was more or less keenly contested, and the animals presented before the judge in nice fit. Barrow 6 months and under 9—1, 2 and 3, Featherstone; 4, Dynes; 5, Foster; 6, Collins. Barrow, under 6 months—1 and 3, Collins; 2 and 5, Featherstone; 4, Dynes. Sow, 6 months and under 9—1 and 2, Featherstone; 3, Collins; 4, Dynes; 5, Foster. Sow under 6 months—1 and 3, Collins; 2 and 5, Featherstone; 4, Dynes.

**BERKSHIRES.**—The exhibit of Berkshires was, numerically, the weakest of any of the breeds. Some choice animals, well fitted, were exhibited by W. A. Wallace, of Kars, Ont., and A. Dynes, Hintonburg, Ont. Barrow, 6 months and under 9—1, Wallace; 2, Dynes. Sow, 6 months and under 9—1 and 4, Wallace; 2 and 3, Dynes.

**TAMWORTHS** were exhibited by Reid & Co., Hintonburg, Ont., and A. Dynes, of the same place. While the numbers was not high, the quality was certainly very satisfactory. Barrow over 6 months and under 9—1 and 3, Reid & Co.; 2, Dynes. Barrow under 6 months—1 and 3, Reid & Co.; 2, Dynes. Sow, 6 months and under 9—1 and 4, Dynes; 2 and 3, Reid & Co. Sow under 6 months—1 and 4, Dynes; 2 and 3, Reid & Co.

**GRADES AND CROSSES** made a good showing, from a quality, type and fitting standpoint, and were also out in stronger classes than any of the others. The exhibitors were: J. Featherstone & Son, Reid & Co., A. Dynes, and S. Bray, of Enfield, Ont. Barrow over 6 months and under 9—Featherstone had things all his own way in this class. Barrow under 6 months—1 and 2, Featherstone; 3, Reid & Co.; 4, Dynes. Sow, 6 months and under 9—1 and 2, Featherstone; 3, Dynes. Sow under 6 months—1, Reid & Co.; 2, Dynes; 3, Featherstone; 4, Bray.

D. C. Flatt, the well-known importer and breeder of Yorkshires, from Millgrove, Ont., handed out the awards with promptness and despatch, showing a thorough knowledge of the art of swine-judging.

**BACON CLASSES.**—The entries in the classes for bacon hogs were well filled, and the animals a credit to the exhibitors, both in type, size and proper fitting. The exhibitors were Featherstone, Foster, Collins, Dynes, Bray, and Reid & Co. Three pure-breds—1, Collins; 2, 3 and 4, Featherstone; 5, Dynes; 6, Reid & Co.; 7, Foster. No. 6 were Tamworths, all the others being Yorkshires. Three grades or crosses—1 and 2, Featherstone; 3 and 5, Dynes; 4, Bray.

D. C. Flatt and Prof. Grisdale judged these classes in a manner satisfactory to all concerned.

#### STRONG POULTRY EXHIBIT.

In keeping with other poultry shows on the continent, the display of poultry at the Eastern Ontario Live-stock and Poultry Show was superior to that of former years in numbers and quality. The presence of about 400 winners from the Boston Show gives some idea as to quality. These comprised chiefly White Wyandottes, Buff Orpingtons, Hamburgs, Polands, White Leghorns, Dorkings and bantams of all kinds.

Entries totalled some 2,200 birds—about 500 ahead of any previous entry list. Barred Rocks headed the list, with about 115 birds. White Wyandottes were a close second, with about 100, and Brown and White Leghorns also were much in evidence.

Prominent among the Barred Plymouth Rock winners were Dr. Lamburts, of Eganville; F. A. James, of Ottawa, and J. Pringle, of London. Dr. Lamburts has a cockerel that was pronounced the best ever seen in Ottawa. Wyandotte winners included Highland Park Poultry-yards, of Westboro; Jos. Russell, of Toronto, and Hintonburg Poultry-yards, of Ottawa. A. W. E. Hellyer, of Ottawa, was strong in Buff, and W. F. Garland, also of the Capital City, strong in Black Orpingtons. White Leghorns had worthy representation from the pens of J. L. McCormack, of Brantford; D. McKellar, of Hawkesboro; H. Carleton, of Ottawa, and F. Wales, of Milton. H. B. Becker and A. J. Engel, of Waterloo; J. H. A. Collins, of Cumming's Bridge, and W. A. Gurney, of London, had the best Brown Leghorns. Black Minorca winners were owned by L. Zavitz, of Ottawa; W. Ellis, of Prescott, and Hintonburg Poultry-yards. Fine specimens of Rhode Island Reds, from the Hintonburg Poultry-yards, Geo. Robertson and J. I. Gill, of Ottawa, upheld the honors of that breed.

Turkeys, geese and ducks were well represented. Among the prizewinners were: A. Thompson, of Allan's Corners; G. & J. Rogue, of Strathroy, and McDougal & Bedlow, of Fairfield East.

There was a large display of dressed poultry, much of which was well fitted and neatly benched. The prizes fell to G. Higman, of Ottawa; A. A. Armstrong, of Fergus; Alex. Dynes, of Ottawa; W. H. Slinn, of Ottawa; J. Tomalin, of Toronto; Jas. Snetzinger, of Eamer's Corners; G. R. Bradley, of Carsonby, and A. Thompson, of Allan's Corners.

#### DRESSED CARCASSES.

Great interest was taken in the placing of the dressed carcasses. On the whole, the awards conformed fairly well to the standing in the live classes, but there were some serious discrepancies. Prof. G. E. Day, of Guelph, and Mr. Gray, of Ottawa, made the awards.

First in beef went to A. A. Armstrong, on a grade Aberdeen-Angus, one of the three that won in the export class. The carcass was evenly covered, and showed a nice eye in the loin, and an excellent round. Grade Shorthorns, owned by A. Dynes, came second and third, and then followed the other grade Angus. All were nice beef. The champion steers, owned by Slattery, had so much fat on ribs, back, and, in fact, on all parts, as to bring them very low in a carcass competition.

The awards were: 1, 4 and 5, A. A. Armstrong, Fergus; 2 and 3, Alex. Dynes, Ottawa; 6, W. C. Edwards & Co., Rockland.

The placing for sheep carcasses was as follows: cheswell—Wether under 1 year—1, J. W. Lee & Sons, Simcoe; 2 and 3, John Sockett, Rockwood. Lincoln—

Wether under 1 year—1 and 2, L. Parkinson, Eramosa. Oxford—Wether under 1 year—1, J. W. Lee & Sons, Simcoe. Shropshire—Wether under 1 year—1, J. & D. J. Campbell, Woodville; 2 and 3, A. M. Stewart & Sons, Dalmeny. Southdown—Wether under 1 year—1 and 3, Baker Bros., Simcoe; 2, Telfer Bros., Paris. Dorset—Wether under 1 year—1, R. H. Harding, Thorndale. Hampshire and Suffolk—Wether under 1 year—1, Telfer Bros., Paris. Grade or Cross—Wether under 1 year—1, 2 and 3, J. R. McCurdy, Hazeldean; 4, Alex. Dynes, Ottawa.

#### BACON HOGS.

In the awarding of the prizes in the dressed-carcass competition, in comparison with the awards as won by the various lots alive, a wide divergence was made; very many of the hogs that looked and handled well alive did not kill out to the expectation of the judge. The awards were as follows: Three pure-breds—1, 3 and 6 went to Featherstone; alive they stood, 1st dressed was 2nd alive, 3rd dressed was 4th alive, 6th dressed was 3rd alive. Second went to A. D. Foster on the lot that was 7th alive; 4 and 5 went to A. Dynes; 4th was not placed alive, and 5th was 5th alive. Seventh went to P. O. Collins on the lot that was 1st alive. Grades or Crosses—1 and 2 went to Featherstone (they were placed the same alive); 3 and 4 went to A. Dynes, and 5 to S. Bray. Sweepstakes for best three went to Featherstone, on a trio of pure-breds, that was second alive and first dressed.

#### PURE-BRED STOCK SOLD.

Several pure-bred Shorthorns, chiefly one-year-old, were sold by auction, and went at low figures. Some of the bulls were choice individuals, with fancy pedigrees, but even this did not result in reasonable bids. Buyers were scarce, and those who came seemed to want low-priced animals. As a rule, bidding started at \$25 or \$30. Two choice yearlings, one owned by Peter White, of Pembroke, and the other by S. Bray, of Enfield, went over the \$100 mark. The average price for 18 sold was \$57.05. Last year's average was the even \$57.

#### FIELD-CROPS DISPLAY.

The display of grains, grasses and potatoes was very creditable. Among the prizewinners were: Cereals and peas—A. Schmidt, of Mildmay; C. R. Gies, of Heidelberg; A. H. Foster, of Twin Elm; J. A. Herron, of Billing's Bridge; Jas. Snetzinger, of Eamer's Corners; S. A. Northcott, of Taunton; S. J. Woods, of Metcalfe, and Wm. Shields, of Eamer's Corners. Grass seed and clovers—S. A. Northcott, Wm. Shields and A. H. Foster. Potatoes—A. H. Foster; G. R. Bradley, of Carsonby; S. J. Woods and Jas. Snetzinger.

Two-bushel sacks of oats, representing the agricultural societies that had entered the Field Crop Competitions in the part of the Province lying east of Toronto, and held under the auspices of the Provincial Department of Agriculture, and judged by men sent by the Dominion Seed Branch, formed a magnificent display of seed oats. There were 39 entries. Each entry represented at least 50 bushels of similar grade for sale as seed. All were excellent samples, and the prizewinners were pronounced absolutely free from noxious seeds or other grains. A few otherwise good samples were placed low because of being cut before the crop was ripe.

The Banner variety shows a peculiar history in the continuous contest. The eastern part of the Province found 178 entries in the Field Crop Competition, of which 42 were Banner. The distribution of this number among the various agricultural societies made it possible for only 37 to receive a prize. Of this number 20 were successful out of a total of 65 prizes awarded. When it came to making the awards in the threshed and bagged grain, however, a different story is told. Only one Banner came in the list named by the judges, and this one receives a "highly commended" ribbon. The only plausible explanation is that Banner is an excellent cropper, with strong straw and large panicles, but that the quality is not maintained in the marketable product. The hull, though not thick, is long and pointed, thus reducing the weight per measured bushel and giving it anything but a plump appearance. The prevalence of green or immature grains in the sacks, too, indicate that the ripening is not uniform.

The awards were made by Dr. C. E. Saunders, of Central Experimental Farm, Ottawa, and Cecil R. Klinck, B.S.A., of the Experimental Department of Ontario Agricultural College, Guelph. The prize money totalled \$125, first premium being \$35. The average weight per measured bushel was over 40 pounds. The first-prize sack stood third in the field-crop competition in the district represented.

The names of the winners are: 1, Andrew McKay, Woodville, Eldon Agricultural Society, on Newmarket; 2, G. Kennedy, Bobcaygeon, Verulam Agricultural Society, on Mammoth Cluster; 3, P. Drummond, Keene, Otonabee Agricultural Society, on Irish White; 4, Wm. Lewis, Dunsford, Verulam Agricultural Society, on Siberian; 5, Robt. Fisher, Bensfort, South Monahan Agricultural Society, on Prolific; 6 (highly commended), C. H. Dawson, Balleboro, South Monahan Agricultural Society, on American Banner; 7 (commended), J. Vanstone, Hartley, Eldon Agricultural Society, on Newmarket.

Field-crop-competition oats sold at prices ranging from \$1.25 to \$1.80 per sack of two bushels, or an average of \$1.39 for 34 sacks sold. Owners of the prizewinning lots made several sales of 25 bushels or more at high prices.



**MILKING CONTEST.**

This year's milking competition was extended over three days, and proved to be the best in the history of the show. Holsteins were on top, but Geo. Rice's wonderful Ayrshire cow, Jean Armour, was not far below them. Her milk, though not so great in quantity as that of the Holsteins, was considerably higher in butter-fat. The best score, 215.98, was made by Francy 3rd, a Holstein cow, owned by J. H. Caldwell, of Fallowfield, Ont.; second best being Ideline Pauline De Kol, shown by Geo. Rice. The class, name of cow, owner and complete score is as follows:

Class.	Name of Cow.	Exhibitor.	Lbs. Milk.	% Fat.	Lbs. Fat.	Lbs. Solids not Fat.	Points for Days in Milk.	Points for Fat.	Points for Solids not Fat.	Total.
Shorthorn cow, 42 mos. and over.	Morning Glory 5th	S. Bray, Enfield	186.2	3.46	4.72	11.22	4.1	94.40	44.88	143.88
	Carleton Beauty	J. J. Hodgins, Hazeldean	100.1	3.76	3.77	8.47	1.6	75.40	33.80	110.88
	Blossom	R. R. Reid & Co., Ottawa	95.5	3.83	3.66	8.24	—	73.20	32.96	106.16
	Pansy 4th	R. R. Reid & Co., Ottawa	76.6	4.08	3.13	6.32	—	62.60	25.28	87.88
Ayrshire cow, 42 mos. and over.	Jean Armour	Geo. Rice, Tillsonburg	186.3	3.9	7.28	14.51	3.3	153.60	56.56	206.94
	White Floss	H. & J. McKee, Norwich	143.7	4.2	5.98	11.07	4.4	119.60	44.28	168.28
	Sarah Second	H. & J. McKee, Norwich	155.8	3.49	5.44	12.33	9.7	109.80	49.32	167.82
	Maggie Brown of H.H.	N. Dymont, Clappison	146.6	3.74	5.49	11.56	3.9	109.80	46.24	159.94
	Spottie	H. & J. McKee, Norwich	137.3	3.85	5.29	11.00	4.4	105.80	44.00	154.20
Rosalee of H.H.	N. Dymont, Clappison	136.4	3.6	4.91	10.70	5.5	98.2	42.8	146.50	
Ayrshire heifer, under 42 mos.	Forget-me-not	N. Dymont, Clappison	106.0	4.1	4.41	8.74	3.7	88.20	34.96	126.33
	Star's Sarah	H. & J. McKee, Norwich	98.1	3.86	3.79	8.0	11.0	75.80	32.0	118.0
Holstein cow, 12 mos. and over.	Francy 3rd	J. H. Caldwell, Fallowfield	212.1	3.7	7.83	14.42	1.7	156.60	57.68	215.98
	Idaline Pauline De Kol	Geo. Rice, Tillsonburg	216.8	3.25	7.07	16.13	4.5	141.40	64.52	210.42
	Mauder De Kol	T. A. Spratt, Billing's Bridge	227.3	3.1	7.05	16.50	—	141.00	66.00	207.00
	Hasketon Belle	J. H. Caldwell, allowfield	181.7	3.1	5.80	12.97	4.2	116.0	51.88	172.08
Bouncing Jess	Martin McDowell, Norwich	135.8	3.9	5.32	10.23	2.9	106.40	40.92	150.22	
Holstein heifer, under 42 mos.	Queen's Butter Girl	Geo. Rice, Tillsonburg	150.7	3.12	4.71	10.33	—	94.20	41.32	133.52
	Lady Colanthus De Kol	M. McDowell, Norwich	118.0	3.7	4.05	8.88	10.4	81.00	35.52	126.92
Grade cow, 42 mos. and over.	Jane	T. A. Spratt, Billing's Bridge	187.0	3.09	5.79	14.87	—	115.80	59.48	175.28
	Rosalee	R. A. Herron, Billing's Bridge	169.7	3.53	5.99	12.20	2.9	119.80	48.80	171.50
	Granny	M. McDowell, Norwich	151.8	3.32	5.04	9.87	2.7	108.	39.48	150.18
	Rose	Wm. Ormiston, Columbus	121.2	3.8	4.63	9.66	—	92.60	38.64	131.24
Spot	R. Reid & Co., Ottawa	108.7	3.74	4.07	8.76	—	81.40	35.04	116.04	
Grade heifer, under 42 mos.	Dina	M. McDowell, Norwich	122.2	2.98	3.65	8.94	1.8	73.0	35.76	110.56
	Tiny	R. A. Herron, Billing's Bridge	113.1	2.73	3.10	8.76	1.9	62.0	35.04	98.94
	Molly	R. Reid & Co., Ottawa	76.5	3.7	2.86	6.10	—	57.20	24.20	81.60

**AGRICULTURAL ADDRESSES.**

Brief addresses and free discussions formed a valuable feature of the week's educational work. Men who are recognized as reliable authorities in connection with horses, cattle, sheep, swine, poultry, dairying, and the various phases of agricultural operations, were present at the different sessions. Great difficulty was experienced in collecting a crowd sufficient to make it worth the speaker's while introducing his subject. If it were possible to secure the services of an entertainer of some kind, who did not object to making a start before empty chairs, and who could continue for about five minutes while the crowd settled into these chairs, much more good would be derived. As it was, almost all the meetings were lamentably late in starting.

**SYSTEM IN HORSE-BREEDING.**

The tendency of the average farmer to breed in a haphazard way was referred to John Gardhouse, of Highfield, who urged that system should govern the question of brood mares kept and stallions used. Too many were satisfied with an ordinary horse at low service fee. No man should cross heavy mares with carriage stallions, in order to secure farm horses. Brood mares and colts could be used to advantage in doing the regular work on the farm. "Always set an ideal and stay with it, whether with light or heavy horses," said Mr. Gardhouse. Heavy horses were advocated because the average farmer had neither time or experience that made light-horse breeding within easy reach.

The number of brood mares kept should be regulated by the number of acres in the farm. On 100 acres a man should be able to keep two, worth \$150 or \$200 each, from which three colts in two years could be expected under average conditions. Much could be done in improving the stock, by selecting a stallion strong in build or characteristics in which the mare was weak.

**HORSES IN THE STABLE.**

Feeding horses was dealt with by John Bright, of Myrtle, who coupled with feeding the importance of exercise. Much of the success of Scottish breeders in horse-raising was credited to the attention paid to daily exercise. Nothing was more important in the treatment of brood mares. Turning out in the yard was not sufficient. As a rule, the mare stood around—particularly if any feed was within reach. It was more satisfactory to hitch up and travel at least four or five miles a day. Mares carrying foals should not be fat and flabby, because the foals were fat and flabby also, and hard to raise. The hardy mare in working condition produced a strong, thrifty colt.

In handling work horses there was little trouble, provided they were used regularly and fed well on good hay and oats. When the horses were idle, however, trouble came. Most farmers gave too much hay to idle horses. Hay was wasted and the digestive organs injured.

Salt was not given freely enough in the average stable. Good practice was to put about a teaspoonful of salt to a gallon of oats at every meal. On new hay, especially, was salt desirable. Man wants salt in fresh meat; so do horses relish new oats better

when salt is added. They do not take enough salt when it is left within their reach at all times.

Q.—What is your treatment for joint ill?  
A.—It is safe to use any antiseptic on the navel cord, such as dilute carbolic acid or Zenoleum. It should be used frequently and applied thoroughly from the time the colt is born until the wound at the navel heals. This treatment is, of course, preventive.

**SELECTING A STALLION.**

Dealing with the selection of heavy-draft stallions, Wm. Smith, of Columbus, advised the use of stallions that were superior to the mares to which they were to

Q.—Do you not find the corn to become musty in the barn?

A.—No, I always allow it to dry thoroughly and then stand it on end. If it is laid down it frequently musts.

Q.—Are you not troubled with mice in the corn?

A.—No, the remedy is found in keeping plenty of cats.

**VENTILATION PROBLEMS.**

The fact that plenty of fresh air gave a vigorous appetite was mentioned by J. H. Grisdale as a sound argument in favor of thorough ventilation. Animals

be bred. Among the points to be considered were good temper, choice underpinning, fine appearance, well-sprung rib, good square action, quick walk, and fairly large, strong feet. In sections where small general-purpose mares prevailed it was a good plan to select sires with strong bone for a time. Later it might be advisable to pay more attention to quality. Smart walkers were wanted by draymen, and, therefore, attention must be paid to this factor. A reasonably lengthy neck, too, was desirable. Pedigree was worthy of consideration, because of the fact that continuous breeding along definite lines counted for something.

With regard to unsoundnesses, Mr. Smith advised buyers to beware of bone spavins. Sidebones were undesirable, but a horse could not be turned down because of their presence.

It was commonly urged to make use of great large stallions. This was not always good advice. The horse of average size and good quality was the one that left the greatest impress in a locality. Large, overgrown horses, although not always uncertain breeders, were, as a rule, more or less freaks, and the size and quality of the offspring were variable.

**FEEDING THE ROUGHAGE.**

Methods of rendering rough feeding stuffs on the farm palatable were outlined by Robt. Miller, of Stouffville. It was necessary to harvest hay before it became too mature, and to have sufficient help to cure it and store it in first-class condition. Mistakes were frequent in preserving the straw of the farms. It did not pay to overfeed with concentrated foods, and since straw is cheap special care should be given to keeping it in fit condition for feeding.

Few recognized the true value of straw in feeding horses. Heavy horses would do all right without a mouthful of hay, provided well-cured straw was available from the time the rush of fall work was over until operations on the soil began the following spring.

Corn, either as silage or as dry stalks, was an important factor in roughage feeding. When cut and shocked carefully it came in good to cut and mix with straw and other foods during the winter months. Silage was more desirable for milch cows. With dry corn it was well to feed more roots.

Q.—Do you leave your corn standing in the field?  
A.—No, I always try to get it into the barn as soon as the ground freezes up, or earlier. There is too much trouble and undesirable work about hauling in corn during winter.

Mr. Miller advised plenty of fresh air. An animal outside never contracted tuberculosis, while in close stables, where fresh air was not provided at all times, tuberculosis was common.

Q.—Do you cut hay for horses?  
A.—No; not unless the hay is of poor quality. Then it is well to cut it and mix with other feed, or sprinkle with water.

Q.—Do you approve of turning feeders outside?  
A.—There is no objection to letting them out, but if they run outside very long they lose much of their flesh.

demand food, water and air for growth and development. Many provided the first two, but neglected the third. Without air digestive processes could not go on. Comfortable conditions for cattle were essential, but comfort consisted in plenty of fresh air, as well as reasonable protection from winter's rigors.

The President, Peter White, testified to the efficiency of curtain ventilation for poultry houses. In his poultry houses ordinary burlap was used near the floor, and also above the windows. There always was a current in through the lower curtain and out through the upper, but not so rapid as to cause draft.

**JUDGING BEEF CATTLE.**

In discussing the question of judging beef cattle, Prof. G. E. Day pointed out that there were two viewpoints that caused differences of opinion. Some criticised from the standpoint of the butcher's block, while others were interested from the standpoint of the feeder or the breeder. Exhibitors should be careful in complaining of the placing of judges. Every animal had strong and weak points, which left it possible for different judges to give valid reasons for various placings. Typical beef animals were used to point out desirable type and choice cuts.

**PASTEURIZED WHEY AND WHEY BUTTER.**

Pasteurization of whey and the feeding value of whey fat was ably dealt with by Prof. Dean in an address, of which an abstract appears in our dairy department this week. Whey after being properly pasteurized remained sweet, and with proper care of the whey tanks little trouble should be experienced in regard to bacteria. Wooden tanks were difficult to clean. Many factories were providing steel tanks, and pronounced them much more satisfactory.

Q.—How much butter can be made from whey?  
A.—Our experiments show 2½ to 3 lbs. from 1,000 lbs. of whey. Some have said that they get as high as 8 lbs., but I would conclude that there is something wrong when so much is secured.

Q.—How does the price of whey butter compare with cream butter?

A.—Ours sold at 2 to 7 cents less on the market. When there is a shortage of butter buyers will pay almost as much as for ordinary butter.

**DAIRY COWS IN WINTER.**

In discussing winter feeding of dairy cows, J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, pointed out that the main point was to induce the consumption of easily-digested food in large quantities. This food should be of such composition as would furnish the elements essential to milk production. Cows eat large quantities when palatable food is provided. Succulent or juicy food, similar to June grass, resulted in heartier eating. Some accomplished this in a measure by mixing cut straw and chopped grains, and sprinkling with water. Of recent years silage and roots had become popular. At the Central Experimental Farm a mixture, composed of 8 parts silage, 4 parts roots and 1 part of straw was eaten ravenously.



The ration was made more desirable by adding some salt.

Succulence tended to increase digestibility. Roots were most easily digested. Coarse straw and poor hay were difficult of digestion. The most important element needed for milk production was protein. Many cereals were of value, and easily produced on the farm. Bran is among the best. Oil-cake meal contains a high percentage of protein, and is not desirable as a feed for dairy cows. Barley and corn meal should not be fed in large quantities to milch cows. It was not wise, however, to feed a ration excessively high in protein, because of high cost, and so precaution must be taken to mix judiciously.

For economy of feeding, oats, bran and peas at normal prices—oats at \$25 per ton, bran at \$18 or \$20, and peas at \$30—were most satisfactory. Present prices made it necessary to buy oil cake and gluten meal. If milk was sold at ordinary prices, meal could be fed at the rate of 1 lb. to every 4½ or 5 lbs. of milk produced. When high prices could be secured there was profit from giving 1 lb. meal to 3 lbs. of milk produced.

Q.—How often do you feed your cows?

Ans.—In the morning about 7 o'clock silage, roots and meal are fed, and after this a slight quantity of long hay. In afternoon at 4 p.m. silage, roots and meal are fed again, and also hay given afterwards.

Q.—Would it not pay to feed three times?

Ans.—We have tried both ways repeatedly, and find that the increase of milk by three feedings does not run 1 lb. from ten cows.

Q.—How often do you give salt?

Ans.—It always is added to the mixture of silage, roots and meal.

#### POULTRY DISCUSSION.

The question of feeding and rearing chickens was discussed by Prof. W. R. Graham, of Ontario Agricultural College, Guelph. Lantern slides were used to show various forms of houses, desirable and otherwise. Some details of incubation were given, and the value of buttermilk and Zenoleum in the incubator touched on briefly.

Q.—How do you use buttermilk, and why?

Ans.—Our reason for using it is because it has been found to produce a gas similar to that found in natural incubation. This milk is put in a shallow pan along with some Zenoleum. A rank smell results. We have had almost as good results from Zenoleum alone.

Q.—Do you find any benefit from adding a culture to the buttermilk?

Ans.—We had practically the same results from treated and untreated buttermilk.

Q.—Do you advise always providing moisture in the incubator?

Ans.—Yes, in every case it is better. Our average runs 20 per cent. more chickens from incubators with moisture.

Q.—What do you feed young chicks?

Ans.—A good start can be made with cracked wheat, oatmeal and cracked corn. In the winter, of course a different diet must be given. Chickens must have green food. In summer they get this while running about. A satisfactory winter-feeding mixture can be made of 2 hard-boiled eggs, 2 loaves of bread and 2 fair-sized onions, well chopped and thoroughly mixed. After a time it is well to add to this bone charcoal, about the size of a walnut.

Other addresses of particular interest to mixed farmers and stockmen were given by J. H. Grisdale, Prof. G. E. Day and A. W. Smith. A synopsis of these will appear in future issues. G. H. Clark, of the Dominion Seed Branch, gave a valuable talk on weeds, and showed the more noxious specimens by lantern slides.

#### STOCK-JUDGING SESSION.

The session for expert judges of live stock, called by J. Lockie Wilson, Superintendent of Fairs and Exhibitions, was largely attended, and the discourses and demonstrations thoroughly appreciated. Prof. G. E. Day, of O. A. C., Guelph, dealt with the judging of beef cattle. Dairy-cattle judging was taken up by W. F. Stephen, of Huntingdon, P. Q. John Gardhouse outlined the details of horse judging. In each case typical animals were used.

#### Valuable Reports.

"The Farmer's Advocate" makes a special point of publishing the fullest, best and most carefully-prepared reports of live-stock and agricultural exhibitions, as well as meetings and conventions of Provincial or Dominion scope. The average newspaper throws together a few scrappy impressions and facts, without much regard for utility. "The Farmer's Advocate" sends experienced, painstaking correspondents to sift out and digest the points of practical importance. Our reviews of live-stock judging-rings have long had a continental reputation for reliability and instructiveness; and, of recent years, while fully maintaining this reputation, we have also put forth special efforts to cover the various agricultural conventions better than any other publication. A meeting in a column, three sessions in a page, is the rule. Reading the report in "The Farmer's Advocate" is the next best thing to personal attendance. For its exhibition and convention reports alone our paper is worth its subscription price.

#### Changes in Ontario Fruit Experiment Stations.

The Advisory Board for Ontario Fruit Experiment Stations' work held their first meeting for the New Year in Toronto, on January 4th. Reports of the past season's work were received from all of the Stations, and will be published in full in the annual report, as soon as issued.

The Jordan Harbor Station made important progress during the year, large plantings of all kinds of fruits being made in the spring. Extensive vegetable tests for varieties, fertilizers, were started, and will be continued from year to year. The outlook for this Station is very promising, and, through the services of a permanent staff of experimenters, should prove of great value, not only to the tender-fruit sections, but to other parts of the Province as well.

The smaller stations in this district will be closed as soon as possible, Mr. Peart, at Burlington, and Mr. Woolverton, at Grimsby, dropping out this year. Mr. Peart states that he has completed the experimental work assigned to him, and is unable longer to give the necessary attention to this work. The Board desire that Mr. Pettit continue his work with grapes during 1909, paying special attention to experiments for the control of the grape rots and mildews.

Mr. Dempsey, of Trenton, resigned his position as experimenter in the spring of 1908. Since that time, representatives of the Department of Agriculture have been appointed in the counties of Prince Edward and Ontario, and these men intend to conduct various experiments and investigations in horticulture during the present season. As they are paid to give their full time, these men will be able to undertake more extensive experiments than was possible under the old system.

For this reason, the Board recommended the appointment of such representatives in those districts where at the present time no local stations exist. In Simcoe County, where Mr. Caston has acted as experimenter for a number of years, the horticultural conditions are so varied that it has been thought best to close the station, in view of the appointment of an assistant to the Department representative at Collingwood, who will give his whole time to the Departmental work. This man will be expected to cover the Georgian Bay section and the Lake Simcoe section, as well as the inland sections whose conditions were represented in the past by Mr. Caston.

The other stations will remain as in 1908, until their special work is completed, or can be taken over by such representatives of the Provincial Department of Agriculture as may be appointed from time to time. Mr. Hilborn, at Leamington, in peaches, and Mr. Jones, at Maitland, in hardy winter apples, have special problems in these fruits which require attention.

In addition to Mr. Young's work on St. Joseph's Island, and some smaller experiments in the Temiskaming district, the new Government farm at Matheson will be made use of, if possible, for experimental work in hardy fruits.

The Agricultural Department representatives in the Counties of Essex, Simcoe, Prince Edward, and Ontario will conduct numerous experiments during the coming season, and make investigations into the horticultural conditions in their various districts. A. McMeans, of the College staff, is working with the Board in conducting experiments in cranberry-growing at two points in the Province. Other places have made inquiries, and, if found suitable, plantings will be made this year.

#### Canadian Hackney Horse Society.

The 17th annual meeting of the Canadian Hackney Horse Society was held at the King Edward Hotel, Toronto, Friday, February 15th, the President, W. C. Renfrew, in the chair.

The President, in his opening address, said in part: It is not very long ago that the Hackney breed was not properly appreciated on this continent, but it is now a very great pleasure to know that it has rapidly forced its way to the front, until it now stands at the head of all other breeds for the purpose of getting carriage horses. Hackney sires are being used to cross on the Standard and other breeds, but no matter how or what it is crossed on we shall still have to maintain the pure breed for this particular purpose. Some very high prices have been paid in the United States during the past year, and some very fine specimens of the breed have been exported from England to America. At the last great show, the International, at Chicago, the Hackney breed was 1st, 2nd and 3rd in the class for the best horse suitable for getting carriage horses.

The Secretary-Treasurer's report, and the financial statement, were read and adopted, the President congratulating the society on the position reflected in the report.

After some discussion on the inspection fees, the meeting proceeded to the election of officers, which resulted as follows: President, W. C. Renfrew, Bedford Park, Ont.; Honorary President, E. C. H. Tisdale, Beaverton; 1st Vice-President, A. G. Campbell; 2nd Vice-President, W. H. Gibson, Beaconsfield, Que. Directors—Senator Robert

Beith, Bowmanville, Ont.; Robert Miller, Stouffville, Ont.; E. C. H. Tisdale, Beaverton, Ont.; T. A. Graham, Claremont, Ont.; A. E. Major, Whitevale, Ont.; R. E. Gunn, Beaverton, Ont.; Fred. Richardson, Columbus, Ont.; John Boag, Queensville, Ont.; O. Sorby, Guelph, Ont. Vice-Presidents for Provinces—Ontario, J. W. Allison, Morrisburg; Manitoba, John Graham, Carberry; Saskatchewan, R. H. Taber, Condie; Alberta, J. R. Thompson, Calgary; Quebec, T. B. Macaulay, Montreal; British Columbia, Mr. Mitchell, Victoria; Maritime Provinces, Mr. Black, Amherst, N. S. The secretary is H. M. Robinson, 8 Albert St., Toronto.

On motion, it was agreed that the usual membership fees be sent to the Ontario Horse-breeders' Association. The question of grants to the various shows, also in regard to the question of the Studbook, raised by the President, were left in the hands of the directors.

Mr. Major raised the question of inspection fees, and after some discussion it was moved by Mr. Pepper, seconded by Mr. Campbell, that on receiving application for inspection of a mare, the President and Executive appoint an inspector in that locality to inspect the mare free of cost, other than expenses, and as may be arranged by the Executive.—Carried.

On motion, the meeting endorsed the action of the Executive in obtaining legal advice on the constitution, and in the appointment of the President, Mr. W. C. Renfrew, as delegate to the Canadian National Exhibition.

The meeting then proceeded to consider the constitution, the President calling upon Mr. Brant, of the National Live-stock Association, to read the draft. After full discussion, certain amendments were included, and the draft of the constitution as amended was finally approved and declared adopted.

On motion, a vote of thanks was tendered to Mr. Brant, in recognition of the time, trouble and attention he had given them, in attending the annual meeting, and assisting so ably in the matter of the new constitution, and for the courtesy and consideration he had always extended to the society in its relations with him.

The winter short course at the Agricultural College, Truro, N.S., closed January 15th, having had a regularly enrolled attendance of 203 in the men's course and 20 in the ladies' course, with an intermittent attendance of over 300. Included among the number were 25 students from New Brunswick and 40 from Prince Edward Island; also some 10 from Great Britain, and the rest from the various counties of Nova Scotia. The course has been in every way the most successful yet held in the history of the College, and the attendance points to a day, not very far distant, when the class-rooms at the College must be increased. A number of the short-course students are going in with the regular classes, the attendance at which will now stand at about 50. Aside from the numbers in attendance at these short courses, it is most satisfactory to observe that they are constituted, for the most part, of the most progressive and intelligent farmers of the Maritime Provinces. It is, therefore, with every confidence that those interested in agriculture in the Eastern Provinces are looking forward to a development of the agricultural resources, which will gradually bring this division of Canada up to the highest standing. When it is considered that four years ago the number in attendance at this short course was 64, and the number in the regular course was 15, readers will readily appreciate the progress being made.

#### Wages for Farm Help.

According to the Dominion Bureau of Census and Statistics, the average wages of farm and domestic help for the Dominion, per month, in 1908, was \$24.60 for males, and \$13.50 for females; and, per year, \$295 for males, and \$162 for females. The highest averages are reported for the Western Provinces, where they reach about \$300 per year for males, and \$160 for females. In Ontario and Quebec, the average for males was about \$240, and for females \$120, per year.

By the more general adoption of modern labor-saving implements and methods, the earning capacity of the labor on most of our farms could easily be increased fifty per cent., and in many cases doubled, with resultant advantage to employer and employee alike.

#### Notice Date on Address Label.

Have you remitted for your subscription for 1909? Examine the date on the label of your paper, and if the date has not been changed within three weeks, write us at once, give full particulars, and how remittance was sent, date, etc. If you have not yet renewed, please forward same to us at once.

#### Twentieth Century Dictionary.

Many thanks for your valuable premium of Twentieth-century dictionary. I am highly pleased with it, and will also try to get you other subscribers.

WM. WILLIAMSON.



**New Brunswick Fruit-growers' Convention.**

The annual meeting of the New Brunswick Fruit-growers' Association was held at Fredericton on January 14th and 15th. President Stephenson, in his opening address, congratulated the members on the good work that had been accomplished during the year in disseminating a wider knowledge of the varieties of fruit most suited to the locality, of the better cultivation and care of orchards, and of the manner of packing and marketing the fruit. It appeared to be pretty well acknowledged that, except in a few favored localities they could not make a commercial success of growing many of the standard winter varieties of apples; they had, therefore, to consider only the varieties they could grow, so that the same might be placed on the market from September onwards. He referred particularly to the advantages offered by the English market, and spoke very strongly in favor of honest packing as a means of establishing a reputation. He strongly advocated greater interest being taken in exhibitions, and contrasted the poor showing made by the Province at the Maritime Winter Fair, Amherst, when compared with Nova Scotia, a fact which was all the more to be regretted when it was borne in mind that the exhibits of New Brunswick on that occasion were in all cases equally as good as, and in many cases better than those from the sister Province. A good deal of knowledge was being obtained from the various illustration orchards established by the Government in the different parts of the Province, and from the meetings which had been held during the summer in various places, when practical lessons in orchard cultivation and practice had been given, and were much appreciated by all who had attended them.

The Secretary, S. B. Hatheway, in his report, referred to the same matter, and spoke of the Association's indebtedness to G. H. Vroom, the Dominion Fruit Inspector, for the able assistance he had rendered.

The treasurer reported a satisfactory balance in hand.

**ST. JOHN RIVER VALLEY TO RIVAL AN- NAPOLIS.**

W. T. Macoun, Horticulturist, of the Experimental Farm, at Ottawa, then gave a short address on the work of his Department, with the main features of which our readers have already kept familiar from year to year. He was satisfied New Brunswick was admirably adapted for growing fruit; in fact, the St. John Valley was in every respect as desirable and suitable place for that purpose as the Annapolis Valley in Nova Scotia. It was, he said, only a question of knowing just what varieties would succeed best, and, when this had been ascertained, he felt sure that the time would come when the St. John Valley apples would be as noted as those of the Annapolis Valley.

**SMALL FRUITS ON THE FARM.**

A paper on "Small Fruits on the Farm," by W. T. Inch, strongly advocated the farmer having a supply of these fruits for his table all through the summer months. This was possible by having early and late varieties of strawberry, raspberry and blackberry, which would give a continuous supply, from the ripening of the first strawberry until the frost cut off the last blackberry. He advised not undertaking too large a plot, as a small plot well tended would give better returns than a larger one half done, besides needing less labor. With the numerous varieties of fruit now obtainable, no difficulty need be experienced in getting a proper succession.

**STRAWBERRY EXPERIENCE.**

J. C. Gilman, the first president of the Association, followed, with an address on the same subject. He referred to the troubles experienced by reason of the spring thaws, followed by sharp frosts, and advocated heavy mulching as the only remedy. Where old beds of strawberries are badly winter-killed, it would often be found better to plow them up and start afresh. When all danger of frost had passed, he advised the application of some fertilizer. Ground bone was a good thing for strawberries the first year, but it would not be found to give the best results if applied just before fruiting. Nitrate of soda, with potash in some form, would best meet the needs of the crop at that time.

**PICKING AND MARKETING.**

A good deal of the value of the fruit, said Mr. Gilman, depended upon the manner of picking. Different growers had their own methods of doing this; most, however, used what was called a stand; a field basket, or picker's basket, which, in most cases, was simply a shallow box, with four legs three or four inches long, and a handle made of anything which would answer the purpose. These stands were made just large enough to hold six boxes. It was necessary to explain

to beginners the difference between picking and pulling; they should be shown that, by picking a berry, it might be placed in the box without harm, whilst, by pulling, the ripe berries were bruised, the stems were broken, and green berries destroyed. Above all things, keep moving amongst the pickers; some new hands would be liable to damage the fruit at first, but, by patiently explaining any difficulties to them, they would soon become expert. In disposing of the crop, however it was done, growers should endeavor to be prompt, to deliver the fruit free from dust and dirt, and in the best possible condition.

**HARDINESS IN FRUITS.**

Mr. Macoun gave an address on "Hardiness in Fruits," and he defined "hardiness" as "the power of adaptability to environment." Plants and flowers, he said, were much hardier when growing under natural conditions than when under cultivation, the reason being that, in the latter case, conditions were often forced upon them which were not natural. For instance, the wild crab apple was much hardier than the cultivated apple in the orchard. The least hardy trees were those which ripened late in the season. One of the greatest trials the orchardist had to contend with was winter-killing of his trees. A partial preventive was a heavy mulch, though this was not always effectual. Apples which had been grafted onto crab stocks would be found less liable to damage than those on their own roots. The speaker went on to refer to the various other troubles to which the orchard is liable, such as bark-bursting, trunk-splitting, sun-scald, black-heart, and other injuries with which growers are familiar. He strongly advocated thorough cultivation during the early part of the season, as thereby the moisture which was so essential to the welfare of the trees was conserved. Leaving trees neglected in sod was condemned in unmeasured terms. Though the matter of cultivation was not one in which hard-and-fast rules could be laid down, suitable to all localities, the frequent use of the spring-tooth cultivator around the trees would never do any harm; it would keep the surface clean and preserve the moisture.

**INSECT FOES.**

W. McIntosh, the Curator of the Natural History Museum, at St. John, referred to the great possibilities which lay before the Province in the way of fruit-growing, accompanied, as they were, by such excellent shipping facilities, and regretted that more fruit of No. 1 quality was not being produced. It was a condition of affairs which was very easily remedied. He then went on to speak of the troubles which orchardists had to contend with, and among these troubles were caterpillars and insects. These were of many kinds, but they were most of them easy to get rid of. The tent caterpillar was one of the most common, but, by judicious spraying, it was easily destroyed. The same might be said of the bud moth, the ravages of the caterpillar of which were often ascribed to frost; so with the codling moth. A man who was in the habit of spraying regularly need have no fear; it was only the men who neglected their orchards who would be sufferers. The oyster-shell bark-louse was another pest, but trees properly looked after were usually free from it. Dirty, uncared-for orchards were troubled with this pest, and an application of kerosene emulsion when the young lice were running was the best remedy. The most dreaded pest was, of course, the brown-tail moth, which happily had not yet become common in the Province, though some half dozen specimens had been found in St. John during the summer, all of them, fortunately, males. The caterpillar of this moth was not unlike the tent caterpillar, and might be sometimes mistaken for it, but the brown-tail caterpillar was distinguished by two little red spots on the end of the back, near the tail, which were absent in the tent caterpillar. The address of this speaker was illustrated by large colored drawings of the various insect pests referred to, which added very considerably to the interest of it.

Dr. Hamilton, of the Provincial Normal School, gave an address on the text, "Anything will not do; the best is none too good." On this he founded a most instructive discourse, which applied not only to agriculturists and horticulturists, but to every other walk in life. No man who was satisfied with "anything" these days could ever expect to make much progress. He owes it to himself, his fellows and his country to strive for the best, and in the end it would be found that the best was none too good. Dr. Hamilton gave his hearers something which they could take away and seriously ponder over.

An exhibition of apples was also part of the proceedings, and many of the exhibits were unsurpassable by fruit grown anywhere. A gentleman from Nova Scotia remarked that there were apples staged there that the Annapolis Valley could not touch.

All the retiring officers were re-elected, namely: I. W. Stephenson, President; J. C. Gilman, Vice-President; H. Wilmot, Treasurer; and S. B. Hatheway, of Kingsclear, Fredericton, Secretary. G. B.

**Brown-tail Moth in New York State.**

Through the kindness of G. G. Atwood, Chief of the Bureau of Horticulture of the State of New York, it has recently come to the knowledge of the Entomological Division of the Experimental Farm, at Ottawa, that about 75 nests of the young caterpillars of the brown-tail moth have been found on apple, pear and cherry seedlings, and quince stocks, recently received in New York State from France. The nests contained living caterpillars in the usual winter form.

The infested stock, so far as examined, was packed in or near Angiers, France. It would appear that the brown-tail moth has been unusually abundant this year in France, and it is probable that some of the larvæ of this terribly-destructive insect may find their way into different parts of Canada, and become established there, unless the utmost care is taken to promptly destroy them.

This insect has already done incalculable damage to orchards and woodlands in some of the Eastern States, where many hundreds of thousands of dollars have been spent during the past ten years in the endeavor to exterminate them, with only partial success. The brown-tail moth has recently been found in considerable numbers in parts of Nova Scotia, where constant efforts are being made to destroy them. It would be a great calamity to our fruit industry were this pernicious insect to become established in other important fruit districts, since this would result in a heavy annual loss.

A circular letter has recently been sent out, over the name of Dr. Saunders, Director, Experimental Farm, Ottawa, to all nurserymen in Canada, inquiring whether they have been or will be importing any seedlings or stocks from France this season, and offering, in such case, to send an officer of the Entomological Division to examine such material, and to advise as to precautions to be taken in case any of the insects should be found. It is sincerely to be hoped that this pest may be kept out of other Provinces than Nova Scotia, and speedily eradicated from the latter. The presence of the dread pest in New York State is warrant for the utmost vigilance on the part of all concerned.

**Poultrymen Elect Officers.**

Officers were elected and business connected with exhibitions for 1909 transacted at the annual meeting of the Eastern Ontario Poultry Association, held in Howick Pavilion, Ottawa, last week. A few changes in the prize-list were made. Golden Polands will be divided into bearded and unbearded classes. Black Wyandottes and Sultans were added. It was voted that any exhibitor who paid \$1.00 in entry fees at the poultry show should be considered as a member of the Association.

The new officers are: Hon. Presidents—Hon. Sydney Fisher, Hon. J. S. Duff, and Wm. McNeil, of London. President—Geo. Robertson, Ottawa. Vice-Presidents—Geo. Higman and John Belford, of Ottawa. Directors—W. F. Garland, of Ottawa; A. W. E. Hellyer, of Ottawa South; J. E. Fidelity, of Brockville; James C. Cornish, Robert McKinstry, and J. Peaker, of Ottawa. Representative to the Canadian National Exhibition, at Toronto—Geo. Robertson. Representative to Central Canada Exhibition, at Ottawa—John A. Belford. Representative to the Board of Directors of the Fat-stock Show, at Ottawa—Geo. Robertson, Geo. Higman, John Belford, and W. F. Garland. Superintendent—R. E. McKinstry. Judges—Sharpe Butterfield, Windsor; Wm. McNeil, London; Richard Oke, London; L. G. Jarvis, Grimsby; George Robertson, Ottawa; and Chas. Wagner, Toronto.

It was decided that the expenses of the representative to the Toronto Exhibition be paid by the Association.

**Short Courses at O. A. College.**

The annual short courses in poultry, dairying, and stock and seed judging, have been in session at the O. A. C. this month. Upwards of 50 students in dairying, and twenty in poultry, are registered. The attendance at the stock and seed judging has been 200 during the past two weeks. Prof. G. E. Day, assisted by Dr. Hugo Reed and R. W. Wade, had charge of the stock-judging. They have been ably assisted by leading stockmen. Professor Zavitz and Mr. Buchanan had charge of the seed-judging. Each evening during the course lectures on farm topics were given in Massey Hall. The students seemed exceedingly well pleased with the course, and gave tangible evidence of this by presenting Prof. Day and Prof. Zavitz, each, with a gold-headed ebony cane, and Dr. Reed with a solid-gold watch chain. During the session, a petition, asking the Government to equip the College with Hackney and Standard-bred horses, was adopted. This will be presented to the Government at an early date.



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MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, January 25, receipts numbered 52 carloads, consisting of 1,071 cattle; finished cattle scarce; trade good. Export steers, \$5.15 to \$5.60; better cattle would have brought more; bulls, \$4 to \$4.25; prime picked butchers', \$4.85 to \$5.15; good, \$4.50 to \$4.75; medium, \$4 to \$4.40; common, \$3.80 to \$4; cows, \$3 to \$4.25; canners, \$1.75 to \$2.50; milkers, \$30 to \$55, one at \$60; calves, \$3 to \$6.50; sheep, \$3.50 to \$4 per cwt.; lambs, \$5.50 to \$6 per cwt. Hogs higher; \$6.65, fed and watered; \$6.40, f. o. b. cars, country points.

REVIEW OF LAST WEEK'S MARKET.

Receipts of stock at the City and Union Yards last week were 371 carloads, comprising 6,067 cattle, 5,267 hogs, 3,581 sheep, 269 calves, and 83 horses.

The bulk of the cattle on sale last week were of medium quality, the prices paid being such as to cause farmers to dispose of them before they were in a finished condition. Trade at the beginning of the week was brisk, but at the close, the market was much easier, with prices a little lower for the common and medium grades, but finished cattle were scarce, at firm prices.

Exporters.—There was a strong market all week for good to choice shipping cattle of heavy weights, which were scarce. Export steers sold at \$5 to \$5.60; bulls, \$4 to \$4.75, with a very few of prime quality at \$5.

Butchers'.—Prime picked lots of butchers' cattle sold at \$4.90 to \$5.25; loads of good, \$4.40 to \$4.80; medium, \$3.80 to \$4.30; common, \$3.50 to \$3.75; canners, \$1.50 to \$2.50; bulls, \$3 to \$3.50.

Stockers and Feeders.—Receipts light, and readily bought up, as many farmers were on the market each day. Prices ranged as follows: Feeders, 950 to 1,100 lbs., \$3.90 to \$4.60; feeders, 800 to 950 lbs., \$3.50 to \$3.90; stockers, 600 to 800 lbs., \$3.25 to \$3.50 per cwt.

Milkers and Springers.—Deliveries were moderately large, with prices about steady, at \$30 to \$55 each, and \$60 for two or three of extra quality.

Veal Calves.—Deliveries light, with prices firm, at \$3 to \$6.50, and \$7 for new-milk-fed, per cwt.

Sheep and Lambs.—The run of sheep and lambs was moderate, but prices were easier at the latter end of the week, especially for lambs. Export ewes, \$4 to \$4.50; rams, \$3.50 to \$4; lambs, \$5.50 to \$6.35 per cwt.

Hogs.—The market for hogs was very strong all week. Packers quote selects at \$6.50, fed and watered at the market, and \$6.25 to drovers, f. o. b. cars at country points.

Horses.—The number of horses offered for sale at the Union Horse Exchange was not large, but there was a fair trade for those offered at about steady prices. There were several dealers from the Northwest, as well as some from Montreal and Ottawa in the East. J. Herbert Smith, manager, reports that more horses would have sold readily, but dealers report them hard to buy. Mr. Smith sold three carloads to go to the Northwest, and could have sold more for the same market, could he have got them. Prices ranged as follows: Drafters, \$160 to \$185; general-purpose and farm chunks, \$140 to \$160; wagon horses, \$125 to \$170; drivers, \$100 to \$160; serviceably sound, \$30 to \$50 each.

BREADSTUFFS.

Very little Ontario wheat is being offered, and prices are advancing. Wheat—No. 2 white, 96c. to 97c.; No. 2 red, 96c. to 97c.; No. 2 mixed, 95½c. to 96c. Manitoba—No. 1 northern, \$1.09 to \$1.09½; No. 2 northern, \$1.06 to \$1.06½, at Georgian Bay ports. Rye—No. 2, 71c., sellers. Peas—No. 2, 85c. bid. Oats—No. 2 white, 38½c. bid; No. 2 mixed, 38c. bid. Barley—No. 2, sellers 57c.; No. 3X, 53c. bid; No. 3, sellers 51c. Buckwheat—No. 2, 56c. bid. Flour—Ontario 90 per cent. patent, \$3.70 bid, for export; Manitoba patent, special brands, \$6; second patents, \$5.40; strong bakers', \$5.20. Bran—\$21 to \$22, in bulk, at outside points. Shorts—\$24, in bulk, at outside points. Corn—No. 3 yellow, 66½c., at Toronto.

COUNTRY PRODUCE.

Butter.—Receipts have been liberal for several weeks, which has in turn caused the market to be easy. Commission dealers seem to be inclined to try to hold prices up, many of them having stocks in cold storage. Prices were easy, as follows: Creamery pound rolls, 28c. to 29c.; creamery solids, 27c. to 28c.; store lots, 23c. to 24c.

Eggs.—New-laid, 30c. to 31c.; cold storage, 27c.

Cheese.—Market quiet. Prices unchanged; large, 13½c.; twins, 14c.

Honey.—Extracted, 10½c. to 11c.; combs, \$2.25 to \$2.75 per dozen sections.

Potatoes.—Ontarios, in car lots, on track at Toronto, are easy, at about 63c. per bag.

Apples.—Prices are gradually creeping up. The range of prices for the best varieties being from \$2.50 to \$4.50, and sometimes \$5 per bbl.

Beans.—Market steady. Primes, \$1.70 to \$1.75; hand-picked, \$1.80 to \$1.85.

Poultry.—Receipts were a little larger, but prices held about steady. Turkeys, 18c. to 20c.; geese, 12c. to 14c.; ducks, 15c. to 17c.; chickens, 15c. to 16c.; fowl, 11c. to 12c.

Hay.—Baled, in car lots, on track at Toronto, \$10.50 to \$11.

Straw.—Baled, in car lots, on track at Toronto, \$7.50.

HIDES AND WOOL.

E. T. Carter & Co., 85 Front street East, Toronto, have been paying for No. 1 inspected steers, 60 lbs. and up, 11c.; No. 2 inspected steers, 60 lbs. and up, 10c.; No. 1 inspected cows, 10½c.; No. 2 inspected cows, 9½c.; country hides, 9c.; calf skins, city, 12c.; calf skins, country, 10c. to 12c.; horse hides, No. 1, \$3; horse hair, per lb., 29c. to 30c.; tallow, 5½c. to 6½c.; lamb skins, 80c.; raw furs, prices on application.

GRAIN MARKET.  
The market remains unchanged. American No. 3 yellow corn 50½c.; Peas—No. 2, 94c. to 95c.; Oats—Western, No. 2, 47c., carloads; track extra, No. 1, feed, 40½c.; No. 1 feed 45c.; No. 2 white, 44c.; No. 3, 43c.; No. 4, 42c.; No. 2 barley, 63c. to 64c.; Manitoba 60c. to 61c.; 75c. to 76c. for extra.

Montreal.

Live Stock.—Shipments from St. John, N. B., and Portland, Me., up to January 16th, this year, amounted to 9,944 head of cattle. Exporters, both here and in the United States, have ample room to fill all requirements for ocean freight space across the Atlantic, the result being a rather easy feeling in freights, Liverpool and Glasgow space being probably available at 35s. per space, and London at 30s.

In the local market, tone for cattle was quite firm, and advances were registered. On the whole, the offerings on the local market were light, although the proportion of choice animals was rather larger. This occasioned a good demand, and some purchases were made for export, as well as for outside places, such as Quebec. Choice stock sold at 5½c. to 5½c. per lb., fine at 4½c. to 5c., good at 4c. to 4½c., medium at 3½c. to 4c., common down to 2½c. or 2½c., and inferior down to 2c. per lb. There was a good, brisk demand for sheep and lambs, and prices ruled firm, choice sheep bringing 3½c. to 4c. per lb., culls 3½c. to 3½c., and choice lambs 5½c. to 6c., and fair 5½c. to 5½c. Very few calves offering; prices \$2 to \$10 each. In hogs, the situation was firmer and prices advanced fractionally, at 7½c. to 7½c. per lb. for select lots, weighed off cars.

Horses.—The demand last week was from local carters; supply was on the light side. Heavy draft, 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., \$185 to \$240 each; good blocks, 1,300 to 1,400 lbs., \$175 to \$200 each; small or inferior animals, 1,000 to 1,100 lbs., \$100 to \$150; broken-down animals, \$50 to \$75 each, and choice saddle or carriage animals, \$300 to \$500 each.

Dressed Hogs and Provisions.—Good demand for dressed hogs. Fresh-killed, abattoir-dressed, were selling at 9½c. to 10½c. per lb., while country-dressed were 8½c. to 9½c. per lb. A good demand for all sorts of provisions, bacon being particularly wanted, at around 14c. to 15c. per lb. for smoked. Lard sold at 12½c. to 13c. for pure, and 8½c. to 9½c. for compound, per lb.

Poultry.—Supply in the city was exceedingly light and demand good. Under the circumstances, it is not surprising that the exceptionally high prices which developed during the holidays were preserved. Fresh-killed turkeys, choicest, being freely taken at 19c. to 20c., frozen bringing 17c. to 19c. per lb., inferior available at less. Finest fresh-killed spring chickens 14c. to 15c. per lb., frozen 12c. to 14c., fowl 10c. to 11c., and geese 10c. to 11c. Ducks scarce, at 10c. to 12c. per lb.

Potatoes.—Market dull and steady, 75c. to 80c. per 90 lbs., for Quebec whites, carloads, on track; Green Mountains, 80c. to 85c. Jobbing prices about 5c. more.

Eggs.—Notwithstanding talk about importing fresh-laid stock from Chicago, prices held firm. To do a profitable business in Chicago eggs, prices would have to be about 10c. below quotations here. No. 1 limed or cold-store eggs were quoted at 26c. to 27c. per dozen, selects being 29c., and fresh 35c. to 40c.

Butter.—Market very firm. Fresh makes showed a considerable range, the lower grades being poor and the best none too good. The range was about 24c. to 25½c. Fall creamery, 27c. to 28c. per lb., and dairy rolls, 23c. to 24c. per lb. Dairy tubs were of all qualities, and sold from 22c. to 24c., while Manitoba dairies ranged from 21c. to 22c.

Cheese.—Market across the Atlantic exceedingly firm. Reports circulated recently, to the effect that prices had been forced down here by arrivals of New Zealand cheese in England, were without foundation in fact, so far as we have been able to learn. Quotations were: 12½c. to 12½c. per lb. for Quebecs, 12½c. to 12½c. for Townships, and 12½c. to 12½c. for Ontarios. Sales of the latter were made at the outside price, colored being preferred.

Grain.—The markets were fairly steady all round. American No. 3 yellow corn 50½c.; Peas—No. 2, 94c. to 95c.; Oats—Western, No. 2, 47c., carloads; track extra, No. 1, feed, 40½c.; No. 1 feed 45c.; No. 2 white, 44c.; No. 3, 43c.; No. 4, 42c.; No. 2 barley, 63c. to 64c.; Manitoba 60c. to 61c.; 75c. to 76c. for extra.

Flour.—Market dull and tone a little easy. Manitoba spring wheat, first patents, \$5.90 per bbl., in bags; seconds, \$5.40; strong bakers', \$5.20 to \$5.30, Ontario winter wheat patents were \$5 to \$5.25, and ninety-per-cents., \$4.20 to \$4.30.

Feed.—Prices held about steady, at \$21 per ton for bran; \$24 for shorts, in bags; \$32 for oil cake, and \$33 for cotton seed.

Hay.—Market steady, at \$12 to \$13 per ton for No. 1 timothy; \$10 to \$11 for No. 2; \$8.50 to \$9.50 for No. 3; \$8 to \$8.50 for clover mixed, and \$7.50 to \$8 for clover.

Hides.—Market fairly active, and quality of stock excellent, dealers paying 9c., 10c. and 11c. per lb. for Nos. 3, 2 and 1 hides, respectively, for city take-off, and a cent more for country hides, and 11c. for No. 2 calfskins, and 13c. per lb. for No. 2, and selling to tanners at ½c. advance. Lamb skins, 75c. each; horse hides, \$2 for No. 1, and \$1.50 each for No. 2. Rough tallow, 1½c. to 2c. per lb., and rendered 4½c. to 6c.

Chicago.

Cattle.—Steers, \$4.60 to \$7.15; cows, \$3 to \$5.50; heifers, \$3 to \$5.75; bulls, \$3.40 to \$3.90; calves, \$3.50 to \$9.50; stockers and feeders, \$2.50 to \$5.15.

Hogs.—Choice heavy shipping, \$6.35 to \$6.45; butchers', \$6.30 to \$6.45; light mixed, \$5.85 to \$6; choice light, \$6 to \$6.15; packing, \$5.90 to \$6.35; pigs, \$4.75 to \$5.60; bulk of sales, \$4.95.

Sheep and Lambs.—Sheep, \$4.25 to \$5.50; lambs, \$5.25 to \$7.75; yearlings, \$5 to \$7.

Buffalo.

Cattle.—Prime steers, \$6.25 to \$6.50. Hogs.—Heavy, \$6.55 to \$6.65; mixed, \$6.40 to \$6.65; Yorkers, \$5.75 to \$6.40; pigs, \$5.40 to \$5.50; roughs, \$5.25 to \$5.65; dairies, \$5.90 to \$6.40.

Sheep and Lambs.—Lambs, \$5 to \$7.35; yearlings, \$6.25 to \$6.40; wethers, \$5.25 to \$5.35; ewes, \$4.50 to \$4.75; sheep, mixed, \$2.50 to \$5.

British Cattle Market.

London cables cattle at 13c. to 13½c. per lb., dressed weight; refrigerator beef, 10½c. to 10½c. per lb.

GOSSIP.

HOLSTEIN COWS SELL HIGH.

Brown Bros., Lyn, Ont., report the sale from their herd last week, to F. F. Field, of Brockton, Mass., of two Holstein cows for \$4,000. These are Sarah Jewel Hengervald, record in milk 1 day, 101.14 lbs.; 30 days' milk record, 2,740 pounds; and Sarah Hengervald 3rd, a daughter of the foregoing, butter record, 39.39 pounds in 7 days, and 121 pounds in 30 days.

A CORRECTION.

Too late for making a change in the advertisement of the joint sale of Ayrshires and Yorkshires, to take place at West Toronto on February 5th, our attention has been called to an error in assigning the 30 Yorkshires to R. E. Gunn. These are the contribution of Donlands Farm. Mr. Gunn's contribution is an extra choice lot of young boars. The contribution of F. M. Chapman is high-class young sows in pig.

CLYDESDALES AND HACKNEYS BY AUCTION.

At the village of Winchester, Dundas County, Ont., on Wednesday, February 10th, Messrs J. J. Black & Son will sell by auction several imported Clydesdale stallions and mares, two imported Hackney stallions, and one Standard-bred stallion. These animals are all high-class representatives of their respective breeds, are all guaranteed right in every particular, are all insured, and, if desired, the policies will be turned over to the purchaser. Fuller particulars of the offering will appear in next week's issue. Winchester is on the main line of the C. P. R., a few miles east of Smith's Falls. The terms will be: For the horses—two notes of six and twelve months, bearing 4 per cent. interest, 6 per cent. off for cash. Animals will be loaded on boat cars free.





**Life, Literature  
and Education.**

The Provincial Board of Health for Ontario is organizing a systematic campaign against tuberculosis throughout the Province. The news is welcome. Such a campaign is bound to be followed by good results, and good results in one Province are bound to give inspiration to similar measures in others. Let the good work be carried on thoroughly, unwearingly, and we may yet hope to see the stamping out of the white plague from among our people.

A clause of the waterways treaty between Canada and the United States, signed at Washington on January 11th, provides that the development of power at Niagara will be so restricted that it shall not interfere with the natural beauty of the spot. There are some who hold that the restriction has been rather unduly severe, and that a considerable volume more than that allowed might be diverted without producing a perceptible difference. This may be true. Upon the other hand, the news that something definite has been done towards preventing the utter destruction, from a scenic standpoint, of this wonder of the world, cannot but be received with general satisfaction.

Niagara Falls is a possession too precious to be sacrificed for the mere sake of bringing a little more material convenience into the homes of a few people who are comfortable enough without them, or of throwing a little more money into the pockets of already rich corporations. Besides, as a mere advertisement of Canada, even the most hopelessly commercial must concede that the preservation of the great cataract is worth the price.

The ice-palace at Montreal, which is already under completion for the big carnival, will cost about \$7,000, and, although the railways have refused to grant excursion rates for the occasion, the citizens of Montreal hope to make the affair a success, in profits, as well as in enjoyment. Probably the railways feel themselves justified in refusing to lend a hand in the advertisement of Canada's ice and snow; still, it must seem to many that the hue and cry against the Canadian winter is a thing which might very well be let die out. In reality, we glory in our winter, else why the wish, which one hears everywhere, for snow at Christmas? Else why the enthusiastic looking forward to cold weather by our young folk who skate and skee and snowshoe? After all, our "Lady of the Snows" is little less attractive in her fur hat and mittens than when lolling in the sunny-in-the-shade temperature which she fails to attend her during a big share of the year.

Canada is not so greatly in need of immigrants that they must needs be picked here by misrepresentation. Let us tell the truth, and not in-

veigle to us the soft and faint-hearted, who fear to brave the blasts of our sturdy north wind. So shall our country be built up with the courage, and brain and brawn befitting the men and women of the bracing north.

An old soldier, who subscribes himself "Gunner," in writing to a British magazine, recently, casually refers to the association which, as a rule, is connected with the term "Home," as applied to institutions for homeless people. "Our 'Soldiers' Home,'" he says (degrading title, suggesting analogy with 'homes' for dogs and destitutes), is truly admirable," etc. etc.

"Gunner" has not inserted the parenthesis unadvisedly. It is absolutely true that the word "home," as so used, has become a title which—if not actually "degrading"—has come to have associated with it an idea of charity to an extent which deprives many, who might otherwise be glad to become participants in the benefits of such institutions, from entering. In many of our Canadian cities there are Old People's Homes, in which no small proportion of the inmates pay a full figure for board, yet which are generally looked upon as charitable institutions. As a consequence, many a homeless old person with ample enough means refuses to enter, choosing to drag out a companionless old age in a boarding-house, rather than to face the danger of being thought dependent upon charity. What though the Home be comfortable, with the companionship of sympathetic old age? Pride dies hard.

This may seem a trifling matter to the outsider; to those immediately concerned, it is far from trifling. As a way out of the difficulty, might it not be suggested that the divisions of such institutions apportioned to boarders and to better-class residents in general, be given distinctive names, such as those applied to hotels? For the harborage set apart for the other element, the vagrants of a lifetime, the distinctively coarse and low, with whom the better class should not be obliged to commingle, the term "Home" might still be retained.

Henry Farman, the English airship inventor, predicts that, for pleasure and general running about, the airship will before long supplant the motor-car. Incidentally, what will be the verbalism with which we shall describe this new method of locomotion? "Sail" will scarcely do, seeing that it has already been given over to the water. Shall we, then, adopt the terms applied to the birds of the air? Will the young man whisper over the sill of the upstairs window, "Will you come for a fly this evening?" and will no insinuation ever be sniffed when we ask such questions as "When do you fly?" or communicate, without a smile, the intelligence that we "flew from Halifax last week"? This plan failing, will a new set of words be created to meet the emergency? Already, "aviate" has made its appearance, but it has a hard, artificial, made-to-order look. Besides, it possesses an utterly extravagant

"e" at the end, upon which the spelling-reform belligerents will, no doubt, make speedy war. When all is said, it seems up to Andrew Carnegie, or someone else with money to spare, to institute a monster competition for words wherewith to meet the emergency. Then let the philologists creep out from their dens and the spelling-reformers hop down from their pedestals, to show us what can be done by way of manufacturing language "while you wait."

Reporters of the proceedings of the Hains trial, which was terminated a fortnight ago in New York, tell us that the acquittal of Thornton Hains, held on the charge of complicity in the murder of William E. Annis in Brooklyn, last August, was received with a great demonstration, both in the court-room and on the street. "The packed court-room of spectators," the accounts ran, "rose as one man, and cheered and applauded with such mighty vigor that Judge Crane was unable to restore order." There may have been those who thought Thornton Hains justified in inciting his brother to shoot the Burr-Macintosh editor in his yacht on that fair autumn day, but, even in such a case, why make a hero of the fellow—a gay man about town; a writer of indifferent, smart-set stories; a man known to have the blood of yet another fellow-creature on his hands? It is inexplicable that the people who make up a "crowd" cannot, as a rule, find better things to wax enthusiastic over than those which usually rouse them to enthusiastic applause. The truly great, who have accomplished great good for mankind, often with intense personal sacrifice and risk—the Marconis, the Edisons, the Doctor Grenfells, and Father Damien—are given but a passing glance; the man who escapes by the skin of his teeth, in all probability more through the skill of his lawyer rather than through his own innocence, is granted an ovation. . . . Verily, human nature is not to be accounted for.

**People, Books and Doings.**

Dr. Paget, Suffragan Bishop of Ipswich, has been made Bishop of Stepney, in place of Bishop Lang, who vacated the bishopric to become Archbishop of York.

An exhibition of English and French art, of which the Queen has consented to become patroness, and which will consist chiefly of paintings of women, will be held in the Tuileries, Paris, in May and June.

The British Authors' Club, of which Mr. George Meredith is president of the general council, is arranging to commemorate the centenary of the birth of Edgar Allan Poe by a dinner, to be given in London, March 1st, and at which the chair will be taken by Sir A. Conan Doyle. Poe was really born on the 19th of January, 1809, but for various reasons the celebration was postponed.

The Legislature of Louisiana has passed a law prohibiting the slaughter of robins in their temporary sojourn in that State. The pot-hunters of Louisiana have in the past killed as many as a million robins in

a single winter, and a law was sorely needed to put an end to the needless slaughter of an excellent bird—excellent because it destroys injurious insects, and is withal a cheerful songster.—[American Exchange.]

When Charles Dudley Warner was the editor of the Hartford, Connecticut, Press, back in the sixties, arousing the patriotism of the State by his vigorous appeals, one of the typesetters came in from the composing room, and, planting himself before the editor, said: "Well, Mr. Warner, I've decided to enlist in the army." With mingled sensations of pride and responsibility, Mr. Warner replied encouragingly that he was glad to see that the man felt the call of duty. "Oh, it isn't that," said the truthful compositor; "but I'd rather be shot than try to set any more of your copy."

Retiring President Roosevelt daily reminds himself of the need for strenuousness by a sonnet which he has had printed on a card and hung up in his office at Washington. The sonnet, which was composed by a former Senator, John J. Ingalls, and is entitled "Opportunity," runs as follows:

"Master of human destinies am I!  
Fame, love, and fortune on my  
footsteps wait.  
Cities and fields I walk. I penetrate  
Deserts and fields remote, and, passing  
by  
Hovel and mart and palace, soon  
or late,  
I knock unbidden once at every  
gate.  
If sleeping, wake; if feasting, rise  
before  
I turn away. It is the hour of  
fate,  
And they who follow me reach every  
state  
Mortals desire, and conquer every  
foe  
Save death; but those who doubt  
or hesitate,  
Condemned to failure, penury or  
woe,  
Seek me in vain and uselessly im-  
plore,  
I answer not, and I return no  
more."

Ex-president Castro, of Venezuela, has, during his sojourn in the German cities, expressed a desire for seclusion and quiet. At the same time, he stays at the most fashionable hotels, occupying the "Prince's Suite," where one is provided; is accompanied by a retinue wherever he goes, and keeps ten motor-cars at his beck and call.

Professor A. L. Lowell, brother of the astronomer, Prof. Percival Lowell, has been chosen by the corporation of Harvard University to succeed President Eliot, who retires in May.

**Re Local Option.**

Editor "The Farmer's Advocate":  
I noticed your article regarding hotel accommodation given by the temperance people in towns and villages. You say that the class of people who are complaining are chiefly the commercial travellers, who say they do not find the accommodation they need in a local-option hotel. Now, sir, I wonder where are



the parents who are willing to sacrifice their sons and daughters on the shrine of intemperance to gratify the desire of a few commercial travellers. You say, further, that something must be done by the temperance people to supply this lack; but, sir, I say no. It seems to me that those who complain so much about local-option accommodations, and advocate the open bar so strongly, must relish something the bar contains. Let us get a different class of commercial travellers—men who, for accommodation, will accept a good, well-cooked meal (I do not see why they should not find it as well cooked in a local-option hotel as one with the open bar), a clean bed, and nice quiet rooms for conversation or reading, the tables of which contain the latest news of the day, and on whose shelves are books which, to read, will stir up the man to greater deeds of usefulness, cleaner lives and manly principles—and this bill of fare without the taint or smell of this great curse, alcohol, or bar-room language. If the towns and cities cannot supply this class of commercial travellers, the rural sections of this great Canada of ours can. In our village of Ripley, here, we have had local option for close on two years, and every resident will tell you it is the greatest blessing that ever came to this section of country. Moreover, we have a local-option hotel, whose accommodations ought to satisfy any respectable person, and the proprietor is making it pay. The time is very near when local option will cover the whole land, and when business men everywhere, and commercial men, will be ashamed to be seen patronizing the open bar.

R. H. REID.  
Bruce Co., Ont.

## With the Flowers.

Lily of the Valley, Violets, and Tuberose.

I have received so much benefit from your Flower Corner, and now would like you to give me some hints regarding the culture of lilies of the valley; also English violets. I am already planning for our next summer's garden, and would like very much to have these two flowers, but I know very little about either of them.

I will procure the plants of the violet and the lily of the valley pips at the florist's. Will you please give me a few hints about their culture?

What should I do with a tuberose when it has finished blossoming? Will the bulb, if kept in the pot and well watered, etc., bloom again?

A FLOWER LOVER.

Carleton Co., Ont.

The lily of the valley is absolutely hardy and needs but little care. It requires a partially shaded place, and a deep, rich, well-drained soil. If the soil where you purpose planting it is not rich enough, use plenty of good leaf mould, with a little old, well-rotted cow manure to bring it to the right condition, adding enough sand to make the consistency loose. Some florists always put a little sand next lily bulbs of any kind to prevent possible burning from the manure. Lily of the valley pips are usually planted in October, but you might try placing some early in spring, although you cannot expect them to bloom this year. The little odoriferous violets, to which we suppose you refer, will do well under the same treatment given the lily of the valley. In fact, in a moist, rich soil, they will, in time, spread everywhere through the grass without any care whatever.

The double pearl tuberose, to which you probably refer, blooms but once. If small bulbets have appeared, they may be carefully cultivated and cared for for two or three years, and so brought to maturity, but very few care to take this trouble, preferring to purchase new, fully-developed "bulbs" (really tubers) as required.

You are very wise to begin planning your garden so soon. By so doing you are much less likely to make mistakes than if you left everything until the last minute.

## The Quiet Hour.

### The Secret of Riches.

The blessing of the Lord, it maketh rich, and He addeth no sorrow with it.—Prov. X., 22.

Who shuts his hand hath lost his gold,  
Who opens it hath it twice told.  
—George Herbert.

We all want to be "rich," though we may not all agree about the meaning of the word. George MacDonald says: "To have what we want is riches; but to be able to do without is power," but of course we don't all want the same things. Some may want to become millionaires, others think that fame is the great object of ambition. Some long for a quiet, peaceful country home, while others are only happy in the stir and rush of a city. Some like ease and luxury, while others much prefer "roughing it." Some are eager to gain, while others earnestly desire to give. Some want to be loved, others want to pour out their lives in self-devoted loving service to God and man. If we don't get what we want, then we are not rich, no matter how much money we hold. One whose chief desire is to be accepted in the best society, is poor and miserable if the lavish use of millions fail to secure that desire. One who hungers and thirsts after righteousness could never be satisfied with anything else, and would not consider himself rich just because the riches and fame of Solomon were given to him.

In the November Number of "Canada West" there is a modern fairy tale, called "The Midas Touch." It describes how the son of a practical business man was considered by his father to be weak-minded. Instead of studying the financial page of a newspaper, he preferred to study poetry; instead of trying to figure out how he could obtain enormous dividends, he became absorbed in the mystery of the stars. His father thought that he had made a grand success of his own life, because he had started in life as a poor boy and now had to pay taxes on more than \$60,000 worth of personal property. "He estimated every man's worth by the size of his bank account, and to him the word success had only one meaning, which was Wealth."

It was a great sorrow to this "successful" man that his son Arthur could not be made to understand that God had put man into this world "for the sole purpose of getting rich."

Arthur was sorry that he could not rise to his father's ambition, and one day a fairy came to his aid and gave him the power of turning into money everything that he touched. He was delighted to find that leaves plucked from a tree became bank notes of large denominations. He patted a little dog on the head and it turned into a heap of silver coins; but, to his horror, when he reached out an eager hand to grasp his father's, that poor man, who had sunk the glory of his manhood's opportunity in the paltry ambition of money-getting, was instantly transformed into a "bright, new nickel and a ten-cent piece." The fairy explained to Arthur that when he turned things into money they were transformed according to the standard of measurement which men had chosen for themselves, showing their intrinsic value. "Do you mean to say," Arthur demanded, "that my father, a prominent citizen, and a man who has made millions of dollars, is of less real —"

But the fairy vanished without giving him any answer.

I have described this story in detail because it is a splendid object lesson. No one wants to feel that his real intrinsic worth is only fifteen cents, and yet many seem to turn their energies as enthusiastically in the direction of money-getting as though that were the best way of living successfully.

Our Lord describes the sad condition of a "Fool" who had heaped up so much property that he didn't know what to do with it. He thought himself rich and prosperous, and yet he was miserably poor, for that night his soul was required of him, and he had to go out into the darkness, leaving all his wealth behind. His treasure and his heart were certainly not in heaven, and he must change suddenly from a rich man to a beggar.

Those who have laid up treasure in heaven, by giving many gifts of love during their journey of life, will be surprised to find how rich they are when the great call—which must come sooner or later—forces them to give up the treasures they think they hold. God pays the highest interest, and money or time placed at his disposal is a splendid investment. Even in this life it always pays to go into partnership with God. Usually He sees to it that the man who honors Him, in word and act and thought, receives honor from men, and as much worldly prosperity as is best for his real, eternal interests. A man who is hungering after holiness will not thank God if He heaps wealth upon him at the expense of his soul's growth. It is as hard as it ever was for a rich man to keep his heart's desire always set on the highest things. Those who consecrate all that they are and all that they have to God's service can safely trust their temporal prosperity in His hands. He is pledged to see that they have everything that will make them really rich—rich in love and happiness, rich in purity, courage and patience. A true man would be disappointed if life were too easy, if he slipped luxuriously through, in a Pullman palace car, without once standing shoulder to shoulder with his comrades and doing some really hard fighting. A brave young soldier would be bitterly disappointed if he never had a chance to face danger and endure hardship, to prove his pluck in a hard march, and his courage under fire.

"The blessing of the Lord, it maketh rich," with a wealth that has no ugly sediment of bitter disappointment. A man who has, by example and precept, inspired his children with the spirit of cold-hearted worldliness will feel terribly poor, in the midst of millions, when he looks at a friend who is surrounded by loving, noble-hearted sons and daughters. And a man who sells his integrity for money will bitterly repent the foolish bargain he has made. How can money make anyone enjoy life if his conscience is continually informing him that he is a liar and a thief, or has obtained his riches through grinding down his poorer brothers and sisters?

The opportunity to become really rich lies in our own hands, the opportunity of living successful lives. The most successful life the world has ever known was that of a young carpenter in a little country village. He had no capital, no influential friends (from a worldly point of view). He died a shameful death in the very prime of life, and, under God, only the charity of a comparative stranger saved His body from a shameful burial. He devoted the best years of His vigorous young life to healing those sick in body and soul, without charge. And even common gratitude seemed to fail Him at the last when His people—the people He had loved and helped with untiring enthusiasm—cried "Crucify Him!" and cut His agonized soul to the quick with taunts of derision. What a wonderful example of a man's powers of triumphing over a mountainous array of obstacles and achieving success with all the circumstances against him! That undaunted man sacrificed all He had to give, and the riches of millions have been poured out at His feet. He has won not only gold—little He cares for that, unless it is the outward expression of love and loyalty!—but the hearts of earth's noblest men and women, and the hearts of dear, innocent children, multitudes which no man can number are His treasured possession. Rich! what man in all the world's history was ever as rich as He who sacrificed heavenly riches willingly, gladly, joyously, for the sake of His brethren?

He is rich to-day—rich in love and joy—and so may we be if we choose His method. A farmer knows the truth of the saying: "There is that scattereth, and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty." If it is true in regard to grain, it is no less true in other respects, though the harvest may be slower in appearing. "The liberal soul shall be made fat and he that watereth shall be watered also himself." This applies to everything. A miser, who clings to his wealth and will not spend it, might just as well have gilded stones to hold; he is not master of his money, it is master of him. Everything we have is lent by God; we are only stewards and should lay out our time, money and opportunities to the best advantage not

for our own profit, but for the highest service of God and men. Then God, who holds all kinds of riches in His hand, is pledged to look carefully after our interests.

"We lose what on ourselves we spend,  
We have, as treasure without end,  
Whatever, Lord, to Thee we lend  
Who givest all."  
HOPE.

## The Beaver Circle.

An Interesting Letter from Australia.

I have been very long in writing to you again, but I hope you will excuse me. It is our spring here, and the bush is glorious in the colors and scents of the many different kinds of flowers, shrubs and trees. The gardens are not less beautiful, as all kinds of roses are out now. The gullies are white with ti-tree, or tea-tree, and supple-jack. The ti-tree has a yellowish-white blossom the shape of a brush, with a strong, sickly sweet odor, while the supple-jack, which is a creeper, and covers all kinds of scrubs and trees, making them look as if they were in blossom, has a pure white star-shaped flower, with a dainty perfume. All kinds of orchards are now in bloom, and very strange some of them are. These pieces of poetry describing spring I copied from the "School Paper":

"Lightly the breath of the spring wind  
blows,  
Though laden with faint perfume,  
'Tis the fragrance rare that the bush-  
man knows,  
The scent of the wattle bloom.

"The magpie 'midst the wattle blooms,  
Is singing loud and long,  
What fragrance in the scattered scent,  
What magic in the song!

"On yonder gum, a laughing jock,  
Out-gurgles, laughter grim,  
And, far within the fern-tree scrub,  
A lyre-bird sings his hymn.

"Amidst the stringy-barks, a crowd  
Of dazzling parakeets—  
But, high o'er all, the magpie loud  
His joyous song repeats.

"For us the roving breezes bring,  
From many a blossom-tufted tree,  
Where wild bees murmur dreamily,  
The honey-laden breath of spring."

Nearly every day for a month now, the school children have gone down to the creek—Middle Creek, which is about a quarter of a mile from the school, for a swim. There are two good places to go in, and we take it in turns going to them. A Sunday school has been started here now.

The inspector was at the school a little time ago and examined us. I passed in everything except written arithmetic, and I am to try again at the arithmetic in three months. If I pass then, I get my merit certificate. Last Thursday night was the 5th of November, Guy Fawks night, and we had a big bonfire by the school, and some crackers, and a guy. He did look funny when he was set up on the heap with a pipe in his mouth and a straw hat on his head. When all the crackers were done, we had some supper. Someone mixed the tea and coffee and gave some to the boys. They reckoned it was "shandy" they had got.

We have two pet lambs now, and there are 180 others. All big, strong ones, too.

Father and the boys are planting potatoes to-day.

Well, I must close, hoping you will think this fit to publish.

Your Australian friend,  
DAPHNE BREWSTER.

Yinnar, 5th, Gippsland, Victoria, Australia, Nov. 11th, 1908.

Would not some of the girls and boys like to tell Daphne some things about Canada, and about the especial part of it in which they live? I am sure descriptive letters, say from Ontario, Quebec, Nova Scotia, New Brunswick, P. E. I., and British Columbia, would be very interesting to our Australian "Beaver," as well as to many other Beavers. Why not tell Daphne something about our



birds, flowers, trees, and little wild animals of the woods and streams?

**Some Good Games for the Older Beavers.**

Dear Puck and Girls and Boys,—I was quite pleased to see my letter in print. I think the "Christmas Advocate" is a very pretty one.

I am sending some games, suitable for New Year's, or any winter evenings:

- (1) Which is your aunt? (Ant.) Have slips of paper with one question put in different places in the room, all numbered as below, and provide each guest with a pencil and sheet of paper with merely the numbers on. Explain that there is a word ending in "ant" in answer to each question, as: "Which is the oldest ant? Adamant."
1. What ant leaves his home? Tentant.
2. What ant is joyful? Jubilant.
3. What ant is learned? Savant.
4. What ant is well informed? Conversant.
5. What ant is trustworthy? Confidant.
6. What ant is proud? Arrogant.
7. What ant sees things? Observant.
8. What ant is angry? Indignant.
9. What ant tells things? Informant.
10. What ant is successful? Triumphant.
11. What ant is an officer? Commandant.
12. What ant is a beggar? Mendicant.
13. What ant is obstinate? Defiant.
14. What ant is youngest? Infant.
15. What is the ruling ant? Dominant.
16. What is the wondering ant? Errant.
17. What ant lives in a house? Occupant.
18. What ant points out things? Significant.
19. What ant is prayerful? Suppliant.

(2) "Private view party." Place these objects around a room and have all numbered. Give each guest a catalogue of the paintings, and they must guess from the objects to what name they correspond in the catalogue, placing the number opposite the name. It is best not to place the objects or the names in the catalogue in exact order.

- Departed days. Last year's calendars. We part to meet again.—Scissors. The reigning favorite.—Umbrella. A line from home.—Clothes line. Bound to rise.—Yeast cake. A place for reflection.—Mirror. Deer in winter.—Eggs. A rejected beau.—Old ribbon bow. Sweet sixteen.—Sixteen lumps of sugar. The four seasons.—Salt, pepper, vinegar, mustard.

A morning caller.—The bell. Bound to shine.—Shoe polish. I will send some instructions on making New Year's gifts:

1. "Making a pen-wiper."—Take a wishbone from a good-sized chicken, get some black sealing-wax and make the top part black for the head. Then make a little dress of chamois skin for the wiper. Draw it tight around the top and trim it with ribbon. Write this verse on the chamois:

Once I was a wishbone,  
Taken from a hen,  
Now I am a little slave  
Used to wipe a pen.

2. "A match scratcher."—Take a piece of cardboard 8½ x 6 inches, covered with blue sateen for the background. Then cut a moon and star from sandpaper (No. 1), and tie the top with ribbon to hang up. Put a little match-holder on the right-hand corner, and also tie this on with ribbon. They are very neat and useful presents. I am making No. 2 just now.

Well, I must not take any more room of this precious Corner.

FLOSSIE M. STAGER (age 14).  
Hespeler, Ont.

Although New Year's is past, we have put in your New Year's gifts. Flossie, they will do just as well for birthday gifts, will they not?

**The Younger Beavers.**

Dear Puck,—My papa has been taking "The Farmer's Advocate" for about 13 years, and we all like it very much. This is my second letter to the Beaver Circle, but the other must have found the waste basket. I go to school every day. Papa drives us to school in the winter. We had another room built to our school last summer, and we have two teachers.

I have been helping papa and the boys to clean oats. Roy and Jack are snow-plowing roads around the house. We live beside Lake Simcoe, and when the lake freezes we have great fun skating and sleighriding.

MYRA REID (age 9).  
Hawkestone, Ont.

Dear Puck,—An aunt of mine has a little terrier dog whose name is Shorty. He knows how to do some cute tricks, but I shall tell you how he took care of a little pet chicken. My aunt brought it in from the barn because the mother hen would not let it go with the other little chickens. Shorty went with the little chicken under the stove, and sat

take up too much room in your valuable Circle

JAMES HUNTER (age 11).  
The Maples.

This letter is too short, Jimmie—short and sweet, eh? You might have told us some more about your pony.

**Beaver Circle Notes.**

Robert Kent, of Prince Edward Island, sent a letter, which was almost too short to publish, so I am not going to put it in this time. Write us again, Robert, and tell us something about your Island. That will be very interesting to us inlanders, who never saw salt water.

Gertrude Deadman's letter was omitted as it was nearly all about Christmas, and it was impossible to print it before that day. Write again, Gertrude.

Lulu McKenzie thinks she cannot write to the Circle until she knows what "Puck" means. Never mind what it means, Lulu. Write anyway. Puck is a good-natured old fellow, who will not bite your head off.

Nellie Spalding's composition on "The Beaver" came far too late. Be up with the rest next time, Nellie.



The Laughing Jackass, Australia.

**The Ingle Nook.**

**Some Questions.**

Dame Durden,—Have been reading with interest your paper for a number of years, and since the discussion about the young people in your paper last fall, have been wanting to put in a few remarks, too.

Someone said the girls' dresses should always be in keeping with their work, and that they should always have clean work dresses on for the rough work connected with the house. I would like to know what they would do with the older, going-out dresses, and would it be economizing to wear them out, or what would it be best to do with them? Also, if parents were not willing to supply regular work dresses for all such work, what would the girls do then? I think young people, as well as older ones, have to do as they can to quite an extent, not as they wish.

Would you advise busy housekeepers to get a bread-mixer, as you spoke of in your report of the convention, and about how much do they cost?

Where could one get circulars regarding such?

Your kind attention to these questions will be much appreciated by

QUIZZ.

Yes, I agree with you that, as a rule, a great many people have to do as they can, not as they wish. Eventually, I think, "going out" dresses have to be worn out as work dresses, but I do think they should do duty just as long as possible first for going out. I often think that country people lose much by never

sending dresses and suits to a professional cleaner. As soon as a dress gets soiled it is taken for everyday wear, and that is an end of it, so far as its appearance is concerned. A far better way, it seems to me, is to get good material that will look well for a long time, have it well made in some simple fashion (extreme fashions "go out" much sooner), have it cleaned when soiled, and so get the money's worth out of it. A good cleaner will send you back a suit looking as good as new. His charge may seem a little high—possibly \$2, or \$2.25, for a coat and skirt—but when one considers that the cleaning saves the price of a new suit, the saving appears.

When a dress has done duty for going out, it may be worn quite a while as an afternoon dress, and may be kept presentable for a long time, if well protected by "all-over" aprons, with sleeves, or sleevelets, whenever it is necessary to do work. Finally, when it has to be used as a morning working dress, I should say to take every vestige of trimming off it and make it into a shirtwaist suit, if possible, when, with a white collar and maybe a bright tie, it will look neat enough, and suitable enough to its purpose, to suit anyone's taste. Besides, when all the trimming has been taken off, most of these dresses can be "tubbed" as often as necessary. They may come out of the process looking a little the worse for it, but if the material has been properly shrunk before it was made up in the first place, there should be no shrinkage, and the gowns should look quite good enough for morning wear, especially if well pressed.

As regards buying work-dresses—this certainly pays, when the only alternative is to take a going-out dress that may be made to do duty for another season for a working dress. Blue Holland, or navy blue prints are, perhaps, the best material for regular work-dresses, as both are easily laundered, and not as easily soiled as softer materials.

Any hardware man will get a bread-mixer for you. They were well spoken of at the Convention, and cost about \$3.

**"Leaves" from Maple Leaf.**

Dear Dame Durden,—I have come to answer to the roll-call of the shades, in fear lest my shade should become so vapory that you would not recognize it.

I hope you and the Nookers have all had a Merry Christmas and are starting the New Year with bright prospects before you.

I wonder how many lived the pleasures of their childhood Christmases over again this Xmas by inviting some families to spend the day with them, and seeing the excited enjoyment of the children, just as we remember when we used to all pack into the sleigh and go to grandpa's, where we would meet uncles, aunts, and cousins? Let us give the children pleasant memories to carry with them through life.

Now I must try and shake a few leaves from this staid maple tree. Here they are:

If any of you are crowded for closet room and have high wooden bedsteads, just pull them away from the wall and put some clothes hooks on the back of the head end. If the head of the bed is away from the entrance of the room, you can have your clothes handy and yet out of sight.

Have any of you tried cheesecloth curtains, as suggested in "The Farmer's Advocate" some time ago, made with a fringe on the inner edge and just long enough to reach the sill? They are very dainty for bedroom or living-room.

The next time you want to clean your stovepipes, do not blacken or varnish them, but get a can of aluminum paint and a small brush; the paint seems rather expensive, but a 25-cent can will go a long way. It is nearly two years since I painted my sitting-room pipes, and they are just beginning to look shabby. It will make rusted tinware look like new, but do not use it on anything that requires to be washed often.

I must now close, and hope the rest of the shades will put in an appearance before long.

MAPLE LEAF.

Waterloo Co., Ont.

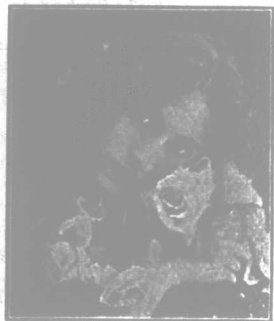
**Answer to "Anxious Mother."**

Dear Dame Durden,—In reply to "An Anxious Mother," I am sending you the information she asks for; I have spent



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The Best Thing In the Home  
—except the baby.  
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and all skin affections, scalp troubles, etc., are speedily cured when our reliable remedies are used. It will be unnecessary for you to come here unless you live near and desire to.

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**RAZOR-EZE** has filled a long-felt want for the man who shaves himself. With **RAZOR-EZE** any man can quickly put a keen, smooth, easy-cutting edge on any razor, which will shave the hardest beard with comfort. Mailed with full directions to any address. Price 50 cts.  
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considerable time, some experience, and much anxiety over this very thing. Dr. Emmet L. Holt is the authority I quote from, and he is regarded as one of the most experienced men on this particular subject, and I should not only recommend but urge every mother who must feed her babe artificially, to purchase his little book, "The Care and Feeding of Children," costing only seventy-five cents, yet useful every day your child lives up to three or four years. Of course, it deals only with feeding and clothing, etc.—it is not a medical work.

Before cow's milk can be fed to infants, it must be "modified" by the use of sugar, lime water, etc., to make it fit for the delicate stomach to digest. It contains only half as much sugar, yet three times more proteids, which are much more difficult to digest; has more acid and less fat than the breast milk of a normal mother. To overcome these difficulties we use "milk sugar" to supply one of the essential elements for the growth of the child, not just to sweeten and make it palatable. Cane sugar is much cheaper, but more difficult to digest and likely to produce colic. If you must use it, take a little less than half the quantities given below. Lime water helps to reduce the acid, and the boiled water dilutes the proteids. Since the milk can be obtained perfectly fresh, strain at once into a quart bottle and cool as rapidly as possible—in ice water or cold water—not just set the bottle in a cool place. When the milk has stood for at least four hours after cooling, the top may be dipped off—never poured off—and is ready to use. This dipping can be done with a spoon, or better with little dippers made purposely. Dr. Holt gives two series of formulas, one for ten per cent. milk, the other for seven per cent. milk: To obtain the ten per cent. milk, if your milk is quite poor (2½ to 3 per cent.) remove the top one-fourth from the quart. If of medium richness (4 per cent.) remove one third, and if rich Jersey milk remove one-half. To obtain seven per cent. milk from the poor milk take one-third, from the medium take one-half, or from the rich Jersey milk take two-thirds. Now, this is very important, for if you have no idea how rich your whole milk is, how can you know how rich your "top milk" is? It is also important to remove the entire one-third, one-half, etc., as directed, not just the number of ounces required to make the food. Having removed the proper proportion from the bottle to another vessel, stir well and dip out the number of ounces needed for the food. Dissolve the sugar in the boiling water. Have everything—hands, table, milk, bottles, spoons, nipples—absolutely clean. The quantities are given for making 21 ounces of food—larger or smaller quantities must be in the same proportions, as follows:

	I.	II.	III.	IV.	V.
Ten per cent. milk.....	2 oz.	3 oz.	4 oz.	5 oz.	6 oz.
Milk sugar .....	1 oz.	1 oz.	1 oz.	1 oz.	1 oz.
Lime water .....	1 oz.	1 oz.	1 oz.	1 oz.	1 oz.
Boiled water .....	17 oz.	16 oz.	15 oz.	14 oz.	13 oz.
	21 oz.	21 oz.	21 oz.	21 oz.	21 oz.

The milk sugar dissolves in the water, so you have 21 ounces in each formula. The foods made from seven-per-cent. milk are as follows:

	I.	II.	III.	IV.	V.
Seven per cent. milk.....	2 oz.	3 oz.	4 oz.	5 oz.	6 oz.
Milk sugar.....	1 oz.	1 oz.	1 oz.	1 oz.	1 oz.
Lime water .....	1 oz.	1 oz.	1 oz.	1 oz.	1 oz.
Boiled water .....	17 oz.	16 oz.	15 oz.	14 oz.	13 oz.
	21 oz.	21 oz.	21 oz.	21 oz.	21 oz.

These foods are made to be used from the birth of a child to the end of the fourth month, when stronger foods are required. For the eight-weeks-old babe, I would think one might start with the III. or IV., of whichever series one decided to use. The first series is suitable for a large, strong child, with a fairly good digestion. The second for a small weak child, or may be used if the first does not seem to be suitable. Remember this, that all changes must be made very gradually, not over one-quarter ounce at a time, being added to the food, and let an interval of a week or 10 days elapse before going from one formula to the next. If the child is not satisfied he will be greedy when taking the food, and will cry for it before next feeding time comes. If it is too strong he will vomit and have sour stomach—colic and various other signs of indigestion. Do not overfeed nor feed

too frequently; from the third to the fifth month, every three hours, with one feed at night, and from four to six ounces at a feed, is often enough.

To measure the sugar, count three level tablespoons (not packed) to the ounce, two tablespoons of milk or water make an ounce.

To make lime water, shake several times a day a quart of boiled water in which is a heaping teaspoonful of slaked lime; let stand 24 hours, and pour off the clear liquid.

The milk sugar can be obtained at any drug store at about 40 cents per pound.

Make up all the food for the day, having separate bottles if possible, putting each into its own bottle, and cork with clean cotton. Keep it cool and in sweet, pure air.

Change gradually from your prepared food to the modified milk—say use one fed a day at first—then two, and so on. If the patent food is agreeing well, go very slowly, as the milk may not agree so well at first.

Good luck to mother and her baby.

JACK'S WIFE.

Middlesex Co., Ont.

**Another Answer.**

Dear Dame Durden,—May a new-old member come in to your charming Nook? I want to tell an "Anxious Mother" my recipe for home-prepared baby-food. I got it from a very successful doctor, and have had the best success with it, both in my own family and others.

It is two teaspoonfuls milk, one teaspoonful cream, two teaspoonfuls barley water, and one of lime water; mix fresh just before using. This recipe is enough for a young baby, given every two hours, unless the baby is sleeping. As the baby gets older and stronger, increase the quantities. I have had good success, too, with sago, after the baby was three months old. Boil a teaspoonful of sago in water until clear, and rather thin; put in a little cream and a small teaspoonful sugar. If baby is costive, add a few drops Castoria. Hoping "An Anxious Mother" will find these recipes as helpful.

ANOTHER MOTHER.

Perth Co., Ont.

**Yet Another.**

Dear Dame Durden,—I have often thought I would like to answer some of the queries of the Nookers, but have always put it off. Now I really feel I must tell "An Anxious, but Thankful Mother" about a little experience I had last summer. A Chicago lady and her wee son came to spend a month with us in hope that the country mountain air would help the poor, wee babe. When I met them at the station the tears rolled

a long time. His feet, legs and stomach were kept warm; he never wore a hat or cap while here; he had a warm bath every morning. Everybody was amazed at the progress he made in the month. Even the village doctor, who saw him when he came to us, and saw him when leaving, said to me, "You certainly have done wonders with that child!" His father was so pleased on his return that he took a house out of town, where they could get real cow's milk. In a recent letter from the child's mother, she says: "I wish you could see baby; he weighs twenty-two pounds; his face is bursting with color, and his brain is bursting with mischief. He runs all over the house, and not a year old. Can you believe it?"

Now, poor Lankshire Lass, how my heart aches for her! I am so well and strong, I feel for her all the more.

This is a very old family recipe for mincemeat: One pound raisins, seeded; one of currants, washed; one of candied peel, mixed and shredded, one pound suet, chopped fine; one pound yellow sugar; two pounds of apples, chopped; one teaspoon of ground cloves, one nutmeg, grated; wine and brandy to taste. Seal tightly or flavor will evaporate.  
MRS. R. L. S.

Brant Co., Ont.

Several others have answered "Anxious Mother's" query. We thank all heartily. Will reserve the rest until some future time, when the question will be new again.

**Forget-me-not Reappears.**

My Dear Friends of the Ingle Nook,—One simply cannot defer calling any longer after that remarkable "Conference of the Shades." Dear chatters, did you ever hear anything like it? Is not Dame Durden a veritable genius? I only wish I could adequately describe her to you, but I fear I am incapable. One might be inclined to think on reading her rhetorical articles, so full of profound experience and actual knowledge of human nature, that she is one of those walking encyclopedias, who unconsciously embarrasses you with her illimitable fund of knowledge. But don't you ever imagine it, Chatterers, for she doesn't look a day over 21; and let me whisper it to you: She is "of the puffed hair, and her hat has the droop that spells the acme of style."

I wonder if you all enjoyed as much as I that imaginary half hour ensconced in a railway station. How frequently I have realized similar thoughts and wondered if others found themselves unconsciously students of human nature.

It is true that letters from the Ingle Nookers have been conspicuous by their absence during the past few months, and no doubt we may attribute the cause to that universal evil, procrastination. Are not each and every one of us more or less prone to that weakness, even in our daily routine of life, to say nothing of correspondence? However, at this memorable conference, I believe our "Shades" have promised to write at least twice this year, which accounts for the appearance of Forget-me-not.

Dame Durden, my curiosity prompts me to ask you a question? Are you not the author of "Carmichael"? That idea dawned upon my consciousness recently, and I have almost convinced myself that the conjecture is accurate. If so, we solemnly trust that Dick will remain away in foreign lands for an indefinite length of time, for should he return to claim his Peggie, what a catastrophe for the Ingle Nook!

My husband and I attended Toronto Exhibition, and I visited "The Farmer's Advocate" and Women's Institute pavilions in the hope of accidentally meeting you. I wonder if you were on the grounds, either of the days we attended?

Now, since Forget-me-not is such a tiny note she should occupy but a tiny space, so allow me to conclude by wishing all our Ingle Nookers all possible happiness and prosperity during the New Year.

FORGET-ME-NOT.

Perth Co., Ont.

Now, didn't I stir you all up?—and you are actually more letters on hand to follow! Verily, I believe Conferences of the Shades are a good scheme—if, only, such good schemes didn't grow stale with repetition, one might try them again.

Yours—aside I am genuinely glad to see hands with you all again at this



beginning of the New Year. It is true, as Jack's Wife said, that a great many have come to us for information during the past year (you don't know what scrambling about among books and after experts some of you gave me—but it's great fun), but that all too few have come with the chatty, homelike letters—such as those that have appeared since I resurrected you all at the Conference—which all love to read. . . . This year I shall expect you to mix them up—the questions and the chats, I mean.

Now, little lady from Muskoka, I haven't had a photo taken for years, except snap-shots—and when I look at them it is either to laugh or be "mad"—so there!

Yes, Jack's Wife, I think there should be mothers' meetings in the Ingle Nook now, but please put me in as Secretary, will you not? You see, as I haven't "done had 'sparience," I shall have to listen while the "learned" among you do the talking.

And Forget-me-not!—Don't you believe her, Chatterers; she is a gay deceiver. . . . Oh, you awful girl, don't you see what you have committed me to? What fussing over my hair and bother over my hats! I'll be positively afraid to appear in an old one for fear of meeting an Ingle Nooker—and anyway I always hate my own headgear, although I know what I like on anyone else well enough. . . . And mercy me! What a time I'll have plastering out the wrinkles so that no one will ever guess you have been fibbing over that sweet "twenty-one"—how I love the "allegation," even unto never thinking of defying the "allegator." . . . I wish all the world could think as "thee," dear, but I have my doubts, awful, awful doubts! . . . Yes, I was at Toronto Exhibition. Am so sorry I missed you. Come again, all of you, s'il vous plait. This is jolly. D. D.

Re Wedding Presents.

Dear Dame Durden and Chatterers,—While the young people have been discussing the "Young Man and Young Woman" question with great interest, I have thought of a subject which might very well go hand-in-hand with that one, and which the older folk, who usually control such things, might very well take up, viz.: The question of wedding presents.

Now, I think it is very nice to make a wedding to which one's nearest relatives and bosom friends are invited—just those who would give presents anyway. But for a long time I have thought that nothing can be more vulgar than to make a big wedding, to which people not especially friends, and often were acquaintances, are invited. The only thing, it seems to me, that could redeem such invitations from vulgarity, would be to add a line to the invitation cards, "No presents accepted," but this is seldom done. If it were the rule, the chances are that big weddings would soon be a thing of the past.

Just think of it—inviting people to your house for an afternoon or evening, and expecting them to pay for the invitation, whether it is possible to attend or not, at a rate of anywhere from \$3 up! Think of it—depending upon other folk, virtually strangers, to help furnish your or your daughter's house, when, possibly, many of these same people find it hard enough to get actual necessities for themselves! "Silver" weddings, etc., are just as bad. After all, what are they but a scheme to get something for nothing?

"Showers," however, are very different from mercenary weddings. A shower is usually given by one of the girl-friends of the "bride-to-be," never by herself or her mother, or any of her relatives. To it the bride-elect is invited, also all of her girl friends, each of whom brings some little thing, useful, though inexpensive. There are "granite showers," to which pans and kitchen utensils of all sorts are brought; "linen showers," which call for linen articles of all kinds; "cup-and-saucer" showers, etc. These little remembrances do not cost much, and yet carry more love with them, as a rule, than the expensive gift which is so often "hard" to get, and which is really demanded with every invitation to a wedding.

Perhaps some of you will not agree with me. At any rate, I should like to hear what the rest of you have to say about it. You will understand, of course, that what I have said does not refer at all to rich people. The rich can buy what they choose without missing it. I have been thinking just of the people who are not rich, and who have a hard enough time just getting along—the people to whom every cent counts. ALPH. BETA.

Middlesex Co., Ont.

Our Scrap Bag.

A friend uses her old stockings to make tights for her little girl. The stockings are slit at the sides for a few inches from the top, and sewn together to form the front of the tights. The other two raw edges are sewn together to form the back, and slits are again made at the sides and faced about neatly. Finally a band and buttons are added and the tights are completed.

In very cold weather clean windows with cloths moistened with kerosene instead of water.

A writer in Harper's says that, when making cake or pancakes in winter, if eggs are scarce, a tablespoonful of snow will take the place of one egg. Beat it in at the last minute, just before baking.

A reader of "The Farmer's Advocate" contributes the following:

Kerosene is excellent for cleaning enamel ware.

RECIPE FOR HOMEMADE WHITE OIL.

Take 2 cups best vinegar, 1 cup turpentine, and 3 eggs, shells and all. Dump together in a quart sealer and shake occasionally for a week. Then strain and put in bottles. This recipe, costing but a few cents to fill, will make three or four times as much as is sold in the drug store for seventy-five cents. It is an excellent liniment.

Note to "Another Traveller."

Will "Another Traveller" kindly send me her address? Unfortunately, I have lost it, and I have received a letter from Moose Jaw, N. W. T., asking for it. This correspondent says, "As my ancestors all came from near Vinegar Hill, I am interested."

"The Farmers' Advocate" Fashions.



6221 Boy's Suit, 6 to 12 years.

6221.—For the above suit for mid-winter wear, serge, wool chevot, shepherd's check, and materials of the sort are favorites, while cotton and linen materials are always in demand, and khaki, galatea, linen, and the many inexpensive printed wash fabrics can be utilized for the thinner suits.

The quantity of material required for the medium size (10 years) is 5 1/2 yards 24, 4 1/2 yards 32 or 2 1/2 yards 44 inches wide, with 4 yards of narrow, 1 1/2 yards of wide braid.



6208 Boy's Suit, 4 and 6 years.

6208.—The quantity of material required for the medium size (6 years) is 4 1/2 yards 24, 3 1/2 yards 32 or 2 1/2 yards 44 inches wide.

The above patterns will be supplied at the rate of 10 cents each. Kindly state age of boy when ordering, and address orders to "The Fashion Department," "The Farmer's Advocate," London, Ont.

The Golden Dog (Le Chien D'Or.)

A Canadian Historical Romance.

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CHAPTER VI.—Continued.

But neither happiness nor innocence was suggested by the look of the Chateau itself, as it stood bathed in bright sunshine. Its great doors were close-shut in the face of all the beauty of the world without. Its mullioned windows, that should have stood wide open to let in the radiance and freshness of morning, were closely blinded, like eyes wickedly shut against God's light that beat upon them, vainly seeking entrance.

Outside all was still; the song of birds and the rustle of leaves alone met the ear. Neither man nor beast was stirring to challenge Colonel Philibert's approach, but long ere he reached the door of the Chateau, a din of voices within, a wild medley of shouts, song, and laughter, a clatter of wine-cups, and pealing notes of violins struck him with amazement and disgust. He distinguished drunken voices singing snatches of bacchanalian songs, while now and then stentorian mouths called for fresh brimmers, and new toasts were drunk with uproarious applause.

The Chateau seemed a very pandemonium of riot and revelry, that prolonged the night into the day, and defied the very order of nature by its audacious disregard of all decency of time, place, and circumstance.

"In God's name, what means all this, Master Pothier?" exclaimed Philibert, as they hastily dismounted and, tying their horses to a tree, entered the broad walk that led to the terrace.

"That concert going on, your Honor?"—Master Pothier shook his head to express disapproval, and smiled to express his inborn sympathy with feasting and good fellowship—"that, your Honor, is the heel of the hunt, the hanging up of the antlers of the stag by the gay chasseurs who are visiting the Intendant!"

"A hunting party, you mean? To think that men could stand such brutishness, even to please the Intendant!"

"Stand! your Honor. I wager my gown that most of the chasseurs are lying under the table by this time, although, by the noise they

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make, it must be allowed there are some burly fellows upon their legs yet, who keep the wine flowing like the cow of Montmorency."

"'Tis horrible! 'tis damnable!" Philibert grew pale with passion and struck his thigh with his palm, as was his wont when very angry. "Rioting in drunkenness when the Colony demands the cool head, the strong arm, and the true heart of every man among us! Oh, my country! my dear country! what fate is thine to expect when men like these are thy rulers?"

"Your Honor must be a stranger in New France or you would not express such hasty, honest sentiments upon the Intendant's hospitality. It is not the fashion, except among plain-spoken habitants, who always talk downright Norman." Master Pothier looked approvingly at Colonel Philibert, who, listening with indignant ears, scarcely heeded his guide.

"That is a jolly song, your Honor," continued Pothier, waving one hand in cadence to a ditty in praise of wine, which a loud voice was heard singing in the Chateau, accompanied by a rousing chorus which startled the very pigeons on the roof and chimney-stacks. Colonel Philibert recognized the song as one he had heard in the Quartier Latin, during his student life in Paris—he fancied he recognized the voice, also:

"Pour des vins de prix  
Vendons tous nos livres!  
C'est peu d'être gris,  
Amis, soyons ivres!  
Bon.  
La Faridondaine!  
Gai.  
La Faridonde!"

A roar of voices and a clash of glasses followed the refrain. Master Pothier's eyes winked and blinked in sympathy. The old notary stood on tiptoe, with outspread palms, as with ore rotundo he threw in a few notes of his own to fill up the chorus.

Philibert cast upon his guide a look of scorn, biting his lip angrily. "Go," said he, "knock at the door—it needs God's thunder to break in upon that infamous orgie. Say that Colonel Philibert brings orders from His Excellency the Governor to the Chevalier Intendant."

"And be served with a writ of ejectment! Pardon me! Be not angry, sir," pleaded Pothier, supplicatingly. "I dare not knock at the door when they are at the devil's mass inside. The valets! I know them all! They would duck me in the brook, or drag me into the hall to make sport for the Philistines. And I am not much of a Samson, your Honor. I could not pull the Chateau down upon their heads—I wish I could!"

Master Pothier's fears did not appear ill-grounded to Philibert as a fresh burst of drunken uproar assailed his ears. "Wait my return," said he, "I will knock on the door myself." He left his guide, ran up the broad stone steps, and knocked loudly upon the door again and again! He tried it at last, and to his surprise found it unlatched; he pushed it open, no servitor appearing to admit him. Colonel Philibert went boldly in. A blaze of light almost dazzled his eyes. The Chateau was lit up with lamps and candelabra in every part. The bright rays of the sun beat in vain for admittance upon the closed doors and blinded windows, but the splendor of midnight oil pervaded the interior of the stately mansion, making an artificial night that prolonged the wild orgies of the Intendant into the hours of day.

### CHAPTER VII

The Intendant Bigot.

The Chateau of Beauport had, since the advent of the Intendant Bigot, been the scene of many a festive revelry that matched, in bacchanalian frenzy, the wild orgies of the Regency and the present debaucheries of Croisy and the petits appartements of Versailles. Its splendor,

its luxury, its riotous feasts, lasting, without intermission, sometimes for days, were the themes of wonder and disgust to the unsophisticated people



Marquise de Pompadour.

of New France, and of endless comparison between the extravagance of the Royal Intendant and the simple manners and inflexible morals of the Governor-General.

The great hall of the Chateau, the scene of the gorgeous feasts of the Intendant, was brilliantly illuminated with silver lamps, glowing like globes of sunlight as they hung from the lofty ceiling, upon which was painted a fresco of the apotheosis of Louis XIV., where the Grand Monarque was surrounded by a cloud of Condes Orleans, and Bourbons, of near and more remote consanguinity. At the head of the room hung a full-length portrait of Marquise de Pompadour, the mistress of Louis XV., and the friend and patroness of the Intendant Bigot; her bold, voluptuous beauty seemed well fitted to be the presiding genius of his house. The walls bore many other paintings of artistic and historic value. The King and Queen; the dark-eyed Montespan; the crafty Maintenon; and the pensive beauty of Louise de la Valliere, the only mistress of Louis XIV., who loved him for his own sake, and whose portrait, copied from this picture, may still be seen in the chapel of the Ursulines of Quebec, where the fair Louise is represented as St. Thais kneeling at prayer among the nuns.

The table in the great hall, a masterpiece of workmanship, was made of a dark Canadian wood then newly introduced, and stretched the length of the hall. A massive gold epergne of choicest Italian art, the gift of La Pompadour, stood on the center of the table. It represented Bacchus enthroned on a tun of wine, presenting flowing cups to a dance of fauns and satyrs.

Silver cups of Venetian sculpture and goblets of Bohemian manufacture sparkled like stars upon the brilliant table, brimming over with the gold and ruby vintages of France and Spain; or lay overturned amid pools of wine that ran down upon the velvet carpet. Dishes of Parmesan cheese, caviare, and other provocatives to thirst stood upon the table, amid vases of flowers and baskets of the choicest fruits of the Antilles.

Round this magnificent table sat a score or more of revellers—in the garb of gentlemen, but all in disorder and soiled with wine; their countenances were inflamed, their eyes red and fiery, their tongues loose and loquacious. Here and there a vacant or overturned chair showed where a guest had fallen in the debauch and been carried off by the valets, who in gorgeous liveries waited on the table. A band of musicians sat up in a gallery at the end of the hall, and filled the pauses of the riotous feast with the ravishing strains of Lull and Destouches.

At the head of the table, next to

place as in rank, sat Francois Bigot, Intendant of New France. His low, well-set figure, dark hair, small, keen black eyes, and swarthy features, full of fire and animation, bespoke his Gascon blood. His countenance was far from comely—nay, when in repose, even ugly and repulsive—but his eyes were magnets that drew men's looks towards him, for in them lay the force of a powerful will and a depth and subtlety of intellect that made men fear, if they could not love him. Yet, when he chose—and it was his usual mood—to exercise his blandishments on men, he rarely failed to captivate them, while his pleasant wit, courtly ways, and natural gallantry towards women, exercised with the polished seductiveness he had learned in the Court of Louis XV., made Francois Bigot the most plausible and dangerous man in New France.

He was fond of wine and music, passionately addicted to gambling, and devoted to the pleasant vices that were rampant in the Court of France, finely educated, able in the conduct of affairs, and fertile in expedients to accomplish his ends. Francois Bigot might have saved New France, had he been honest as he was clever, but he was unprincipled and corrupt; no conscience checked his ambition or his love of pleasure. He ruined New France for the sake of himself and his patroness and the crowd of courtiers and frail beauties who surrounded the King, whose arts and influence kept him in his high office, despite all the efforts of the Honnetes Gens, the good and true men of the Colony, to remove him.

He had already ruined and lost the ancient colony of Acadia through his defrauds and malversations as Chief Commissary of the Army, and instead of trial and punishment, had lately been exalted to the higher and still more important office of Royal Intendant of New France.

On the right of the Intendant sat his bosom friend, the Sieur Cadet, a large, sensual man, with twinkling gray eyes, thick nose, and full red lips. His broad face, flushed with wine, glowed like the harvest moon rising above the horizon. Cadet had, it was said, been a butcher in Quebec. He was now, for the misfortune of his country, Chief Commissary of the Army, and a close confederate of the Intendant.

On the left of the Intendant sat his Secretary, De Pean, crafty and unscrupulous, a parasite, too, who flattered his master and ministered to his pleasures. De Pean was a military man, and not a bad soldier in the field; but he loved gain better than glory, and amassed an enormous fortune out of the impoverishment of his country.

Le Mercier, too, was there, Commandant of Artillery, a brave officer, but a bad man; Varin, a proud, arrogant libertine, Commissary of Montreal, who outdid Bigot in rapine and Cadet in coarseness; De Breard, Comptroller of the Marine, a worthy associate of Penisault, whose pinched features and cunning leer were in keeping with his important office of chief manager of the Frigates. Perrault, D'Estebe, Morin, and Vergor, all creatures of the Intendant, swelled the roll of infamy, as partners of the Grand Company of Associates trading in New France, as their charter named them—the "Grand Company of Thieves," as the people in their plain Norman called them who robbed them in the King's name, and, under pretence of maintaining the war, passed the most arbitrary decrees, the only object of which was to enrich themselves and their higher patrons at the Court of Versailles.

The rest of the company seated round the table comprised a number of dissolute seigneurs and gallants of fashion about town—men of great wants and great extravagance, just the class so quaintly described by Charlevoix, a quarter of a century previous, as "gentlemen thoroughly versed in the most elegant and agreeable modes of spending money, but utterly ignorant of how to obtain it."



Among the gay young seigneurs who had been drawn into the vortex of Bigot's splendid dissipation, was the brave, handsome Le Gardeur de Repentigny—a captain of the Royal Marine, a Colonial corps recently embodied at Quebec. In general form and feature, Le Gardeur was a manly reflex of his beautiful sister Amelie, but his countenance was marred with traces of debauchery. His face was inflamed, and his dark eyes, so like his sister's, by nature tender and true, were now glittering with the adder tongues of the cursed wine-serpent.

Taking the cue from Bigot, Le Gardeur responded madly to the challenges to drink from all around him. Wine was now flooding every brain, and the table was one scene of riotous debauch.

"Fill up again, Le Gardeur!" exclaimed the Intendant, with a loud and still clear voice; "the lying clock says it is day—broad day—but neither cock crows nor day dawns in the Chateau of Beaumanoir, save at the will of its master and his merry guests! Fill up, companions all! the lamplight in the wine-cup is brighter than the clearest sun that ever shone!"

"Bravo Bigot! name your toast, and we will pledge it till the seven stars count fourteen!" replied Le Gardeur, looking hazily at the great clock in the hall. "I see four clocks in the room, and every one of them lies if it says it is day!"

"You are mending, Le Gardeur de Repentigny! You are worthy to belong to the Grand Company! But you shall have my toast. We have drunk it twenty times already, but it will stand drinking twenty times more. It is the best prologue to wine ever devised by wit of man—a woman—"

"And the best epilogue, too, Bigot!" interjected Varin, visibly drunk; "but let us have the toast, my cup is waiting."

"Well, fill up all, then; and we will drink the health, wealth, and love by stealth, of the jolliest dame in sunny France—The Marquise de Pompadour!"

"La Pompadour! La Pompadour!" Every tongue repeated the name, the goblets were drained to the bottoms, and a thunder of applause and clattering of glasses followed the toast of the mistress of Louis XV., who was the special protectress of the Grand Company—a goodly share of whose profits in the monopoly of trade in New France was thrown into the lap of the powerful favorite.

"Come, Varin! your turn now!" cried Bigot, turning to the Commissary; "a toast for Ville Marie! Merry Montreal! where they eat like rats of Poitou, and drink till they ring the fire-bells, as the Bordelais did to welcome the collectors of the gabelle. The Montrealers have not rung the fire-bells yet against you, Varin, but they will by and by!"

Varin filled his cup with an unsteady hand until it ran over, and propping his body against the table as he stood up, replied, "A toast for Ville Marie! and our friends in need!—The blue caps of the Riche-lieu!" This was in allusion to a recent ordinance of the Intendant, authorizing him to seize all the corn in store at Montreal and in the surrounding country—under pretence of supplying the army, and really to secure the monopoly of it for the Grand Company.

The toast was drunk, amid rapturous applause. "Well said, Varin!" exclaimed Bigot; "that toast implied both business and pleasure. The business was to sweep out the granges of the farmers; the pleasure is to drink in honor of your success."

"My foragers sweep clean!" said Varin, resuming his seat, and looking under his hand to steady his gaze. "Better brooms were never made in Besancon. The country is swept as clean as a ball-room. Your Excellency and the Marquise might

lead the dance over it, and not a straw lie in your way!"

"And did you manage it without a fight, Varin?" asked the Sieur d'Estebe, with a half-sneer.

"Fight! Why fight? The habitants will never resist the King's name. We conjure the devil down with that. When we skin our eels we don't begin at the tail! If we did, the habitants would be like the eels of Melun—cry out before they were hurt. No! no! D'Estebe! We are more polite in Ville Marie. We tell them the King's troops need the corn. They doff their caps, and with tears in their eyes, say, 'Monsieur le Commissaire, the King can have all we possess, and ourselves, too, if he will only save Canada from the Bostonnais.' This is better than stealing the honey and killing the bees that made it, D'Estebe!"

"But what became of the families of the habitants after this swoop of your foragers?" asked the Seigneur de Beauce, a country gentleman who retained a few honorable ideas floating on top of the wine he had swallowed.

"Oh! the families—that is the women and children, for we took the men for the army. You see, De Beauce," replied Varin, with a mocking air, as he crossed his thumbs, like a peasant of Languedoc when he wishes to inspire belief in his words, "the families have to do what the gentlemen of Beauce practice in times of scarcity—breakfast by gaping! or they can eat wind, like the people of Poitou; it will make them spit clean!"

De Beauce was irritated at the mocking sign and the proverbial allusion to the gaping of the people of Beauce. He started up in wrath, and striking his fist on the table, "Monsieur Varin!" cried he, "do not cross your thumbs at me, or I will cut them off! Let me tell you the gentlemen of Beauce do not breakfast on gaping, but have plenty of corn to stuff even a Commissary of Montreal!"

The Sieur Le Mercier, at a sign from Bigot, interposed to stop the rising quarrel. "Don't mind Varin," said he, whispering to De Beauce; "he is drunk, and a row will anger the Intendant. Wait, and by and by you shall toast Varin as the chief baker of Pharaoh, who got hanged because he stole the King's corn."

"As he deserves to be, for his insult to the gentlemen of Beauce," insinuated Bigot, leaning over to his angry guest, as the same time winking good-humoredly to Varin. "Come, now, De Beauce, friends all, amantium ire, you know—which is Latin for love—and I will sing you a stave in praise of this good wine, which is better than Bacchus ever drank. The Intendant rose up, and holding a brimming glass in his hand, chanted in full, musical voice a favorite ditty of the day, as a ready mode of restoring harmony among the company:

"Amis! dans ma bouteille,  
Voila le vin de France!  
C'est le bon vin qui danse ici,  
C'est le bon vin qui danse.  
Gai lon la!  
Vive la lorette!  
Des Filettes  
Il y en aura!"

Vivent les Filettes! The girls of Quebec—first in beauty, last in love, and nowhere in scorn of a gallant worthy of them!" continued Bigot. "What say you, De Pean? Are you not prepared to toast the belles of Quebec?"

"That I am, your Excellency!" De Pean was unsteady upon his feet, as he rose to respond to the Intendant's challenge. He pot-valiantly drew his sword, and laid it on the table. "I will call on the honorable company to drink this toast on their knees, and there is my sword to cut the legs off any gentleman who will not kneel down and drink a full cup to the bright eyes of the belle of Quebec—The incomparable Angeliqne des Meloises!"

The toast suited their mood. Every one filled up his cup in honor of a beauty so universally admired.

"Kneel down, all," cried the Intendant, "or De Pean will hamstring us!" All knelt down with a clash—some of them unable to rise again. "We will drink to the Angeliqne charms of the fair Des Meloises. Come, now, all together!—as the jolly Dutchmen of Albany say, 'Upp seys over!'"

(To be continued.)

### Current Events.

Several persons have been killed in recent earthquake shocks in Turkey.

The salary of the President of the United States has been increased to \$100,000 per annum.

Valuable discoveries of zinc, lead and gold have been made near Rossport, Thunder Bay District, Ont.

Mr. Noel Chevrier, of Winnipeg, has been appointed to the Senate, in succession to the late Senator Bernier.

Parliament was opened in Ottawa on January 20th, Mr. Charles Marcell being elected speaker of the House of Commons.

### GOSSIP.

#### THE EDWARDS, DRUMMOND, WHITE SALE.

The first week in February will be a memorable week in cattle-breeding circles in Toronto, the annual meeting of the Dominion Shorthorn Breeders' Association, and of other breed societies being slated for the same week, together with three exceptionally important auction sales at the Union Stock-yards, of selections from noted Shorthorn herds, and one of Ayrshires and Yorkshire swine.

The Shorthorn breeders meet on Tuesday, February 2nd. The Pettit-Watt sale takes place on Wednesday, February 3rd, at 1 p. m.; the Miller, Birrell and Johnson sale on Thursday, February 4th, at 10 a. m., and the Edwards, Drummond, White sale the same day, Thursday, at 1 p. m.

The catalogue of the last named contingent, 21 bulls and 18 females, shows a richness of breeding on popular lines probably unequalled in any former offering at public sale in America. While the individual merit of the bull end of it is said to be of an exceptionally high order, the calibre of the young cows and heifers is quite on a par. Such an opportunity to secure high-class young stock for improving or founding a herd has never before opened in Ontario.

The Edwards contribution comprises 16 young bulls, of serviceable age, sired by the noted stock bulls at the head of the Pine Grove herd, viz.: Missie Champion, Prince of Fashion, Chief Ruler, and Royal Favorite, a Toronto grand champion, and out of dams representing many of the most notable Cruickshank and other Scotch families. A half dozen choice young cows and heifers from the same herd are equally richly bred and finished in form and quality. The Huntlywood herd of Sir Geo. Drummond contributes the handsome roan yearling bull, Golden Lavender 2nd, by Imp. Gold Cup, out of the choicely-bred cow, Lavender 44th, by Imp. Cicely's Pride, bred by H. M. the King, and a Toronto first-prize winner. Five yearling heifers, by Cicely's Pride, and Gold Cup (imp.), and a handsome red two-year-old imported heifer, Queen of Sunshine, bred by the King, are also contributed from the Huntlywood herd. The Belmar Parc herd of Peter White, of Pembroke, contributes four yearling bulls, three reds and a roan, sired by the Bruce Mayflower, and Rosewood, Miss Ramsden and Duchess of Gloucester bulls at the head of the herd, from which a half dozen richly-bred heifers have also been selected for the sale, among which is a red Lavender, by Nonpareil Eclipse, and two Bruce Augusta and Rosewood representatives. There should be a large gathering at this sale, as considering the character of the offering, the probability is that some good bargains will present themselves, as all will be sold, without reserve, and fancy prices are not looked for.

## Raw Furs

Trappers and collectors, ship your Raw Furs to me. Highest prices, fair assortment.

Send your name and address for Price List—Free. We want you on our Special Mailing List.

TORONTO, 1815. WALKERTON, 1895.

Expert and Import.

C. H. Rogers, Walkerton, Can.

DEPT. O.

## POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

BREEDER of high-class Barred Plymouth Rocks. Choice stock for sale at times. Eggs in season. Leslie Kerns, Freeman, Ont.

BEAUTIFUL White Leghorn cockerels, S. comb laying strain, \$1.25 each. Satisfaction guaranteed. A. E. Donaghv, Colborne, Ont.

CHOICE White Wyandotte cockerels and pullets at reasonable prices. W. D. Monkman, Bond Head, Ont.

COLUMBIAN Wyandottes, Best fowl yet introduced. Also Toulouse geese. Emerson Tufts, Welland, Ont.

MAMMOTH Bronze turkeys. Show birds. Bred from prizewinning heavyweight stock. Young toms 22 to 27 lbs. Pairs not akin. R. G. Rose, Glanworth, Ont.

OVER 400 Bronze turkeys have been shown at Guelph Winter Fair the past nine years by 25 exhibitors. I was awarded 30 first prizes, leaving only 24 firsts for the other 24 exhibitors. I have furnished first-prize winners at Dominion Exhibition (Calgary), Manitoba Poultry Show (Neepawa), and Winnipeg Poultry Show the past year, besides winners at Madison Square Garden, N. Y., and largest shows in Indiana. Choice stock for sale—all ages—at moderate prices, considering quality. W. J. Bell, Angus, Ont.

SELLING out, half price, incubators, brooders, White Wyandottes, collies, bone mill. Wright Bros., Brockville, Ont.

TOULOUSE geese, two dollars each. R. I. Red, one dollar each. Emerson Tufts, Welland, Ont.

WHITE Wyandottes for sale. A few pullets from prize-winning stock. Eggs in season. Also Partridge Wyandotte eggs. A. Matton & Son, Mitchell, Ont.

A choice lot of young MAMMOTH BRONZE TURKEYS Bred from the heavyweight M. B. tom, first-prize winner at Toronto and London, 1908. Also a choice lot of English Red Caps for sale. W. E. Wright, Glanworth, Ont.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situation Wanted, and Pet Stock. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

CHOICE farm for sale, County of Welland, 117 acres; 25 acres in bush. Brick house (seven rooms) and outbuildings in good condition. Well watered. Possession arranged. A bargain. R. F. Argles & Co., 6 King St., West, Toronto.

FOR SALE—One of the best farms in Elgin Co. 100 acres. 20 acres hardwood timber. 5 miles from St. Thomas. All conveniences. For all particulars apply to Box 79, Pingal, Ont.

FARM FOR SALE—143 acres; quarter mile south of Centralia. Brick dwelling; three barns; first-class basement stables. One acre orchard. Three never-failing wells. Two windmills. Water system in house and stables. Soil is clay loam, clean of weeds, thoroughly underdrained, and in good heart. Terms to suit, as proprietor is retiring. Apply: Richard Hicks, Centralia, Ont.

RESPONSIBLE agents wanted for unallotted territory. Complete line of all No. 9 woven and coiled wire fencing, gates and fire escapes. National Wire Fence Co., Prescott, Ont., Hamilton, Ont.

WANTED—A situation on a first-class stock farm, or would take farm on shares. References if required. Lovett, Kintore, Ont.

WHEAT FARM FOR SALE in the famous Moose Jaw district. Only two miles from railroad and good town with four elevators, churches, hotels, stores and schools, district school on one corner of the farm. 640 acres, every foot of it first-class wheat land. 550 acres under cultivation. 390 acres ready to crop this year. 200 acres fenced. 2 houses. First-class stable for 20 head horses. Stabling for 25 head of cattle. 2 granaries. 2 good wells and 3 pond reservoirs. 14 head of good work horses. 14 head of cattle. And a complete line of implements, sufficient for farm of this size. Price \$26 an acre. This figure takes the whole thing—farm, stock and implements. Write us for particulars. Henry Y. Smith, Box 1096, Moose Jaw, Sask.

WANTED A THE DELHI TANNERY Hides, Skins and Furs to tan for Robes, Coats and Gauntlets Mitts, etc. Tanned soft and pliable. Never get hard. B. F. BELL, DELHI, ONTARIO



# FENCE TALK No. 1

Common sense and simple arithmetic can show you the economy of Page Fence as against any other fence there is.

Common sense will show you that because Page Fences are—by actual test—fully one-third stronger than the best of other fences.

Common sense shows you that the stronger fence is the better fence—because it can be stretched tighter, and will stand up to its work longer.

Page Fences, with their high-carbon (tougher, harder) steel nine-gauge horizontal wires, are a third stronger than the best of the other kinds. By harsh tests, this Page wire stands a strain of 2,400 lbs. The "hard drawn" horizontals in the other kinds break at 1,800 lbs. strain. Some of them break at less.

Simple arithmetic will show you that Page Fences, costing maybe a cent more a rod than the half-as-strong kinds, is actually five cents and more a rod cheaper—because fewer posts will keep them in better shape.

Figure it yourself. Using Page Empire Fences, say, you can safely set the posts half as far apart again as you'd dare to with ordinary wire fencing. That means two posts for Page Fence to three for the other kind.

What is it worth to dig post holes? What are fence-posts worth in your section? Figure out the saving for yourself—it is easy to do.

Here are but part of the reasons why you can't afford to buy other than the Page Fences—no matter what you pay. Let us send you a booklet (free) that shows you how to prove fence-value before you buy. Ask by mail of our nearest place. The Page Wire Fence Co., Ltd., Walkerville, Toronto, Montreal, St. John, Vancouver, Victoria.

## "PAGE FENCES WEAR BEST"

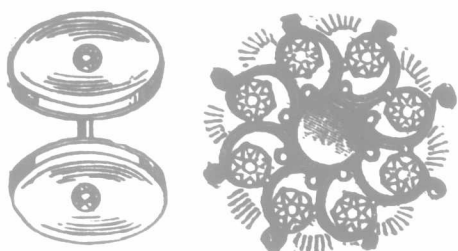
Imported Clydesdales and Hackneys by Auction

At the VILLAGE OF WINCHESTER, on

Wednesday, February 10th, 1909,

MR. J. J. BLACK & SON

will sell, without reserve, 1 imp. Clydesdale, 1 Canadian-bred Clyde stallion, 1 horse colt foal, 2 imp. Clyde mares, 2 imp. Hackney stallions, and 1 Standard-bred stallion. Every animal in this lot is a winner, and some of them are champions. A high-class lot. Terms: Two notes of 6 and 12 months, bearing interest at 4%; 6% off for cash. Every animal guaranteed.



Boys and Girls!  
**FREE**

Any one of the above illustrated articles of Jewelry—Lady's Gold Brooch set with 8 flashy brilliants, with pearl and colored stone centre, Man's gold-plated lever Cut Links with pretty cut stone setting, or Lady's Gold-plated Ring, brilliantly set with small diamonds and large cut stone centre—given free for selling only \$1.50 worth of our Picture Post Cards of Canadian and English Views, or Collar Buttons. Post Cards set 6 for 10c. Collar Buttons are Gold-plated and set of 4 sells for 10c. Are easy sellers. Send your name and address and we will mail you the Post Cards or Collar Buttons, whichever you wish to sell. Write at once. A postal will do. **THE RELIABLE PREMIUM CO.** Dept. X, Waterloo, Ont.

### TRADE TOPIC.

FREE TRIP TO CALIFORNIA FOR TEN MEN.

The Frost Wire Fence Company are always doing something unique in their advertising. Their newest big advertising proposition is a decidedly enterprising scheme for securing the hearty cooperation of their agents in thoroughly canvassing their fields for every possible user of wire fence and gates. They offer the ten dealers who best fulfill the conditions of this contest, a thirty-days' sight-seeing trip to California next fall, visiting intermediate points of interest,

with all expenses paid from the time they leave their homes until they return.

Instead of charging increased prices to provide for the expense of the trip, the Frost Company have reduced their prices, relying on the increased business to more than take care of the total expenditure.

One object of the contest is to quickly introduce the new Frost woven fence, which was added to the Frost line about a year and a half ago. This new woven fence is now being made in thirty-seven different styles, and with the Frost field-erected fence, makes an agency proposition that comes close to being unbeatable. While only ten years on the market, the Frost Fence Company's products have a wide sale. Last year's sales record was remarkable, being 25 per cent. ahead of any previous year, and in a lean business year at that.

The company have prepared a neat folder outlining the California trip. This folder and complete details of the contest, which continues until October 31st, 1909, will be mailed free, on request, to all Frost agents, and others who think they would like to join the Frost staff. Address The Frost Wire Fence Co., Hamilton, Ont., mentioning "The Farmer's Advocate."

Englishman on British Museum: "This book, sir, was once owned by Cicero." American Tourist "Tshaw! that's nothing. Why, in one of our American museums we have the lead pencil which Noah used to check off the animals as they came out of the ark."

### GOSSIP.

AYRSHIRES AND YORKSHIRES AT AUCTION.

The joint sale to take place on Friday, February 5th, at the Union Stock-yards, West Toronto, Ont., as advertised, of the entire herd of 20 head of registered Ayrshire cattle belonging to Messrs. A. A. Morden & Son, Wellington, Prince Edward County, Ont., together with 11 head of Ayrshire cows, heifers and young bulls, from the Donlands Farm herd of Mr. W. F. McLean, M. P., Donlands, near Toronto, and over 40 head of choice Yorkshire swine of various ages, from the herds of Donlands Farm, R. E. Gunn, and F. M. Chapman, Pickering, Ont., will afford a fine opportunity to secure a good class of dairy stock and bacon hogs. The Ayrshires are bred for deep milking capacity, and include a number of fresh cows; also a number of young bulls and heifers, bred from heavy milking dams, and from sires that are sons of heavy milkers. The hogs are from first-class imported stock and should be good property to invest in now that prices are climbing up.

MAPLE SHADE SHORTHORNS AND SHROPSHIRE.

The signal success and excellent prices realized at the surplus stock sale held at Maple Shade Farm, the property of the Hon. John Dryden & Son, Brooklin, Ont., the past summer, was abundant evidence of the high-class character of the offering, and also that the stock sold on that occasion were of a type that met the present-day demand. At that time, it will be remembered, practically nothing but young things were offered, all their splendid breeding animals being kept on the farm, consequently the last year's crop of calves are now of salable age, among which are several young bulls, the equal of any lot ever bred on that noted farm. Prince Imperial =72511=, is a roan two-year-old, sired by their grand old Duchess of Gloster-bred stock bull, Prince Gloster =40998=, dam Helen 21st (imp.), by the Cruickshank Orange Blossom bull, Archer's Pride. This grandly-bred young bull will make a splendid herd-header for the man fortunate enough to get him. Contender =72512=, is a dark roan, 15 months old, an extra good one, exceptionally thick and even, sired by the Rosemary bull, Imp. Scottish Prince, dam Countess, a Cruickshank Carmine, by Prince Gloster. Bravado =72517= is another high-class herd-header, low-down and very thick, a red 15-months-old, sired by Imp. Scottish Prince, dam Constance, also a Cruickshank Carmine, by Revenue, a half-brother to the champion, Nominee. Minstrel Prince =72516= is a straight, level young bull, a red yearling, by Imp. Scottish Minstrel, a Missie-bred bull, and second in service at Maple Shade, dam Golden Bracelet, a Brawith Bud, by Prince Gloster. Scottish Lord =72513= is another extra good one, put up on show lines, a roan yearling, by Scottish Minstrel (imp.), dam Lavender Lady, a Cruickshank Lavender, by Prince Gloster. Lavender King =72518= is a red yearling, by Prince Gloster, dam Lavender Spot, a C. Lavender, by Revenue. For over a quarter of a century the Maple Shade herd has had an international reputation for excellence of type and breeding. Scores of high-class herd-headers have gone out from this herd and won distinction, and among this lot are as good ones as were ever bred here. There are also several choice heifers that will be priced. There is no better flock of Shropshire sheep in Canada than the Maple Shade flock. All imported and from imported stock, new breeding blood is annually imported, and the flock kept up to the highest standard of excellence, there are both sexes for sale. The farm has Bell 'phone connection.

### TRADE TOPIC.

Plank barn frames, ready-made and guaranteed correct, are advertised in a paper by Alf. A. Gilmore, Hunterdon, Quebec, who claims he can deliver a frame, freight paid, for less cost than can be framed on the farm. A good plank and lumber shed frames are also provided, with complete drawings and instructions, at small cost.

## FARMERS' FRUIT AND VEGETABLE GROWERS



WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY PRODUCT OFF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER. THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK SEND FOR PRICES, ETC.

THE W.A. FREEMAN CO. LIMITED HAMILTON, CANADA

## IT IS NOT

Necessary to whip your horses if you use our Elastic Draft Springs, as they prevent that rushing and jerking about, and make the unwilling horse pull alike and even with the other. Try a set, it's a good investment.

Constructed of Best Crucible Cast Steel



Spring Complete	Tension Link with inside spring	Tension Link Catch Link	Tension Link Extended
No. 1 for loads 2 to 4 tons, \$4.00 per set (4 springs)	" 2 " 4 to 8 " 5.00	" 3 " 8 to 16 " 7.00	" "

Representatives for Canada and United States. Agents wanted everywhere.

THE TRANSATLANTIC IMPORT AND MANUFACTURING CO., LIMITED.

OFFICES: 163 Queen St., North, P.F.R.I. ONT.

## Big Magic FREE LANTERN

This valuable Magic Lantern, same as illustrated, and all complete, including one dozen handsome Colored Slides, given free for selling only 11 boxes, \$2.75 worth of Dr. Snyder's Famous Vegetable Pills, the greatest Remedy known for Indigestion, Weak or Impure Blood, Catarrh, and also for all Liver and Kidney Troubles. Sell 2c. box. No trouble to sell them—everybody needs them. Send your name and address and we will mail you the pills. Write at once. A postal will do. **THE RELIABLE PREMIUM CO.** Waterloo, Ont., Dept. X.

WHAT TO DO WITH FURS.—Numerous requests come to us in the course of a year for recipes for tanning skins. While many of them can be tanned at home, the best results are usually obtained from the tannery. Far better shipping rates are obtained. C. H. Rogers, of 1000-1002 (Department O) offers a complete and fair assortment. Send for a catalogue and address for a free trial. Mention this paper.



# The Canadian Bank of Commerce.

ANNUAL MEETING OF SHAREHOLDERS.

The forty-second Annual Meeting of the Shareholders of The Canadian Bank of Commerce was held in Toronto on 12th January.

After submitting to the meeting the Directors' report for the past year and the balance sheet, the General Manager addressed the meeting. He spoke, in part, as follows:

### General Manager's Address.

The net profits for the past year show a decrease of \$125,016.89 as compared with the figures of the previous year, but they are slightly in excess of 16 1/2 per cent. on the paid-up capital, and under the circumstances we feel that this result is a very satisfactory one. Had it not been that the volume of our loans was well maintained during the early part of the year, the decrease would have been much greater.

We have paid the usual dividends at the rate of 8 per cent. per annum, and after providing for customary payment to the Pension Fund and for some special subscriptions, and adding \$1,000,000 to the Rest, we have been able to set aside \$300,000 for Bank Premises Account, and to carry forward undistributed profits of \$161,244.88. This emphasizes the position this Bank is in as regards the maintenance of its present rate of dividend, and, while some of the shareholders may feel that they are entitled to a larger distribution of the profits of the Bank, we believe that the majority will agree with us that the present moment, when we are facing a period of diminished demand and consequent lower rates for money, is hardly opportune for the consideration of this question, and that the policy your Executive has followed of strengthening the foundations of the Bank is that which will tend most surely, in the not distant future, to the realization of the hopes of those who look for increased returns. It is possible that some may think our expenditures on bank premises might now be lessened to some extent, and in this connection we may say that the principal buildings which we feel at the present time are necessary should, in the course of the next two years or thereabouts, be completed. But the rapid extension of the Bank in the newer parts of this country, and the remarkable growth exhibited by many of the cities and towns of these new districts, are constantly making demands upon us for accommodation which we find it difficult—indeed, well-nigh impossible—to obtain in any other way than by erecting our own buildings.

During the year our deposits have increased by \$7,996,738, or almost eight million dollars, of which about six million dollars is in deposits bearing interest. It may be interesting to note that, starting last year with deposits of \$87,041,057, some of which were of a temporary character, being balances of large accounts in process of adjustment, there was a decrease until April, when we reached the lowest point, \$82,257,018. The past six months showed a steady increase, culminating in our record of \$95,037,796. On the other side of the balance sheet, our loans stand at \$87,692,785, as compared with \$88,768,829 in our last report, the decrease being mainly under the heading of "Current Loans and Discounts," which represents almost entirely our share of the commercial loans of the country. In this item the decrease is \$7,378,622; while, on the other hand, our Call and Short Loans have increased \$5,241,327.

We have not had a recurrence of the difficulties attending the marketing of our crops, and perhaps a word on this question will not be out of place. There was little or no apprehension of stringency during the crop season. Our easier financial position, the wise provision for an emergency circulation, and the fact that a large portion of the crop was moved with exceptional rapidity before the close of navigation, all tended to obviate these difficulties; still there is much to be considered seriously permanent measures for financing a crop movement of such large proportions. It is manifestly necessary that there should be a large amount of bank capital available as a reserve for our circulation, but, even with a considerable augmentation of bank

circulation and the thoughtful interposition of Government measures of relief, we shall still be brought face to face with the difficult problem of taking care of immense stores of grain after the close of navigation, when the interior movement is over and the grain is warehoused at terminal points.

In November, 1907, when the foreign loans of Canadian banks were at their low point—\$64,774,000—the Canadian banks held deposits elsewhere than in Canada amounting to \$54,819,000, so that not more than \$10,000,000 of Canadian funds were being lent outside Canada. Moreover, the larger portion of these loans is carried in New York at 24 hours' call—practically as readily available as cash. Except as rare intervals, New York call loans bear a much lower rate of interest than Canadian mercantile loans; consequently the banks aim to carry only such amounts at call in New York as, with the cash carried here, will constitute a reasonable reserve of cash and immediately realizable funds. Notwithstanding all that financial critics have written about Canadian banks sending in New York moneys needed in Canada, in order to take advantage of the high rates occasionally prevailing there, such a thing as a bank curtailing its commercial loans in Canada for a purpose of this kind is absurdly improbable. Only occasionally during the past fourteen years have excessive rates for call money in New York prevailed for more than a few days in the year, and no sane banker would think of sacrificing permanent business connection in Canada, of even the smallest kind, for such a temporary advantage. Self-interest will at all times be a sufficiently weighty force to prevent the banks from lending Canadian funds outside of Canada except to the extent that is necessary for the purposes of their cash reserves.

From the figures quoted above, it will be seen that, so far from the business interests of Canada being prejudiced by the policy of the Canadian banks in this matter, they are actually benefited, and in no small measure, since the deposits gathered abroad supply a large part of their cash reserves. Had the banks at the date mentioned had no deposits and no loans outside of Canada, only \$10,000,000 would have been added to their resources at home, and this would not have been lent for commercial purposes. On the contrary, in order to bring the total reserves up to the normal level, not only would it have been necessary to add this sum to the cash reserves carried here, but also to withdraw a further large sum from mercantile loans.

During the panic in the United States some of our newspapers published sensational and misleading articles to the effect that the funds lent by Canadian banks in New York were tied up and could not be got back to Canada. Notwithstanding the severity of the panic, however, there was not a day during which moneys lent to New York brokers on call could not have been got in, and while it is true that, if it had been desired to ship money to Canada direct from New York, a premium of 3 to 5 per cent. would have fallen to be paid, on the other hand, New York funds could at any time have been exchanged for drafts on London, and the gold brought from there—indeed, this procedure was followed to a considerable extent by the New York agencies of some Canadian banks. No more convincing evidence could be had of the availability of call loans in New York than is afforded by the experience of last year.

On the general subject of the moneys lent in the United States, it may properly be argued that reserves are for use in a time of emergency, but on this score it can be shown that the course of the Canadian banks last autumn was not at all open to criticism. In the month of September, 1907, the total loans of Canadian banks outside Canada amounted to \$88,953,000, while at the end of November, when the stringency was most severe, they had been reduced to \$64,774,000—from which it will be seen that the banks had drawn upon their outside reserves to the large amount of \$24,000,000 to meet the necessities of the mercantile community in Canada.

The President then moved the adoption of the report, and said, in part:

### President's Address.

It is hardly necessary to say that the conditions of business are very different from those of a year ago. We were then required to meet the serious lessening of our purchasing power because of poor crops in Canada, and our share of the result of the culmination of a world-wide expansion in general expenditure, and particularly in the fixing of capital in public and private improvements. We have now had a year in which the pace of expenditure throughout the world has been sufficiently checked to ease the money markets, and in Canada we have gathered an excellent harvest. Better class securities almost everywhere have recovered in price to such an extent as almost to wipe out the apparent losses which seemed so serious a year ago, and which were, of course, real to those who were forced to sell. The lessening of our power and disposition to purchase goods has naturally lessened the profits of many manufacturers and merchants; but all this was inevitable, and I think those who consider sufficiently must conclude, as a year ago we suggested would be the case, that we have suffered far less than most other countries. Whether we have suffered enough for our own good is another matter.

### Ontario and Quebec.

While the results of the year's farming operations have been a fair average in Ontario, they have been below the average in Quebec. Spring conditions were favorable in most parts of Ontario, but the season was late in Quebec and in Eastern Ontario. In both Provinces the unusually dry period during the summer affected the yield in the case of many crops, and the farmer suffered like others from the decline in prices. Still the year was one of prosperity, although the farmer's purchasing power is for the moment lessened by the effect of the poor crops in 1907. The acreage of fall wheat sown in all Canada for the crop of 1909 is five per cent. less than normal, although there have been great increases in the three Prairie Provinces and in Quebec. The reduction in the general average is caused by the Ontario acreage falling to 86 per cent. of the normal amount owing to the drought and consequent bad condition of the ground for working. Any loss due to this will doubtless be made up in other directions. Hay and pastures generally were, of course, affected by the drought. The value of the hay and other fodder crops, of potatoes and roots, including sugar beets, in Ontario and Quebec, is very great, and yet in discussing crops from year to year we are apt to forget the importance of these relatively to the cereals. The Government report for November shows the value for all Canada of these root, seed and fodder crops to be \$186,000,000, of which 48 per cent. was grown in Ontario and 28 per cent. in Quebec, the money value for 1908 in the two Provinces being \$142,500,000.

For a second time dairy exports are much less than for the record year of 1906, and while this is partly due to the lack of rain and a lessened number of milch cows, we have apparently come to a point in the trade where its growth cannot be judged by the exports alone, as it has been possible to do heretofore with a fair degree of accuracy. Fortunately, the statistics now published by the Dominion Government make a study of the subject quite easy. There has been another marked decline in the total value of cheese exported, the quantity shipped from Montreal being valued at only \$17,142,000, against \$20,941,000 in 1906, although the average price was highest on record. In butter there is an improvement of about 50 per cent. over the extraordinarily low figure of 1907, but even then we show exports valued at only \$1,266,000, as against \$7,400,000 in 1905. If we compare 1908 with 1903, the loss in value of dairy products exported is about \$8,000,000. If, however, we take into account the requirements of our greater population, an increased supply worth about \$9,000,000 is now required for home consumption. But this is not a sufficient explanation, because the decline in exports has been as great since 1906 as since 1903. There is no doubt that it is also due in a large measure to the more lavish expenditure at home for all dairy products owing to

our increased prosperity. The total value of the entire dairy product of Canada for 1908 is estimated at \$94,000,000. There are in Quebec 2,806 factories for the making of cheese or butter, or both, and in Ontario 1,284, while in all the rest of Canada there are but 265. This comparison gives some idea of the opportunity for expansion in this most valuable branch of farming. No matter how great is the home consumption, the growth of our dairy business should be great enough to provide for it, and barring lean pastures, to increase annually the quantity available for export. It is most unfortunate that at a time when there has been drought in Australia and New Zealand the same thing has occurred in Canada. As a consequence, the falling off in the supply of Colonial butter in Great Britain has been so great that prices have been the highest in twenty years, and foreign buttermakers being unable to supply the deficiency to any considerable extent, it has been supplied by various cheap substitutes for butter, doubtless to the disadvantage of our future trade in the real article.

Exports of apples have also been smaller, owing to the prolonged dry weather. As against 630,000 barrels in 1907, we exported only 351,000 in 1908, the average for nine years being 430,600.

The market for horses has been satisfactory. Owing to the reduction in the herds on account of the lack of food supplies in 1907, and the dry season of 1908, there is not the same improvement in the cattle of Ontario and Quebec as has taken place in the West, and a season or two of our usually plentiful food supplies will be necessary before we have entirely recovered. It is also regrettable that the Ontario farmers have for two or three years paid less attention to hog-raising than formerly, partly, of course, because of the scarcity of food; the effect has been to lessen the steadiness of our supply of bacon and to give our chief competitor, the Dane, a renewed hold on the market in Great Britain.

The stringency in money has affected the lumber trade of Ontario and Quebec as elsewhere. Large transactions for a time practically ceased, but the manufacturers are, as a rule, able to hold their stocks, and are unwilling to make much concession in price. There are now signs, both in Great Britain and the United States, of some renewed interest, and this particular trade will doubtless recover its strong position as quickly as any other. There is naturally some lowering of the cost of manufacture, although this will not have its full effect upon boards sawn this year.

In almost all branches of manufacturing there has been a large falling off in output, causing a considerable number of people to be out of employment, and all shopkeepers and distributors of goods to experience a corresponding diminution in the volume of sales and in profits. This inevitable result of the necessary check which has come to the world's expansion is now gradually passing away, and we can look hopefully to the future, especially in view of the unusual growth of this country. In many branches of manufacturing, orders are now coming in quite satisfactorily, and many stocks which had become low are being replenished.

Much the most interesting feature in the development of Ontario has been the Cobalt mining camp, and the prospect of new areas of similar character. The actual silver shipments of 1907 have advanced us to the fourth position among the world's producers, as compared with the fifth position a year ago. We have passed Germany, and we may pass Australasia in the near future. Up to the close of 1907, the total value of silver produced at Cobalt was \$11,300,000; and of this about \$6,000,000 was shipped in 1907, the average value being about 65 cents per ounce. The quantity of ore shipped in 1908 was about double that of 1907, but the average value having fallen to approximately 52 cents per ounce, the money result is only about \$9,500,000. Had the price of silver remained as in 1907, the value of the product of 1908 would have been about \$12,000,000. The result is, in any event, very gratifying, and is still due largely to development work. The most notable new areas are in the Montreal River district, about 75 miles northwest of Cobalt, where the general conditions seem to be practically similar to



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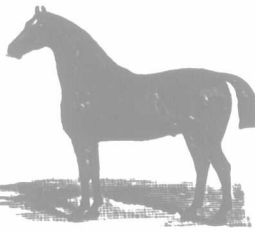
One pound of Barnes English Compound makes ten pounds of stock food, by mixing it with three pounds of linseed meal and six pounds of corn meal. As a conditioner and flesh-producer has no equal. Postpaid on receipt of 50c., money order or stamps. Address: S. G. Amsden, Windsor, Ont.

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consisting of 220 acres of land under cultivation, free from stumps; 280 acres pasture land and orchard of choice fruit; stabling for about 150 head of stock, and pigery capacity for 200 hogs. The bright possibilities of the tenant of Annandale Farm are probably more widely known than that of any other farm in the Province. It was brought to perfection as a model for mixed farming under the personal attention of the late E. D. Tillson, Esq., and more recently under the control of Mr. Geo. Rice as a breeder of Holsteins, and the farm has continued to stand out as one of the finest private farms in the Dominion. The barns and other buildings embody the most modern ideas. The diversity of the soils, the perfect water supply, the nearness to first-class schools and business college and the splendid shipping facilities to five cities, coupled with the establishment here of Borden's Condensed Milk Factory and the Tillsonburg Pork Packing Co., should make Annandale Farm especially attractive from the tenant's viewpoint. For full particulars address: THE E. D. TILLSON ESTATE, LIMITED, TILLSONBURG, ONTARIO.

### Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin or money refunded, and will not kill the hair. Manufactured by Dr. Fredrick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:



J. A. JOHNSTON & CO., Druggists, 171 King St. E., TORONTO, ONT.

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a big knee like this, but your horse may have a lurch or bruise on his Ankle, Hock, Saddle, Knee or Throat.

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will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle, daily'd. Book 8 D free. ABSORBINE, J.E., for manhood, \$1. Removes Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Varicocel, Old Sores, Ailays Pain. Book free. W. F. YOUNG, P.O.F., 73 Monmouth St., Springfield, Mass. LYMAN, BONS & CO., Montreal, Canadian Agents.

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Don't build a homemade barn frame. Get one of Gilmore's ready-made, guaranteed, correct plank frames, delivered at your station, freight paid, for less money than you can have it framed on your own farm. Have also the best frame for skating rinks and lumber sheds. Complete drawings and instructions at a small cost. Write for particulars.

ALF. A. GILMORE, BOX 189, HUNTINGDON, QUE.

Shannonbank Clydesdales, Ayrshires, Yorkshires. One stallion rising three years, by imp. Hopewell. Two young bulls ten months, and some heifers from six months to two years. Yorkshires of both sexes. W. H. TRAN, Cedar Grove, Ont., Locust Hill Sta., C. P. R.

### Shetland, Welsh and Iceland Ponies

I have on hand a number of single ponies and matched pairs; all ages; thoroughly broken to harness and reliable in every way.

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those at Cobalt. It is too early as yet to guess whether Cobalt is to be repeated. The shipments from Cobalt have been made by about 40 companies; 24 of these are regular shippers, and 15 are paying dividends. Unfortunately, these 15 dividend-payers are the examples upon which numerous companies are being created, most of which will not reach the dividend-paying stage. The total capital of the companies listed on the Exchange is about \$56,000,000, and their shares are quoted as worth about \$58,000,000. In addition to these there are many companies whose shares are not listed. It is, of course, possible, that this rich camp may, as a whole, justify these figures, but, if so, it will almost surely mean that a few have made large sums, while a very large number of exceedingly foolish people have lost all that they had invested. While Cobalt can produce silver cheaper than any mining area in the world, except those where it is a by-product, the fall in the world's price for silver is disappointing. If the low price continues, many mines in other countries must close down, and this would tend to a movement upward.

The total value of all minerals produced in Canada in 1907 was \$86,000,000, against \$65,000,000 five years ago, and \$10,000,000 twenty years ago.

While the smaller number of immigrants and other travellers, and the lessened imports, have been unfavorable factors, Montreal, as a port, has done well during the past year. It now occupies the fifth place in North America, being surpassed by New York, Galveston, Boston and New Orleans. The value of incoming and outgoing merchandise for 1907 was \$192,000,000, and to meet the requirements of this great trade, the Harbor Commissioners have made important improvements of the most modern character. The Marine and Fisheries Department have also for some years past been steadily improving the lighting of the St. Lawrence, and it is claimed that during the last eight years the decline in insurance rates has been such as to make a saving to freight and vessel owners combined of about \$6,000,000.

### Manitoba, Saskatchewan, and Alberta.

There is little to say this year about the Prairie Provinces that is not pleasant to hear. So far as agriculture is concerned, the work of seeding was done under very good conditions, and with ideal weather in June, the sanguine hopes of early July, which went as high as 125,000,000 bushels for wheat, were not without justification. But July was too hot, and in August there was some frost. The total yield did not come up to the calculations of the most optimistic, but it is the largest ever secured in all kinds of produce. Both yield and grade, when the grain was not frosted, were good, and with prevailing prices the money return is, of course, larger than in any previous year. Our estimate of the total quantity of cereals is as follows: Wheat, 106,040,000 bushels; oats, 103,200,000 bushels; barley, 23,380,000 bushels; or, in all, 232,620,000 bushels, against 160,000,000 in 1907, and 32,000,000 in 1900. The West has seldom had a season more favorable for the threshing and movement of the crop, and also for the preparation of the land for the following year. As a consequence it is estimated that the acreage for 1909 will exceed that of 1908 by 15 to 20 per cent., making a total acreage of 11,500,000, of which about 7,250,000 will be in wheat. With this bountiful crop for 1908, and the handsome promise for 1909, it is well not to forget such years as 1907. There are many avenues of economy and profit open to the Western farmer, which, because of the ease with which he acquires wealth, he is apt to neglect. This is unfortunate for the country as a whole, and some day it may be unfortunate for him. Apparently, he does not always prepare in the fall as large an acreage as possible for early seeding in the spring, nor is he always careful to use good seed; he does not use fertilizers to any reasonable extent, nor destroy noxious weeds with sufficient vigor, nor does he prepare for a proper rotation of crops; and it is regrettable that the higher branches of farming, such as dairying, the breeding of good cattle, horses, hogs, and sheep, and the raising of poultry, are not being more rapidly developed. However, the Manitoba Government is doing good educative work of this kind in its Agri-

cultural College, and the Governments of Alberta and Saskatchewan have shown in many ways that they are alive to these most important questions. The example also of the well-trained farmers who are to be found in many districts, must tell in time; indeed, there are many parts of the three Provinces in which great progress in mixed farming is already noticeable.

From the best information we can get the year just closed is regarded as an exceptionally good one in the cattle trade. Prices have been satisfactory, and the European markets have been steadier than at any time since 1892. The prospects for a continuance of good prices seem particularly bright, owing to the general shortage of cattle in all exporting countries, and especially in the United States. Canadian herds, from the Atlantic to the Pacific, are now reported by Government experts to be entirely free from disease, and a most careful quarantine against foreign countries as to cattle, cattle products, and horses, is being maintained. On the Western ranges the grass is excellent and the cured, and animals intended for next year's market should come through the winter in good condition. While it is difficult to obtain reliable records of the number and total movement of cattle in the West, the following figures will be of interest. The shipment for export for the last four years has been as follows:

1905	64,287
1906	86,575
1907	53,556
1908 (to 5th December)	100,454

These figures indicate clearly the severity of the winter of 1906-7, and also the recovery from its effects. The total number of cattle, horses and sheep in the three Provinces is estimated as follows:

	Cattle.	Horses.	Sheep.
1901	942,625	340,329	182,616
1906	1,944,598	682,919	304,531
1908	2,073,840	737,659	307,682

Now that the slight check to the growth of the West, caused by the worldwide stringency in money, the poor crops of cereals, and the bad winter for cattle, is passing, it may be well, if you are not already tired with figures, to give some of the evidence afforded by statistics, of the rapid growth of the Prairie Provinces. We have already dealt with grain and cattle. In lumber, the cut for the country between Lake Superior and the Rocky Mountains—a district not very important in timber areas compared with other parts of Canada—has grown from 119,000,000 feet in 1899 to 266,000,000 feet in 1907. In coal, from mines in Alberta and Saskatchewan, the growth in the same period has been from 334,000 to 1,757,000 tons. The grain storage capacity, including terminal elevators, has grown from a little under 20,000,000 bushels in 1899 to 61,000,000 bushels in 1908. The milling capacity, of which we have no records for 1899, has grown from under 20,000 barrels per day in 1903 to over 40,000 barrels per day in 1908.

The railway mileage in the three Provinces has grown from 2,000 miles in 1900 to 8,560 miles in 1908, and the demand for branch lines is still as pressing as ever. The Premier of Alberta has stated his views as to the necessity for greater transportation facilities in his Province so urgently, that we cannot doubt but that his people and those of Saskatchewan are keenly alive to the advantage and necessity of being able to get their crops speedily to the seaboard. The movement of cars will illustrate the poorness of the crop of 1907 and the excellence of the crops of 1906 and 1908, and also the improved capacity of the railroads. For the twelve months ending 31st August, 1907, the number of cars carrying grain was 80,507; for the corresponding period in 1908, 63,978, while for only three months of 1908, from September to November, inclusive, the number was 48,898. In Southern Alberta, and at scattered points elsewhere, there have been strong complaints of car shortage, but as a whole the service of the railroads has been better than usual.

The number of homesteads and pre-emptions exceed all previous records, partly because of the new Land Act, which came into force only on 1st September, since which time a great rush

has occurred. The number of entries during the first nine months of the past three years has been as follows:

1906.	1907.	1908.
37,690	23,129	41,965

It seems safe to assert that the new policy of the Dominion Government regarding the desirability or otherwise of those who propose to settle in Canada is bearing good fruit, as those who have taken up land during 1908 have been, as a rule, of a better class than in previous years. The number of settlers coming into the three Provinces during the past year is estimated at 105,000, of whom about 40 per cent. were from the United States.

The population of the three Provinces has grown from 414,000 in 1901 to 975,000 in 1908; the value of goods entered at the Customs Department from \$6,200,000 in 1899 to \$26,000,000 in 1907; the number of branch banks from 29 in 1899 to 507 in 1908; the bank clearings from \$107,786,000 in 1899 to 717,423,000 in 1908.

These figures abundantly illustrate the prosperity of the West, and we may fairly expect that Eastern business dependent on the West will now improve. Still it must be remembered that, owing to the poor crop and the cattle losses of 1907, the West, so far as its immediate buying power is concerned, is not very much ahead of where it was at the end of 1906. It is sincerely to be hoped that the desire to spend freely and to incur debt will not immediately return, and that some of the lessons in economy may remain permanently impressed upon the people.

In view of the rapid destruction of timber going on throughout the world, a correspondent of the London Times, in a recent article, draws attention to the quantities estimated as still standing in the Pacific Coast areas of North America, as follows: Oregon, 225 billion feet; Washington, 195 billion; California, 180 billion; British Columbia, 150 billion; Idaho and Montana, 100 billion; a total of 850 billion feet. Canada, as a whole, is credited with 500 to 600 billion feet. The deep interest of the European world in these last great stands of timber in North America should not be forgotten when we consider our own national future. We may see the forests on which we have placed so much reliance disappear with a rapidity which we have not supposed possible. The quantity and value of the lumber produced from the Douglas fir of Oregon and Washington, the sugar pine, the white pine, and the redwood of California, all combined, will illustrate in a startling manner the depletion which is going on, and the enormous money value of these staples:

	Feet.	Value.
Total production 1905	4,940,000,000	\$ 73,450,000
Total production 1906	6,080,000,000	104,200,000
Total production 1907	5,200,000,000	85,500,000

Taking all the varieties of lumber into account, Washington exceeds all other States in output, the product in 1907 being nearly 4,000,000,000 feet. The total product of the whole United States in 1907 was about 10,000,000,000 feet, with an estimated value of \$ 66,000,000.

### GOSSIP.

Messrs. H. S. Pipes & Son, Amherst, Nova Scotia, whose excellent herd of Jersey cattle have taken the lead in prize-winning at the provincial Maritime Province shows in recent years, and which is headed by the noble-bred and typical stock bull, Blue Wood and Financier, order to be placed in their advertisement in which they offer for sale three choice young bulls, 2 1/2 years old. The three-year-old, by Blue Wood and Financier, is a true type of his sire, and a champion (champion), as he has won the title of champion of the province, and the progeny of this bull is of a high standard. A seven-year-old bull, by Blue Wood and Financier, is also a true type of his sire, and a champion. We think this is the best bull in the province. The son of Blue Wood and Financier, is a good this year, and a champion. A study of this herd will show the value of this herd of cattle, and dairy-



### Names of Intending Builders.

We will send a handsome present to those who FIRST send us the names and addresses of people who intend to erect or repair buildings where we can effect sales of SAFE-LOCK SHINGLES, CORRUGATED SHEETS, SIDINGS or CEILINGS. The buildings may be barns, houses, schoolhouses, churches or town halls, etc.

We will also give THREE CASH PRIZES, as follows :

- \$5.00 in cash for the list which brings us the best business.
- \$3.00 in cash for the list bringing the second best business.
- \$2.00 in cash for the list bringing the third best business.

ALL LISTS ARE TO BE SENT IN BY THE END OF FEB'Y.

Names may be sent in at different times, and the person sending in any name first gets the credit for it. So rush along at once the names of intending builders whom you know of now, and make enquiry, so that you can send in more names later on.

**THE METAL SHINGLE & SIDING CO., LIMITED**  
PRESTON, ONT. MONTREAL, QUE.

## POTASH

has absolutely no substitute as an ingredient of a COMPLETE FERTILIZER for all Farm, Orchard and Garden crops. This important "Plant Food" can be obtained from all leading fertilizer dealers and seedsmen in the highly-concentrated forms of

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**MURIATE OF POTASH.**

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### NEW IMPORTATION OF CLYDESDALES.

My new importation of Clydesdales are now in my stables: 14 stallions, 2 fillies. Visitors will find them as choice a lot as ever seen in Canada. Big, full of style and quality, and bred right royally. **T. D. ELLIOTT, Bolton, Ontario, P. O. and Station**

### IMPORTED CLYDESDALES, SHORTHORNS AND SHROPSHIRE!

I have on hand several Clydesdale stallions, as choice a lot as ever crossed the ocean. Missie, Stamford, Claret and Gem of Balcchin Shorthorns; up-to-date in type and quality. 50 imported Shropshires, 30 ewe and 30 ram lambs from imported stock. Look me up at Toronto Exhibition horse barns. **THOS. L. MERCER, MARKDALE, ONT., P. O. AND ST.**

### IMPORTED CLYDESDALES

My new importation for 1908 has now arrived—stallions and fillies—personally selected. Richest in breeding; highest in quality; with abundance of size and character. Sold on terms to suit. **GEO. G. STEWART, HOWICK, QUE.**

### IMPORTED CLYDESDALES

My new importation of Clydesdale stallions and fillies, land- and right royally bred. I will sell them at very close prices, and on terms to suit. **C. W. BARBER, GATINEAU POINT, QUEBEC.** "Close to Ottawa."

### Clydesdales

Imported and Canadian-bred. Our mares all are bred to Acme (imp.), the 8th best breeding horse in Scotland in 1907. Four male foals and one filly, all from high-class (imp.) mares, for sale right.

**R. M. HOLTBY, Sta. & P. O. Manchester, Ont., G.T.R.; Myrtle, Ont., C.P.R.**

**IMP. CLYDESDALE STALLIONS AND FILLIES.**—Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-ring stuff. Come and see them. Will sell on terms to suit. **JOHN A. BOAG & SON, Queensville P. O. Ont., Newmarket Sta., G. T. R.** Telegraph and telephone one-half mile from farm. Metropolitan Street Ry from Toronto crosses the farm.

### Imported Clydesdale Stallion to Rent

"Lord Cathcart" Imp. (13064); sire: Pride of Blacon (Scottish Champ.); g. sire: Baron's Pride. Five years; brown; white points; sound; quiet. A proved sire of grand stock. \$285 for season, payable Feb., 1910, with option purchase. Rare chance. Also beautiful Hackney yearling colt and mares. **MOUNT VICTORIA STOCK FARM, HUDSON HEIGHTS, P. O.**  
**F. B. MACAULAY, PROPRIETOR. ED. WATSON, MANAGER.**

### Oak Park Stock Farm Co., Ltd.,

have at present for sale a choice selection of young HACKNEYS broken to harness, well worth the attention of the best buyers. A grand selection of pedigree BERKSHIRE BOARS and SOWS at moderate prices. Also 70 choice SHROPSHIRE RAM and EWE LAMBS, all bred from imported ewes, and selected by the best imported rams. **JAS. J. BROWN, Manager, BRANTFORD**

### IMPORTED SHIRES

At their St. Thomas stables, the John Chambers & Sons Co., of England have for sale stallions and fillies from their noted Shire stud, high-class representatives of the breed. Correspondence solicited. Address **DR. C. K. GEARY, St. Thomas, Ont.**

### GOSSIP.

The imported Clydesdale stallion, Lord Cathcart (13064), five years old, sire: Pride of Blacon, by Baron's Pride, is advertised to let for the season, by T. B. Macaulay, Hudson Heights, Quebec.

### NEWLY-IMPORTED SHORTHORNS.

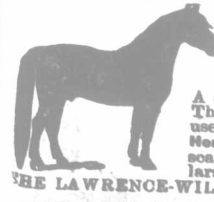
Whether well founded or not, the notion is somewhat prevalent in the minds of many Canadian Shorthorn breeders, that most of the bulls imported of late years have not been up to a very high standard of excellence. While this may have been the case in a few instances, it is certainly not the case regarding the recent new importation of seven Scotch-bred bulls selected by Mr. J. F. Mitchell, of Burlington, Ont., which are a right nice lot, of the low, thick type, and their pedigrees show them to be exceptionally well bred. Clansman 2nd is a beautiful roan yearling, bred by Wm. Anderson, of Saphock, Old Meldrum. His sire is the great show bull, Spicy Charmer, that won first at Perth in a class of 219, and was afterwards sold for 945 guineas; dam the Clara cow, Claret 4th, by the Orange Blossom bull, Archer's Pride. This is a young bull, put up on show lines all over. Bandsman (imp.) is a roan yearling, of superior quality, bred by A. T. Gordon, Newton, sired by the Cruickshank Clipper bull, Newton Crystal; dam Maggie 3rd, a C. Butterfly, by the Mayflower bull, Scottish Farmer. This bull is exceptionally well bred on prizewinning lines, and will make a winner. Newton Ideal (imp.), is a roan, 10 months old, also bred by Gordon, and got by the same sire as Bandsman; dam the Strawberry cow, Newton Ivy, by Coral Star, a son of the great Star of Morning. This young bull is something particularly good, his low, thick, even type; his extra good back and quarters; his grand head and thick covering, making a coming show bull of a high order. Count Claret (imp.) is a Campbell Claret, roan, 10 months of age, by the Augusta bull, Prince Augustus; dam by Grand Duke, own brother to the champion of Great Britain. This is a level, smooth young bull, of splendid quality. Braemar Champion (imp.) is a red C. Butterfly, 9 months of age, by the champion Broadhooks bull, Lovat Scout; dam by the C. Victoria bull, Golden Victor. This is a very low, thick calf, that will make a right good kind. Brilliant Character (imp.), Favorite Character (imp.), and Prince of Characters (imp.), are three young red bulls, all bred by John Young, of Tilbouries, and all sired by the Missie bull, Sterling Character. The first named is a Jilt, 9 months old, dam by Sittyton Choice; the second, a Marr Roan Lady, 9 months old, dam by Sittyton Choice also; the last named, also a Roan Lady, 8 months old, dam by John Bull. Here are a trio of young bulls that will be appreciated by discriminating buyers. Other bulls on hand for sale are: Redstart (imp.), a red, 22 months old, sired by the C. Lavender bull, Sittyton Royal; dam Rosalie 3rd, a Bruce Snowdrop, by the champion, Argyle. Lord Gloster =71102=, a Toronto winner, red, 16 months old, by Imp. Ben Lomond; dam a Duchess of Gloster, by the Village-bred bull, Village Hero. Cranberry Chief =71297=, is a red, 15 months old, by the Broadhooks bull, Imp. Lord Roseberry; dam Cranberry 4th (imp.), by Murchison. Besides these, there are several others, the whole giving a scope for selection hardly equalled in Canada. In females the herd represents the Scotch Thistle, Ury, Cranberry, Gwynne, Heiress, Countess, Stamford, Strathallan, C. Lovely, Nonpareil, Duchess of Gloster, Princess, Strawberry, Clementina, Roan Lady, Jilt and Maggie strains, imported and Canadian-bred. Among them are a large number of choice heifers, nearly all from imported stock. The farm is only a 1/2 mile from Burlington Junction station, 8 miles east of Hamilton. The farm has telephone connection.

### TRADE TOPIC.

The Metal Shingle and Siding Company of Preston, Ontario, and Montreal, Quebec, in their new advertisement in this paper, offer handsome presents to those who first send them the names and addresses of people who intend to build barns, houses, churches, or halls. They also offer three cash prizes for the best bringing them the most business. See the advertisement and note the terms.

### HORSE OWNERS! USE

**CAUSTIC BALSAM.**  
A safe, speedy and positive cure. The safest, Best BLISTER cure used. Removes all bunches from horses. Impossible to produce scurf or blemish. Send for circulars. Special advice free.



**THE LAWRENCE-WILLIAMS CO., Toronto, Canada**



**RADIOL TREATMENT**  
Prolongs the life of a horse's legs. Completely removes by radiation all soft swellings that disfigure and lame a horse, as Sprained Tendons, Windgalls, Bag Sprains, Capped Elbow, Big Leg, Enlarged Glands, etc.

**No Blister: No Laying Up; No Hair Removed.**

RADIOL TREATMENT fixes down a worn horse's legs, and it is a certain cure for puffiness and Sprains, Prevents Filled Legs.

An intelligent use of the "RADIOL LEG WASH" counteracts that daily wear and tear of the legs unavoidable with the horse in constant work, whether training, racing or on the road.

**One flask of "Radiol" will make a gallon of valuable leg wash.**

6 Mar. 1909.  
Dear Sir,—I have found Radiol very effective in reducing capped hocks and similar enlargements on horses' legs, and I, therefore, consider your claim that it is a necessary stable requisite quite genuine.

Yours faithfully,  
**W. M. PRICE,**  
Estate Manager to the Earl of Minto, Howick, N. B., England.

WRITE FOR ILLUSTRATED BOOKLET AND USE OF "RADIOL." Ask your chemist for "RADIOL." Price 50 a large flask, or post free from Canadian Agent:  
**Thos. Reid, 9 St. Nicholas St., Montreal.**  
Manufactured by The Radiol Co., 213 Westminster Bridge Road, London, England.

### "SAVE THE HORSE" SPAVIN CURE



If you are at the end of your rope in trying to cure your horse, the sooner you abandon precarious, vicious and uncertain methods and turn to "SAVE-THE-HORSE," the quicker you will have a sound horse. Its unflinching power is proven beyond question, and our guarantee is a binding contract to protect you.

The Union Insurance Co. of Phila.—  
Office of Resident Agent, Ponca City, Okla.  
Troy Chemical Co., Hinghamton, N. Y.—I was making inquiry of Mr. Wm. Craven of this city what would take off a bad Bone Spavin on one of my horses and he told me he was using "Save-the-Horse" for a bowed tendon on my Flower, and it was improving so fast that he believed it would cure anything recommended to. So you will see by your books that I ordered a bottle last July and it cured my horse sound and well of a bad bone spavin, and I wish to say that I am glad to recommend it. I believe it to be the best spavin cure made. J. T. ROSS, Glen Ridge, N. J.—I cured a horse twenty-three years old of a bad bone spavin with your great remedy. Used horse right along.

Narragansett Park, Providence, R. I.  
I have taken Bog Spavins off of four horses with your "Save-the-Horse." I buy it of T. W. Rounds & Co., Providence. Have never yet had to ask for any money back. C. F. JONES.

**\$5.00** a bottle with signed guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. Permanently cures Spavin, Thoroughbred, Ringbone (except low), Curb, Splint, Capped Hock, Windgall, Shoe Bell, Injured Tendon and all Lamenesses. No wear or loss of hair. Horse works as usual. Dealers or Express Paid. Troy Chemical Co., Hinghamton, N. Y., and 145 Van Horn St., Toronto, Ontario.

### FOR SALE: THE IMPORTED Clydesdale Stallion

Sir Arthur [3154] (10455).  
The property of the Whitty Clydesdale Horse Association; 2,200 lbs. Sound, good stock horse. Has been travelling seven years in vicinity of Whitty.

**D. Webster, Sec.-Treas., Whitty, Ont.**

### MR. A. I. HICKMAN

Court Lodge, Egerton, Kent, England, exports pedigree live stock of every description to all parts of the world. During the spring months the export of light and heavy horses will be a specialty. Breeders should write and learn how to get in right. Mr. A. I. Hickman will be at the Bell Hotel, Gloucester, Eng., during the week of the Royal Show, and will be pleased to meet all foreign and colonial visitors there.

**Dr. Bell's Veterinary Medical Wonder** cures inflammation of lungs, bowels and kidneys. The 20th-century wonder. Agents wanted in every county. Write for terms.  
**DR. BELL, V. S. Kingston, Ont.**

**FOR SALE: Suffolk Punch Stallions**  
TWO GOOD Suffolk Punch Stallions, Ontario. Sired by pure-bred Suffolk Punch stallion, Ontario. One brown, 6 years old; one sorrel, 4 years old.  
**THOS. KNAGGS, VANDECAR, ONT.**

**For Exchange Handsome Chestnut Mare**, 6 years old; 15 1/2 hands high. Sired by Prince Regent, dam Nellie Rooker. Will exchange for sound general purpose. Send full particulars. **Box R., Farmer's Advocate, London, Ont.**





**Think Only of Permanency**

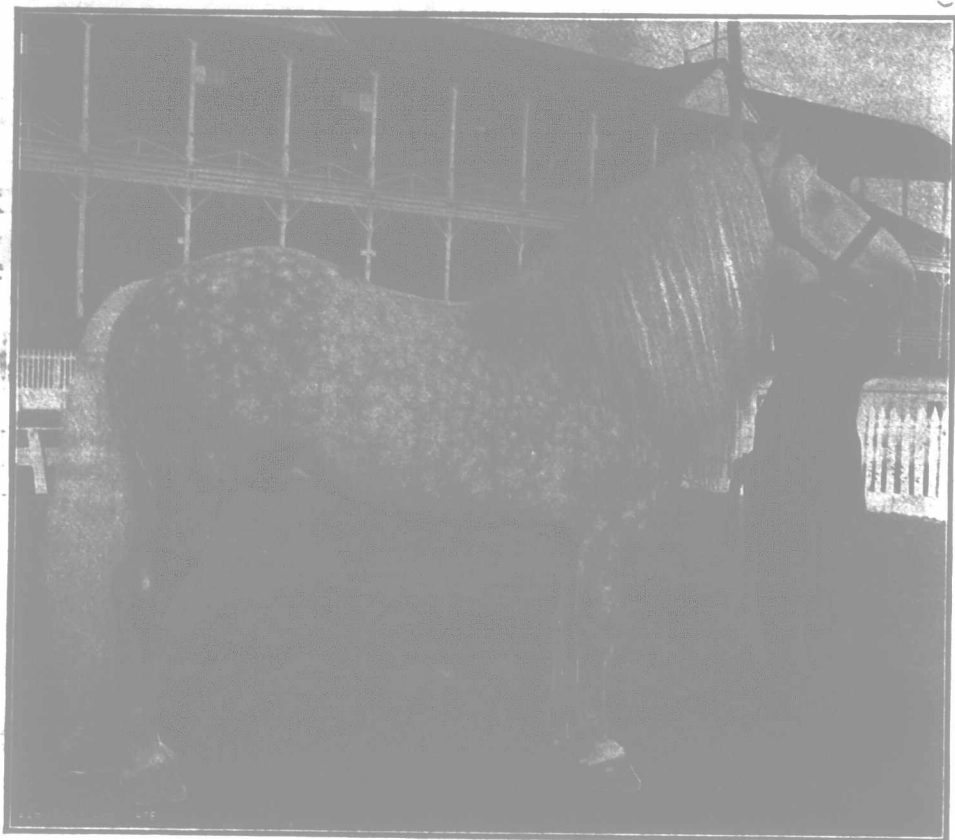
When buying fencing FORGET about the NOW cost. Do as the railways. Think only of PERMANENCY. Select the fence with the quality, weight, stiffness and strength to give longest service. And three or four years from now you will shake hands with yourself because you were shrewd enough to see eye to eye with the railways and buy IDEAL woven Wire Fence.

This Lock makes "IDEAL" FENCE Strongest in Existence

No fence has a simpler lock than the IDEAL. Yet the railways have proven to their entire satisfaction that the IDEAL lock has the greatest gripping-tenacity. Other things being equal, the impossible-to-release grip of this simple lock makes IDEAL fence strongest in existence. But other things are not equal. IDEAL Woven Wire Fence has the best quality of hard drawn elastic steel wire laterals. It has the stiffest uprights. The galvanizing is the smoothest and heaviest—most rust-proof. The scales prove IDEAL the weightiest woven fence. What further reason do you need to prompt you to buy IDEAL fence? Well, here is another: IDEAL Fence will cost you no more than other fences that you will not buy if you think only of permanency. Our fence and gate booklet shows different styles for horses, cattle, hogs, etc. Write for your copy.

**JOIN OUR STAFF OF AGENTS** and increase your income. The weight, quality and strength of IDEAL fence make it easiest to sell.

THE MCGREGOR-BANWELL FENCE CO., LIMITED, WALKERVILLE, ONT.



**IMPORTED Percherons**

OUR NEW IMPORTATION OF **15 Selected Percheron Stallions,**

2 to 6 years old, blacks and greys, landed December 10th, 1908, all in good shape and doing well. The best importation we have ever made. All bred by the best breeders in France. Are big, wide horses, with the best of feet and legs, beautiful heads and necks. Also **TWO HACKNEYS**, the right kind. These horses are all for sale at reasonable prices and on easy terms. Stables in Town of Simcoe, Norfolk Co., 82 miles south-west of Toronto. Address:

**Hamilton & Hawthorne, Simcoe, Ont.**

**D. McEACHRAN,**

F.R.C.V.S., D.V.S., ETC.,  
Ormsby Grange, Ormstown, P. Q.,  
Importer and breeder of high-class pure-bred **CLYDESDALES** STALLIONS RECENTLY IMPORTED.

Personally selected from the extensive stud of Messrs. A. & W. Montgomery, **Baron Barlac 13972**, 2-year-old; sire Baron's Pride, dam by Macgregor, g-dam by Cedric **Selborne 14363**, 2-year-old; sire Pride of Blacon, dam Sybel Grey (dam of Acme). **Doctor Jim 14094**, 2-year-old; sire Pride of Blacon, dam by Prince Macgregor.

**CORRESPONDENCE INVITED.** One of the fillies is the celebrated four-year-old, prize, cup and championship winner, Hilda (now Linlithgow Lass), by Everlasting, purchased from Wm. Nelson, of Haining Valley, Linlithgow; sired to Sir Hugo.

**For Sale!** Percheron and French Draft Stallions, mares and colts. Duroc Jersey Swine, both sexes. **JACOB STEINMAN, NEW HAMBURG, ONT.** Only a stone's throw from G.T.R. depot.

**Shires, Shorthorns and Lincolns** We are now offering eight specially good young bulls, richly bred, and will be priced right; also a dozen heifers. Some choice young Shire fillies. And Lincolns of both sexes.

**John Gardhouse & Sons, Highfield, Ont.** Weston Station

**Hillhurst Hackneys and Shetlands.** For Sale: 3 imp. pony mares, broken to ride and drive; 1 yearling filly, imp. in dam. Low price for lot. **JAS. A. COCHRANE, Lennoxville, P. Q.**

**Clydesdale Stallions and Mares!**

A fresh lot has just arrived, including many prizewinners. Some extra big ones. Prices right. Inspection invited. **DALGETY BROS., LONDON, ONTARIO.** Stables Fraser House. Address correspondence to Dalgety Bros., Glencoe, Ont.

**CLYDESDALES AND SHORTHORNS.**—Both Imported and Canadian-bred, at Columbus, Ont., the Home of the Winners. Our last importation landed in August. They include the pick of Scotland, from such renowned sires as Baron's Pride, Everlasting, Baron o' Bucklyvie, Hiawatha, Marsells, Sir Everest, and Prince Thomas. We have on hand over 30 head to choose from, from the above noted sires, from 1 to 6 years old, and including stallions and mares. Correspondence solicited. Call and see them at our barns, Columbus, Ont., before purchasing elsewhere. Our prices are right. Long-distance phone in houses. Phone office, Myrtle station. Myrtle station, C.P.R.; Brooklyn station, G.T.R.; Oshawa station, G.T.R. **Smith & Richardson & Sons, Columbus, Ont.**

**Clydesdales and French Coachers, Imp.**

Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such noted sires as Baron's Pride, Upt. Linc, Royal Favorite, Ethiopia and Acme. They combine size, power and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone. **ROBT. NESS & SON, HOWICK, QUEBEC.**

**Clyde Park Imp. Clydesdales** I have on hand for sale several imported Clydesdale stallions and fillies, also 3 foals. Parties wanting something extra well bred and of the highest quality should write me. They will be sold at a right price, and on terms to suit. **ALEX. F. McNIVEN, ST. THOMAS, ONTARIO.**

**GOSSIP.**

Caldwell's Meal, as advertised in this paper, is a feeding preparation, the result of extensive experiments in the feeding of heavy cane syrup to stock. The manufacturers write: "It was found that molasses contained certain impurities (potash and soda), which when fed to stock had an injurious effect upon the liver and kidneys of the animal. In the process of manufacture of Caldwell's Meal these 'salts' are eliminated, or, rather, rendered inert; a certain digestive quality is added which acts upon the rest of the food taken by the animal, and the whole incorporated with a suitable vehicle for convenient handling. Caldwell's Meal is the only safe medium by which stock may receive the benefit of the fattening material in syrups without being effected by their impurities."

**LAST CALL FOR THE GREAT SHORTHORN SALE ON FEB. 4TH.**

Before another issue of this paper reaches its readers, the great sale of Scotch Shorthorns, contributed by the Millers, Arthur Johnson, and David Birrell, will be a thing of history. It goes without saying that the week of Feb. 1st, 1909, at the Union Stock-yards, West Toronto, will be the center of attraction for many hundreds of the breeders of pure-bred stock from Canada and the United States, for without doubt, during that week more high-class show animals will be sold at auction than was ever before offered by auction in Canada. At this sale there will be the grand champion female at Toronto last fall, Old Lancaster's best daughter, and the third-prize bull in the two-year-old class at the same show, besides several others fit to compete in any show-ring in the world. All of the offering will be brought out in excellent condition, while their breeding is unsurpassed in Shorthorn pedigrees. There is no question of doubt that Shorthorns are on the eve of a decided upward move, consequently there is nothing to be lost, but everything to be gained, by stocking up now. Every man at all interested will be consulting his own interests by attending this sale, in which are included eight choice young bulls of serviceable age, and 22 females, all in the prime of life, and representing such choice families as the Cruickshank Lavender, Butterfly, Duchess of Gloster, and Village Girl; Marr Missie and Lady Mary and Campbell Bessie, Mina, Crimson Flower, Strathallan and Wedding Gift tribes. Dundas-street cars will land visitors within a quarter of a mile of the sale pavilion at the West Toronto Stock-yards, where the sale will commence at 10 a. m., Thursday, Feb. 4th. A large and well-equipped dining hall at the Stock-yards will supply meals at nominal cost.

**QUESTIONS AND ANSWERS. Veterinary.**

**IRRITABILITY OF BLADDER AND UTERUS.**

Three-year-old filly had a foal. Since then she urinates frequently in small quantities and, evidently, with difficulty. She tires and perspires easily. She eats well and seems hearty. R. J. M.

Ans.—Give her 1 oz. tincture of hyoscyamus in a pint of cold water as a drench three times daily. Feed well, and give gentle exercise, but do not work her hard until she gains strength. V.

**Miscellaneous.**

**ACCIDENTS TO STOCK AT LARGE.**

In a township where sheep and peaceable cattle are allowed to pasture unattended on the highways, A and B, driving along on a foggy day, saw a dog drive over a small lamb lying in the road. The dog's track, the horse was walking on. Neither A nor B saw the lamb till it was too late. The dog afterwards died. Are you a subscriber for this paper?

**SUBSCRIBER.** I have not seen the paper for some time. What has happened to it? It is not at large the owner of the paper is dead.

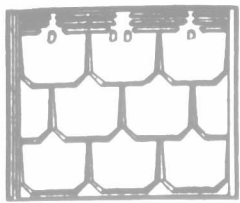


## PUT ON IN 1885 Perfect Protection in 1909

Metal Shingles may be "guaranteed" to last for 25 years—and not last five.

When a house has been making Metal Goods only a few years, of what good is their "guarantee" that their shingles will "last a life-time."

They don't know themselves how long their shingles will wear because they have not had time to put the shingles to the test.



### "EASTLAKE" METALLIC SHINGLES

MADE IN CANADA FOR 24 YEARS

Don't forget that—Made in Canada for 24 Years. In use, right in your own province, for 24 years. Proven lightning-proof, fire-proof, leak-proof, wind-proof, rain-and-snow-proof, wear-and-rust-proof by 24 years' resistance against storms and climate.

The guarantee that goes with "Eastlake" Shingles is backed by 24 years' test. You don't take risks, you know.

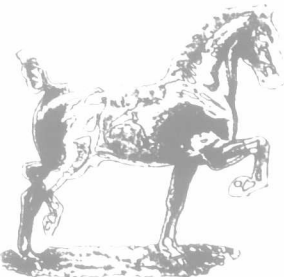
There's the "Eastlake" Cleat—the improvement that makes the "Eastlake" Shingles perfect. An entirely original idea, patented, and found only in "Eastlake" Shingles. Let us tell you all about it. Write for catalogue.

### The Metallic Roofing Co., Limited

TORONTO                      Manufacturers                      WINNIPEG

Agents wanted in some districts. Write for particulars naming this paper.

54



### UNION STOCK-YARDS Horse Exchange WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.  
Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day.  
The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. Northwest trade a specialty.  
HERBERT SMITH, Manager.  
(Late Grand's Repository.)



### PREMIUM AND PRIZE Clydesdales

I have just landed my choicest importation of premium and prize Clydesdale stallions in 30 years' experience.  
I will not exhibit at Toronto in January. Come and see the winners at home. Everybody welcome.

O. SORBY, GUELPH, ONT.

### NEW CLYDESDALE IMPORTATION.

My new importation of 24 Clydesdale stallions is now in my stables. I invite inspection and comparison. I think I have the best lot for size, style, character, quality and action ever imported. 27 Clyde stallions and 8 Hackney stallions to select from. Prices right, and terms to suit.

T. H. HASSARD, MARKHAM, ONT.

POST OFFICE, PHONE AND STATION.

### Clydesdales and Hackneys

We have for sale a few choice Clydesdale mares, imported and Hackney stallions and Canadian-bred; also some Canadian-bred Clydesdale stallions. Hackney stallions and mares for sale always. HODGKINSON & TISDALE, BEAVERTON, ONTARIO.  
G. I. R. and C. N. R. Long-distance phone.

### AN OPPORTUNITY TO SECURE YOUNG Shorthorn Bulls

Substantial Individuals with Rare Breeding. A few heifers will be sold cheap.  
MYRTLE, C. P. R. STATIONS: BROOKLIN, G. T. R.  
JOHN DRYDEN & SON, BROOKLIN, ONT.  
Long distance telephone.

### GOSSIP.

Messrs. Geo. Amos & Sons, Moffatt, Ont., write: We have made the following recent sales of Shorthorns: To Miller Bros. for their sale in West Toronto on February 4th, our grand champion heifer, Pleasant Valley Jilt =79903=. We consider this one of the very best, if not the best animal we ever showed, and she should prove a valuable offering. To Joseph Stone, Saintfield, Ont., Ben Scotch, a good young bull, by Imp. Ben Lomond =45160=, and out of Imp. Scottish Queen, the dam of the grand champion heifer, Pleasant Valley Jilt. This is a very promising young bull, and should prove a good investment to Mr. Stone. To Messrs. J. & N. McPhedran, Wanstead, Ont., Orange Emblem, by Bud's Emblem; dam Flowry (imp.). To Geo. Monell, Harriston, Emblem, a son of Bud's Emblem. Our cattle are coming through the winter in good shape. Have still left for sale two young bulls, Ben Cecil, second-prize junior bull calf at Toronto, and Augustus, by Bud's Emblem; dam Augusta Girl (imp.), by Princely Archer. These young bulls will be sold at right prices, and we will be pleased to have intending buyers come and see us, or correspond with us.

It pays to feed good cows well. The Ontario Agricultural College, knowing that it had a good cow in Boutsje Q. Pieterje De Kol, a pure-bred Holstein-Friesian (the breed that her unutterable name indicates), fed her during a year, up to October 26, 1907, feed to the value of \$72.66. This is over twice what the average dairyman puts into a cow in the way of feed; but it makes little difference what the cost of the feed is, so long as the cow is able to pay for it. The more she eats, the better, says Pacific Dairy Review.

This Holstein at the Ontario College not only made good on the large value of the food she consumed, but she did a great deal more. In one year out of this food she produced 782 pounds of butter-fat and 20,778 pounds of milk. At only one dollar per hundred her milk was worth \$207.68, and had it sold at the usual price for market milk, it would have realized \$293.91, according to the calculations made by the Dairy Department of the Ontario College. At only 25 cents a pound the butter-fat would have been worth \$195.40. If we deduct the cost of feed and make due allowance for the labor, we have here a business proposition paying more than 100 per cent. profit a year over the cost of raw material and labor involved.

There are two things worth noting about the showing made by this remarkable cow. The first is that it shows the value of dairy capacity, and the second is that it carries out a new idea of feeding dairy cows, which is to feed them according to their capacity to make use of food. A dairyman could make no bigger mistake than to feed every cow in his herd \$72 worth of feed a year. The chances are that not one in five or even ten cows have the capacity to return a profit on over \$50 worth of food a year, and when the food value gets up to \$72 it is a rare cow that is able to respond with a profit. This is the modern idea of cow management—to first have a cow of largest possible dairy capacity, know what her capacity to convert food into milk is, and feed up to the capacity and no more. In your herd that you are feeding all alike it may be possible that two cows of limited capacity are wasting food that one may be in need of to do her best work. Are you underfeeding good cows and overfeeding poor ones?—that is the up-to-date view of profitable cow feeding.

### TRADE TOPIC.

Crampton, Ont., Jan. 7th, 1908.  
Messrs. Wm. Cooper & Nephews,  
Toronto.

Gentlemen,—In replying, we received your sample tins of Fluid, which we have tried in many ways, and find it very strong as a disinfectant, and when applied on cattle to kill lice it is sure death to them. We will send you an order as soon as our supply runs out.

Respectfully yours,

(Sgd.) H. E. GEORGE.

## ROOFS THAT NEVER WEAR OUT

### Sea Green or Purple Slate

is nature's own product—not man made. Quarried from solid rock—split into convenient form for laying, and then in its natural state ready for the roof.

### SOLID ROCK CAN NOT WEAR OUT

It can't burn, rust, warp, crack, tear or decay. That's why Sea Green or Purple Slate Roofs never wear out and never require painting and repairing like all other roofing. Sea Green or Purple Slate Roofs are suitable for any building, new or old. Give perfect protection. Reduce insurance rates because spark and fire-proof. Afford clean easterly water. Not affected by heat or cold. First cost—only a trifle more than short lived roofing. Settle your roof question for all time. Don't spend more money for poor roofing. Write to us for our free book "ROOFS"—it will save you money. Give name of your local roofer. Write today.

AMERICAN SEA GREEN SLATE CO.  
Box 3                      Granville, N. Y.

### Important Sales of Pure-bred Stock in England.

#### JOHN THORNTON & CO.,

will sell by auction as follows:

Friday, February 26.—The late Mr. W. B. Greenfield's entire herd of Aberdeen-Angus cattle, including many celebrated prizewinners, at Haynes Park, Bedford.

Thursday, April 29.—The entire old-established herd of Shorthorns, bred by the late Col. Sir Nigel Kingscote, at Kingscote, Wotton-under-Edge, Gloucestershire.

Friday, April 30.—About 80 Shorthorns from the herds of Mr. W. T. Garne and Mr. Geo. Freeman, and including Mr. J. O. Taylor's entire Bates herd, at Sherborne, Northleach, Glos.

Thursday, May 6.—About 70 highly-bred Bates Shorthorns from Mr. Geo. Taylor's celebrated dairy herd at Cranford, Southall, Middlesex.

Friday, May 7.—About 50 Shorthorns from Mr. R. W. Hobbs' well-known dairy herd at Kelmescott, Lechlade, Glos.

Catalogues may be had of John Thornton & Co., 7 Princes street, Hanover Square, London, W., England, who will execute commissions and undertake shipment and insurance.

### THE "MAPLES" HEREFORDS



Canada's Greatest Show Herd.  
For Sale: 25 bulls from 6 to 18 months of age, bred from imported and show stock; also about the same number of heifers, none better. Prices right.

W. H. HUNTER,  
Orangeville P.O. and Sta.

### HOMESTEAD ABERDEEN-ANGUS



Good individuals and good breeding, at prices that anyone wanting a good young bull or heifer can afford to pay. Come and see them.

WM. ISCHE,  
Sebringville, Ont.

### ABERDEEN-ANGUS CATTLE!

FOR SALE: Some of the best strains. Several fine heifers; also cows and a couple of bulls. Apply: MANAGER,  
GRAPE GRANGE FARM, CLARKSBURG, ONT.

Angus Cattle for Sale—A few choice females and young bulls. Prices right. Three miles west of Erin station. C. P. R., 16 miles north-east of Guelph.

J. W. BURT, Coningsby P.O., Ont.

### Aberdeen-Angus

For sale: The right sort, some of them by Klondyke, imp. Drumbo station.  
WALTER HALL,  
Washington, Ontario.

GLENGORE Present offering: One bull 2 year old, and three choice yearling bulls, and anything in the female line. A choice lot and sold right. GEO. DAVIS & SONS, ALTON, ONT. Station, C. P. R.

### Aberdeen-Angus Cattle, Suffolk Down Sheep.

If you require either of these breeds, write:  
JAMES BOWMAN, Elm Park, Guelph, Ont.

## RHEUMATISM.

The Best and Safest Cure for  
GOUT, RHEUMATISM, SCIATICA, LUMBAGO, is  
BLAIR'S GOUT & RHEUMATIC PILLS  
All Druggists, at 40c. and \$1 per box.

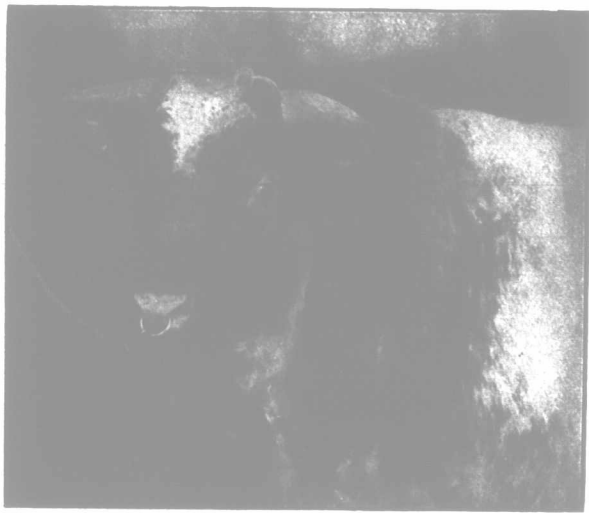


# 47 Choice Scotch Shorthorns AT AUCTION

TORONTO JUNCTION STOCK YARDS, 1 P. M.,

## Wednesday, February 3, 1909

FROM THE NOTED HERDS OF J. A. WATT AND W. G. PETTIT & SONS.



This offering comprises one of the best collections of Shorthorns sold in Canada in recent years, and contains many high-class show animals, including Imp. Prime Favorite = 45214 =, the grand champion bull of 1907. The 33 females are a choice lot, and are bred along lines that should appeal to the more critical buyers. The man in quest of a herd bull should not fail to attend this sale, as the 14 bulls offer one of the best opportunities of the year. Come to this sale and make your selections at your own price. Send for the catalogue, mentioning The Farmer's Advocate. Address:

### W. G. PETTIT & SONS, FREEMAN, ONTARIO.

Feb. 2nd.—Annual meeting of the Dominion Shorthorn Breeders' Association.  
Feb. 4th (morning).—Miller combination sale of Shorthorns.  
Feb. 4th (afternoon).—Annual Edwards-Drummond-White sale of Shorthorns.

#### GOSSIP.

Colonel Milton Young, of Lexington, Kentucky, one of the biggest breeders of Thoroughbred horses in America, was in Calgary for a few days, and while here he purchased a ranch. Mr. Campbell, of Calgary, while in Kentucky, learned from the Colonel that the latter intended going to Argentine Republic to purchase and stock a ranch. Colonel Young was persuaded by the Calgary man to come up here and look into Alberta before he bought in South America, and the Colonel came, and was so well impressed with the country that he bought almost immediately, although he arrived just at the start of the cold snap. But Alberta looked pretty good to the experienced eye of the Kentucky gentleman. He will stock his ranch with high-class drivers and Thoroughbred animals.—Calgary Herald.

#### TRADE TOPIC.

THE RENNIE SEED ANNUAL.—Grandest than ever for 1909 is the handsome catalogue of many pages, giving a full description of the best seeds that can be grown, as proved by the yearly increasing sales throughout the Dominion, neatly bound in lithographed covers with bright colors, attractive collections rarely offered to prospective customers, illustrated by 250 engravings devoted to grain, vegetables and flowers, showing good crops of some special varieties taken from nature, just issued by the Wm. Rennie Co., Toronto. No seed-buyer can afford to be without the Rennie Seed Annual, which tells you just what to plant in your garden or farm for 1909. Write for it to-day to the Wm. Rennie Co., corner Adelaide and Jarvis streets, Toronto, Ont.

"Oh, I shall only charge you a nominal fee," remarked a young lawyer to a friend who had called for professional advice.

"Well," replied the other, "for a man of your profession, that's phenomenal, surely!"

### CALDWELL'S MEAL

**Non-medicated.**  
For Cattle, Horses, Sheep and Hogs.

Is a feeding meal rich in carbohydrate, prepared in such a way as to furnish the animal with this most important element in its most easily-assimilable form. It is not a tonic or stimulant, but a meal containing the ingredients that a straight diet of cereals lacks to make a balanced ration. Manufactured only by

**A. G. CALDWELL, EAST TORONTO, ONT.**  
PRICE, FREIGHT PREPAID, \$34.00 PER TON.

#### Canadian Jersey Cattle Club

The annual meeting of the Canadian Jersey Cattle Club will be held on Thursday, February 4th, 1909, at the Walker House, Toronto, at 10:30 a. m. Those attending should secure certificates from railway agent when purchasing ticket in order to return by reduced rate.

**R. Reid, Secretary, Berlin, Ontario.**

**JERSEYS** We have the get of Ethel's John, a 75 FOR SALE per cent. Mary Ann of St. Lambert bull; also of Minette's Star, a son of Brampton Minette, Brampton Monarch (imported), Blue Blood, and Financial King. Write for what you want. **H.S. Pipes & Son, Amherst, Nova Scotia.**

#### WILL MAKE PRICES ON THE FOLLOWING LIST OF Shorthorns, Clydesdales, Shropshires and Cotswolds

That No Man Keeping Live Stock Can Afford To Overlook: dam, amongst the best. The filly is good and has the quality wanted in a show mare. A small number of imported cows and heifers, and some splendid young bulls and heifers from imported sires and dams. Good young Shropshire and Cotswold ewes in lamb to high-class imported sires.

Two imported bulls, tried sires, very valuable, will sell or exchange at moderate price. One Clydesdale filly coming three, from imported sire and dam.

**ROBERT MILLER, Stouffville, Ont.**

**Cattle and Sheep LABELS!** Metal ear labels, with owner's name and address, and numbers. Sample and prices mailed free. **F.G. James, Bowmanville, Ont.**



SECURE ONE OF OUR PREMIUMS.

#### Greengill Shorthorns!

We offer for sale our herd bull, imp. Lord Roseberry also young bulls and females all ages, either imp. or from imp. stock. Prices right, Long-distance phone **R. Mitchell & Sons, Nelson P. O., Ont.** Burlington Jct. Sta.

### First Sale of Salem Shorthorns, Feb. 3, 1909

J. A. WATT, SALEM, ONT. ELORA, G. T. R. AND C. P. R.

#### SHORTHORNS

#### FOR SALE!

I have a dozen young cows and heifers, got by the Brawith Bud bull, Golden Abel (imp.), and in calf to the Bruce Mayflower bull, Royal Bruce (imp.), that I will sell very reasonable. A number of them are out of imported dams, and registered in Dominion and American Herd-books.

**R. J. DOYLE, OWEN SOUND, ONT.**

#### GOSSIP.

#### LAST CALL FOR THE PETTIT-WATT SALE.

One cannot too strongly impress upon the minds of intending purchasers of the better class of Shorthorn cattle the exceptionally high-class character of the animals to be sold at West Toronto on February 3rd, consigned by the noted breeders, Messrs. W. G. Pettit & Sons, Freeman, and Mr. J. A. Watt, Salem, Ont. Both these herds have been in continued existence for nearly half a century, and both have been frequently strengthened by importations personally selected from the leading herds in Scotland. For a great many years representatives of both herds have been annually exhibited at the leading Canadian shows, and at several of the more important exhibitions in the United States, and the great success they have met with in competition with the best on the continent is well known by everyone at all interested. Many of the leading winners and champions on both sides of the line were bred in one or the other of these herds, and we think we are within the mark when we say that the complexion and quality of the herds were never higher than at the present time, and that the animals to be sold at this sale are selected for their individual excellence. Messrs. Pettit and Watt are certainly taking great chances in offering this class of cattle by auction, but they will be there to be sold, and they will be sold regardless of price. It is to be devoutly hoped that prices will rule on a par with the quality of the stock. Grand champions, sons and daughters of grand champions, imported and Canadian-bred, make the offering a most fascinating one to all lovers of the breed. For catalogues, write to Mr. W. G. Pettit, Freeman, Ont.

Two Suffolk Punch stallions, six and four years old, are advertised for sale by Thos. Knages, Vanderar, Oxford County, Ont.



## Fistula and Poll Evil



**Any person, however inexperienced, can readily cure either disease with Fleming's**

**Fistula and Poll Evil Cure**

—even had old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

**FLEMING BROS., Chemists,**  
75 Church Street, Toronto, Ontario

### SHORTHORNS!

Present offering: Choice young stock, either sex, by Golden Crescent = 72325 = and Nonpareil Victor 2nd = 34534 =. Prices reasonable.

**John Racey,**  
Lennoxville, Que.

### Stock Bull

Trout Creek Sallor = 59421 = 247242, A. H. B., for sale; also roan show bull, fit for service. **A. M. SHAWER, ANGASTER, ONT.** Station 13, Brantford and Hamilton Electric Line; three minutes' walk from barns. Inspection invited. Priced right.

### Shorthorn Bulls

Ready for service. One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramsden, Rosemary, Diamond and Lady Fanny dams, the get of Chancellor's Model. Prices to suit times. Come and see. **Israel Groff, Elmira, Ont.**

### Spring Valley Shorthorns.

Ten bulls from 9 to 15 months, including two recently imported bulls from noted herds in Scotland; also Broadhocks Chancellor, winner of 1st at Toronto. Don't fail to see them before you buy.

**Kyle Bros., Ayr, Ont., P. O. and Station**

### Scotch Shorthorns

Fifteen choice red bulls, 7 to 17 mths., by Imp. Protector; some out of imp. dams. Will be sold reasonable. **McFARLANE & FORD,** M. C. and P. M. Rys, Box 41, Dutton, Ont., two miles east of station.

This is how a driver of the prison van known as "Black Maria" distinguished himself. A would-be wit on the causeway hailed him:

"Got any room inside, Robert?"

"There's room for one," replied the driver; "we keep it for you."

Not entirely disconcerted, the wit made another shot:

"What's your fare?" he asked.

The answer entirely extinguished him.

"Bread and water—same as you had before."

## HE KNOWS FROM HIS EXPERIENCE

**That Dodd's Kidney Pills Will Cure Bright's Disease.**

**Postmaster Cote Tells How the Great Canadian Kidney Remedy Cured Him After Doctors Had Given Him Up.**

Le Petit Bois Franc, Temiscouata Co., Que., Jan. 25.—(Special).—Mr. Charles Cote, postmaster here, is firmly convinced that Dodd's Kidney Pills will cure Bright's Disease, or any other disease of the kidneys. He knows it from his own experience. Hear what he says:

"For over four years I was troubled with Backache, Rheumatism and lack of ambition, and my urine was of a dark unnatural color. I was attended by three doctors, who did me no good. The last one told me it was only a waste of money to try anything else, as I could not live more than a year at the outside."

"At the verge of death I decided to give Dodd's Kidney Pills a trial. I used eighteen boxes, and to-day my Rheumatism, Backache and Headache are gone. My urine is like that of a child. I feel I owe my life to Dodd's Kidney Pills."

Postmaster Cote had all the symptoms of Bright's Disease. The doctors evidently knew he had Bright's Disease—the most deadly form of Kidney Disease. Dodd's Kidney Pills cured him. They will cure any form of Kidney Disease.

### QUESTIONS AND ANSWERS. Veterinary.

#### THOROUGHPIN—LICE.

1. After running in the yard one morning I noticed the hind leg of my filly swollen above the hock. I applied Gombault's Caustic Balsam. This was two months ago. Now there is a soft, puffy lump on each side, just below the point of the hock.

2. Would salt and hellebore be good to kill lice on cattle, and how should they be mixed?

W. J. G.

Ans.—1. This is a thoroughpin, and very hard to remove. Repeated blistering is the best treatment. Take 2 drams each of cantharides and biniodide of mercury and mix with 2 ozs. vaseline. Clip the hair off the parts. Tie so that she cannot bite them. Rub well with the blister once daily for two days. On the third day apply sweet oil. Turn her in a loose box now, and oil every day. Repeat the blistering every four weeks. It would be well to give her regular gentle exercise, except when she is tied during the applications of the blister, but violent exercise, slipping, rearing, etc., must be avoided.

2. I have never tried this mixture, but as hellebore is an insecticide, no doubt it will act. About four parts salt to one part hellebore would act well.

V.

#### MISCELLANEOUS.

1. Cow calved last April and will be due again in March. Parturition was difficult last time. Ever since she calved she has strained and discharged a reddish fluid. We have treated her according to the advice of a veterinarian, but the trouble continues.

2. Last September cow's neck became stiff. We rubbed it with oils and she got better. She calved December 25th, and on January 2nd her neck became stiff again. She became uneasy and died. A post-mortem revealed inflammation of the womb, and her kidneys were spongy.

3. Mare, when brought to the stable, attempts to urinate frequently, and voids little at a time.

A. L. H.

Ans.—1. Nothing can be done until after parturition. Then flush the womb out twice weekly with a little warm 2-per-cent. solution of creolin or zenoleum, and give 40 drops carbolic acid in a pint of cold water three times daily until the discharge ceases. It is remarkable that she will breed under these conditions.

2. The stiffness was due to an affection of the vertebra, for which nothing could have been done. This, with the disease of the kidneys, caused death.

3. Give her six drams nitrate of potassium once daily for three days. When brought into the stable put her in a well-bedded stall.

V.

#### LUMP IN UDDER, ETC.

1. Cow has a lump in one quarter of her udder. She was that way when she calved the first time. She has been milking about a month. It takes half an hour to milk the quarter.

2. I have had a sheep and two lambs die. They refuse to eat for two or three days, then fall down and die. They show no symptoms except these. They are fed on pea straw, clover hay, and a few turnips once daily, and they are in good condition.

H. T.

Ans.—1. I presume this lump is at the junction of the teat to the udder. An operation by a veterinarian with an instrument especially designed for the purpose, can be performed, but when the obstruction is so high up, the operation is likely to be followed by severe complications. I would advise you to allow her to go dry in that quarter and not breed her again. Applications will do no good.

2. The symptoms indicate a stoppage of the passage from the stomach to the intestines. This is often caused by a wool ball. Nothing can be done in such cases. It requires a post-mortem to ascertain the cause of death. You are feeding intelligently, but the addition of a little grain is advisable. If any more die, get your veterinarian to hold a post-mortem.

V.

At the Union Stock Yards, Toronto, Can.  
ON THURSDAY, FEB. 4th, AT 10 A. M.

THERE WILL BE SOLD

## 35 Pure Scotch Shorthorns

Contributed by John Miller, Jr., Ashburn, Ont.; Arthur Johnston, Greenwood, Ont.; Miller Bros., Brougham, Ont.; David Birrell, Greenwood, Ont.; John Miller, Brougham, Ont.; Robert Miller, Stouffville, Ont.

There are 27 females, all of valuable ages, one of them GRAND CHAMPION at TORONTO in 1908. Others of high-class SHOW-YARD character, fit companions for the champion, and no animal in the lot without merit of a high class.

There are 8 bulls, all old enough to use; some of them prize-winners, and others that will be; every one fit to head a good herd.

The catalogue shows that there are LAVENDERS, LANCASTERS, VILLAGE GIRLS, SECRETS, MISSIES, BESSIE LASSES, MARR BLYTHSOMES, GLOSTERS, CRIMSON FLOWERS, STRATHALLANS, MINAS, BRAWITH BUDS, and others of choicest breeding.

The contributors have decided to make an annual sale, and they know what it means when they say: "We wish to have our measure taken by the contributions we make to this our First Event."

This sale, made by six of the leading Shorthorn establishments in Canada, together with the sales mentioned below, make a series of events not before equalled in the Shorthorn history of Canada.

The sale will be held in a comfortable building. Lunch will be provided, and papers will be furnished buyers to enable them to get animals home without trouble.

Buy single-fare tickets, and get standard certificates for cheap return fares. Write:

**JOHN MILLER, JR., ASHBURN, ONT.**

For Catalogue.

**Col. F. M. Woods and Capt. T. E. Robson, Auctioneers.**

Messrs. Pettit and Watt sell on the 3rd; Messrs. W. C. Edwards & Co., Peter White and Sir George Drummond sell on afternoon of 4th at same place.

PLEASE MENTION THE FARMER'S ADVOCATE.

### WILLOW BANK STOCK FARM



**Shorthorns, Leicesters.**  
Herd established 1855; flock, 1848. The great Duthie-bred bull, imported Joy of Morning = 32070 =, at the head of herd. A choice lot of cattle of either sex to offer. It will pay you to see them. Also choice Leicesters. **JAMES DOUGLAS, Caledonia, Ont.**

### Imported Bull!



To save inbreeding I will sell the Cruickshank (Duthie bred) imp. bull, Sittytton Victor = 50993 = (87397), a proven sire of merit, gentle and active. Also some young bulls by him, out of imp. dams. Address:

**John Brydone, Milverton, Ont.**

## Scotch Shorthorns

**BULLS:** 4 choice yearlings, IMPORTED; 8 yearlings and a number of choice calves of our own breeding. **FEMALES:** A number of cows and heifers forward in calf, including showyard material. Tempting prices. **W. G. PETTIT & SONS, FREEMAN, ONT.**

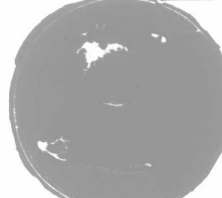
Bell telephone at each farm. Farms only 1/2 and 1 1/4 miles from Burlington Jct., G. T. R.

### Scotch Shorthorns

Canada's greatest living sire, Mildred's Royal, heads my herd. For sale are young bulls and heifers, show stuff and Toronto winners, out of Stamford, Lady Ythan, Claret, Emeline, Matchless and Belona dams. A visit will be appreciated. **GEO. GIER, Grand Valley P. O., Ont. Waldemar Sta., C. P. R.**

### TWO IMP. BULLS

of excellent quality, color and breeding. One 7 months old, sired by imp. Joy of Morning = 32070 =; dam Blossom 2nd, imp. Also heifer calves and young cows, and heifers in calf. And choicely-bred Yorkshires of either sex. Prices very moderate. **GEO. D. FLETCHER, BINKHAM P. O., ONT. Erin Station, C. P. R.**



SOME SHOW PROPOSITIONS IN BOTH MALE AND FEMALE

## SHORTHORNS

as well as a number of the useful sort of both sexes. Prices right. Large lot to select from. Up-to-date in breeding, etc. Catalogue.

**JOHN CLANCY, Manager.** **H. Cargill & Son, Cargill, Ont.**

### VALLEY HOME Shorthorns and Berkshires

For sale: Six young bulls fit for service, and young cows and heifers; some are choice show animals. Also ten fine young Berkshire sows of prolific strains. Write, or come and see our stock. Visitors welcome.

**S. J. Pearson, Son & Co., Meadowvale, Ont.**

Stations: Meadowvale, C. P. R., and Brampton, G. T. R.


### Pleasant Valley Herd

Present offering: 7 high-class young bulls by Imp. Ben Lomond = 45160 = (80468) and Bud's Emblem = 63850 =, and good imp. and Canadian-bred dams. Write for particulars and prices, or visit personally.

**GEO. AMOS & SON, Moffat Station and P. O. Moffat is 11 miles east of Guelph on C. P. R.**

### Rowan Hill Shorthorns

The 1908 Toronto grand champion, Royal Chief 65495, heads my herd. For sale are: 3 spring bulls and a few heifers, sired by him, and out of show cows. These are choice young things that are sure to please. **R. F. DUNCAN, Carlisle P. O., Ont. Caledonia Station, G. T. R., or station 13 Hamilton and Brantford Electric Road.**









### WAS WEAK AND THIN ONLY WEIGHED 73 POUNDS. NOW WEIGHS 113 POUNDS.

Had Heart Trouble and Shortness of Breath for Six Years.

#### MILBURN'S HEART AND NERVE PILLS

cured Mrs. K. E. Bright, Burnley, Ont. She writes: "I was greatly troubled, for six years, with my heart and shortness of breath. I could not walk eighty rods without resting four or five times in that short distance. I got so weak and thin I only weighed seventy-three pounds. I decided at last to take some of Milburn's Heart and Nerve Pills, and after taking eight boxes I gained in strength and weight, and now weigh one hundred and thirteen pounds, the most I ever weighed in my life. I feel well and can work as well as ever I did, and can heartily thank Milburn's Heart and Nerve Pills for it all."

Price 50 cents per box or 3 boxes for \$1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

## Now

is the time to buy a bull for service next year, because we sell CHEAPER now than we do next spring. Why not write to us RIGHT AWAY for a BARGAIN in bulls from R. O. M. dams? Or better yet, call and see us.

**E. & F. MALLORY,**  
FRANKFORD, ONTARIO.

**Spring Brook Holsteins and Tamworths.** 32 choice young Tamworths from imp. sows, and sired by imp. Knowle King David, of best British blood and Royal winners. Correct type. Holsteins of best strains. Write for what you want, or, better, come and see. Will not exhibit this year. Stock better than ever. A. C. HALLMAN, BRESLAU, WATERLOO CO., ONT.

#### HOMESTEAD HOLSTEINS

For sale: 4 bulls of serviceable age, sired by the champion, Count Mercedes Posch, whose nearest dams' records average 25 lbs., and out of Advanced Registry dams.

G. & F. GRIFFIN, Burgessville, Ont. Oxford Co.



## DON'T

Buy a HOLSTEIN BULL till you get my prices on choice goods from 14 months to 1 month old, from best producing strains. "Fairview Stock Farm." FRED ABBOTT, Harrietsville, Ont.

**HOLSTEINS** Choice bull calves from high-producing and Record of Merit dams. White Rocks and Buff Orpingtons. Winners of silver cup and sixteen regular and special prizes at Galt and Hespeler shows. David Rife & Sons, Hespeler, Ont.

**Maple Glen HOLSTEINS** For sale: Two bull calves born April 28th. One sired by Brightest Canary; dam of calf has 22 1/2 lbs. butter record, over 4 per cent. fat. The other from 19-48-lb. 2-year-old A. R. O. test, sired by a bull with a 22 1/4-lb. tested dam, with 93 lbs. milk 1 day. Also a 4-year-old cow due in Oct., sire's g. dam sister of Carmen Sylvia. G. A. Gilroy, Glen Buell, Ont.

#### HOLSTEINS FOR SALE.

Both male and female, including my present stock bull, Cornucopia Alban De Kol, imported.

J. A. CASKEY, MADOC ONT.

A man's animosity towards a political opponent is sometimes so bitter that it does not cease even when the opponent is dead. A few years ago a gentleman who had figured most prominently in the history of his country suddenly came to an end of a long and useful life. On the day of the funeral one of the strongest political enemies of the deceased was asked, "Are you going to attend Mr. —'s funeral to-day?" "No," responded the distinguished gentleman, deliberately; "but (dryly) I wish you to understand I heartily approve of it."

# Black Watch

Chewing Tobacco

The big black plug.

2289

#### Ontario Fairs' Association.

The ninth annual convention of the Ontario Fairs' Association is announced this year for Wednesday and Thursday, February 10th and 11th, at the City Hall, Toronto. The following programme will be followed this year in discussing the situation in regard to the fairs and exhibitions with their varied interests.

On Wednesday, February 10th, the convention will be opened by an address by President Wm. Laidlaw, of Guelph, followed by H. J. Gould, of Uxbridge, vice-president.

Special features will be the subject of an address by Hon. J. S. Duff, Minister of Agriculture for Ontario, followed by an address on the Management of Agricultural Societies by Dr. J. O. Orr, Toronto.

The question of "Ideals in Judging" will be dealt with by Prof. G. E. Day, O. A. C., Guelph, and the question "Should an Entry Fee Be Charged on Exhibits at Fairs?" will be discussed by John E. Roxburgh, Norwood, Ont., and W. H. McNish, of Brockville.

On Thursday morning an address by C. C. James, Deputy Minister of Agriculture, will be followed by an address by J. H. Grisdale on the question of "The best way to secure the proper number of qualified judges for our fairs," and the discussion will be opened by R. S. Hamer, of Perth.

The afternoon session will be devoted to a discussion of "Growing Better Field Crops," by Prof. Zavitz, O. A. C., and the question will be further discussed by Prof. Kluck, Ste. Anne de Bellevue, P. Q.

The question "Should plowing matches be revived and encouraged?" will be discussed by J. W. Wheaton, Toronto, and will be followed by J. W. Sangster, secretary-treasurer of the Clydesdale Horse Association of Canada, Toronto.

D. McGuire, of Waterford, will address the convention on the subject of the distribution of the Government grants, and the discussion will be opened by E. Boughner, of Windham, Ont.

Those desiring to attend the convention will be afforded the privilege of doing so at single-trip fare for the return trip. Single-fare tickets can be purchased from February 6th to 15th, inclusive, and will be honored with return journey free. For using the tickets a fee of 25c. will be charged.

Each agricultural society is entitled to send two representatives to this convention free, and the membership fee of one dollar should be sent to Alex. McFarlane, Otterville, treasurer.

Why are horses more spirited, more inclined to go, and in better health generally in winter? It is because cold is one of the best tonics as an invigorator of digestion, as well as of nervous energy and muscular contraction. Judge a horse by yourself. We all know the invigorating effect of a bright frosty morning, how the blood tingles and flashes through the veins, and the whole system is stimulated as with new wine. Coming out of a morning in the atmosphere pure and sparkling, one feels as if he was walking on air. It is the same with the horse. He feels good, and sometimes the most staid old Dobbin will fling his heels in the air in the very exuberance of spirits. Heat, on the other hand, takes out the tension from all the tissues, lessens the appetite, and enervates all the functions. It is depressing because the appetite and digestion are weakened. Special attention should be given the horse in winter, in view of his peculiar surroundings, so that his health may not suffer. Feed him nitrogenous food, but not too abundant of fat-producing material. Have a care to the stable. This is of the utmost importance. Keep the stable clean. None of us need be told what a heat-producer stable manure is. Heat causes the rapid escape of ammonia, which causes weakness of eyes, and is injurious to the lungs. Therefore, keep the stable well cleaned out.

Attention is called to the new advertisement in this issue, of important auction sales of Aberdeen Angus and Short-horn cattle, from noted British herds, to take place February, April and May, under the management of the well-known firm of auctioneers, John Thornton & Co., 7 Princes street, Hatover Square, London W., who will furnish catalogues and execute commission.

It Cures Abortion.  
It Cures Mange.  
It Cures Ringworm.  
It Kills Ticks, Lice and Fleas.  
It Is Safe to Man and Beast.  
It Does Not Stain.  
It Has No Sediment.  
It Is 3 to 6 Times Stronger Than Any Other Germicide  
It Is Made By the Makers of Cooper's Powder Dip.  
It Is Called

# Cooper's Fluid

WILLIAM COOPER & NEPHEWS,  
DEPT. C., MANNING CHAMBERS, TORONTO, ONTARIO.

### Riverside Holsteins

For sale: Seven young bulls from two to nine months old, out of Record of Merit cows, sired by Sir Pietertje Posch De Boer, whose dam and sire's dam average in official test 25.87 lbs. butter in 7 days, and 87.6 lbs. milk in 1 day.

J. W. Richardson, Caledonia, Ont.

### Centre and Hillview Holsteins

125 head to select from. 35 in the R. O. M. Stock bulls Bonheur Statesman, high official backing, and is closely related to Colantha 6th's Johanna; Brookbank Butter Boy. All nearest dams over 20 lbs. From these sires, out of R. O. M. dams, are several young bulls and a few heifers. Prices right. P. D. EDE, Oxford Centre, Ont. Woodstock Station.



## OIL CAKE

J. & J. Livingston Brand

The finest feed known for stock. Once a user, always a user. Sold either fine or coarse ground. Write:

DOMINION LINSEED OIL CO., LIMITED,  
BADEN, ONTARIO. 31 Mill St., MONTREAL, QUE.

### FAIRVIEW HERD HOLSTEINS

The greatest A. R. O. herd of in northern New York. Headed by Pontiac Korndyke, the greatest sire of the breed, having five daughters whose seven-day records average 29 1/4 pounds each, and over 4 3/4% fat. Assisted by Rag Apple Korndyke, a son of Pontiac Korndyke, out of Pontiac Rag Apple, 31.62 pounds butter in 7 days, and 126.56 pounds in 30 days, at 4 years old. Cows and heifers in calf to the above two bulls for sale, also young bulls sired by them out of large-record cows. Write, or come and inspect our herd. E. H. DOLLAR, Heuvelton, St. Law. Co., N. Y., near Prescott, Ont.

### MAPLE HILL HOLSTEIN - FRIESIANS!

Two cows due to calve inside of six weeks. Two cows giving milk, bred to Prince Posch Pietertje C. G. W. GLEMONS, ST. GEORGE, ONT. EVERGREEN STOCK FARM offers for sale choice young HOLSTEIN BULLS, from 10 to 12 months old, sired by sons of Mercena 3rd and Tidy Abberker, each of which made over 27 lbs. of butter per week, and 80 lbs. milk per day. Also choice young females. Write for prices. F. E. PETTIT, Burgessville, Ont.

### HOLSTEINS

We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls. 100 head to select from. Imported Pontiac Hermes, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. Putnam station, near Ingersoll.

### HOLSTEINS

H. E. GEORGE, Crampton, Ont.

### BUSINESS HOLSTEINS!

Over 60 head to select from. Milk yield from 60 to 85 lbs. a day, and from 35 to 47 lbs. a day for 2-yr.-olds. There are 10 2-yr.-old heifers, 3 1-yr.-olds, and a number of neifer calves. Bulls from 1-yr.-old down. Priced right. Truthfully described. W. Higginson, Inkerman, Ont.

### Holsteins & Yorkshires

R. Honey, Brickley, Ont. All surplus stock of Holsteins sold, except this crop of calves. Ready to book orders for them. Best bacon type Yorkshires, one to six months, both sexes, at moderate prices.

Only Bull Calves FOR SALE, HOLSTEINS and AYRSHIRES, Of the best performing strains. GEO. RICE, ANNANDALE STOCK FARM, TILLSONBURG, ONTARIO.

### The Maples Holstein Herd!

RECORD-OF-MERIT COWS. Headed by Lord Wayne Mechthilde Calamity, also in the Record of Merit. Several choice bull and heifer calves; also one bull fit for service. WALBURN RIVERS, Folders Corners, Ont.

### LYNDALE HOLSTEINS

Offers for sale 5 young bulls from Record of Merit cows, and sired by Count De Kol Pietertje. Also 2 bulls sired by Sara Hengerveld Korndyke, and a number of heifers bred to this bull. BROWN BROS., LYN, ONTARIO.







# CURE FOR DYSPEPSIA

As is well known, this troublesome complaint arises from over-eating, the use of too much rich food, neglected constipation, lack of exercise, bad air, etc.

The food should be thoroughly chewed, and never bolted or swallowed in haste, stimulants must be avoided and exercise taken if possible.

A remedy which has rarely failed to give prompt relief and effect permanent cures, even in the most obstinate cases, is

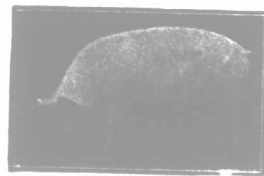
## BURDOCK BLOOD BITTERS

It acts by regulating and toning the digestive organs, removing costiveness and increasing the appetite and restoring health and vigor to the system.

Mr. Amos Sawler, Gold River, N.S., writes:—"I was greatly troubled with dyspepsia, and after trying several doctors to no effect I commenced taking Burdock Blood Bitters and I think it is the best medicine there is for that complaint."

For Sale at all Druggists and Dealers.

### Summer Hill Herd of Large English Yorkshires

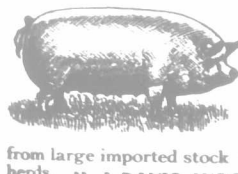


We are bound to get rid of 100 Yorkshires, either sex, any age, within the next few weeks. Since the United States ports are closed against us, our trade has been more than cut in half, and we must

sell double the number to Canadians to make room for natural increase in the herd. If you think of buying a large, growthy Yorkshire in the near future, do it now and save your money. We have the greatest show record on earth. Also the world's public sale record. Better write now. We will also sell a few choice Holstein heifers, in calf to the best backed-up bull in Canada.

D.C. Flatt & Son, Millgrove, Ont., Hamilton, Sta.

### Large White English Yorkshires



October offering: A choice lot of boars ready for service. A number of good sows bred or ready to breed. A fine lot of young pigs. Pairs and trios supplied not akin. All the above from large imported stock from the best of British herds.

H. J. DAVIS, WOODSTOCK, ONT., Importer and Breeder of Shorthorns and Yorkshires. Long-distance Bell Phone.

### Maplehurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S.-C. W. Leghorns.

Tamworths of excellent breeding and ideal bacon type. Herd won sweepstakes at Toronto and London, 1905-6-7-8; winnings at World's Fair, St. Louis, 1904.—sweepstakes aged and junior herd, and two grand championships. Apply to:

D. DOUGLAS & SONS, MITCHELL, ONTARIO

### Maple Leaf Berkshires

For sale: Sows bred and ready to breed. Guelph winners among them. Boars all ages. The highest types of the breed. Imp. sires and dams. Pairs not akin.

Joshua Lawrence, Oxford Centre, Ont.

### Morrison Tamworths, Shorthorns and Clydesdales.

Tamworths from Toronto winners. Either sex. Any age. Sows bred and ready to breed. Pairs not akin. CHAS. CURRIE, Morrilton, Ont. Schaw Sta., C. P. R.

### FOR SALE: SOME VERY CHOICE CHESTER WHITE YOUNG SOWS

Bred to farrow in March and April next. They are from prizewinning stock, and a good bacon type. Will be sold reasonable. Apply to:

Daniel DeCourcy, Bornholm, Ont.

### ELMFIELD 50 young pigs for sale, both sexes. Young sows bred to imported boar, also sows to Canadian-bred boar due to farrow about 1st October. G. B. Muma Agr. Ont. C.P.R.: Paris, G.T.R.

"I guess," said the Yankee who had been asked to admire an echo. "I guess you don't know everything about echoes in this country. Why, at my place up in the Rocky Mountains, it takes eight hours to hear the echo of your voice. When I go to bed I put my head out of the window and shout, 'Time to go to bed,' and the echo wakes me in the morning."

## QUESTIONS AND ANSWERS Miscellaneous.

### POST STAMPING LETTERS.

Can a postmaster or his assistant at a country post office be compelled to stamp all letters taken into or given out from his office, with a stamp showing the date of receipt and mailing of such letters?

SUBSCRIBER.

Ans.—It is the duty of all postmasters to so stamp all letters coming in or going out, with the regular dated post-office stamp. If this rule is not complied with and regularly practiced, a letter addressed to the Post-office Inspector of your district, calling attention to the neglect, will, no doubt, be effectual in having the rule observed.

### RAILROAD SNOW-FENCE.

A railroad is running across my farm, in which there is a deep cut. The railway places a snow-fence about six rods on my farm.

1. Can I keep them from removing said fence without paying damages claimed?
2. Can I come on said railway for damages caused by inconvenience of their fence?
3. Can I remove the said fence without their permission?
4. If fence is in my way, can I remove it wherever I will?

Ontario. A SUBSCRIBER.

Ans.—1, 3 and 4. No.

2. Yes, if any actually suffered.

### RED CLOVER VS. ALSIKE.

Please answer the following questions in the columns of "The Farmer's Advocate":

1. Is red clover a more valuable fertilizer than alsike on any kind of soil?
2. Is it more valuable as hay for feed?
3. Is red clover as liable to heave out on loamy soil?
4. Which will produce most hay per acre?
5. I have a field of timothy sod that I was intending to fall plow and put in peas in the spring, but I did not get it plowed this fall. How would it be to plow early in the spring, and how would chances be for a good crop?
6. Please give me Andrew Carnegie's present address; also John D. Rockefeller's address.

OLD SUBSCRIBER.

Ans.—1. Yes; it is considered a better nitrogen-gatherer.

2. Yes; because it produces more heavily, and if cut early and well cured, is more nutritious.

3. Yes; perhaps more so under unfavorable conditions, on undrained land or under alternate freezing and thawing of the soil.

4. Red clover, decidedly.

5. It would be all right, and not necessary to plow earlier than May.

6. Andrew Carnegie, Skibo Castle, Sutherland, N. B., Scotland. John D. Rockefeller, 4 W. 54th street, New York.

### ROYAL GEORGE—PRUNING—PRICE OF CLOVER SEED.

1. The origin of the Royal George horse, or what breed of horses does he belong to?

2. Can apple trees be successfully pruned and trimmed during the winter months without injuring the trees or fruit crop?

3. How do you account for the low price of clover-seed when the yield was so small?

E. R.

Ans.—1. The original Royal George was of the Pilot branch of the trotting or roadster class of horses. The blood of the old black pacer Pilot, who was of French-Canadian origin, nicked well with the best American trotting strains, and many of their best trotting horses traced to him, mainly through his son, Pilot Jr., a horse owned by R. A. Alexander, of Kentucky, out of a mare that was nearly Thoroughbred. The Royal Georges were a handsome class of horses, of good size, suitable for carriage purposes, as well as being fast trotters.

2. Yes, fairly, if not too heavily pruned. The best time to prune, however, is in May, as the wounds heal more satisfactorily.

3. Probably the yield is much larger in some sections than in others. The price is supposed to depend largely on the supply.

# FREE! \$200.00 IN CASH And 500 Valuable Premiums Given Away

Below will be found three sets of mixed or jumbled letters. The first set when placed in proper order spells the name of a large animal. The second set spells the name of a staple article of food. The third set spells the name of a large city. Here are all the sets:

RSEOH [the name of a large animal]  
RAEBD [the name of a staple article of food]  
LEAMOTNR [the name of a large city]

Can you place the above sets of letters in proper order, so as to spell the words wanted? It is not easy, but with patience and perseverance it can be done. It may take a small amount of your time, but as there are cash prizes and valuable premiums given away as an advertisement, it is well worth your time to make an effort.

It is just possible that you may have entered contests before and have not been successful, but please remember that in this instance you are dealing with a reliable firm and that there are over five hundred prizes to be distributed.

Write your answer to the above neatly and plainly on a slip of paper, and send it to us at once. Both writing and neatness count in this contest. If you do not happen to be a good writer, have some neat writer enter the contest for you, in his or her name, and if you are awarded a prize, agree with the person who does the writing that the prize belongs to you. All this may take up a little time and be a little trouble, but the prizes are handsome and valuable, and worth many times the amount of time that anyone will give to the above.

Should you read this advertisement and yet not desire to enter the contest yourself, please point out the advertisement to some relation or friend who might be interested. This is an opportunity of a lifetime, and should not be missed.

This contest is not open to children under 14 years of age. We propose to hold a contest for young people very shortly, but will not accept entries from children in this one. Below is the prize list for the most correct, best written and neatest solution of the above:

- 1st Prize.....\$50.00 in Cash
- 2nd Prize.....\$40.00 in Cash
- 3rd Prize.....\$35.00 in Cash
- 4th Prize.....\$25.00 in Cash
- 5th to 9th Prizes, five prizes of \$10.00 each.. \$50.00 in Cash

- 10th to 14th Prizes, Five Ladies' or Gents' Gold Filled Hunting Case Watches.
- 15th to 19th " Five Family Dinner Sets (97 pieces).
- 20th to 24th " Five Ladies' or Gents' 14k Gold Plated Watches.
- 25th to 29th " Five Sets of half dozen Silver Plated Knives and Forks (Rogers)
- 30th to 34th " Five Ladies' or Gents' Solid Silver Watches.
- 35th to 39th " Five Handsome Violins and Bows.
- 40th to 44th " Five Hardwood Accordeons.
- 45th to 49th " Five Magnificent Fur Ruffs.
- 50th to 54th " Ten Ladies' Toilet Sets.
- 55th to 59th " One Hundred Ladies' or Gents' 14k Gold Filled Rings.
- 60th to 64th " One Hundred Waterton Fountain Pens.
- 65th to 69th " One Hundred Sets of 6 Silver Plated Tea Spoons (Rogers).
- 70th to 74th " Forty Ladies' Hand Bags.
- 75th to 79th " 110 Sets Silver Plated Sugar Spoons and Butter Knives (Rogers)

### CONDITIONS

The judging of the above will be in the hands of three gentlemen of undoubted integrity, who have no connection whatever with this office. No employee of ours nor any of their relations will be allowed to compete. We do not ask anyone to send ANY OF THEIR MONEY in order to enter this contest.

There is a simple condition that must be complied with, about which we will write you as soon as we receive your answer to the above.

This contest is open to persons of either sex over 14 years of age. No entries will be received from children.

When replying to this advertisement, be sure to write your name and address very plainly in the space below. Cut out the advt., and send it to us, together with the slip of paper on which you have written your solution to the puzzle, and we will write you at once in regard to the simple condition mentioned above.

I wish to enter the above contest, and agree to accept the decision of the three judges appointed by the Bovel Manufacturing Co., whose decision will be final.

Name.....

Address.....

State whether we are to address you as Mr., Mrs., or Miss.....

Address: BOVEL MANUFACTURING CO., Dept. O. Montreal, Can.

### SUNNYMOUNT BERKSHIRES

Highest standard of type and quality. For sale: Sows of all ages, and 4 yearling boars. A grand, good lot. Also younger ones. Pairs not akin. JOHN MCLEOD, C.P.R. & G.T.R. Milton P.O. Ont.

### Willowdale Berkshires!

Won the leading honors at Toronto this fall. For sale are both sexes and all ages, from imp. stock on both sides. Show things a specialty. Everything guaranteed as represented. J. J. WILSON MILLS, ONT., P. O. AND STATION. C. P. R. AND G. T. R.

## MONKLAND YORKSHIRES

are the easily-fed, quick-maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now.

JAMES WILSON & SONS.

FERGUS, ONTARIO

### Newcastle Stock Farm

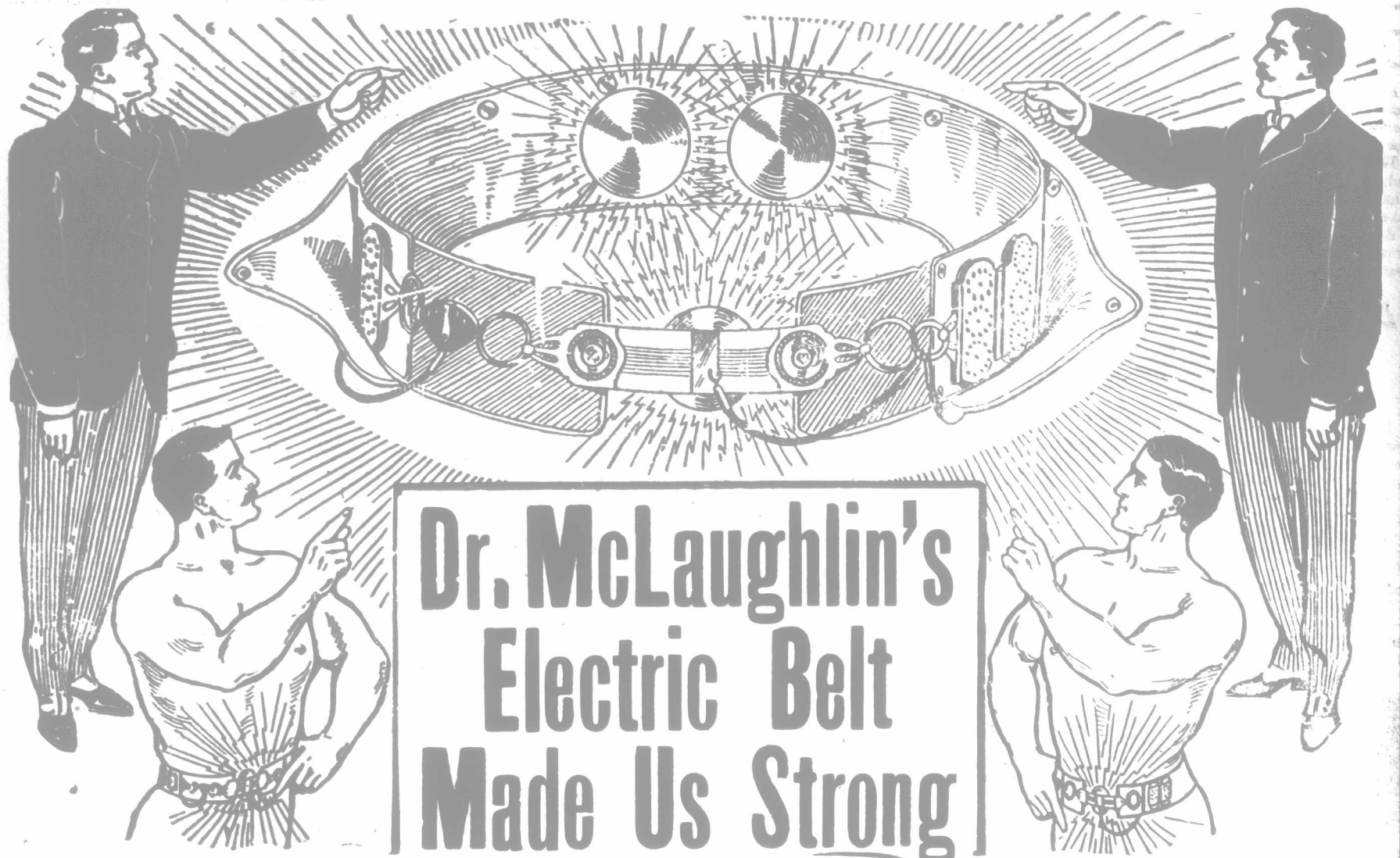
I have a splendid lot of TAMWORTH SOWS well forward in pig, and well worth looking after; also grand selection of boars, 3 months to 10 months old, several prizewinners, and a lot out of dams that have been prizewinners all over this part of Ontario. I have also a few choice Shorthorn heifers well forward in calf to my Cargill-bred bull, and others ready to breed. All will be sold well worth the money. A. A. COLWILL, NEWCASTLE, ONT.

### DUROC-JERSEY SWINE

Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. MAC CAMPBELL & SONS, HARWICH, ONT.

OHIO IMPROVED CHESTER WHITES.—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 6 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe delivery guaranteed. E. D. GEORGE Putnam, Ont.





# Dr. McLaughlin's Electric Belt Made Us Strong

When you hear a lot of people praising a thing you begin to realize that it must be good. One man, or maybe two, in a community may be mistaken, but when a dozen remark that they have found Dr. McLaughlin's Electric Belt a good thing you are forced to believe it.

When you meet a friend on the road, and comment upon his improved appearance, and he tells you that Dr. McLaughlin's Electric Belt has done it, even though you don't believe in electric belts yourself, you can't help feeling glad that your friend imagines that it helped him.

It's hard to convince some people that there is so much good in a thing that is worn about the body only a few hours at a time; it looks impossible, but when a dozen people whom you know to be honest persist in saying that it made life worth living for them, you are forced to take some stock in it.

That is why Dr. McLaughlin's Electric Belt is so popular now. It has cured a lot of people, and they are praising it; they call it their best friend.

One man who had felt run down generally, who had no life in him, no ambition for the future, and was always groaning with some sort of a pain or ache, was cured by it, and he seemed to think a good deal of it, because he said there was not enough gold in the Dominion to buy it of him if he could not get another like it.

The most noticeable thing about men who have been cured by Dr. McLaughlin's Electric Belt is the way their views change as to their future; men who have looked for nothing but hard luck and discouragement seem to take a new grip on prosperity, and aim higher from the day they begin wearing the belt.

You know men who seem to think that they have no luck, nothing turns out right for them. They are men without nerve, with some sort of trouble that is holding them down; they are discouraged and tired of the fight; they wake up in the morning with a pain in the back, a tired feeling, and very little interest in the day before them; they go about their work without caring, and are glad when quit time comes.

How can a luck favor that kind of a man? If he does succeed, it is certainly luck for him, but fortune smiles mostly on the man who goes after her with a club, you've got to train your luck as the man tamed the shrew, by being master of it and shaping it in your favor by your power to command.

Luck is generally nothing but energy turned to working for you; success comes to the hustler. Nobody can hustle who has not strength and vitality. Men who wear Dr. McLaughlin's Electric Belt are full of energy; they are full of life; they bring success to themselves with the health and strength that the wonderful belt gives them.

That is why men who wear this Belt are bright, happy and cheerful; they feel good, and show it.

The majority of cases which have been lately cured by the Dr. McLaughlin Belt are of men broken down by nervous strain, over-work, over-eating and late hours. In them the old ambition seemed to have gone; self-confidence was lacking, and there was a tendency to premature old age. In such cases Electricity is most effective, as its effect is to restore life to the nerves and all the vital organs. As examples of the influence of the Dr. McLaughlin Belt upon such cases note what Mr. Jos. Armstrong, 173 Rectory St., London, Ont., says:

"I am glad to say that I never felt better in all my life, and all the praise is due to you and your Belt, which I only wore for three weeks, and have it laid aside as good as new. To put the whole thing in a nutshell, every joint in my body and my back is working like a new clock. My work is no bother to me, and I thank you again for the cure of my back and stomach, and for my whole system. Do not be afraid of letting any one see this, and if they are not satisfied with this, send them to me and I will prove it to them. After suffering for the most of four years, you and your Belt cured me. I came here from Scotland for that cure, and I am for stopping in this country now. I am here to witness all I have said. Wishing you all kinds of prosperity and sale for your good remedy."

Here is another. Mr. J. Harry Denton, Trenton, Ont., says:

"I used your Belt for nervous debility and rheumatism in 1903, and it cured me. I wrote at that time to this effect, and what I said then I can verify now. I am enjoying better health at the present time than I have done for many years. I would recommend the Belt to any one suffering from rheumatism or from any form of nervousness."

Mr. A. Russell, Niagara Falls, Ont., writes:

"I am glad to tell you that I have not felt better in years. I have had no signs of a lame back since I wore your Belt, and that is over a year ago. I think they are the best thing for a lame back that any one could get. I could not have got along without one, and I will be pleased to recommend your Belt to any one that is troubled with a lame back."

In cases of Rheumatism the Dr. McLaughlin Electric Belt has a specific action in quickly relieving the pains and freeing the blood of the Lactic Acid deposits that cause the trouble. Among the recent cures we may mention Mr. August McDonald, No. 9 Buffalo Street, Brantford, Ont., writes:

"I was troubled a little over two years ago with Rheumatism, and it could not be carried into my hands. I was laid up for six months, and it was only after these different treatments that I was able to

and took the baths, and received slight benefit from them. I then bought one of your Belts, and at that time considered my case hopeless. I have improved steadily since wearing it, and have been able to resume my business as builder and contractor. I have recommended your Belts to many as a sure cure for Rheumatism, even in its worst form, as I was about as bad as any one could be with it when I got your Belt, which has, I am glad to say, completely cured me. The Rheumatism had affected my heart, and it has greatly improved me in that respect."

Mr. Robert, Arcola, Sask., is another man cured of rheumatism two years ago. Here's what he says:

"Dear Sir—I wore your Belt two years ago for rheumatism, and it cured me completely, and I can now say that I consider it a permanent cure, as I have had no return of it since. I thank you very much for urging me to take your Belt at that time. I feel stronger and younger than I have for years, and I would advise any one suffering from rheumatism to try your Belt, as I do not think they could find a better remedy."

The man or woman whose stomach seems to be "knocked out" can practically get a new stomach by using the Dr. McLaughlin Belt. The reason for this is that the stomach when in a healthy condition is an electric battery in itself. It furnishes power and strength to every organ of the body. When it is weak, it is a sign that the natural electricity is below the normal. It is useless to take drugs to refill the human electric battery with the element that is so necessary for its health. They can't do it. How the stomach is reinvigorated by the Dr. McLaughlin Electric Belt is told by Mrs. Bertha Hamilton, of Erin, Ont., who writes as follows:

"Since calling at your office on June 22, I must tell you that I am sure it was the Electric Belt that has helped me. I knew that I would not have lived if I had not got it when I did, and I cannot be too thankful to you. After five years of agony that I endured, it is like having a new lease of life now. I am gaining ten pounds of flesh a week, and am eating solid food. I have been eating liquid food a month nearly, and am now eating for three weeks. I have never think my cure very rapid and wonderful. Many of these people can never eat again. I am certain that you cannot advertise your Electric Belts enough. The only thing I think that there are those who are not good. We do not think of the money we spent on doctors, and have to repeat my story over and over again, every day, to my people, as every one who has been cured from myself about six years ago, and felt better than I do now, and my nerves began to quiver."

gan to use the Belt, and, as you know, I wore it even when I was very weak. I have a host of grateful friends who wish me to thank you also for them, for they were all nearly sick about me, thinking and seeing me starving every day, with plenty of food about me. I cannot speak too highly of your Electric Belt, for it is a perfect fit, and is doing just what you said it would do, and in so short a time. I never expected the cure so quickly. It was a surprise to me, and I can hardly believe it. I now look very well. You would hardly recognize me as the woman who called at your office on June 22. I think my doctor here is as delighted over my recovery as any one can be. With best wishes for your continued success."

Here's a man cured of stomach and kidney trouble and diarrhea. A. P. Hickling, of St. James, Man., says:

"My indigestion has quite disappeared, and my kidneys are free from pain. I no longer feel any weakness in my spine, and my appetite has returned, so that I can enjoy as good a meal as any man my size. I have gained five pounds in weight. I am also free from diarrhea, which was severe during the summer months. I am most thankful to say that the Belt has about cured me of other weaknesses. I believe your Electric Belt is a genuine success."

We could fill pages of this paper with letters of praise from those who have been cured by Dr. McLaughlin's Electric Belt, but those given above are certainly enough to suggest to the reader that he may also find relief from his ailments by using electricity. It don't cure you, it costs you nothing. All I ask is reasonable security and you can pay when cured. If you are suffering from Nervousness, Back Ache, Rheumatism, Stomach Trouble, Constipation, or any ailment which drugs fail to cure, call today for Free Book. This Book should be read by every man, it tells facts that are of interest to every man who wants to remain young and healthy at any age. Call today, if you can't, send coupon for a beautifully illustrated 84-page Free Book.

DR. M. S. McLAUGHLIN,  
12 Young St., Toronto, Can.

Send for your book, free  
to 6 p.m.  
to 15 p.m.



# WHAT WE WANT

first-class value. We offer nothing else. If any one of our subscribers was ever disappointed, we have yet to learn his name.

- WE WANT thousands of new subscribers.
  - WE WANT you to help us to get them. We know you CAN and we believe you WILL.
  - WE WANT to pay you WELL for doing it.
- WE WANT you to know that every premium we offer is

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The number of new subscribers required to entitle you to each premium is marked opposite each. Send for agent's outfit, and begin work to-day.

### RAZOR.

The Griffin Carbo Magnetic Razor, direct from the manufacturers in Germany. The manufacturers will not allow this grade of razor to be sold for less than \$2.00. We offer for two new subscribers.

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The Famous "Farmer's Advocate" Knife. Genuine Joseph Rodgers. (Made in Sheffield, England.) For one new subscriber.

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Bound in cloth, illustrated. Just the thing for Christmas or Birthday Gift. "Far above the ordinary run of fiction," says the Buffalo Courier. "Should be in all the homes of the people," Toronto World. For two new subscribers; or cash, \$1.25.

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An indispensable volume in every home. The Chambers' Twentieth Century Dictionary. Cloth bound, contains 1,200 pages, profusely illustrated, printed on superior quality of paper. For two new subscribers.

These premiums are given only to our present subscribers for sending in bona-fide new yearly subscriptions, accompanied by \$1.00 each.

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Offered as premiums to present subscribers for securing new subscriptions to The Farmer's Advocate and Home Magazine, or sold for amounts named after each book. Any book valued under \$1 for one new subscriber; any book valued from \$1 to \$1.50, two new subscribers; any book valued from \$1.50 to \$2, three new subscribers; any book valued from \$2 to \$2.50, four new subscribers; any book valued from \$2.50 to \$3, five new subscribers. For books valued over \$3 it may be reckoned that one new subscriber will count as 60 cents cash.

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- VEGETABLE GARDENING—Green. 224 pages. Postpaid, \$1.35.
- FLOWERS AND HOW TO GROW THEM—Rexford. 175 pages. Postpaid, 55c.
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- PRINCIPLES OF FRUIT-GROWING—Bailey. Postpaid, \$1.35.
- BUSH FRUITS—Card. Postpaid, \$1.60.
- THE FORCING BOOK—Bailey. Postpaid, \$1.10.
- THE PRUNING BOOK—Bailey. Postpaid, \$1.60.
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- GINSENG—Postpaid, 50 cents.
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- THE STORY OF THE PLANTS—Grant Allen. 213 pages. Postpaid, 45c.
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- TWENTIETH CENTURY DICTIONARY—A miracle of scholarship. Best inexpensive work published, 1,200 pages. For two new subscribers.
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### NICKEL WATCH.

Good timekeeper. This watch has taken well. For three new subscribers.

### MOUTHORGANS.

Best German make. Keys, A, B, C, D, E. Two instruments for one new subscriber, or choice of one Mouthorgan and one Compass for one new subscriber.

### THE MICROSCOPE.

Tripod Microscope, with strong magnifying lens, useful for examining weed and other seeds, insects and other small objects. Is a means of great entertainment and instruction in the home and out of doors. Will be found invaluable in carrying on nature study, now becoming a specialty in rural schools. Two Microscopes for one new subscriber, or one Microscope and one Mouthorgan for one new subscriber.

### BIBLES.

(Bagster's.) Probably the best value of all our premiums. This handsome volume (convenient size) for only two new subscribers.

### BARON'S PRIDE.

Handsome picture of the Champion Clydesdale. Size, 17x13 in., including margin. Suitable for framing. For one new subscriber.

We must have honest subscribers. Changing the name for one member of the household to another, or deception of any kind, will not be allowed. If discovered, the premium will be withheld.

The William Weld Company, Limited, London, Ontario.



# Every Safe Lock Shingle is made to meet the rigid requirements of the British Government for Admiralty and other Public Service



to proper size for Safe Lock Shingles. —The only shingle with galvanized edges.

—The only shingle sold with a positive protective guaranty against lightning, backed up by a free insurance policy signed and sealed by the manufacturers, the Metal Shingle & Siding Company, a \$200,000.00 Canadian corporation.

Every Canadian farmer who expects to put up a new barn or house or to re-roof old buildings is directly interested in this extraordinary free offer.

Think of it! A straight-out lightning insurance policy free from conditions of any kind. It is the most liberal roofing offer ever made to Canadian farmers.

Insurance records show that one-half the fire losses on barns in Canada result from lightning. The property loss in these cases amounts to many thousands of dollars every year.

Safe Lock Shingles have been on the market for more than ten years, and in all that time no building covered with them has ever been harmed by lightning.

This proves to us that Safe Lock roofing is a positive guaranty against lightning.

Anyway, we are willing to show our faith in Safe Lock Shingles and will protect you from lightning without one cent additional cost to you, directly or indirectly.

Safe Lock Shingles are sold at the same price as shingles known to be inferior in quality of steel, galvanizing and construction.

Safe Lock Shingles lock positively and securely on all four sides. They cannot be blown off, nor can they be pulled apart through the warping of the sheeting, or in any other way.

And remember this—No other shingle is a Safe Lock Shingle.

Safe Lock Shingles can be found in every part of the Dominion of Canada where they have been subject to storms of all degrees of severity.

No building covered with Safe Lock Shingles has ever been unroofed.

We want you to know what some of the users of Safe Lock Shingles say of them.

R. T. McLAUGHLIN, Fair View Farm, Alba, Ont.—“The ‘Safe Lock’ makes your shingles absolutely wind and water proof. They are the best shingles on the market to-day.”

F. B. DOUD, Branchton, Ont.—“The Galvanized Steel roof is apparently as good as when put on in 1898. The ‘Safe Lock’ Shingles make a lasting, storm-tight roof, and give clean cistern water. “I am satisfied that I put on a good roof.”

W. J. McPHERSON, Berryton, Ont.—“The ‘Safe Lock’ Shingles that I purchased from you ten years ago have given splendid satisfaction. The roof has never leaked a drop, and they seem to be just as good as the day they were put on.”

J. C. PAYNE, Cayuga, Ont.—“It must be ten years now since I bought the metal ‘Safe Lock’ Shingles, and up to this time I have no reason to regret their purchase. We have had wooden roofs put on since which are open in spots from the splitting and shrinkage of shingles. No difficulty, so far as I have noticed at least, has arisen with your Metal Shingles, and the roof seems compact and durable. So far as I have been able to see, I have seen no wear or injury to the shingles during the ten years’ use, and cannot see but that the roof is just as good as when it went on.”

MURDOCK McKENZIE, Bear Line, Ont.—“The ‘Safe Lock’ Shingles have never given me any trouble, and they appear to be as good to-day as the day I put them on. I am well satisfied with them, as I believe them to be the best roofing that can be used on barn buildings.”

GEO. HARDY, Ashgrove, Ont.—“It will be eight years in June since the barn was shingled. I never had any trouble with it in any way, and it appears to be as good as when put on. I have been recommending your shingles as the best that can be got.”

MRS. JAMES STEWART, Pendleton, Ont.—“In reply to your letter asking about shingles I bought from you over five years ago. I looked the roof all over to-day, and they seem to be in as good condition as when they were put on the roof. The shingles don’t seem to be any the worse for wear, and they will last for years.”

Send to-day for our book, “The Truth about Roofing” and full details of our Fire Insurance Policy payable in cash if your Safe Lock Roof is damaged by lightning.

**T**HE British Government requires all galvanized steel roofing for Admiralty or other public work to be of specific grade and to be capable of withstanding a certain acid test.

The acids used for this purpose are strong enough to burn the skin off a man’s hand, and yet the galvanizing must be heavy enough to withstand their action for a definite period.

Exposure to wind, rain and snow for a quarter of a century is much less destructive than this acid test.

Yet every Safe Lock shingle is guaranteed to meet the Government requirement in this and all other respects.

No wonder that those who have used Safe Lock Shingles declare that they will last as long as the buildings they protect.

Safe Lock Shingles are the only shingles that actually lock on all four sides so that they cannot pull apart. Shingles which do not lock on four sides are not Safe Lock Shingles.

Again: Safe Lock Shingles are the only shingles that completely protect the roofing nails from weather.

—The only shingles that have three thicknesses of steel along the upper edge of lock, thereby doubling the strength along the line of greatest strain.

—The only shingle galvanized after sets have been accurately cut

The Metal Shingle and Siding Co. Ltd.  
“Roofers to the Farmers of Canada”  
Queen Street Factory, Preston, Ontario  
Branch Factory, Montreal

CUT OFF THIS COUPON AND MAIL TO US

My roof measures.....ft.....in. long.

**The Metal Shingle and Siding Company, Limited**  
Queen Street Factory, Preston, Ontario

Give length of roof along ridge; also distance from ridge to eaves, and we will send approximate cost of a Safe Lock Roof.

Please send me your booklet “Truth about Roofing,” with full particulars of your Free Safe Lock Lightning Insurance Policy.

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Size of Roof..... If interested in any other Metal Building Goods please state such fact here.....

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