

Farmer's Advocate and Home Journal

WESTERN CANADA'S AGRICULTURAL WEEKLY

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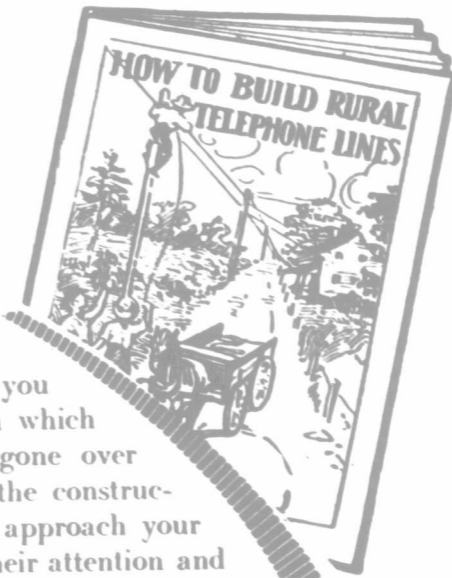
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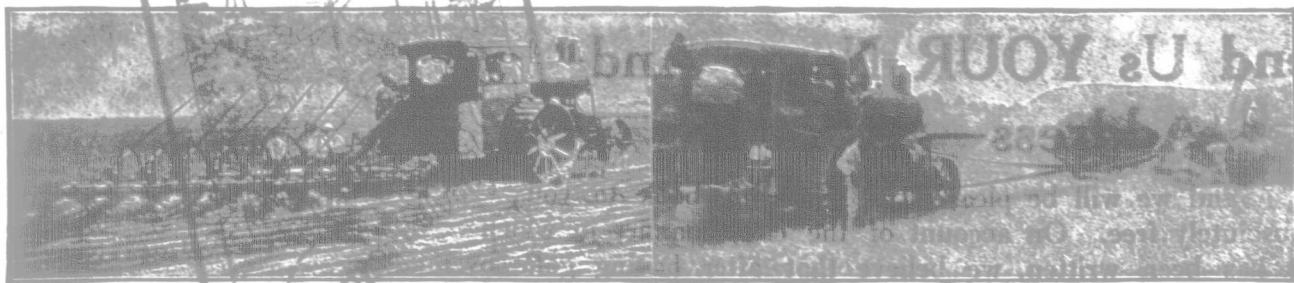
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SOIL FERTILITY AND PERMANENT AGRICULTURE

A SYMPOSIUM of Dr. Cyril G. Hopkins' work, "Soil Fertility and Permanent Agriculture," was read before N.E. Library Association recently by Prof. J. H. Sheppard. It is as follows:

The author is a South Dakota man and is now professor of agronomy in the University of Illinois. Soil at first thought seems sordid and uninteresting; in fact, it attracts us by its production, by the life and beauty which it supports, rather than by its innate features. Dr. Hopkins opens this book of 650 pages by simple explanations of the elemental compounds which constitute soil. Such an explanation seems tedious, but it is necessary; for strange to relate, two-thirds of the farmers of the Northwest would not comprehend his discussion if he had not made these simple explanatory paragraphs in the opening chapters. These explanations are followed by a statement of the nature of plant food and of plant growth.

The first portion of the book is discussed under the topical heading, "Science and Soil;" the second, "Systems of Permanent Agriculture;" the third, "Soil Investigation by Cultural Experiments;" fourth, "Various Fer-

tility Factors." The composition and formation of the earth's surface or crust is given and this is followed by the basis of soil classification. All of the above is given in preparation for the discussion and it is well that the author has done so, for the amateur and the average practical farmer needs it as badly as the student needs his lexicon in translating a foreign language. You may or may not know that soil surveys, more or less complete, have been made or are under way in every state in the union, where a sample of the soil and subsoil is inspected on at least each forty acres of land and the soil areas are mapped.

The volume under discussion takes up the classifications and designates in map form all of the soil areas in the United States. The author next goes into a discussion and explanation of the difference between available plant food and similar material which is not available. If plant food is not soluble the plant cannot take it up. If it is too readily soluble, it may be lost by the leaching of water long before the plants constituting the crop on the field are ready to make use of it.

The chemist finds that the plant uses a large number of elemental plant foods—a dozen at least—and that they are all essential. This has been proven

by leaving one out, and no matter which one it is fatal to the plant. If no iron is present, for example, the plant will be without chlorophyll—the green coloring matter—and will soon die. Fortunately iron has never been found lacking in any agricultural soil, and hence causes no trouble to the husbandman. The fact is that only three of these essential substances commonly run short from cropping. These three are nitrogen, potash and phosphoric acid. A system of cropping, therefore, which will keep up the supply of these three materials is a permanent system of agriculture. Temporary systems have been followed by some of the New England states, and to-day they are advertising abandoned farms as a state propaganda.

Corrective, I think it was, sent out a pamphlet a few years ago, describing abandoned farms and inviting the citizens of America to occupy and redeem them. They used half-tone illustrations from photographs. I remember, at least some of these farms they show lots of pretty good-looking houses and farm barns and the descriptions read: "Three miles from market with a road to road, three-quarters of a mile from a saw-mill, two miles from a church, etc., but these three elements were exhausted or very low

and had to be replaced before a crop could be grown on the land.

The addition of limestone is discussed; that is whether it should be burned by the farmer in a cheap way, or by the manufacturer on a large and expensive scale. Lime in itself is of no value to the crop, but among chemical substances there is frequently a contest for a common substance exactly like that which occurs between dogs when one has a bone which the other thinks he can take away from him. During the fight which ensues frequently a third canine gathers up the morsel and devours. In some soils lime will, in this way, free a substance which the crop will use promptly and to great advantage. Organic matter, humus—and nitrogen can be supplied by growing certain crops.

Dr. Hopkins is accused of being in part responsible for the high cost of meats in this country. He worked out two methods of cropping Illinois and on a basis of maintaining the soil fertility. One plan is grain and clover seed growing and the return of all the straw and clover hay—after the seed is removed—to the land, thus retaining the fertility of the soil. Except for the purchase of some rock phosphate which can be bought rather cheaply in the corn belt, this method of cropping retains the soil fertility without the addition of commercial fertilizers. The other plan of maintenance brought in live stock and by that means retained the fertility.

He shows how erroneous conclusions have frequently been drawn by experiments. For example, 300 years ago Van Helmont, a Flemish alchemist, planted a willow tree five feet high in 200 pounds of soil. In five years the tree had gained 164 pounds in weight and the soil had lost but two ounces. He drew the conclusion that plants live on air and rain water, not realizing that the tree would be removing a large per acre amount on the same basis and that the soil supplied very necessary ingredients to it.

Among the recent discoveries is that of the taking up of nitrogen from the air by the leguminous plants well presented by clover and the garden pea. I remember well that this was announced when I was a student in college, and that after spending three months in study of agricultural chemistry our teacher, an excitable Irishman, came into class one morning and said: "Boys it is all bowled over! Helleigle has discovered that leguminous plants take their nitrogen from the air direct." We had spent the greater part of the term in a study of nitrogen supply and conservation because it was the expensive element to buy, twice as costly as either of the other two. Helleigle had discovered that clover plants and a little bacterium had formed a co-partnership, known to botanists as symbiosis, by which the clover plant builds houses down on its roots in the form of little warts called tubercles and the bacteria live in them. They are pretty thick in these tenements, too, I can tell you—regular Rooseveltian families of them, and in some way not well understood. By this co-operation nitrogen is taken from the air either by the clover getting it from the air above the ground or the bacterium taking it from the air below the ground.

The chemist has never, in recent years at least, agreed for a minute that something has come from nothing. He well knew that a crop of clover removed a large quantity of nitrogen from a field and still left the soil richer than it was before the crop was removed. It had been observed that clover was deep-rooted and he had been satisfied with the belief that the subsoil had supplied the nitrogen to the clover and that the clover had left it in the surface soil.

The loss of fertility from leaching and weathering in these northern states and Canada is very small compared with that at the south. In travelling you may have noticed that southern soils are much lighter in color than northern. That is due to the fact that during some five months in the year northern fertility is locked up in cold storage, and hence the organic matter which gives the dark color is retained much more completely.

Dr. Hopkins has no patience with the toxic theory set forth by Prof. Whitney

(Continued on page 1879)

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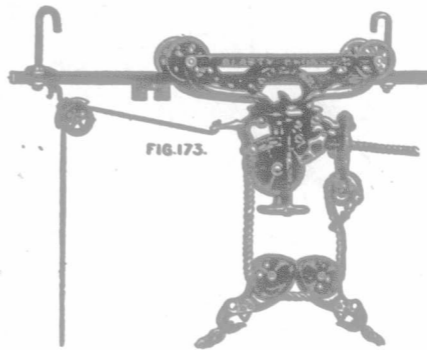
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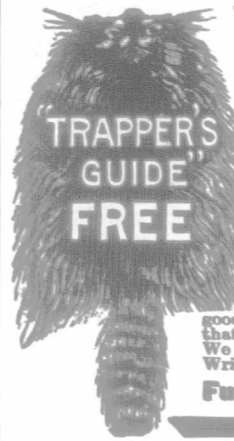
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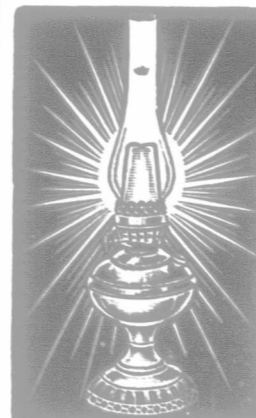
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FARMER'S ADVOCATE

AND HOME JOURNAL

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Editorial

Our Fat Stock Shows

It is three months yet before the final call is sounded for the fat-stock shows at Brandon, Regina and Calgary, but quite early enough for intending exhibitors to get started in the fitting and training of their exhibits for the ring. The fitting, in fact, already should be under way. Livestock men interested in the progress of the industry in Western Canada, of which progress our winter shows are a fair index, should direct their efforts to the getting out of larger cattle, sheep and swine entries. In horses and in poultry one can generally reckon on finding shows that have overflown any accommodation yet provided for them, but in the other livestock branches exhibits could be largely increased to the betterment of the shows and to the advantage of those engaged in these lines of animal husbandry. Our fat-stock shows need more fat cattle, fat sheep and bacon hogs, as many horses and hens as they have now, but more of the others, particularly heavier fat classes.

Lacombe Farm Report

The farmers of Western Canada, and especially those of Alberta and Saskatchewan, are much interested in the work carried on at the Lacombe Experimental Farm. G. H. Hutton, the superintendent of the farm, is an enthusiastic agriculturist, and the work accomplished by him is of great import; thus any report he gives out usually is received with telling effect. In this issue will be found a complete summary of many of the experiments conducted in the fields and the results obtained at the farm during the season of 1910.

Aside from the data given as to the yield of the various varieties of grain and the dates of seeding, much information is given as to the amount of seed to sow per acre and also the results obtained from frequent cultivation and the use of the soil packer. Such informa-

tion is timely, considering that Western Canada is subject to seasons of drouth and any system of procedure that aids in the conservation of moisture and consequently larger yields is of valued consequence. The Lacombe Experimental Farm, judging from this and preceding reports, is performing a valuable function in promoting Western agriculture.

Pioneer Series

With this issue we start what is intended to be one of the most interesting and most instructive features of THE FARMER'S ADVOCATE—a pioneer series. Realizing that those who have had a wide range of experience are in best position to talk on farm topics, as they pertain to the Canadian West, we have decided to endeavor to give a review of progress made by individuals who for twenty years or more have been in touch with farming operations on the prairies of Canada. A relation of personal experiences and advancement under difficulties is interesting; advice for future action from such source is helpful.

Every industrious man of integrity and sound principle, who for twenty years or over has been identified with agriculture in Canada west of the Great Lakes, is entitled to a place in this department. It matters not whether he had \$10,000 with which to make a start, or came with only enough to provide food and fodder for a month. Perhaps an honest start was made as hired man with a prosperous farmer, or with a more or less unscrupulous individual.

The series is opened by a review of what a present member of the provincial legislature of Manitoba has experienced. At one time he was a hard-working hired man. All cannot be members of parliament. However, there are hundreds scattered over the prairies whose experiences will be of interest and benefit to readers of THE FARMER'S ADVOCATE.

If you have a friend or a neighbor whom you know would do credit to such a department let us have his name and address, as well as some details of his career. We will write him for his photograph and further particulars, or if at all possible we will pay him a visit. Our object is to cover every district in the West gradually. Half a hundred can be handled in a year.

Common Interests in Livestock

A combination of circumstances entailing more or less friction seems to have led to some dissatisfaction among stockmen of Alberta, with the result that an attempt has been made to organize apart from the livestock associations with headquarters at Calgary. We will not argue the point of provocation to form a new association.

That there should be but one set of livestock associations in Alberta, known and recognized as being of provincial character, should be favored by all well thinking livestock men.

If the old associations at Calgary have not been fulfilling the function satisfactorily to all concerned it is not likely that a remedy will be found in the formation of other associations in another part of the province and in opposition to the one in existence. Disunion and rivalry and retarded progress are bound to follow. What the livestock interests of Alberta need is one united set of livestock associations, supported by the most capable men in the livestock business in the province. If it is feasible to have two associations why not have an organization in every district that desires one? The more sets of associations the more local in character they become. What is wanted is a united front and provincial associations that will command support from the government to carry on the good work. The government at Edmonton undoubtedly has recognized this fact and are to be commended in giving this year's grant to the old established Alberta Livestock Associations. The common interests of the livestock men of Alberta should not allow for any lack of unity.

The Alfalfa Crop

Many have concluded that it is wise to consider alfalfa as one of the crops that demand careful attention next year. However, even more farmers of the Canadian West can profit by adopting this legume and giving it liberal space on their prairie farms. Too many are more or less skeptical about new crop introductions. They prefer to allow a neighbor or a government experiment station to make a start.

In the case of alfalfa the man who delays until some other person has done the pioneering is wasting just so many years. There is big money in wheat, and perhaps just as much profit in oat-growing; but for the man who has even a few head of live stock, neither of these standard cereal crops will give the return that is easily possible from alfalfa. It is an ideal feeding crop, and, like other legumes such as clovers and peas, materially benefits the soil on which it is grown.

During recent years considerable attention has been given to alfalfa growing in the columns of THE FARMER'S ADVOCATE. We will continue to devote space to it until ninety per cent. of the prairie farmers know its worth, and show that they know it by growing it on their farms.

Men who have had experience in this country do not hesitate to speak with no uncertain sound in favor of it. Frequently extracts from books and bulletins give interesting particulars. The superintendents of sub-experiment stations in North Dakota are now contributing valuable information as to suitable soil condition and methods that are advisable. Farmers of this part will do well to study all that appears in our columns from time to time, and make use of what applies to local conditions.

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What They Represent

Agriculture is not alone in its demands for substantial tariff reduction, nor is farm implements the only line of human necessity in which a reduced tariff would be marked in the interests of the Canadian people. We want cheaper houses, cheaper fuel and cheaper clothing, free lumber, free coal, free cloth. We want to raise our revenues not by taxing what the masses have to live on but what the spoilers for the past thirty years in Canada, under our protective tariff system, have been purloining from the public and the people. The farmers of the West went to Ottawa with the whole country from Lake Superior to the mountains behind them. They spoke primarily for what the farming community most urgently demands, but they spoke for the whole Canadian West. The West is for tariff reform and is determined to have it. The American West and Middle West obliterated party lines to force their opinions upon a government that believed it existed first of all to "protect" the giant infant industries of the New England states. The farmers of the Canadian West hide-bound to party are destined to make the same break and produce the same results. One of the most hopeful signs for the future of the "common" people is the fact that they have reached that stage where they dare to believe their interests are worth protecting, not by tariffs but from tariffs imposed for the benefit of the few.

MY OPINION ON SOME MATTERS NUMBER 26

CANADIAN FARMERS BID FAIR TO SHOW THAT THEY MUST BE CONSIDERED

A pilgrimage of organized farmers from all parts of Canada to the capital city, filled with a determination to show the Dominion government that certain matters must be attended to, is unique in Canadian history. To the present cabinet it will be strong evidence that the agricultural class will not be denied. When men will journey over half way across the American continent in order to prove that they really want the government to do things, there is little danger of them being turned down.

It was interesting and very encouraging to anyone interested in agriculture to note the enthusiasm that prevailed among the half thousand or more that went from Manitoba, Saskatchewan and Alberta. They were set on three things: Government ownership of terminal elevators, the construction of the Hudson Bay Railway and tariff revision. Surely no one will question the advisability of these requests being granted—at least no one who wishes to give the farmer a fair chance in the business world. The only question on which there is room for doubt, it seems to me, is the one relating to the Hudson Bay Railway. There always will be a difference of opinion on this until it is constructed and in operation for a number of years. I'll not say what I think about whether or not it should be government-owned and operated. I might suggest, however, that in the rush for government aid there is a danger of going too far. We need help from our governments, but we should consider what they best can afford to go after first.

Perhaps some of the farmers of the eastern provinces will object to government ownership of terminal elevators. However, if they listen to what delegates from the West can tell them, a few speeches will convince them that we are justified in asking for government ownership. It seems to me the move would be a boon to the grain grower on the prairies.

The tariff question being so complicated natur-

ally leads to difficulties in discussion and in the working out of details. There surely will be strong opposition to the army of farmers from the manufacturers. However, the tendency is to freer trade and tariff reform that at least will provide for the farmer getting his farm machinery and implements at lower rates. Along with such changes naturally will come revisions that will help the bulk of the common people.

It will be interesting further to watch developments. What effect will it have on Parliament Hill? Will those in power consider that the demands should be granted in all fairness and justice? Will they grant one or more of them just to catch votes when election day again comes round? Will they refuse to consider anything suggested? The future will show the results of the delegation's visit. Perhaps the organized farmers often will be heard to advantage.

'AIRCHIE McCCLURE.'

Day Labor Expensive System

EDITOR FARMER'S ADVOCATE:

It seems to me that THE FARMER'S ADVOCATE, in urging the necessity of good roads and in stimulating interest in maintaining the best possible roads, is doing a great deal more than we generally realize for the permanent prosperity of the Canadian West. Without good roads to our railways we are like Robinson Crusoe on his desert island, with his crops and his animals, but no way of getting them off. Everyone realizes the necessity of good roads. But population has scattered over the West so rapidly that it has seemed impossible to supply roads adequate to the needs of the settlers. The whole West is handicapped for lack of good roads, all the way from Eastern Manitoba to Western Alberta. We lose money every year on account of bad roads. Our wagons and buggies are knocked to pieces over them; our bones are jolted till it is a wonder our joints don't part; our horses are fretted by the ever-swinging tongue as the wagon jolts over the little unevennesses, and they have the life drawn out of them climbing steep grades, and getting through the soft places. How many a man is ham-strung in his farm work by the loss of a good team, and how often the loss of the team can be directly laid at the door of the hard draws over bad roads. We can't shut our eyes to the conditions. We must face them and overcome them.

I propose to deal with the present conditions in the supply of this fundamental need of the farmer—good roads—pointing out where the present system of making roads is entirely inadequate. In an article later I intend dealing with the advantages and disadvantages of having road work done on a larger scale, and by contract. If it is fair to judge systems by results, it seems clear that in all three prairie provinces there is need for a decided advance if there are to be adequate transportation arteries for our produce to flow at the least possible cost from the farm to the railways.

First, then, let us look at the present methods of meeting the need for roads.

In Saskatchewan, the central authority has been grappling with its big task of building the thousands of miles of road urgently needed to supply the demands of settlement. In the first year or two after autonomy foremen were engaged by the department of public works, at a fair salary, to oversee the most difficult road construction, under the direction of an able civil engineer. Where the roads were most urgently needed thither a foreman was sent, with a small permanent gang of men and teams to form the nucleus of a larger gang formed by hiring farmers' teams near the place of work, whenever these were available. Much good road construction was done in this way, but the expensive principle of day labor was applied throughout. The old man was right when he said that when he heard a bucksaw he could always tell whether the man using it was working by the day or by the job. The department of public works for Saskatchewan adopted this system only temporarily and, I believe, has largely abandoned

it, having adopted the plan of making appropriations for road work to rural municipalities, the money so allotted being spent by the rural municipalities under the direction of a public works inspector. But the principle of day labor is still adhered to largely throughout the West, if not altogether, and the day labor of farmers is relied on. In my judgment this is the weakness of the present system of building our roads, for day labor is recognized the world over as being the most expensive method of getting any work done. More than that, it is at a loss that most farmers take their men and teams from their fields to do road work. Further, at the present rate of construction by the day labor system Western roads over wide areas throughout the three prairie provinces will not be built within the present generation, to say nothing of the exacting work of keeping them in repair.

We are like a man running to catch a railway train that has got nicely started, and is increasing speed rapidly, for every step the man runs the train travels five times the distance. The only way for the man to catch the train is to take a special. It is with this special that I propose to deal in a following paper.

D. R.

Western Wheat Growing

OUR ENGLISH CORRESPONDENCE

The London "World's Work" has had a commissioner in Western Canada during the past summer, and he has written a series of articles on Western development which have been very readable and interesting. In the November issue there is a glowing account of wheat farming, which is in many respects admirable. However, he gives but one side of the picture, and that the bright one. A Britisher reading the article would conclude that this was a typical picture—knowing the general reliability of the World's Work—and imagine that all the farmers of the West were rapidly turning the golden grain into golden sovereigns, and that fortunes came quite easily to wheat growers.

Those on the spot well know that taking one year with another over, say, a decade, that wheat growing pays fairly well for a time, and in doing so a great deal of hard work has to be performed for a living profit. The commissioner says nothing of what has followed continuous grain growing in the older sections of the West; how the depletion of fertility has been followed by an ever-increasing area of weed-choked lands which necessitate a long, stern fight to overcome—not to speak of profit.

Mention is made in the article of yields as high as 60 bushels of wheat to the acre, and while this is said to be exceptional, the writer claims that "to take it all round an average crop will run into 35 bushels of wheat." With all due respect one must protest against 35 bushels being adduced as an average crop of wheat in the West. Good as Western Canadian land is on the whole, the government crop reports give the average of wheat in the West at about 20 bushels to the acre. This is excellent, compared to the average of 13 bushels in the United States, but is a far different figure to a claimed average of 35 bushels. Why the carefully rotated wheat lands of Great Britain do not reach this high figure, and here we only take one crop in four of wheat!

The truth is good enough for Canada, and no good purpose is served by sensational figures, which can easily be proved to be exaggerated. The commissioner confutes his own figures by stating that in 1909 (and we know that the Western wheat crop of that year was exceptionally good) "4,085,000 acres produced 90,215,000 bushels of wheat." At his average of 35 bushels, this acreage ought to have produced over 140 million bushels, instead of 90 millions.

How many Western farmers who have farmed for twenty years in the West will endorse this statement: "That the men on the prairie, a thousand miles or so away (from Fort William) are piling up large fortunes?"

F. DEWHIRST.

Horse

A movement is being started by the horse breeders to have the stallion laws amended so as to provide that no fees for grade stallions can be legally collected.

* * *

Scottish Clydesdale exportations up to date have been in the neighborhood of 1500 head. The bulk of them came to the Dominion.

Enact Effective Stallion Laws and Enforce Them

EDITOR FARMER'S ADVOCATE:

Regulating the offering for service of stallions is a matter of some difficulty. Stallion laws do not prevent all unsound sires from being enrolled and licensed, or prohibit entirely the travelling of unregistered stallions, whether sound or not, but they go a long way towards doing this, providing they are good laws. The Horse Breeders' Act of Manitoba and the Horse Breeders' Ordinances of Saskatchewan and Alberta do not go far enough, and to that end they are ineffective in preventing what they aim to prevent and in encouraging what they were enacted to encourage, viz., the elimination of unregistered stallions and of unsound stallions, whether purebred or not, and the promotion of sound practices in horse breeding.

The first requisite in a stallion law is that it shall make a definite distinction between stallions that are sound and unsound, and between stallions that are purebred and those that are of no particular breeding. The laws of the three provinces named aim to do this, but because of certain conditions that are a part of them what they accomplish falls short of what is required. Mare owners have no guarantee other than the word of the owner that the stallion used by them is free from the diseases and hereditary unsoundness named as disqualifying by the acts. The acts have not materially reduced the number of grade stallions. Altogether too large a proportion of the stallions travelling in Manitoba, Saskatchewan and Alberta are of impure breeding. Manitoba in respect to the proportion of grades to purebreds, seems to have fared rather better than the other two, but none of them have a very enviable record. No stallion law offers efficient protection to horse breeders that does not guarantee, in so far as inspection by competent men can guarantee, the soundness of the stallions licensed under it as sound, and that does not effectively check and ultimately put an end to the travelling of grade stallions. The greatest check to progress in horse breeding is the too general use of stallions of no particular breeding. A grade stallion bred to a grade mare can produce nothing but a mongrel foal. The foal stands to be a worse specimen than either of his parents. Such breeding is exactly the reverse of grading, and in the general interests of horse breeding needs most to be suppressed. Stallion laws should prevent unsound stallions from being enrolled as sound, and should so definitely designate impurely-bred stallions that mare owners would have no excuse for using such sires, save the excuse of their own careless methods and unwise determination to do so.

Veterinary inspection is the first step towards ensuring that stallions registered as sound by our provincial departments of agriculture are actually free from the diseases and unsoundness

that disqualify them from license under the terms of the acts. Few stallion owners are competent to judge whether or not their stallions are effected by one or more of the disqualifying unsoundnesses named by our Horse Breeders' Acts and Ordinances; and, not knowing, they err on the safe side by making the usual declaration that to the best of their knowledge the animal in question is sound. In fact, they would not be considering their interests if they didn't. Not only should stallions be examined by competent men, but they should be examined each year before license is granted them. A stallion may be sound this year and be effected with the most serious unsoundness next, and the only way in which the certificate of the provincial department of agriculture can be made to correctly describe the condition of the animal it is licensed for is to make it issuable annually as at present, but only under the condition that the animal's soundness is attested for by a qualified veterinarian, who in no way, shape or form is interested in the stallion examined, or under any obligations to its owner. No veterinary surgeon should be required to pass judgment upon the stallions in his own locality, on the owners of which he is depending in some measure for his living. Veterinary inspectors should be appointed by the province and employed outside their own districts.



Grays are Found in Every Locality

There are practical difficulties, of course, in the way of carrying out a stallion licensing law along the line above suggested. Veterinary surgeons in this country are none too plentiful, and the work of inspection would require to be done at a season that is not exactly the slackest in the veterinarian's year; but the system has been adopted in states to the south, where conditions as regards the area to be covered and the number of veterinarians available is very similar to our own, and it seems to be working out satisfactorily. By requiring the stallions in each district to be assembled at a central point each spring before the breeding season opens, where the horses of an entire district could be looked over in one day, the work of inspection could be greatly facilitated and one of the most serious objections to the proposal overcome.

Inspection and certification of this kind would cost more than no inspection and haphazard licensing does under the present. But it would be worth it. Owners of sound, purebred sires would not object seriously to paying a higher registration fee than they do under the prevailing acts, providing the certificate issued under the proposed system meant something to them, and gave them the advantage it should give in competing for business. It would not be the owners of the kind of stallions that we need more of, who would kick against a reasonable charge for expert inspection. Owners of the other kind might raise some objection, but that wouldn't make much difference. By all means let us have a clearer notion of what an efficient stallion licensing law should be, enact one and enforce it. Not because it would give a few veterinarians

government jobs, but because such legislation is in the interests of the horse-breeding industry. Man. D. V. M.

How to Take a Horse's Pulse

The pulse is due to an automatic expansion and relaxation in the wall of an elastic tube, the artery, caused by the jets of blood pumped into those vessels by means of a force pump, the heart. Each stroke of the heart is equal to one pulsation, viz., a rising and falling of the arterial wall. In health, the average number of pulse beats per minute is about 36 to 40. The larger the horse the slower or fewer the number of beats per minute.

A very good place to take the pulse is at the underside of the jaw. By rolling the tips of the fingers about a little, they can be brought on to the blood vessel. Don't press too firmly, nor yet too lightly. The animal must be kept still and quiet. In point of importance the "character" of the pulse must be the best guide. That is to say, the blood vessel may impress us as feeling hard, soft, full, quick, small, wiry, regular or irregular.

These are niceties which require practice before they can be fully appreciated. In pleurisy, the pulse will be found beating about 80 times per minute (depending upon the stage of the disease), hard, wiry and irregular. In pulmonary apoplexy, it may be beating 120 times per minute. When properly taken, it forms a valuable means of assistance in ascertaining the nature and progress of disease.

* * *

The report of the Department of Agriculture of Manitoba for 1909 contains the following information regarding the stallions in use in the province: Total number, 724, made up of 324 Clydesdales, 194 Grades, 71 Percherons, 49 Standardbreds, 34 Shire, 23 Hackneys, 8 Suffolks, 7 Coach, 7 Thoroughbreds and 6 "drafts." Of the 530 purebred stallions enrolled 521, or 98.3 per cent., are certified as free from the diseases and unsoundnesses named as disqualifying under the terms of Manitoba Horse Breeders' Ordinance.

Stock

The Boar

The prizes in the contributors' competition this week are given in the order in which the letters appear. One of the serious difficulties in keeping a boar for public service is to collect the service fees. A farmer, who kept a boar to oblige his neighbors, once showed us his service book with entries to the number of several hundred, running back for ten years. He claimed that only about one in ten who used the boar made a practice of paying for the service. Boar money seems to be about the last thing the average man thinks of paying.

Thirty-Five Years' Experience With Boars

EDITOR FARMER'S ADVOCATE:

The plan laid down here is the one I have followed for thirty-five years, both in Ontario and Manitoba, and found it to work satisfactorily. First procure from a reliable dealer the best hog money will buy, and raise him yourself. Put him in a roomy enclosure, with pasture and shade in summer, and feed him all he will eat of shorts, milk and house scraps. It depends all on the first six or eight months how he will behave in after years. In this time he gets his growth and training. Have the enclosure made in such a way that it is impossible for him to get out. Then, in feeding, train him so that he never comes to the trough until he is told to. For training I used a piece of board made in the shape of a paddle, about two feet long, and never strike at him unless his head is towards you, and only then when you are sure of hitting him on the nose.

With this training, in after years, the boar will be handled with pleasure instead of danger.

If kept for public service have a good, warm pen; mine was 10 by 30 feet, divided into three compartments. The two end compartments opened into separate yards. The middle one with a wide door opened into the stable yard, where a team could back in for loading and unloading, with a movable shoot. The boar being in his own compartment the sow is placed in the middle pen, the door shut, and the hog is then let out with the sow through a sliding door. If she has to remain, she is put through a sliding door into the other end of pen. I never allow more than one service.

The boar is fed from a hopper on good, sound, clean, whole oats with a shallow trough underneath, so placed as to catch all waste. In this lower trough is placed charcoal and ashes, and he gets all he can drink three times a day, house slop, or water with a handful of any fine meal that is handy, and a raw cabbage when I think of it.

As to fees, first there is the keep of the visiting sows. This is supplied by the owners and left to their discretion. Some bring too much and some not enough, so this evens out all right. The feed is all dumped into a bin and fed in an open trough with water. For the service of boar I get a young pig at weaning time. If no pigs, no pay. If litter is lost, it is more loss to owner than me. And you get a pig next time sure. In the case of pedigreed sows being served I leave it to the owner of sow whether he pays \$5 for service with certificate of same, or the usual young pig. I take it for granted that every pig owner, whether he has one or one hundred, knows that they must sleep in warm, perfectly dry quarters with lots of bedding, that large or small litters can be controlled to a great extent by the sow being starved or well fed for the first week after service. If starved, she will pay you your deserts at farrowing time. If you do not believe this, try it.

Man.

W. M. CHAMPION.

Caring for the Boar

EDITOR FARMER'S ADVOCATE :

The boar is one of the easiest animals to care for, if ordinary conveniences are provided. If not, he can be a great nuisance. We keep ours in an enclosure of stout wire hog fencing, provided with a small house for shelter, adjoining the hog yards. These yards are all well sheltered by poplar bluffs, and, though not large enough for pasture, are sufficiently roomy to allow plenty of exercise.

During summer the boar is fed a little grain (ground) plenty of water, and plenty of green stuff thrown in from the garden, which is distant only a few yards through the bluff. In winter his rations are grain and slops, with one or two turnips now and then and an occasional green cut oatsheaf. It is surprising how pigs relish this last feed if they can get it. A heavy, shallow box should be provided and wood ashes, to which a little salt has been added, should be put into it occasionally. Pigs will lick at it a little every day, and it does them good. Plenty of bedding is necessary in the house during winter.

All boars, whether kept for public service or not, should be purebred. It doesn't pay to breed scrubs. Charges for services should be reasonable, but should be net cash. I reckon that one dollar at time of service is better than a dollar and a half some time next summer, or perhaps never.

Sask

JOHN HUBBARD.

Observations at the International

The fact that the International Livestock Exposition is the greatest show of its kind on this continent leads one to believe that there he will find the highest class of livestock exhibited in the best form possible, and criticized by the best livestock judges of the world. This should be true, and the lessons learned should be a splendid criterion for the livestock enthusiast to follow.

Allowing that the above is true of the International of 1910, the writer, a Canadian spectator, will endeavor in this article to emphasize a few

WHO'S WHO IN LIVE STOCK



R. W. CASWELL

Robert W. Caswell was born on a farm in Middlesex County, Ontario, about fifty years ago. His first serious business was washing bottles and beakers and doing other jobs incidental to learning the drug business. That was at Palmerston, Ont., where also he learned to handle the telegraph key. In April, 1882, aged 21 years, master of two professions and filled with the wanderlust that for ages has drawn men towards the setting sun, he struck for the Red River country and took a job with the C. P. R. as telegraph operator and agent. Two years later he quit railroading, and squatted on a homestead at the point where the C. N. R. now crosses the South Saskatchewan. The fall of 1887 found him again railroading, working as operator for the C. P. R. in Alberta. Then in 1893 he returned to where the railroad crosses the South Saskatchewan, Saskatoon, now called, entered a second homestead and settled down to make a home.

The choice of that second homestead was a fortunate one. It and a purchased quarter section form a part of the city of Saskatoon, the town that sprung into being a few years ago and seems to have got everything it ever asked for since. The Caswell half section went into it and most of it has sold since by the foot. It's a safe bet that the man lucky enough to own a large part of the ground floor of one of Saskatchewan's leading cities didn't part with his claim just to give the real estate agents something to subdivide. The inference is that he made something out of it.

Six years ago Mr. Caswell purchased the foundation of his present Shorthorn herd, buying the entire herd of J. S. Grant, whose herd had been established some ten years before, the start of it being two cows, purchased respectively from the late Hons. Thos. Greenway and John Dryden. This start was augmented by importations from Scotland and purchases in Ontario. The herd now numbers some seventy head and comprises some well known winners at Western and Eastern exhibitions.

Mr. Caswell has always aimed to be at the top in livestock and has made purchases and bred with an eye single to the best interests of the breed and the requirements of the country. In addition to Shorthorns he has a number of purebred Clydes and purposes extending operations in the breeding of both these favored kinds of Scotch livestock.

Mr. Caswell farms several hundred acres in the district about Saskatoon, making grain growing his chief interest and feed for the purebred herd and stud. He takes an optimistic outlook on the cattle industry and figures that the cattle breeders of the West are just beginning to come into their own. He is one of those who believes in government assistance to our livestock industry, believing that aid should be extended towards the building up of the chilled meat industry, and not in fighting for the removal of the embargo.

R. W. Caswell has been an alderman of Saskatoon, and a member of the city's school board. He has been president of the local branch of the Grain Growers' Association, director and vice-president of the Central Saskatchewan Agricultural Society, and at present is on the executive of the Livestock Breeders' Association of the province. At the municipal elections the other day he was elected again to the City Council of Saskatoon.

points which appeared to be the deciding point in the minds of the several judges when placing awards, and to show to what extent the ideal of the judges was carried out among the types which the several breeders were endeavoring to produce.

Speaking of horses in general, the massive, low-set, deep-bodied, well-muscled animal won. This was most noticeable among the Percherons, where eighty to one hundred animals appeared in one class. Here the judges discarded the small animals and those with either short rib or lack of muscular development without giving

them a chance to perform. The larger, better balanced animals were shown for action, and unless they proved themselves above the average were immediately sent to the stables.

Feet and legs now made the basis of a third selection, until, finally, the five or six top animals possessed the ideal type and conformation almost identical. The decision now was based on the strength of the body rather than the feet and legs as it is in Canada. The animal that possessed the wide, deep, chest, well sprung, long rib, strong coupling with reasonable quality of bone carried off the coveted ribbon.

Among the Clydesdales the same body conformation was sought for, and, providing quality was coupled with it, was given due consideration. The general impression, however, was that while in Canada we dwell so strongly on legs, pasterns and feet, there they lay more emphasis on the body conformation, which, with less quality, they claim, is more desirable in a draft horse than quality without the strong, deep chest and heavy body.

Among the fat cattle classes the competition was so keen that decisions had to be based on some very minor points, but in general the deciding question was that of "smoothness" and "firmness" of fleshing. This probably accounts for the success of the Aberdeen-Angus breed at Chicago, where year after year they win highest honors. Several of the animals carried an equally heavy covering of flesh, and were more desirable types, but the ability of the Angus to carry their flesh so evenly and firmly without signs of patchiness brought them to the top, but many believe that the good points of the breed were exaggerated by the judge when placing his awards in the championship classes.

Among the breeding classes of cattle the ideal of the exhibitor and judge appeared more in unison than in any other classes of stock. Here the greatest stress was laid on breed characteristics, and an animal was obliged to be not far from ideal to hold a place among the winners. The low-set, uniform, smoothly-fleshed, strong-constituted animal attracted the judge, while the masculine character in the males was very essential to become a prize winner.

The type of hog that attracts the American judge appeals most strangely to a Canadian. Here we want the long, trim, quality, bacon hog, and will permit of a rather lean, narrow body carried fairly high from the ground. Such a type is a decided loser in the United States, where they breed for the low-down, short, thick, chubby hog, too often lacking in quality. A striking feature, however, is the stress laid on smoothness. Some very typical hogs carrying an extra amount of flesh and fat were placed down on account of a few wrinkles on the sides or hams, or a lack of smoothness on the back, while others having this smoothness of fleshing, with perhaps a coarser bone, were awarded the ribbons. The few bacon hogs exhibited were, speaking generally, a poorer class as found at our best Canadian shows, but due to the unpopularity and lack of competition among these breeds, the condition is not surprising.

Lasting impressions are to be gained in the sheep barns and showing. Sheep appear to be one of the strongest branches of the American livestock industry, and the success attained by some breeders in the production of size and body conformation is nothing short of marvelous. The judge did not fail to state that almost every prize winner was well worthy of a blue ribbon, and the breeder who could excel in the fine points of sheep breeding was the one who carried off the coveted honors. Several breeders had so succeeded in breeding animals of ideal type and body conformation that the awards were placed practically on the condition and covering of the fleece on all parts of the body. Breed characteristics played their part, but this factor had been so carefully bred that the fleece question often appeared to be the one and only "loop hole" for the judge to hinge his decision upon.

In summing up, while we find the land of the stars and stripes a splendid school for knowledge along livestock lines, one comes home feeling

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that we also have something in Canada and the Canadian West, and also that with our present rapid development we will soon reach the stage of perfection, and, in all probability, surpass the present livestock status in the United States.

M.A.C.

A. J. McMILLAN.

Winter Work at Brandon Farm

Few farmers think of visiting any of the Dominion experimental farms during the fall or winter seasons. Perhaps many imagine there is little to see, but those who think thus are mistaken. While the principal function of those farms situated in Western Canada may be the experimental work carried on in the fields, plots and gardens, yet none the less important is the livestock and feeding experiments conducted in the stall or in the corral.

A visitor to the Brandon Experimental Farm at this season of the year is met with the complete arrangements that have been made to insure comfort and a subsistence for all stock throughout the winter months. James Murray, the superintendent of the farm, is a popular agriculturalist, and even a few minutes conversation with him in his office will convince you with the fact that quite as important as the field experiments are those found about the animal dormitories. While Western Canada is a wheat-producing country yet a certain and sure diversification is already pressing its importance upon the tillers of the soil; thus the need and value of practical information coming from demonstration work along diversified agricultural lines.

At the Brandon farm is found many interesting items that should appeal to every husbandman possessing ideas of progressiveness. Prominent among them is the experiment regarding steer feeding. Fourteen steers, averaging about 1,100 pounds each, are being stall-fed. These animals are two-year-olds that were purchased on the ranges. Eight others of similar weight are enclosed in a large corral and sheltered only from the blasts of winter by the shaggy coats with which nature has so beneficently provided them. The animals that run in the open are fed three pounds of meal each per day on a broad elevated table. Their roughage, such as straw and coarse hay, is provided them in loose form. This they leisurely eat, and from every appearance they are thriving well. It is the intention to steadily increase their concentrated feed supply, giving them more meal as the season advances.

The fourteen animals fed in the stall are provided for somewhat differently. They are given roots and silage. At the beginning their meal ration was a light one, being started off with but three pounds of meal per day. Part of the lot of the fourteen stall-fed steers were given 2 or 3 pounds of alfalfa to take the place of part of the meal ration. It will be interesting to note the final results of these steer-feeding experiments.

In the stables is found the herd of utility Short-horns and they are being bred with the purpose of establishing a dual-purpose herd. Some of these animals come from high record milking strains.

In the piggery several lots of hogs are seen. A number of crossbreds fed for pork purposes present a favorable appearance. Those, a cross of the Yorkshire and Berkshire breeds, were reported to show favorable gains and quick development on an average amount of feed.

A new line of livestock on the Brandon farm is a flock of sheep. A small bunch of grade range-bred ewes were purchased, similar to what an ordinary farmer would buy and keep on his farm. These were running outside in late November, although a large and spacious sheep barn is being built for their accommodation. These ewes are grade Oxfords and they are being bred to a purebred Oxford ram, with the object of improving the flock. The purpose is to demonstrate what improvement can be made on an ordinary flock by the careful selection of purebred sires. The sheep are fed only on clover hay at present, little grain being given them. Some sixty acres of the farm is being set apart for the keep of the sheep. Much of this land is

scrubby and rather rough, and it is thought best adapted for sheep rearing.

There are many notable features of the work on the Brandon farm that should commend itself to many of our Western farmers. The experiments carried on are of a very practical nature, and all interested agriculturists should carefully watch the tabulated results when published of the winter's work at the Brandon farm.

Farm

Topics for Discussion

In recognition of the fact that valuable hints always are obtained from men engaged in actual farm work THE FARMER'S ADVOCATE has adopted the "Topics for Discussion" column, in order that our readers may see an open channel through which they may inform their brother farmers as to practices that are worth adopting and warn them against methods that prove unprofitable. Not only do we wish our readers to discuss the topics announced for the various issues, but also we desire that they suggest practical subjects on which it would be well to have discussion.

This notice appears under the "Farm" department, but the questions dealt with cover all branches of the farming industry. Letters should not exceed 600 words and should reach this office 10 days previous to the date of issue. They are read carefully and a first prize of \$3.00 and a second prize of \$2.00 awarded each week. Other letters used will be paid for at regular rates to contributors.

December 28.—*Should the boy who proposes to be a farmer be trained as an up-to-date farmer capable of taking part in discussions at public meetings and holding positions in public life? What can be done to overcome the scarcity of labor on the farm that makes it necessary for him to work from early morning until late night when he is too tired to read or study, or do anything to remove the picture of hard work to get more land and make more money. Too many farm boys are "old men" at 18 or 20 years.*

January 4.—*What should be the attitude of the farmer toward farmers' organizations? To how many can he afford to lend his best services and how can he be of greatest service to his fellow farmers and the industry at large?*

January 11.—*What feed and exercise do you give the stallion in winter, and what preparations do you make for the breeding season? Kindly discuss this question fully, especially the relation between winter exercise and feed and his use in the breeding season.*

January 18.—*Why is it that so many young men whose fathers are interested in purebred livestock seem to have a wholesome distaste for the business, and will have nothing to do with it? What's the matter with livestock, or the boys we are raising, that it is hard to keep stock and boys on the same farm?*

Farmers' Blacksmith Shop

EDITOR FARMER'S ADVOCATE:

It is practically impossible to blacksmith successfully in the open, so I built a 12 x 12 shop with 6 foot walls and pitch roof. The smoke finds its way out through the roof pipe easier with this kind of roof than with a car roof, and prevents the objectionable feeling of being nearly choked. The walls are shiplap, the roof one ply of half-inch boards laid crossways with a two-inch lap. This is a good, cheap roof. There's a small window in the north. In the summer I use a storm window in front of the bench, which gives in enough lights on the east side. Then the door is south. The cost of the building was about \$20.

The tools comprise forge, anvil, vise, drill, stock and dies, hammers, tongs, chisels, etc. A useful outfit can be bought in Winnipeg for about \$40. In buying a forge it is necessary to have a wide pan, which is a saving in coal, and is more convenient to work on. My forge is homemade and works on the fan principle. It cost me \$1.50 to make, and is second to none. The stocks and dies are of good service for re-

threading old bolts or making new ones. During seeding or cutting time something small breaks on the seeder or binder. With the tools a person can nearly always fix the breakdown at home, thus saving a trip to town, the cost of repairing, and is often able to get back on the land in less time.

Sharpening plow shares is the item which is most important. Consider the time wasted by hundreds taking plowshares to town, when with very little practice the work can be done at home. There are always old shares lying around to practice on. When tempering shares, it is advisable not to harden them too much, especially if in stony land, as they chip so easily. Beginners should temper a little on the soft side. All I know of this work I learned by experience, but am now able to sharpen and point shares and also weld.

I used to pay 70 cents for sharpening a pair of 12 inch shares, and 75 cents each for pointing. As I use a sharp pair every day, it would keep a horse running to town often. In place of this I can keep that horse on the plow, as I always sharpen up when the team is feeding.

The tools come in handy for repairs of every implement on the farm. So, an outfit earns its price and compensates the owner the first summer. I reckon a person can save from \$50 to \$75 in plow shares and sundry work, and then be ahead in his work, having lost no time running for repairs, which are often not ready.

When the thresher is around, the shop saves part of the board bill, because when a small part breaks the men are generally able to fix it up on the farm, and get to work again sooner.

All the tools mentioned are of great service, but in any case every farmer ought to have a forge and anvil. The buggy often needs a little smith work. A stitch in time would often save a lot of wear, but as town prices for repairing are so high, the farmers' buggy is generally left until it is completely spoiled. Bolts and clamps of any size can be made at home for hay racks, floats, stone boats, etc. The amount of coal I've used has cost me only \$1.00 for the year.

J. N. WALTERS.

Cost of Experimental Farms

From the report of the auditor-general for Canada for the fiscal year, ending March 31, 1910, the following data is taken relative to the cost for maintenance and operation of Canada's nine experimental farms. Included in the charges is an item of \$7,184.05 for new farms to be established, which is not chargeable to the farms in operation:

Farm.	Expenditure.
Central Experimental Farm, Ottawa.	\$53,785.63
Branch Experimental Farm, Nappan, Nova Scotia.	8,572.98
Branch Experimental Farm, Brandon, Manitoba.	12,473.73
Branch Experimental Farm, Indian Head, Sask.	10,314.79
Branch Experimental Farm, Agassiz, British Columbia.	6,917.17
Branch Experimental Farm, Lacombe, Alta.	6,993.72
Branch Experimental Farm, Lethbridge, Alta.	9,821.76
Branch Experimental Farm, Rosthern, Sask.	14,934.57
Branch Experimental Farm, Charlottetown, P. E. I.	10,552.85
New farms.	7,184.05
Detailed in 1908-9.	8,671.56

Total. \$150,222.81

The new branch stations are located at the following points: Fort Vermilion, Alta.; Kamloops, B. C.; Abitibi, Ont., and Scott, Sask.

* * *

One of the best sales of Hereford cattle of late years was that of the well known herd of Jas. Edwards, Leominster, Eng. The two-year-old bull, Broadwood Gambler, was sold for 230 gs., the purchaser being the King, for the Windsor herd. His Majesty also bought the heifer, Broadwood Gem, for 130 gs. Seventy-four head averaged £51.

Good Work on Lacombe Experimental Farm

Supt. G. H. Hutton sends the following synopsis of experimental work carried on at Lacombe during the year:

While the season of 1910 has been dry the yields secured at Lacombe do not indicate that the crops felt the lack of rain to any great degree. The soil of Central Alberta demonstrated its moisture-holding power this year, and when given a fair chance has produced a fair return even under adverse conditions. From April 1st to August 15th this year we had 8.34 inches, which, while considerably more than some sections enjoyed, is away below the average rainfall for this period.

All through the district good yields are recorded, particularly on breaking of 1909 or summer-fallow of that year, which were handled with a view of conserving soil moisture. The soil packer on fall plowing proved its value in many instances, in that moisture was available for prompt germination and subsequent growth, while that on similar soil not so handled was lost through evaporation.

EXPERIMENTS WITH SPRING WHEAT

All yields of spring wheat are high, though some varieties (notably Marquis and Chelsea) do not occupy as high a position in the list as usual. We consider Marquis, however, to be one of the best varieties for this soil, having regard to quality of flour produced coupled with early maturity. Following is the standing of the different varieties tested:

	Days maturing	Yield in 1910		
		bus.	lbs.	oz.
1. Huron	156	69	35	10
2. Pringle's Champlain	156	65	54	6
3. Preston	156	65	50	10
4. Riga	151	65	18	12
5. Red Fife	160	64	..	..
6. White Fife	165	63	56	4
7. Stanley	156	63	13	2
8. Bishop	157	60	50	10
9. Marquis	156	59	28	2
10. Chelsea	156	53	5	10
x11. Century	141	47	45	..
x12. "Regenerated" Red Fife	139	47	30	..

"x"—Sown on April 21st.

QUANTITIES OF SEED PER ACRE

The test of different quantities of seed has resulted in favor of what might be considered heavy seeding with wheat, oats and barley. This is in opposition to the theories of certain writers who have been dealing with dry land conditions in the western states, but these figures are supported in the main by the results of previous years, and in consequence we advise to test out the results of thin and heavy seeding before going to the extreme in reducing the quantity of seed per acre. I would draw attention to the effect of increasing the quantity of seed per acre upon the length of time required to mature the crop as well as to the increased yield from the heavier sowing.

	Days maturing	Weight of straw	Yield in 1910		
			bus.	lbs.	oz.
Marquis, ¾ bus. ..	156	5670	45	30	..
Marquis, 1¼ bus. ..	148	5645	49	54	6
Marquis, 1½ bus. ..	149	5769	58	50	10
Marquis, 2¼ bus. ..	145	5872	62	7	8
Marquis, 2½ bus. ..	144	6018	63	41	4

Spring wheat was sown at different dates from March 31st to April 28th. The season was favorable for maturing late-sown grain, for the delayed rains helped the late-sown plots to fill out. The grain sown April 14th was ready for harvesting six days earlier than that sown April 28th, and while the last sown gave a yield of 63 bushels, 41 pounds per acre being ten bushels more than that sown two weeks before, yet I consider the early maturity quite as desirable as a heavy yield. It is not likely that this order would hold on average seasons, for as a rule the first sowings of wheat not only mature first but give the largest yield.

COMMERCIAL FERTILIZERS FOR SPRING WHEAT

With a view to determining the value of commercial fertilizers when applied to grain crops on old land which has been growing grain for about fifteen years, experiments have been conducted covering this point for the last two years. The results given below, while indicating that different combinations of fertilizers will increase the yield, the increase is not sufficient to pay for the cost of fertilizer the first year except in one instance. Following is the result:

Name of fertilizer	Amt. applied per acre	Cost of fertilizer	Yield per acre		Value of crop minus cost of fertilizer when valued at 85c per bus.
			bus.	lbs.	
Check plot	—	—	49	5	\$41.72
Acid phosphate ..	300	\$6.18	61	41	37.29
Muriate of Potash	120	4.33	..	..	..
Nitrate of Soda ..	120	4.63	..	..	..
Nitrate of Soda ..	120	4.63	61	46	41.69
Acid phosphate ..	300	6.18	..	..	..
Acid phosphate ..	300	6.18	61	16	41.36
Muriate of Potash	120	4.33	..	..	..
Muriate of Potash	120	4.33	60	22	42.35
Nitrate of Soda ..	120	4.63	..	..	..

EXPERIMENTS WITH WINTER WHEAT

The last two springs the snow has gone quite early and the nights following have been cold and the days warm. We have had, therefore, quite a period of alternate thawing and freezing. Under these conditions winter wheat has always come through much better on breaking or on land plowed out of timothy than on summerfallow. Our varieties for this year were all sown on summerfallow and were not considered worth while leaving this spring. Experiments in quantities of seed and dates of sowing were sown on land plowed out of timothy sod after the hay was cut in 1909. The results in the quantities of seed test bear out the work of previous years, except that formerly there has been a slight falling off in yield past the one bushel and a half seed per acre. This year the Alberta Red gave the largest yield when sown at the rate of two bushels per acre, while Dawson's Golden Chaff reached its maximum at one and one-quarter bushels of seed per acre. The increase from one-quarter of a bushel to two bushels of seed reduced the length of time required to mature by ten days. The following tables show the results with the two varieties, Alberta Red and Dawson's Golden Chaff:

Quantities of seed	Dawson's Golden Chaff yield per acre			Alberta Red yield per acre		
	bus.	lbs.	oz.	bus.	lbs.	oz.
¼ Bushel	0	..	..	15	5	10
½ Bushel	8	5	10	27	33	12
¾ Bushel	24	..	..	29	26	4
1 Bushel	31	30	..	45	41	4
1¼ Bushel	49	35	10	49	18	12
1½ Bushel	43	43	2	50	48	12
1¾ Bushel	28	43	2	52	30	..
2 Bushel	25	15	..	53	11	4

As in previous years winter wheat sown about the middle of August has given larger yields than when sown either earlier or later. The first sowing was made on August 2nd, 1909, and sowings were made of both Dawson's Golden Chaff and Alberta Red one week apart up to September 12th. The highest yield of Alberta Red was 45 bushels, 41 pounds per acre sown on August 16th. The sowings of Dawson's Golden Chaff made August 9th and 16th tied with a yield of 31 bushels, 30 pounds.

EXPERIMENTS WITH OATS

Among the varieties of oats tested Banner, though not heading the list, is one of our best varieties. Abundance also stands well up. The past season did not appear to be as favorable for oats as for wheat. Twenty-six varieties were tested. The following table shows the standing of the best ten:

	Days maturing	Yield per acre	
		bus.	lbs.
1. White Giant	140	88	8
2. Tartar King	133	82	2
3. Swedish Select	133	80	10
4. Abundance	140	79	14
5. Banner	140	78	18
6. Danish Island	140	77	22
7. Lincoln	140	77	22
8. Thousand Dollar ..	133	75	30
9. "Regenerated" Banner	140	75	30
10. Improved American.	133	73	8

QUANTITIES OF SEED

With different quantities of seed per acre a range from one bushel to four and one-half decreased the number of days required to mature by ten and increased the yield by twenty-nine bushels per acre. From two and one-half to three and one-half bushels of seed per acre usually gives the largest yields here.

	Days maturing	Weight of straw	Yield in 1910	
			bus.	lbs.
Banner, 1 bus.	141	4680	91	26
Banner, 1½ bus.	140	5595	100	5
Banner, 2 bus.	139	5550	99	24
Banner, 2½ bus.	138	6135	137	7
Banner, 3 bus.	133	4410	110	10
Banner, 3½ bus.	131	5010	129	24
Banner, 4 bus.	131	4860	134	4
Banner, 4½ bus.	131	4980	128	28

DATES OF SOWING

Banner oats were sown one week apart from March 31st to May 12th. The earliest sown oats required one hundred and fifty-one days to mature, while the last sown matured in one hundred and eighteen days. The heaviest yield was secured from the plot sown April 28th, which made 157 bushels 2 lbs. per acre. The question may arise as to the reason the oats on these plots yielded at a higher rate than the oats sown in the test of varieties. The explanation is that the land on which these tests were conducted was plowed earlier in the season of 1909, and being well-worked down had a chance to store more moisture than the later plowed land on which the variety tests of oats were carried on.

DATES OF SEEDING OATS

	Days maturing	Yield	
		bus.	lbs.
Banner, March 31st	151	125	10
Banner, April 7th	144	116	16
Banner, April 14th	132	122	22
Banner, April 21st	123	135	..
Banner, April 28th	123	157	2
Banner, May 5th	118	145	5
Banner, May 12th	118	141	6

EXPERIMENTS WITH BARLEY

Thirteen varieties of six-rowed barley and ten varieties of two-rowed were tested at Lacombe in 1910. The barley, Guy Mayle received from Montana, stands well, as does also the O. A. C. No. 21. Mensury is this year eleventh in the list of six-rowed varieties. The largest yield of six-rowed varieties is 80 bushels per acre, being reached by Stella and Guy Mayle, while Nugent stood last with 53 bushels 36 lbs. per acre. Following is the standing of the six-rowed varieties:

	Days maturing	Yield in 1910	
		bus.	lbs.
1. Stella	123	80	..
2. Guy Mayle	114	80	..
3. Claude	128	79	3
4. O. A. C. No. 21	119	77	39
5. Odessa	119	77	24
6. Yale	124	77	24
7. Albert	128	73	6
8. Trooper	123	71	12
9. Hulless	128	67	24
10. Mensury	119	63	36
11. Mansfield	119	63	16
12. Oderbrucher	119	58	6
13. Nugent	119	53	36

(Continued on page 1866)

Aids to Agricultural Research

OUR ENGLISH CORRESPONDENCE

The meagreness of the help given by the British government to agricultural research work is strongly commented upon in a recent memorial to the Prime Minister by leading scientists and societies connected with agriculture.

The memorial strongly urges that systematic work should be done in livestock breeding, and towards more intensive methods in agriculture. The direct government grant for such investigation in the last few years has averaged only between £400 and £500 per annum, and this is a pitiful sum compared to the £750,000 of the United States; to Hungary's £55,000; to Denmark's £30,000; with other great countries in proportion.

The oversea Dominions are infinitely more liberal than the home government in providing for agricultural research. For instance, Canada provides £17,500 for experimental farms, and the Transvaal, £39,000.

It is but fair to state that the new British Development Board will be endowed with large funds, and that in future agricultural research in Britain will be endowed in better fashion than is the case now.

It is comforting to find that the memorial states that in spite of our deficiencies in investigation that the production per acre of crops and the better quality of our stock is higher than in any other country, with the possible exception of Belgian and the Netherlands. Whatever we may lack from a government standpoint the common sense of British farmers has brought agriculture to a high average standing.

CROPS AND LIVESTOCK

The autumn has been admirable from a weather standpoint, and farm work of all descriptions is well advanced, in marked contrast to the condition of affairs a year ago. The wheat is nicely above ground, and looks strong and healthy. The catch crops are flourishing.

From a livestock point of view conditions are favorable, as hay and roots are plentiful, and the open weather has enabled a long use to be made of the pastures to the great saving of fodder. One disappointment is the lower average yield of wheat from threshing than expected. The grain has not turned out so heavily as its appearance promised. The average quality, however, is good. The government estimate of this year's wheat crop is 7,064,904 qrs., an average of 31.25 bushels per acre, which is about a half a bushel below the ten years' average, and excellent, considering the kind of a season.

Barley as well is slightly below the decade average, about a third of a bushel. The yield was 7,275,191 qrs., and the average 33.67 bushels an acre.

Oats have proved the cereal crop of the year. The yield was 15,484,241 qrs., 41 bushels to the acre and one bushel above the decade average.

It was along the east coast of Britain that the conditions proved less favorable for the three great cereal crops.

Potatoes have been lifted in good shape, and disease is less prevalent than expected, though severe in places. There exists a big demand from France for potatoes, and fortunes are being made by merchants, and farmers are getting better prices. In the Fen district one man bought 12,000 tons and cleared £10,000, and in many cases a profit of a pound a ton has been made in smaller transactions.

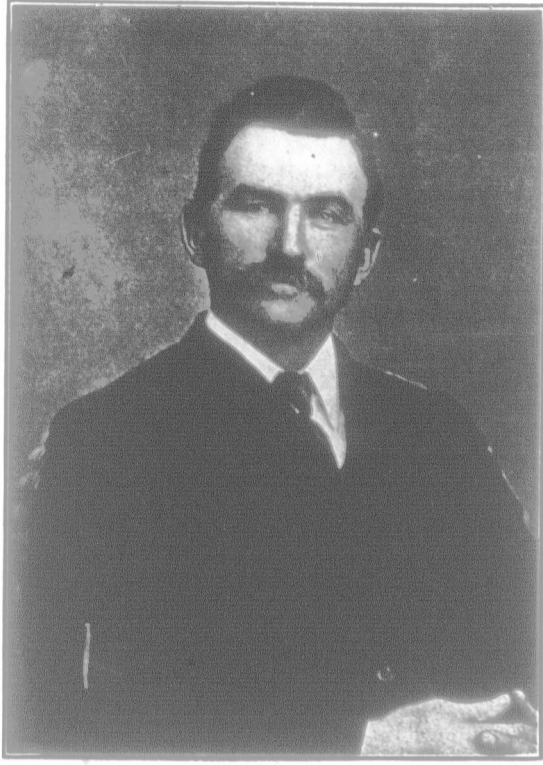
The government reports that store cattle and ewes are thriving everywhere, with disease occasionally noted.

GOOD MILK RECORDS

An instructive milk record is published each year of the Jersey and Shorthorn herds owned by Lord Rothschild, at Tring Park. In the year just ended, September 24th, the Jerseys seem to have been subject to many changes, only six continuing throughout the year. The highest individual Jersey yield was 7,821 lbs., and the average for eight which completed the lactation period at Tring, was 5,513½ lbs.

There were 62 Shorthorns in the herd for the entire year, and their average was the fine one of 5,871 lbs. The highest yield was 11,262 lbs.

PIONEER SERIES No. 1



SAMUEL HUGHES

Born on a farm in Durham county, Ontario, in the early seventies; came to the Canadian West in 1890, with little or no cash; now a prosperous farmer and a member of the provincial legislature of Manitoba. This, in brief, shows how Samuel Hughes, of Grand View, has prospered. Common public school education and a course in business college gave him some equipment for going about his work in a businesslike way. Being born and raised on a farm he naturally turned his attentions to agriculture. For several years after arriving on the prairies he was handicapped because of lack of money. The lot of the hired man was chosen in preference to homesteading. For seven years he experienced what only hired men are acquainted with. However, he was on the Carberry plains—that helped some to make his lot easy. Besides, he was rather fortunate in being employed with men, not slave-drivers. These years found his services in demand by farmers on these well known plains. Then Neepawa farmers knew him for three years, and for a like term he did his best to raise good crops in the Arden district.

In these years of apprenticeship he learned considerable about farming in the Canadian West. More than this he had saved some money, and feeling that he could farm about as well as those who had "bossed" him, a purchase was made at Grand View. At present Mr. Hughes farms a section of land with clay subsoil and 18 to 24 inches of black loam on top. It was pretty well treed with poplar and willow scrub. In addition to the main farm he has a quarter-section of land not yet under cultivation.

What this man has done others can do. How has he done it? By honest and intelligent effort. Experiences have told him that mixed farming is what is needed—even in this country noted as being primarily a grain producer. A crop rotation, comprising wheat, oats, barley, wheat and timothy is being worked out. The summerfallow is largely discarded, more attention being paid to timothy as the seasons pass. On summerfallowed land grains are sown to give pasture in late season. No doubt lessons on timothy growing instead of summerfallows were learned in the Neepawa district.

In livestock, special attention is paid to horses and hogs. He has nine purebred Clydesdales. A start was made four years ago with four mares. On these he used the best Clydesdale stallion within reach. Now he has six brood mares, three of which are purebred. No difficulty has been experienced in getting the mares to breed, and he seldom loses a foal. In 1909 and 1910, five foals were raised, and in 1908, six. Some have been disposed of when weaned at \$200. However, he does not advise selling at this age, unless financial circumstances or lack of food supply compel it. Mixed feeds are used, and not too much grain.

Hog-raising is relied upon as a very profitable feature of farming. Speaking about hogs Mr. Hughes says there is too great a tendency for men to go out of this line when prices fall a little. They should stay with it. His experience has shown that on the average a farmer has good profit at 5½ or 6 cents a pound at point of shipment. The chief trouble is in getting satisfactory help—and it requires careful hands to look after pigs and get best results.

In recent years Mr. Hughes has been placed in public offices. In 1903 he was councillor of Langford Municipality. Grand View elected him to the council board in 1906. He has served two terms as reeve of the same municipality. East summer when the Conservatives of Gilbert Plains wanted a man to carry their standards in the provincial contest they selected Hughes—and he won. When the house opens again, agriculturists can depend on him for support of measures that are in the interests of this great industry.

[NOTE.—Next week's issue will contain a review of experiences of A. B. Bompas, of Wolsely, Sask.]

given by the 14-year-old cow, "Fuebelow Countess 2nd." She has averaged 9,104½ lbs. for six years.

The famous cow, "Dorothy," has produced 11,130 lbs. this year, and has a six-year average of 9,275 and five-sevenths lbs. As she was dry for 106 days this year her daily average of 43.13 lbs. of milk is the best in the herd. It is to be regretted that no butterfat figures are given, as they would prove most interesting.

Very great interest has been caused to farmers and fruit growers in recent years by experimental work on the influence of electricity on plant growth, and probably the most eminent scientist engaged in the work has been Sir Oliver Lodge, the principal of Birmingham University. Sir Oliver has just given his first public discourse on the investigations that he has been conducting for some years on various soil problems. He states that of the problems that are receiving, and yet await intelligence, the absorption of nitrogenous plant life is one of the chiefest. But there are other factors that are coming to the front, of probably equal importance in regard to the reclamation of barren soils; the influence of strong sunshine and of heat upon soil in preparing it for seed; and the curious effect not only of burning but of poisoning or disinfecting the soil, and thereby increasing its fertility. The last process destroys opponents and devourers of healthful bacteria so that these bacteria multiply at a prodigious rate.

In addition to all this is the problem of the electrification of the air above the growing plant. Such electrification always exists, and the pointed character of leaves show that it is made use of. By artificial means the electricity can be greatly intensified, and for years investigations have been made by various scientists. Prof. Lodge has conducted experiments on a large scale near Evesham for the last five years. Wheat has shown an increase of as much as 30 per cent. when electrical stimulus is applied. A practical apparatus has been devised, which is inexpensive. A two-horse power engine is sufficient for a 20-acre plot. Wires are stretched at a height of several feet above the ground, on which crops are grown, and these are connected with a machine producing a suitable continuous current of positive electricity.

It has been found that sugar beet seems to contain more sugar under electrical treatment, strawberries mature earlier and are sweeter. The tops of the plants rather than the roots appear to be beneficially affected, although leguminous plants are an exception. Similar apparatus has been installed in various parts of the world, some for commercial use, and the new process looks like being a great aid to agriculture and horticulture.

OVERSEAS TRADE INCREASE

British overseas trade established a new record for October, of commercial progress. The imports and exports reached the great total of £103,700,000. No other nation has a foreign trade approaching ours in magnitude. The imports reached £58,000,000, the greater part of which was made up of food and raw materials. Exports reached £45,700,000, principally manufactured goods.

It is of interest to note the direction of the British export trade. For the first nine months of 1910, exports to foreign countries were of the value of £210,842,000, and to British possessions the total was £107,735,000. While colonial trade is very satisfactory the bulk of exports still go to foreign countries. In the last ten years our population has increased by about 10 per cent., and external trade by 30 per cent. These relative figures are hardly a sign of decadence in British enterprise, and are a speaking tribute to the buoyancy of an untrammelled commerce.

* * *

The Liverpool show of the Royal Agricultural Society resulted in a profit of £5,400, according to the figures presented at a council meeting of the society. Bristol is to have the show of 1912. At the meeting a resolution was passed after

discussion on anthrax and foot and mouth disease, urging the importance of disinfecting all ships and wagons that have carried foreign skins before using them to carry feedstuffs, and also on the desirability of preventing the carrying of skins and feeding stuffs in the same ship.

F. DEWHIRST.

F. B. Carvel, M. P., is introducing a bill to amend the Inspection and Sale Act, making it compulsory where potatoes are sold by the barrel, the barrel shall contain one hundred and sixty pounds.

Dairy

Drying Off Cows

With some cows it is quite difficult to get them dry; yet it is quite necessary to do this, not only for the sake of the cow during the next lactation period, but also for the welfare of the future calf. Put the cow in a stall and feed her only hay for a time, until she is dry. Look after her udder during the time of drying off, and milk enough of the milk to keep the udder from becoming inflamed. Cows freshening in September and October should be dried off in July and August, when flies are bad, and at a time when the heaviest part of the farm work is to be done. As soon as the cow is entirely dry she may be fed a light grain ration, to get her in good condition, though not fat, for freshening.

It is poor economy to keep dry cows on a starvation ration, as they will not be in condition to do a good year's work when freshening. A cow of the dairy type will draw upon her body-fat for a time, to produce dairy products; but, as self-preservation is one of nature's first laws, she cannot be expected to continue to draw on her own supply unless she has a little extra laid up.

When Should You Milk?

Much has been said on the differences in milk tests and the causes of variation in the percentage of butterfat in milk from the same cow. The following article appeared in a recent issue of American Agriculturist:

Some farmers claim that the fat content of milk can be increased through methods of feeding, while others claim that it cannot. This is an old question, which has been much discussed. Whether we can increase the fat content by feeding or not, there are other causes of variations which are sometimes overlooked. Thus, changes in quality are often attributed to feeding when they are due to something else. The nervous system of a cow has much to do with the secretion of milk, both as regards quality and quantity.

The time between milking also affects the test. Milk a cow late in the evening and the udder will be unusually full and hard. Many of the glands will not be in a free and normal condition. The milk will be rather blue and low in fat content. During the night, however, the fat secreting cells have more freedom and the morning's milk will be richer. It is not uncommon for the difference to be as great as 2 per cent., and sometimes it is over 3 per cent. Upon the average farm, where the cows are now milked at 7 p. m. and 5 a. m., the morning's milk will be much richer.

In one case a farmer decided to test his cows. His good wife washed a few bottles for him. He numbered them and then, just as they began to milk, stripped a little into the bottles at the very start. In the morning, however, the milk was strangely blue. It tested 2 per cent. Why was it? Why will the fore milk sometimes test about 5 per cent., while the last strippings will sometimes test about 12 per cent.? In the first place in the udder there is a sort of milk reservoir. Frequently this is of such a size as to allow the cream to rise. Then, again, many of the fat globules are as large as the small milk ducts. They pass through these ducts with difficulty, and they never come out first. Thus, the fore

milk will naturally test higher than the strippings, and the very process of milking is a factor which controls the test. Allow a careless man to milk the old cow a week, and then watch for a change in the test. A change in test might be due to the hired man or the children who do the milking instead of the supposed pasture grass.

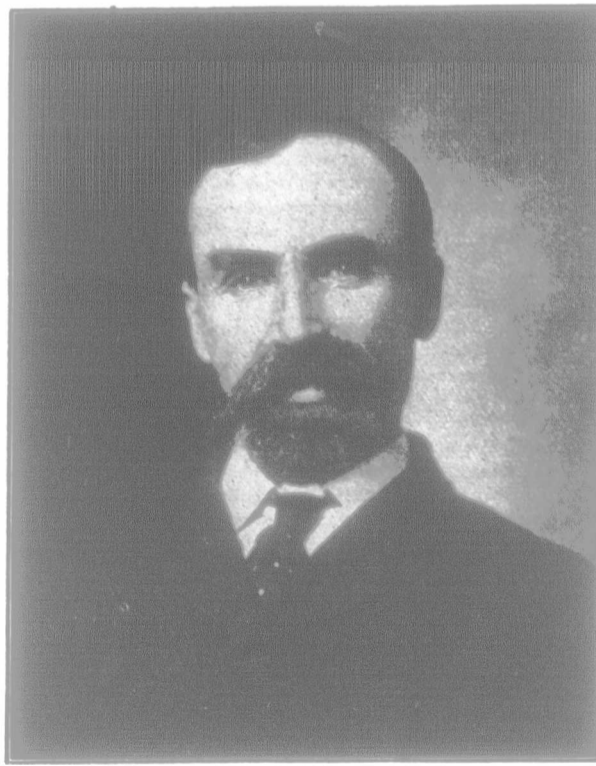
Again, the fair-haired and blue-eyed milkmaids of Denmark are teaching us that by manipulating the udder we can make the milk richer. Their system of manipulation is called the Hegelund method. The university of Wisconsin has found that by such a system the quantity of fat from a herd of cows was increased 9.2 per cent., while the quantity of milk was increased only 4.5 per cent.

Everyone admits that the test varies with the age of the cow, with the individual, with the breed and with the time since the cow freshened. The fact that a cow's milk is usually richer in the fall and winter than during the spring and summer has led many people to believe that the test can be regulated largely through the feed. Possibly it can. It depends for one thing upon the previous condition of the cow. It is entirely possible and probable, however, that many changes in the test have been due to the time and manner of milking rather than to the supposed effects of the feed.

Field Notes

Farmer Delegation at Ottawa

When the delegation of farmers representing the organized grain growers of the Canadian West stopped off at Winnipeg on their way to Ottawa, few doubted that some strong memorials would be presented in the parliament buildings before the members of the Dominion House. No one could listen to the



D. W. McCUAIG

President of the Canadian National Council of Agriculture, who presided over the farmer delegation in the presentation of memorials before the Dominion House

speeches at the banquet in Manitoba Hall without feeling that this body of men formed a force that would move even the slowest of parliamentarians to action. When it is considered, also, that these 500 westerners were strengthened by hundreds from Ontario and other provinces of the East, it can easily be concluded that the big deputation was capable of leaving an impression not soon to be forgotten.

After a day's close and careful consideration of questions on the part of this army of farmers, several memorials dealing with matters that the main body of agriculturists in all parts of the Dominion deem should be considered and amended were placed before the government on Friday. The strongest men representing the interests of farmers in each of the provinces were chosen to present the memorials and call attention with due force to the chief reasons for presenting the same. Their parts were well done.

This is the first really big undertaking of the Canadian National Council of Agriculture, organized about a year ago with D. W. McCuaig, of Portage la Prairie, as president, and E. C. Drury, of Crown

Hill, Ont., as secretary. It was to be expected that their campaign, so well planned and so ably executed, would bear fruit that would please the men they represent.

Sir Wilfrid Laurier, Mr. R. L. Borden and their followers listened carefully to the arguments of the deputation. Every one expected something definite on at least a few of the suggestions offered. The Premier, while on his trip through the West last summer, was in position to know the feeling of the great prairie country. He was therefore in possession of sufficient facts to enable him to answer the delegation in words that would satisfy them. It can safely be said, however, that few found a grain of satisfaction. The farmers of Canada knew as little after the reply of the Premier had been concluded as they did months ago about what action would be taken in regard to the Hudson Bay Railway, the terminal elevators, or the tariff.

RESOLUTIONS ADOPTED BY DELEGATES

When the farmer delegates from the various parts of the Dominion met on Thursday, the following resolutions were adopted after thorough discussion:

TARIFF PROPOSALS

1. Reciprocal free trade between the United States and Canada in all horticultural, agricultural and animal products, spraying materials, fertilizers, fuel, illuminating and lubricating oils, cement, fish and lumber.
2. Reciprocal free trade between the two countries in all agricultural implements, machinery, vehicles and parts thereof.
3. An immediate lowering of the duties on all British imports to one-half the rates charged under the general tariff, whatever these may be; that any trade advantage given to the United States in reciprocal trade relations extend to Great Britain.
4. Such further reductions of the remaining preferential tariff as will ensure the establishment of complete free trade between the Dominion and the Mother Country within ten years.
5. That the farmers of this country are willing to face direct taxation in such form as may be advisable to make up the revenue lost by the new tariff relations.

HUDSON'S BAY RAILWAY

Whereas the necessity of the Hudson's Bay Railway as the natural and most economic outlet for placing the products of the Western prairies on the European market has been emphasized by the Western people for the past generation and whereas the Dominion government has recognized the need and importance of the Hudson's Bay Railway and has pledged itself to its immediate construction and has provided the necessary funds entirely from the sale of Western lands;

And, whereas, the chief benefit to be derived from the Hudson Bay Railway will be a reduction in the freight rates in Eastern Canada, due to actual competition, which could be secured only through government ownership and the operation of the Hudson Bay Railway;

And, whereas, anything short of absolute public ownership and operation of the Hudson Bay Railway will defeat the purpose for which the road was advocated, and without which it would be in the interests of Western Canada that the building of the road should be deferred;

Therefore, be it resolved, that it is the opinion of this convention that the Hudson Bay Railway and all the terminal facilities connected therewith should be constructed, owned and operated by the Dominion government under an independent commission.

TERMINAL ELEVATORS

Whereas we are convinced that the terminal elevators, as now operated, are detrimental to the interests of both producer and consumer, as proved by the recent investigation and the testimony of the important interested bodies, we, therefore, request that the Dominion government acquire and operate, as a public utility, under an independent commission, the terminal elevators of Fort William and Port Arthur, and immediately establish similar terminal facilities and conditions at the Pacific coast and provide the same at the Hudson Bay when necessary.

Also, such transfer and other elevators necessary to safeguard the quality of the export grain.

CHILLED MEAT AND EXPORT BUSINESS

Whereas, it is of very great importance to the whole of Canada that prompt government action be taken toward establishing a complete chilled meat system on a sound and permanent basis, with the interests of the producer adequately protected, and,

Whereas, the live-stock industry of Canada has been neglected, and if the neglect is continued it will soon result in impoverished farms, and the live-stock industry of the country will make no headway until it is made worth the farmers' while to produce and furnish more and better stock, and,

Whereas, the farmers are on account of an unsatisfactory market going out of the meat producing business and will not again take it up until the market is placed upon a stable basis, and further that under the present system of exporting, there is always a danger of the markets of the world being closed to us, which would result in ruin to many; and,

Whereas, on account of the danger of encouraging monopolies, farmers cannot be satisfied with anything short of a meat curing and chilling process, inaugurated by the Dominion government and oper-

ated in such a way that will guarantee to producers the value of the animals they produce:

Therefore be it resolved that the government be urgently requested to erect the necessary works and operate a modern and up-to-date method of exporting our meat animals.

We suggest that a system owned and operated by the government as a public utility, or a system of co-operation by producers through the government in which the government would supply the funds necessary to first install the system and provide for the gradual repayment of these funds and interest by a charge on product passing through the system, would give the relief needed, and make Canada one of the most prosperous meat producing countries in the world.

OTHER RESOLUTIONS

After taking up the banking system, the following resolution was carried:

Whereas it is generally believed that the bank account, forming as it does the charter of all Canadian banks for a ten-year term by its present phrasing prevents any amendment involving the curtailment of their powers, enjoyed by virtue of the provisions of such charter, be it resolved that this convention desire that the new bank act be so worded as to permit the act to be amended at any time and in any particular.

It was also resolved that it was desirable that cheap and efficient machinery for the incorporation of co-operative societies should be provided by federal legislation during the present session of parliament.

SIR WILFRID'S REPLY

It was well past noon when the delegation had presented their case. On rising to reply, the Premier acknowledged the profit all had had from listening to the expression of views from such a representative delegation, even though they did not share these views in their entirety. He stated that although the eastern provinces were represented, it was evident that the feeling of the West, which was more radical, pervaded the memorials presented. He opined that farmers of the East were not prepared to go quite so far. Referring to government ownership and control of public utilities, he was a man of the East.

During the presentation of the case, F. W. Green referred to the great agricultural wealth of the West—some \$300,000,000. Sir Wilfrid used this as an argument that the farmers had little cause for complaint. It was possible things are not in as good condition as they might be, but perfection was not found on this planet. Commercial trade relations with the United States, he said, could be improved in accordance with their recommendations by treaty or by concurrent legislation. He assured them that negotiations were under way that promised to give some remedy. Difficulties that are met were referred to. Assurance was given that nothing done regarding the United States would impair or affect the British preference.

Discussing the resolution on terminal elevators, the Premier showed that he had a fair grasp of the situation in connection with the shipment and transfer of grain enroute from the Canadian West to Great Britain. He considered that something should be done to control matters at points in the East as well as at Port Arthur and Port William. Improvement of grain routes via Ottawa, down the St. Lawrence,

were said to be essential to the solution of the problem.

Dealing with Hudson Bay Railway resolution he said that government ownership was not altogether in his line, but he thought he could go that far. As to government operation he promised to consider the representations made.

FARMERS NOT SATISFIED

Even months will not put an end to the expressions of opinion in regard to the Premier's reply. No one can blame him for being cautious, but it was generally expected that something definite would be granted at least in regard to the terminal grain elevators.

But the delegation will go ahead undaunted. Most of them left Ottawa for their homes, or for visits among friends in the East. The executive of the Canadian National Council of Agriculture, however, have pressed for further hearings. No doubt there will be more to announce in next week's issue.

Horse Championships at Guelph Show

The horse championships made at the close of the Guelph Winter Show evoked much enthusiasm at the time the awards were being made. The champion Clydesdale stallion, any age, was Sailor King, owned by the Graham-Renfrew Company, of Bedford Park, Ontario. This animal, which is three years old, possesses fine Clydesdale characteristics.

Baroness Insch, owned by Smith & Richardson, of Columbus, won the championship amongst the Clydesdale mares. She was an imported mare and a good one.

The Canadian-bred class of Clydesdale or Shire stallions was represented by a large field, and Fascination, only a year and a half old, owned by Smith & Richardson, of Columbus, captured first prize. The best Canadian-bred mare in this class was Roselva, owned by Alex. Graham, of Oro.

The Hackney championship prize was awarded to Derwent Performer, shown by G. H. Pickering, of Brampton. Chocolate King was the name of the horse, owned by A. Yeager, of Simcoe, which was a close second. The Hackney mare championship was easily taken by J. F. Husband's Warwick Princess.

Events of the Week

Sanford Evans is elected mayor of Winnipeg for the third time. His majority is 1717.

Jos. Parker, a farmer near Brandon, broke through the planking at the top of a well and lay at the bottom for several hours before he was found. Death resulted from the fall, and remaining in the ice-cold water.

Explosion of gas in a coal mine of the Western Canadian Collieries at Bellevue, Alta., on Dec. 11, resulted in the death of thirty-one men. This is one of the most serious mining disasters in the history of coal mining in Alberta.

The legislature of Saskatchewan opened on December 15, and adjourned till January 17, when it will assemble in the new parliament buildings. The speech from the throne foreshadows bills dealing with grain elevators and workmen's compensation and insurance.

The Massey-Harris Company have purchased a large implement manufacturing plant in the United States, and will extend their business in the neighboring republic. It is believed that the expectation of closer trade relations with the United States is the chief reason for the company's move in this direction. Up to the present, Canadian manufacturers have not maintained branches in the Republic.

The Northwestern Miller, the organ of the flour milling interests of the Northwestern States, has come out with a strong demand for the removal of the duty on Canadian wheat. This journal declares that the United States are on the verge of a wheat shortage and that unless provision is made for the importation of foreign wheat the American farmers will soon have the bread consumer at his mercy.

Amendments to the Hail Insurance Act were introduced in the Alberta legislature by Premier Sifton. The bill provides for a flat rate premium of 25 cents an acre, with a flat rate of indemnity of \$4 per acre. At present the indemnity is \$4, \$6 and \$8, with premiums at the rate of 20 cents, 30 cents and 40 cents per acre, respectively. A loss of over \$300,000 was incurred under the hail insurance ordinance during the past year.

Dr. Sproule, East Grey, introduced a resolution in the House of Commons last week, calling for the establishment of a system of abattoirs and cold storage under government supervision to encourage trade in chilled meats. The position of the government, as explained by Hon. Sydney Fisher, was that they would take any practical steps that would be of real benefit to farmers, but that it was doubtful whether a government owned system of abattoirs

would be profitable. As for cold storage, the minister of agriculture pointed out that there was already a very effective system in operation while the work of the department generally, had been in the interests of farmers. The resolution was defeated by 111 to 66.

Dates to Keep in Mind

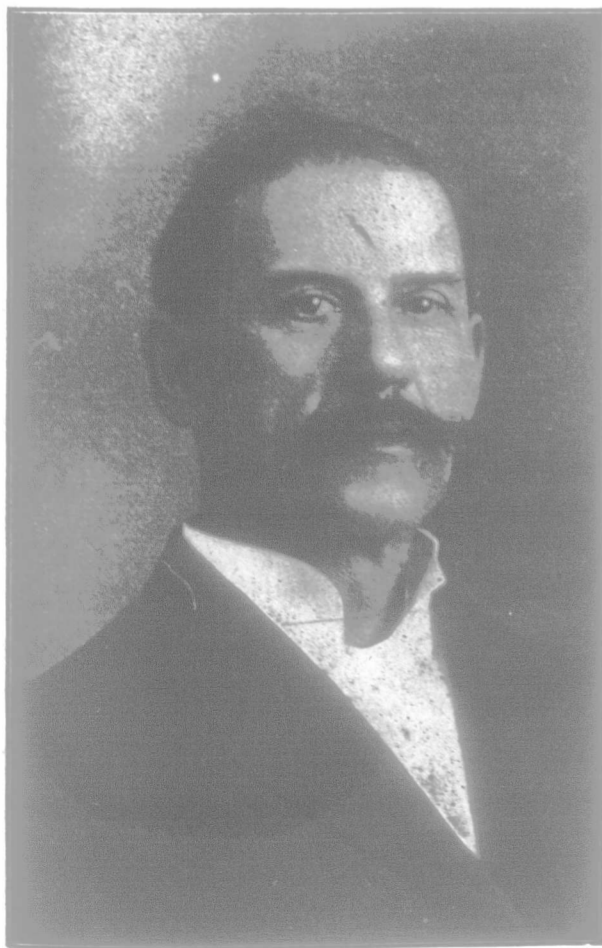
- United Farmers of Alberta convention at Calgary. January 17 to 19
- Manitoba Grain Growers' convention, Brandon January 24, 25, 26
- Manitoba Agricultural Societies' convention, Agricultural College, Winnipeg. February 13 to 17
- Dairymen's Association convention, Agricultural College. February 14 to 15
- Manitoba Horticultural Society's convention, Agricultural College. February 18 to 19
- Brandon Winter Fair. March 11 to 17
- Saskatchewan Winter Fair. March 20 to 24

Professors F. T. Shutt and J. H. Gridale, of the Central Experiment Farm, have returned East after a six weeks' trip of inspection to the farms in the West. Professor Gridale intends starting new work in crop rotation and soil cultivation at the various farms in Manitoba, Saskatchewan and Alberta. Cattle feeding also is to receive more attention than formerly.

The National Grange of the United States was in session last week. The president, in his annual address, attributed the high price of farm products to the consumer to bad roads, excessive freight charges and to extortionate profits of commission houses. He advocated co-operative methods among farmers in buying and selling, as a remedy for the abuses that have sprung up under the present system.

Winnipeg citizens suffer the inconvenience of a street railway strike. Last week the men refused to run the cars, because of the outcome of an investigation into the dismissal of four of their number some months ago for drinking while in uniform. With the assistance of college students cars have been run irregularly, and the men have been given until Tuesday noon to return to their work.

For the first time since Manitoba and North Dakota began annual international debating, Manitoba Agricultural College will be represented on the Canadian team. At a meeting last week the literary society at the agricultural college selected J. H. Evans, a fourth-year man, to assist in putting up a fight for Manitoba. The other two debaters are Messrs Gardiner, representing Manitoba College, and McCool, representing Wesley. The question of debate reads as follows: "Resolved that the Combine Investigation's Act, May, 1910, offers proper remedy for the evils of trusts, monopolies, combines and mergers, in both the United States and Canada." Manitoba debaters will uphold the negative some time in February in Winnipeg.



W. J. TREGILLUS

Vice President of the United Farmers of Alberta, who took a prominent part in proceedings with which the farmer delegation dealt at Ottawa



R. C. HENDERS

President of Manitoba Grain Growers Association, who lent aid in presenting the case of the farmers at Ottawa



OUR WEEKLY MARKET REVIEW



Grain ran through the week at almost a dead level. Fluctuations were only fractional, and oats, barley and flax closed on Saturday practically where they started Monday, without enough change in the daily level to leave anything even for scalpers to take off. The markets all over the world were dull, and there seemed nothing in the situation to send even a ripple over the dead serenity of wheat prices. Europe was satisfied with her own and the outlook abroad. America hasn't got to that stage yet where figuring can be done on the winter crop, so in the absence of anything to speculate on the market went dead. Live stock are selling slowly. All markets were rather dull, considering the Christmas trade was being done. Poultry promise to sell at high prices during the holiday season. There is a shortage both east and west.

GRAIN

Wheat lagged through the week without much change in price. Export demand was fairly good, and a reasonable business done selling abroad. World's shipments continue heavy, Russia showing a surprising ability to deliver the grain. Reports from Argentina are all favorable, and the work of harvesting and threshing is proceeding in that quarter under almost ideal weather conditions. Reports from Europe generally are good. Latest estimates of the exportable surplus of Argentina are 112,000,000 bushels; for Australia, 50,000,000 bushels.

VISIBLE SUPPLY

	Last week.	Prev. week.	Last year.
Wheat	15,120,920	13,141,547	10,084,287
Oats	7,834,910	7,037,403	3,273,576
Barley	403,665	393,971	991,651
United States—			
Wheat	42,666,000	42,989,000	28,400,000
Oats	15,349,000	15,758,000	12,228,000
Corn	1,510,000	1,545,000	5,663,000
Europe—			
Wheat	119,280,000	120,240,000	78,000,000

WORLD'S SHIPMENTS

	1910.	1909.
American	3,568,000	3,448,000
Russian	5,827,000	4,072,000
Danube	2,016,000	1,600,000
India	680,500	856,000
Argentina	504,000	952,000
Australia	328,000	464,000
Chili	232,000	176,000
Other	13,200,000	13,328,000
Corn	6,364,000	4,395,000
Wheat on Passage	35,904,000	38,768,000
Corn	20,035,000	20,256,000

WINNIPEG OPTIONS

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Wheat—						
Dec.	90½	89½	90½	89½	90½	90½
May	94½	94½	94½	94½	94½	94½
July	95½	95½	95½	95½	95½	95½
Oats—						
Dec.	32½	32½	32½	32½	32½	32½
May	36½	36½	36½	36½	36½	36½
Flax—						
Dec.	206	209½	210	208	208	207
May	215	218	219	218	217	217

CASH GRAIN

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Wheat—						
No. 1 Nor.	89½	89½	90	89½	89	90
No. 2 Nor.	86½	86½	87	86½	87	87
No. 3 Nor.	83½	83½	84	83½	84	84
No. 4	79½	79½	80	79½	80	80
Rej. 1, 1 Nor.	83	83	83½	83½	83½	83½
Rej. 1, 2 Nor.	80½	80½	81	81½	81½	81½
Rej. 2, 1 Nor.	80½	80½	81	81½	81½	81½
Rej. 2, 2 Nor.	78½	78½	79	79½	79½	79½
Rej. 1 Nor., for seeds	82½	82½	83	83	83	83
Rej. 2 Nor., for seeds	80½	80½	81	81	81	81
Oats—						
No. 2 C.W.	32½	32½	32½	32½	32½	32½
Barley—						
No. 3	47	46½	46½	46½	47	47
No. 4	38	38½	38½	38½	38½	38½
Rejected	36½	36½	36½	36½	36½	36½
Feed	34½	34½	35½	34½	34½	34½
Flax—						
No. 1 N.W.	205	208½	209	208	208	207

AMERICAN WHEAT OPTIONS

	Chicago—	Minneapolis—	Duluth—	Liverpool
Dec.	91½	91½	92½	91½
May	95½	95½	96½	95½
July	93½	93	93½	93½
Dec.	100½	100½	101½	100½
May	103½	103½	104½	103½
July	104½	104½	104½	104½
Dec.	101	101	101	100½
May	105	105	105½	104½
Dec.	238	242½	240½	238
May	241	249	246½	237
No. 1 Nor.	106½	106½	106½	106½
No. 2 Nor.	102½	102½	102½	103½
No. 3 Nor.	100½	100½	100½	101½

	Dec.	98	97½	97½	98	98½	98½
Mar.	100½	100	100½	100½	100½	100½	100½
May	101	100½	100½	100½	101½	101½	101½

FOREIGN CROPS

United Kingdom—Outlook for the new sown wheat is fair. Unofficial reports state that the condition of seeding is very unfavorable. France—The new sown wheat, with the exception of that seeded on upland, is very unfavorable, as the result of continued wet weather. There are heavy purchases of foreign wheat being made. Germany—Condition of the new wheat plant is favorable. Supplies of native wheat are larger. Local and export demand continues on liberal scale. Russia—Weather conditions favorable for the growing crops. Interior reserves of wheat are very large and increased arrivals are expected.

STOCKS IN TERMINALS

Total wheat in store, Port William and Port Arthur, on Dec. 9, was 6,101,143, as against 5,296,855 last week, and 3,586,161 last year. Total shipments for the week were 2,054,243, last year 3,747,088. Amount of each grade was:

	1910.	1909.
No. 1 hard	13,573.30	24,156.20
No. 1 northern	871,565.10	991,544.00
No. 2 northern	1,437,474.30	1,105,722.30
No. 3 northern	1,260,426.10	511,867.00
No. 4	440,439.10	190,911.10
No. 5	253,297.30	45,913.00
Other grades	824,367.50	716,047.10
Stocks of Oats—	5,101,145.50	3,586,161.10
No. 1 white	224,023.11	117,036.01
No. 2	2,456,129.12	602,572.07
No. 3 white	302,107.29	169,198.21
Mixed	4,040.50	9,551.12
Other grades	520,058.18	139,052.32

	1910.	1909.
Barley	3,506,359.00	1,037,718.05
Flax	252,718.00	286,051.00
Flax	453,650.00	497,123.00

SHIPMENTS

Oats	356,073.00
Barley	1,814.00
Flax	58,267.00

ARGENTINE SHIPMENTS

Argentine estimates wheat shipments at 960,000, last week 504,000, last year 376,000. Corn 2,100,000, last week 4,395,000, last year 1,340,000.

The weather continues favorable and threshing of wheat in the north shows good results. Acreage planted to corn is 9,250,000. This compares with 7,349,000 in 1908-09. This total crop in 1909-10 is officially placed at 164,000,000 bushels.

UNITED STATES FINAL REPORT

The United States department of agriculture has issued final figures for the crop of 1910, giving the total yield of wheat as 695,437,000, as against 737,189,000 bushels in 1909, and 664,000,000 bushels in 1908. The yield of corn was 3,125,713,000, against 2,772,376,000 bushels. Oats, 1,135,763,000 bushels, against 1,007,353,000 bushels in 1909.

WANT FREE WHEAT

The Northwest Miller came out last week with a strong editorial demanding removal of the United States duty on foreign wheat, citing as reason the fact that the United States is rapidly approaching that stage where they must either import wheat from the Dominion or place their ninety odd million bread consumers at the mercy of the American wheat producer. According to the Miller, which, by the way, is the official organ of the milling interests of the Northwest, the American farmer is not producing enough wheat because other crops pay better.

LIVESTOCK

Receipts at the Winnipeg yards are light, particularly light in choice beef stuff. For the season there has been a fair-sized run of butcher cattle, and a heavier than usual run of hogs. Cattle prices are little changed. First-class stuff, or rather the best stuff in the yards, brought satisfactory prices, but the average run sold low. Hogs have been coming in heavily, and prices are lower. Around \$7.50 have been the best figures quoted, and it is altogether probable that this price will be lowered in the next fortnight. Sheep and lambs are slow at unchanged figures. Prices for stock of all grades are as follows:

	Choice export steers, freight assumed	Good export steers, freight assumed	Choice export heifers, freight assumed	Choice butcher steers and heifers, delivered	Good butcher cows and heifers	Medium Mixed butcher cattle	Choice hogs	Choice lambs	Choice sheep	Medium calves	Choice light calves
	\$4.50 to \$4.75	4.25 to 4.50	4.25 to 4.50	4.25 to 4.75	3.75 to 4.25	3.00 to 3.25	7.25	5.50 to 6.00	5.00 to 5.25	4.00 to 4.50	4.50 to 5.00

REPRESENTATIVE PURCHASES

No.	Hogs	Avg. Weight	Price
35	Hogs	193	\$8.00
474	"	183	7.50
15	"	311	7.25
150	"	50	6.00
3	"	392	7.00
	Cattle		
30	Cattle	1100	4.50
8	"	1150	4.25
11	"	1061	4.00
25	"	948	3.85
4	"	873	3.75
36	"	842	3.50
14	"	671	3.40
32	Cows	1113	4.55
25	"	1192	4.00
2	"	1145	3.75
7	"	1019	3.50
2	"	1125	3.35
9	"	825	3.25
11	"	998	3.10
122	"	905	3.00
7	"	900	2.75
1	"	1000	2.25
2	Bulls	1600	3.35
5	"	1105	3.25
8	"	1475	3.10
1	"	732	3.00
1	"	1575	2.75
4	Calves	270	5.00
7	"	399	4.50
12	"	389	4.00
12	"	318	3.75
4	"	478	3.50
7	"	346	3.40
3	"	510	3.25
1	"	525	3.85
95	Steers	1389	4.55
4	"	950	4.40
6	"	812	3.85
1	"	1080	3.25
203	Sheep	587	5.50

TORONTO

Export steers, \$5.25 to \$6.25; cows and bulls, \$4.75 to \$5.25; butcher cattle, \$3.50 to \$7.10; calves, \$3.50 to \$7.50; feeders, \$5.00 to \$5.40; store cattle, \$4.00 to \$5.00; sheep, \$4.25 to \$4.60; lambs, \$5.25 to \$6.10; hogs, \$6.75.

BRITISH

London: ranchers, 10c. to 11½c.; Canadian steers, 13c. to 13½c. Liverpool: Fed ranchers, 11c. to 13c.; Canadian steers, 12c. to 13c.; United States steers, 12½c. to 13½c. Glasgow: Steers, 12c. to 13½c.; bulls, 10½c. to 11c. Canadian bacon, 13-3-7 to 14-2-7 cents.

CHICAGO

Beef steers, \$5.50 to \$6.75; butcher cattle, \$3.50 to \$6.00; stockers and feeders, \$4.25 to \$5.50; calves, \$6.75 to \$10.50; lambs, \$5.00 to \$6.85; hogs, \$7.50.

PRODUCE MARKETS

Following were the quotations last week for farm products in Winnipeg:

Cream, sour, per lb. butterfat	29 to 30c.
" sweet, "	34 to 35c.
Butter, creamery, fresh, in boxes	30 to 31c.
" " " bricks	32 to 33c.
" No. 1 dairy	25 to 26c.
" No. 2 dairy	20 to 22c.
Cheese, Eastern	13a to 13gc.
" Manitoba make	11 to 11gc.
Eggs, fresh, subject to candling	27 to 28c.
Live poultry, turkey, per lb.	15 to 16c.
" chickens, per lb.	12 to 13c.
" boiling fowl, per lb.	8 to 10c.
" ducks, per lb.	11 to 12c.
" geese, per lb.	10 to 11c.
Meats, cured ham, per lb.	18gc.
" breakfast bacon, per lb.	20gc.
" dry, salted, sides, per lb.	15gc.
" beef, hind quarters, per lb.	9gc.
" beef, front quarters, per lb.	6gc.
" mutton, per lb.	12c.
" pork, per lb.	11gc.
" veal, per lb.	9c.
Hides, frozen, per lb.	7c.
" country cured, per lb.	7g to 8c.
Lamb and sheep skins	25 to 50c.
Unwashed wool	9 to 11c.
Feed, bran, per ton	\$18.00
" shorts, per ton	19.00
" chopped barley, per ton	22.00
" " " " "	24.00
Hay, No. 1	23.00
" No. 2	11.00
" No. 3	10.00
Timothy, No. 1	18.00
" No. 2	17.00
" No. 3	16.00
Potatoes, per bushel	5.50 to 7c.

HOME JOURNAL

PEOPLE AND THINGS THE WORLD OVER

In order to have a new tabernacle big enough to seat 5,000 people for union revival services to be held early next year, 150 ministers of Cleveland announced their intention of donning jumpers and doing the carpenter work necessary themselves.

Logberg, Winnipeg's Icelandic organ, publishes a list of 45 names of Icelandic students registered at Wesley College. Of these four are in the fourth year; five in the third, eight in the second, eleven in the first, and seventeen in the preparatory department, nine in the second division and eight in the first.

Mrs. Julia Wyatt, famous in her day as an actress, and creator of the part of "Topsy" in the original "Uncle Tom's Cabin" company, is dead at her home in New Haven at the age of 87 years. She played the part for years. Included in the Wyatt Company in later years were her two daughters, Helen, now dead, and Mrs. Warren, now of Bridgeport. Her husband, George H. Wyatt, also an actor, died in 1855.

A manufacturing firm in New York, which has made it a practice to give turkeys and chickens to its employees on Thanksgiving Day for several years told the forewoman that on account of poor business and a backward season there would be "nothing doing" in the poultry line this year. The girls decided to show that they were not concerned because of the decision, which some of them thought was prompted more by the recollections of recent labor movements than hard times, made up a purse and sent to each of the two proprietors a big turkey with notes containing their Thanksgiving greetings.

Memory handed down through thirty generations is one of the perplexing facts of science. The beaver flourished along French rivers until killed off for its fur, but is known only in about a dozen of its villages on the Rhone near Avignon. For three centuries these villages have had no trees to cut for dams. The animals were compelled to adopt a new mode of life, and have burrowed in the banks, shaping mud with their tails as usual. Recently some of them were taken by a Polish count to forests on his estates. Very strangely, they resumed the habits dropped three centuries before they were born, and at once began cutting trees and building dams.

Dr. Neff, Philadelphia's director of health, is out with a circular warning the dangers of pneumonia and telling how to prevent it. "Ventilation is the keynote to prevention from pneumonia, whether in office, public building, sitting-room or bedroom," says Dr. Neff. "Day and night pure air should be breathed. The old superstition that the breathing of night air is conducive to disease has been eliminated from the minds of nearly all by public education, with the exception of a few of our foreign population, who still believe that some diseases are spread by the breathing of night air. As a matter of fact, the night air is purer than the day air, as there is less black smoke belching from chimney stacks and locomotives and less dust in the air, owing to reduced street traffic; so windows should be opened both top and bottom in every sleeping room."

Training Children's Hands

The following paper on the purpose and advantages of manual training as taught in the schools was prepared by the principal of the public schools of Dauphin, Manitoba, and is well worth pondering. This work of training the hand as well as the mind has already reached the experimental stage in Dauphin, and is worthy of trial elsewhere.

As manual training has become a phase of our school work it is only reasonable that some ex-

GOD BLESS US EVERY ONE

"God bless us every one," prayed Tiny Tim,
Crippled, and dwarfed of body, yet so tall
Of soul, we tiptoe earth to look on him,
High towering over all.

He loved the loveless world, nor dream-
ed, indeed,
That it, at best, could give to him,
the while,
But pitying glances, when his only need
Was but a cheery smile.

And thus he prayed, "God bless us
every one!"
Enfolding all the creeds within the
span
Of his child-heart; and so, despising
none,
Was nearer saint than man.

I like to fancy God, in Paradise,
Lifting a finger o'er the rhythmic
swing
Of chiming harp and song, with eager
eyes
Turned earthward, listening—

The Anthem stilled—the angels leaning
there
Above the golden walls—the morn-
ing sun
Of Christmas bursting flower-like with
the prayer.
"God bless us every one."
—JAMES WHITCOMB PILEY.

pression of our aims along this line should be given to the public.

The question naturally arises: Why introduce this at all? And the answer is that the old is daily passing out and is being replaced by the new, in every department of life. Radical industrial and social conditions have taken place, and an equally radical change in education will only suffice.

This modification in our school work is as much a product of the changed social conditions, and as such an effort to meet the needs of our new society, as are the changes in modes of industry and commerce.

In school life there is an awakening to the fact that our schools are meeting the demands of the professional class, only: a training of the mind, while hand, which earns our bread, is neglected.

Old England realized this fact twenty years ago. It is dawning on us. We are beginning

to see that the aim of the school is attained only where the curriculum makes provision for the trades, as well as the professions.

Is that unfair, seeing that ninety-five per cent. of our boys enter the trade life; whether it be on the farm, railroad, or in town? Is it fair that our public schools should aim to give the complete rudiments of an education to the five per cent., and deal out the same dose to the ninety-five per cent., and at the same time neglect a training so essential to the life-work of the latter?

The lawyer's is a mental training, and our public schools make provision for it. But farming, railroading, mechanics and motherhood are something more; and yet they receive no instruction in agriculture, mechanics, or domestic science; no hand work to fit them for their duties.

If it is necessary to give the rudiments of the professional man's training in the public schools, it is also necessary to give the same to the tradesman. The hand must be trained to skilful work, and, like the mind, the training must begin in youth. Where are we going to reach the ninety-five per cent.? Only in public schools.

Handiwork, or manual training, must first find its place in our programme of studies, the same as any other subject; whether it be in the rural, or urban school, it applies to all.

Now, do not let us get away with the idea that the manual training work is intended to produce finished workmen. As the public school gives the rudiments of professional training, so will it, in the future, give the rudiments of industrial training.

The aim is to make the children handy with tools, so that they may some day become good workmen. The collegiate and university will finish the professional man; the technical and industrial schools the tradesman. The ninety-five per cent. will have equal chances with the five per cent.

There is another phase of this work which appeals to us very strongly, viz., the opportunity for character building; and in this connection I cannot do better than quote the words of Mr. Thos. Speed, pardon attorney to the governor of Missouri, who is quoted in the Western School Journal, as saying:

"About 75 per cent. of felons are untrained in any honest or useful trade; most criminals are thieves; men, for the most part, try to get a living dishonestly because they have not learned to get it honestly. They steal, who have not learned to work. An hour's hand work a day in every schoolroom in the land, running through all the grades from the kindergarten to and including the high school, would give every man, woman and child of the rising generation at least the rudiments of an honest, useful and profitable occupation, and would make of the next generation of Americans the most productive and the most industrially efficient race the world has ever seen. I believe that every criminologist will agree with me when I say that for every dollar so expended two dollars will be saved in the lessened cost of crime."

A mosquito-proof steamer named the Thomas Holt has left the Mersey for West Africa. The vessel is proof against the mosquito, which is one of the deadliest enemies of the white man in West Africa. The plan adopted is to bar the way of the mosquito into all the living apartments on board by providing all doorways, side port openings, windows, skylights, ventilators and passages with close copper gauze coverings.



Hope's Quiet Hour

HALTING BETWEEN TWO OPINIONS

And Elijah came unto all the people, and said, How long halt ye between two opinions? If the Lord be God, follow Him: but if Baal, then follow him. And the people answered him not a word.—1 Kings, xviii.: 21.

Of course, they could not answer Elijah. They knew that Jehovah was God, and yet they were drifting carelessly along with the tide of public opinion, worshipping Baal, like the nations around them.

How is it with us? Are we quite convinced that right is right and wrong is wrong? Do we know that love and holiness are infinitely more precious than riches or fame or pleasure? Then let us see to it that we don't allow our daily life to be a flat contradiction to our convictions. If we believe in God, and then act as if public opinion were our God, or devote these valuable years to the pursuit of money as the one great good worth having, then we are halting between two opinions—serving God with our lips and false gods with our lives.

Christ says that those who confess Him before men will be confessed by Him before His Father in heaven; but those who deny Him before men will be disowned by Him before His Father in heaven. These are words of solemn warning—how do they affect us? We can't help joining one party or the other. If—in our lives—we are not confessing Christ to be our Master, then we are certainly disowning Him. It is so easy to accuse St. Peter of disloyalty and cowardice because he denied any connection with the despised Nazarene. Are we always bold and decided in our loyalty to Him? Have we never laughed uncomfortably at a joke of which we really disapproved, just because we were afraid of being considered "over-strict"? Are we ashamed to have family prayer—that most wonderful bond of family love and unity—because it is not considered quite "the thing"? Are we ashamed to kneel in prayer when we find ourselves in the company of people who dare to come before God without any outward sign of reverence?

Do we stand up loyally for our faith when it is attacked or slightly mentioned? Have we always the courage to declare ourselves boldly on the side of

Christ? If we often play the coward ourselves, then we have no right to look down on another disciple for disloyalty to his Master.

"Ah, if He were here! perhaps our cold hearts would then be as nerveless as now; For the pestilent Pilates are ever the same—E'er ready to falter, e'er shifting the blame, In fawning e'er ready to bow."

"If He were here!" Well, is He not here? He looks at us sometimes as He looked at that other disciple who denied Him, when by word or look or cowardly silence we pretend that we own allegiance only to the world. That loving look should always bring us back to our wronged Master. It is every Christian's business to witness for Christ wherever he may be, using the marvellous power of personal influence for Him, first at home, then in the neighborhood, reaching out steadily farther and farther by prayer, work and sympathetic fellowship "unto the uttermost parts of the earth."

The shifting, undecided people, are always weak; the people who have strong convictions, and are not swayed by the opinion of everyone they meet, are strong. And, if they have ranged themselves on the side of God and righteousness, they can stand like Athanasius "against the world," and come out victorious. Elijah stood alone against 450 prophets of Baal, and he was easily able to conquer them, and to show the undecided people the folly of trusting in any God but the Lord. If he had been facing a million more, the result would have been the same. He was alone, and yet not alone—hear his own calm words: "As the Lord God of Israel liveth, before Whom I stand." Those who stand before God—and know it—need not feel troubled if men do not agree with them.

But those who are continually halting between two opinions—half-hearted, luke-warm disciples—do more harm to Christianity than any open infidel can do. A faith which evidently is only half believed by those who profess it, must seem to outsiders a hollow sham and mockery—simply a fashionable pretence. Those who name the Name of Christ, should have that Name writ-

ten plainly on their lives, so that all the world can take knowledge of them that they belong to Him. He seals His servants on their foreheads. It is not a hidden, but an open badge of service. Keble says:

"When soldiers take their sovereign's fee,
And swear his own to be,
The royal badge on forehead bold
They show to young and old.
Nor may we hide for fear or shame
The persecuted Name,
Only with downcast eyes we go
At thought of sin that God and angels know."

Last Sunday I met a young Englishman who had only been two weeks in this country. He soon showed which side he was on, turning up at the early celebration of the Lord's Supper, kneeling in prayer, joining heartily in the service, expressing great surprise that so few availed themselves of the privilege of meeting God in His own appointed way. I could not explain to him why Christians, who own their weakness, and really wish to become strong, should refuse to hold out their hands for food when God's power is freely offered. Though Christ says: "He that eateth My flesh, and drinketh My blood, dwelleth in Me, and I in him," and we, who are so weak and cowardly, need Divine strength in us, still His invitation, "Do this in remembrance of Me," falls on deaf ears apparently. It must be that many who "call themselves Christians," are halting between two opinions. They say they believe Christ's words, and then act as though they either disbelieved them, or did not care for His offered indwelling Presence.

This is a vital matter. Make up your mind one way or the other, and then act on your convictions. Do you believe the direct statement of our Lord Jesus Christ? He says, with the solemn preface of "Verily, verily, I say unto you"—

"Except ye eat the flesh of the Son of man, and drink His blood, ye have no life in you. Whoso eateth My flesh and drinketh My blood, have eternal life; and I will raise him up at the last day. For My flesh is meat indeed, and My blood is drink indeed."—St. John vi.: 48-58.

Do you say "I believe!" and then act as if you did not believe? Then certainly you are halting between two opinions, growing weaker the longer you hesitate.

Do you go away for a summer holiday and leave your religion, "like a bundle to be called for, in the family pew?" You can do without many luxuries when you are camping, but religion is not a luxury. It is a daily, hourly necessity to one who really loves God. It is not possible to serve God in cool weather, and Baal (the world or self) in July and August. If the Lord be God, follow Him—always. An old guide once described a pleasant surprise that he had with a fishing party of rich men. They were very jolly, and told lots of funny stories, but there was not a swear-word

nor a doubtful joke. At bedtime, Mr. Crandall—a big banker or railroad man—suggested to his son that he should repeat a psalm. Then the whole party said the Shepherd Psalm together. After a fortnight with these men, who were not ashamed of their religion, the guide expressed his opinion as follows: "They made me feel, somehow, that I'd like to have more religion myself. I take it that a good test of having religion is to make men who see you, want some like it."

Men of that stamp are respected by everybody, even by those who fancy they have no faith in "religious people." They may not gush about their feelings, or "talk religion" to every chance acquaintance. But if the subject should come up naturally in the course of conversation, no one can have a moment's doubt as to which side they belong to. A man like that will resent a slighting word about Christ as he would resent a word against his mother or his wife. Such men are not halting between two opinions, and they haven't the least idea how they strengthen the weak faith of others. Elijah's bold stand for Jehovah had a tremendous effect. The people at first "answered him not a word," but, before many hours had passed, they fell on their faces, saying: "The Lord, He is the God." Which side are you on? Do you know? Do all your neighbors know? DORA FARNCOMB.

WILLIE'S PENCIL

"Most every day from nine till three,
I spend in school with Willie Lee;
He keeps me moving smooth and free
O'er pad and pages steadily.

And this is what we write:

Geography, dictation,
Spelling, equation,
Fractions, multiplication,
Until we're worn out, quite.

"But when at home the lamp is lit,
Near grandma's easy chair we sit;
While Willie gaily makes me fit
Across the paper, filling it
From end to end, and bit by bit,
With objects of delight:

Giraffes, cats,
Acrobats;
Fancy stars,
Trains of cars,
Trees, bouquets,
Suns with rays,
Church and house,
Elephant, mouse—

Until it's time to say 'Good-night!'"

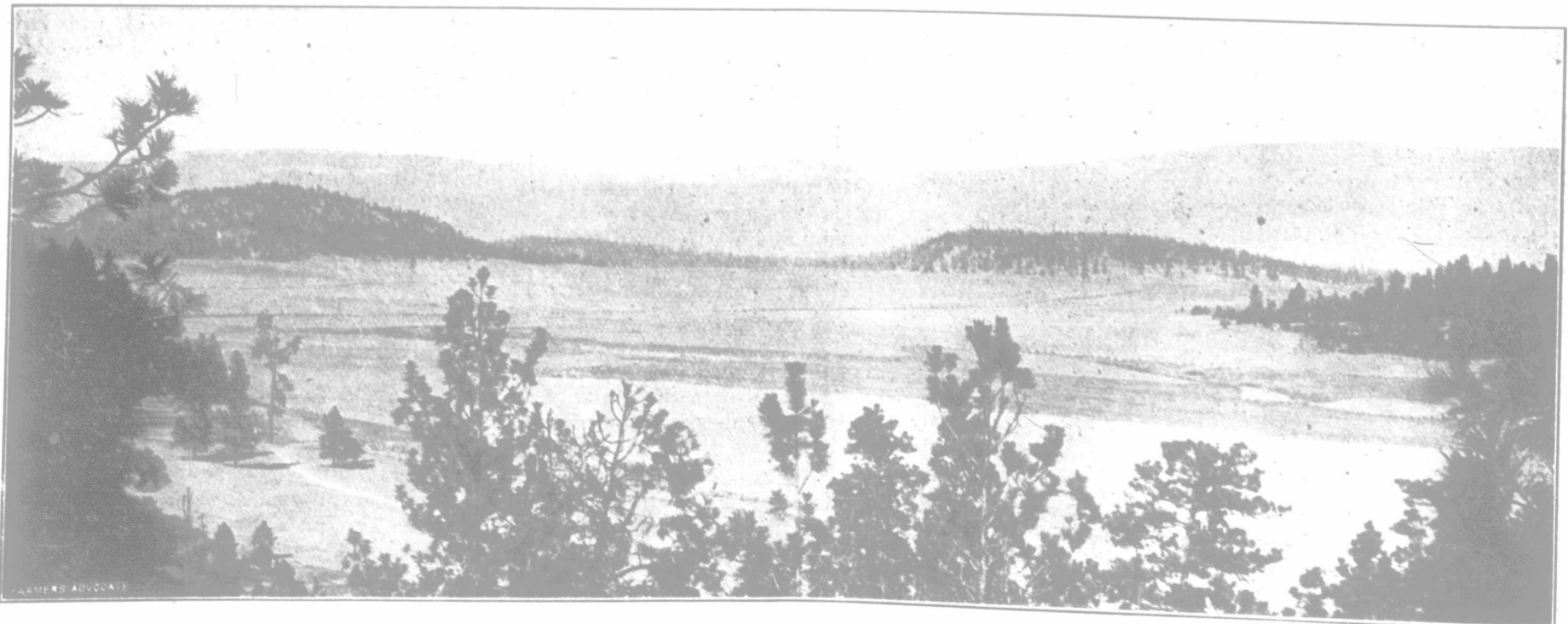
—KATE HUDSON, in the Eagle.

The Visitor: Yes, my 'usband is very 'andy. 'E mended the cuckoo clock the other day, but it ain't quite right yet. It oos before it cucks!
—Punch.

Boarder (on leaving): Madame, you are one of the most honest persons I ever met.

Landlady: I'm glad to hear you say that, sir.

Boarder: Yes; your honesty is conspicuous on the very front of your establishment. Your sign says, "Boarders taken in!"



Beautiful Scene in Okanagan Valley, B. C.



The Ingle Nook

GIVING AND RECEIVING HELP

Dear Dame Durden,—I am coming to your most helpful Nook's and self for some help, and to send a suet pudding recipe which Lonesome One asked for so long ago.

This is taken from a cook book published by a Friends Society (Quaker) somewhere in the eastern United States, and given me by an old lady friend of mine. I find it the best I have ever eaten and hope it will be of use to her and that she will write soon to our Nook. I enjoy her letters very much. I often think of "Heather Hills," I think it was, who in writing said something of her troubles and have wondered if the rough path is growing any easier. She can at least think of the dozens of Nook readers who sympathize with her, if that helps any. If In the Depths will send her address I will write to her. Has she no children? They are some bother, I'll admit, but O, the joy and comfort! I have to stay alone a great deal, which I never could do were it not for my little fellows.

Now, for the help:

1. I should like a Turkish Delight recipe.

2. To know what the newest belts are like.

3. What to use in stenciling designs on muslin curtains, and if it is fast.

Suet Pudding.—One cup suet chopped fine, one cup raisins, one-half cup currants, one cup sour milk and one cup molasses or syrup, two level teaspoonfuls soda, any spices desired. Dredge suet, raisins and currants well with flour after mixing. Add other ingredients and stir until it foams. Add flour to form a stiff batter and steam one and a half hours. Serve with a sauce or dip.

Kind friend, forgive this lengthy letter, but you seem so near to me. I am (as a pen-name).

NO-BEAUTY.

(We are all glad to have a visit from you, particularly the lonely and sad folk whom you have specially mentioned.)

I am sorry that I have no "dependable" recipe for Turkish Delight, but some of our girl readers will likely have one to send you.

The newest belts—well, there is a great variety of them. Black patent leathers about three inches wide are very popular to wear with dark skirts and shirtwaists, light or dark. For dresses all of one material, cloth like the garment is used for the belt, or a belt made of folds of silk to match any other trimming on the dress. The regular belting ribbon of a heavy corded quality, has stripes or spots or a paisley pattern in contrasting colors, while many of the beltings show gold and silver threads in their designs.

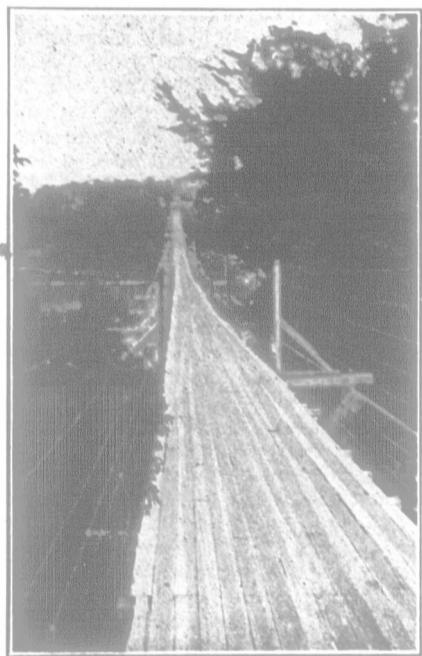
For stencilling wash goods use either the ordinary oil paints or else the dyes that are used for dyeing clothes. The articles stencilled should not be boiled when being laundered. Come again, come again.—D. D.)

TWELVE BENEFITS

Mrs. Julia Ward Howe, in almost her last important published article on woman suffrage, said: "The question of suffrage for women has passed out of the academic stage and has become a matter of practical observation and experience in an evergrowing number of states and countries. Experience has shattered, like a house of cards, all the old predictions that it would destroy the home, subvert the foundations of society and have a ruinous influence both on womanly delicacy and on public affairs. The fundamental argument for women suffrage, of course,

is its justice; and this would be enough were there no other. But a powerful argument can also be made for it from the standpoint of expediency. It has now been proved to demonstration, not only that woman suffrage has no bad results, but that it has certain definite good results."

Mrs. Howe then enumerates twelve practical benefits of equal suffrage as follows: 1. It gives women a position of increased dignity and influence. 2. It leads to improvements in the laws. 3. It enables women to bring their influence to bear on legislation more quickly and with less labor. 4. It often defeats bad candidates. 5. It broadens women's minds, and leads them to take



The Lovers' Promenade

a more intelligent interest in public affairs. 6. It makes elections and political meetings more orderly. 7. It makes it easier to secure liberal appropriations for educational and humanitarian purposes. 8. It opens to women important positions now closed to them because they are not electors. 9. It increases the number of women chosen to such offices as are already open to them. 10. It raises the average of political honesty among the voters. 11. It tends to modify a too exclusively commercial view of public affairs. 12. Last, but not least, it binds the family more closely together.

Not all suffragists will see the force of some one or two of Mrs. Howe's conclusions, but with the majority, including the last, they will fully agree.

VENTILATING A DWELLING

EDITOR FARMER'S ADVOCATE:

Will you kindly inform me, through the columns of your valuable paper, what is the best and cheapest way of ventilating a house in the winter? The house is heated by means of a small furnace, and a kitchen stove; also in very cold weather a small box stove is used for additional warmth.

2. What is the best way (and cheapest) to lath and plaster a frame house, the inside walls of which are of tongued and grooved lumber? The house is high and has been built for about twenty-five years.—E. B.

(In a house already built with the heating equipment provided it is more difficult to install a ventilation system that will work satisfactorily than it is in a house being built, and for which a furnace could be installed specially providing for the introduction of fresh air

into the dwelling and vents or outlets of some kind placed in the chimney or walls to take the foul air out. We presume you have a hot-air furnace, also that provision has not been made for its drawing a portion of its cold "air" from the outside. Hot air furnaces are frequently installed in dwellings and the hot and cold air pipes so arranged that the cool air is drawn from the living rooms, heated in the furnace and kept revolving thus, with only such fresh air getting in as leaks through the wall or passes through open doors or windows.

There are two general methods of ventilating farm houses. One is to introduce and distribute the fresh air by means of the heating arrangement, the other is to ventilate somewhat after the system provided for horse and cattle barns, having inlets for fresh air and vents properly located for the removal of the foul air from the house. A stove ventilates the room to some extent by drawing up the chimney a portion of the air within it, fresh air sifting in from without, a fireplace, whether used or not, ventilates excellently, a hot air furnace so equipped that it draws fresh air from without, heats it and distributes it through pipes and registers to the rooms, provided there are outlets for the air within, is a satisfactory system of ventilation in itself.

A good plan to remove air from a house, whether heated by furnace or stoves, is to have the stovepipe arranged so that a section of it will extend below the hole in the heater, extending down to within a few inches of the floor and provided with a damper as shown in the illustration. If a complete system for the interchange of air through all the house is wanted this plan can be elaborated, especially may such a system be readily installed where the chimney extends upward from the basement through the center of the house.

Intakes, of course, have to be provided. To make such intakes openings may be cut in the siding as represented at A, between pairs of studding, covering them with one-eighth inch mesh galvanized wire netting, and make corresponding openings just under the ceiling at the same pair of studding, covering these with white enameled 4 by 12 inch register faces. These registers may be opened or closed as required, or those on the windy side kept closed all the time in case too much outside air is forced in.

The proper course to take in installing such a ventilation system is to modify the heater so that air may be removed from the floor level as already described. If it is then found that an air change of sufficient rapidity takes place, this being made possible through unintentional openings in the wall, the desired result has been attained and the intakes need not be provided. It may be that a sleeping room is situated as represented in the illustration, through which the stovepipe passes. If so it is a simple matter to attach a radiator to the pipe and thus without extra expense ma-

large and the room above small and warmly built, it may be a comfortable sitting room without the expense of additional heat.

In steam-heated houses and in those heated with hot water by means of radiators distributed in the rooms to be heated the ventilation may be, and usually is, extremely deficient, much more so than with stove-heated rooms, for the reason that with these systems of heating there may be provision neither for air to enter nor leave the room, dependence being wholly upon leakage through the walls or upon the openings of windows and doors. In houses thus heated some means should be adopted for drawing the air out of the rooms at the floor level, even if nothing better than the plan suggested for the second floor in the illustration at C. Fresh air intakes should also be provided, and if possible these should be so placed that the air may be admitted at the ceiling directly above the radiators, of course admitting the air from low-down outside, as at BB. When the fresh air intakes are thus located the currents of warm air rising from the radiators at once mingle with the fresh air entering, so that this is immediately and directly tempered. Of course very many variations will occur in making the necessary provisions for the ventilation of houses already built, but enough has been said to permit such adaptations as may be called for.

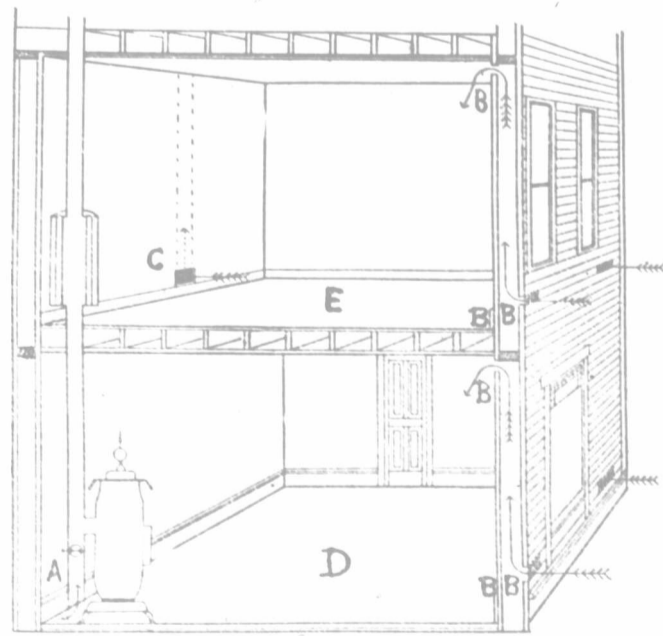
Nail strips on the wall and lath and plaster on these. You will thus have an air space between the lining and plaster and the house will be warmer in winter and probably cooler in summer. If the house is not very warm we would advise lining with building paper, nailing on the strips and lathing and plastering.

A QUESTION ANSWERED

Dear Dame Durden,—Sorry I could not respond sooner to your request for information re protection of currant bushes. I hope I am not too late to be of use.

Protection may be given any time during winter, but preferably soon after the ground has frozen solid. Where snow is deep and lies all winter without melting it will usually be sufficient protection for such hardy bushes as currants. Wheat straw piled all around the bushes, deep and loose, but not on top to break the stems, is as good a thing as can be used. It is not winter frosts that kill, but spring time, when days are warm and nights are cold. The straw keeps the ground and plants frozen till this changeable season is over.

I am beginning to think I did write to you a short time ago. If so this is a surplus production. My mind has been full of other matters lately. Some time I must write you a good long letter, and make up for long silence. Yours truly,
BRENDA E. DOW.



Ventilation System for an Ordinary Dwelling Already Built

A. Outlet flue connected with stove pipe and provided with damper. BB. Inlet for fresh air. B. Inlet at ceiling for fresh air. C. Outlet from upper room, provided with a register to open or close, and opening into attic. D. Lower room. E. Bedroom heated from stove and ventilated by inlets BB, B and outlet C.



A CHANGE OF SUBJECT

Editor Boys' Club,—I hope we boys are not getting tired of writing to the club. I for one, make the excuse of being too busy to write oftener.

We have plenty of snow around here and by the looks of things we will have an extra supply this year, and we certainly need it. I have four steel traps this year but have not caught anything yet. Say, how do you boys bait your traps for muskrats, weasels, minks, badgers? Badgers and weasels are numerous around here this year, but muskrats and mink are scarce, because there is so very little water. I did not know anything about trapping until last year and it really is not very much I know about it yet.

Some boys in this district make an inverted L and put the one end through the ring of the trap and the bait on the other end, they then stick the trap end in the ground and set the trap under the ground and put the bait under the snow and set their trap on top of the bait.

Would it not be good if the editor would get up debates and contests in essay writing, for it gets a kind of tiresome writing about trapping all the time?

I received a letter from John Davidson and one from Henry Veldhuis, but have not answered them yet.

A SASKATCHEWAN COYOTE.

The reason that subjects for essays and debates have not been given out in the club is that the editor wanted to be sure that the boys talked about what interested them most and not about what interested the editor most. It is your page and you can do what you like with it. Hope we shall get the opinion of others on this subject.—Ed.)

WHAT EDUCATION DOES THE FARMER NEED?

In the *Advocate* for August 24th, this question is raised in the Boys' Club.

Though by no means a boy, I have very strong opinions on this matter, which I regard as of the utmost importance to the future of our country.

Competition is increasing yearly, and very soon the ignorant farmer, who cannot adapt himself to changing conditions, since he cannot understand them, will find that he is losing money.

Farming nowadays calls for something more than hard work to make it really profitable.

Whether stock raising, wheat growing, dairying, mixed farming, fruit growing, or poultry raising, the farmer requires an amount of technical and scientific knowledge sufficient to raise his business to the rank of a profession—that is if he is properly equipped to make all the money out of it that there is in it.

Geology, agricultural chemistry, bacteriology, botany, biology from a practical standpoint are all of the utmost value. A sufficient knowledge of entomology to understand his insect friends and enemies and how to encourage or defeat them will often make all the difference between success and failure.

A knowledge of veterinary work will often save the life of a valuable animal, besides saving annually many dollars. Carpentering, blacksmithing and practical engine management are also indispensable. In fact, I might increase the list indefinitely, but I have, I think, said enough to show that a greater range of knowledge is called for in farming than in most professions, and the sooner it is raised to this rank the sooner will good farming become general. When this time does come the uneducated farmer will be regarded by his educated neighbors as the quack is now regarded by the M.D., but he will not have the quack's chance of

making money, since he has nothing wherewith to gull the public.

Furthermore, the uneducated man does not get one-tenth the pleasure out of life that the educated man obtains, and he is a much less useful member of society, though drudges will, I suppose, be always in demand.

Again, the uneducated farmer has not a clear enough outlook to stand up for his rights. He is swindled on all sides, no matter how smart he may think himself; he is jealous of his neighbor, and this deals a death blow to co-operation, the keynote of success, and politically, he is the tool of every smooth-spoken politician, who often sways him both to his own detriment and to that of the country in which he lives.

W. J. L. HAMILTON.

SHEEP DOG TRIALS

In Lord Rothschild's Park at Tring, there will be gathered a great company of shepherds and flockmasters. They will have come from the northern fells and dales, the grassy plains of the west, the hills of Wales, and the populous sheep country beyond the Cheviots. Some of them will give evidence of astonishing lung power; others, of extreme proficiency in the art of whistling. A few will carry shepherd's crooks, and most of them will be experts in a silent language of signs made with the hands and arms. But, quaint and interesting as this pastoral company will be, the dogs which the men will bring with them will be the greater attraction. For the sheep-dog trials at Tring have a fame wherever in Great Britain sheep are moved about difficult country, and the dog, in his highest state of mental development, takes command of things as the real flockmaster.

NOT A SHOW DOG

From the fancier's viewpoint the sheep-dog as a rule is beneath consideration. His breed is often nondescript, and, if it be pure, some essential show-point is usually lacking. The show bench is not his place, for all his superfine intelligence and valuable service. His show is the sheep-dog trial, and there he may shine and win prizes, even if he have but one seeing eye and his coat be the veriest motley that ever covered a mongrel body. The training of a sheep dog, although it requires some patience, is not necessarily the protracted business which one might be led to think from watching the clan methods and perfect tactics of the dogs when at their work. Frequently a dog under a year old gives an excellent display on the show course, and he may not have inherited (as many of the animals undoubtedly do) a sense of what is required of him. If his master's methods be to direct him with a series of whistled orders he must have a fine ear to interpret correctly every varied note and modification. And if he have to work according to shouted commands or movements of his master's hands and arms he must have a perfect understanding of the code employed.

A GREAT MEMORY

When a dog has once learned the code he does not easily forget it. "Some of my dogs have taught me," once said a shepherd to me. "When I've got hold of dogs already broken and found they answered a certain whistle, I've stuck to that whistle, although maybe I've never used it before." The tricks of the sheep-dog are manifold. Perhaps there is nothing of its kind better to see than a test which consists of marking a few sheep, in a flock and setting the dog to separate and pen the marked animals. The latter, with a dab of some pigment on their backs to distinguish them, are indicated by the shepherd, and, by

clever tactics and without undue hustling, the dog will get them away from the main body and hold them up while his master deals with the flock; or he will keep the flock together while the selected animals are secured. In the wilder parts of the country a dog is often sent out to collect and bring in a flock so widely scattered over the hillsides or the rolling downs that many of the sheep cannot be seen at all. Yet in due course the flock is observed coming slowly forward—and not a sheep missing—with the dog briskly busy about them, until they are rounded up at last before the shepherd.

WHAT THEY DO

Something of the capabilities of our best sheep-dogs will be witnessed at Tring. Each dog will be given three wild mountain sheep to bring to his master from a point half a mile away, where they will be slipped from a cart. The shepherd may not move from his position; but he must send his dog off and direct him according to his own methods by shouting, whistling, or waving his arms and stick. The dog will first have to drive his sheep to a hillside on the left, then bring them through two sets of false fences, across a valley, through a narrow opening in another false fence, and by a circuitous route to a fourth false fence, which, having been negotiated successfully, the sheep will be in a position close to the shepherd, who will then be allowed to assist his dog to put the animals through both arms of a Maltese cross constructed of hurdles, and to complete the test by securing the sheep in a small pen. A wave of the shepherd's arm, and off goes his dog in a semicircle on the side indicated, finally bringing up close to his sheep, which his sharp eyes have quickly descried. The sheep are nibbling unsuspectingly, and just as they become aware of the dog's approach the shepherd gives a shrill, slurred whistle, the signal for the dog to lie down. The sheep must not be frightened. They have thrown up their heads and are making away from the dog. A short, sharp whistle, and the dog rises and moves slowly forward. The sheep begin to run. A prolonged whistle, and the dog drops again, only to get on his feet a moment later when the sheep are still, and thus, by sheer tactics, gradually work the animals across to the first false fence.

A WONDERFUL PERFORMANCE

Fence after fence the dog will negotiate in this manner, getting his sheep through the gaps either by stealth or, when they are standing close to the openings, by relying on his speed and suddenly dodging them through. Having brought the sheep to the Maltese cross the dog will crouch on one side of them, while his master, advancing on the other side, will, with arms outstretched, gradually work them through the cross, the dog crouching or advancing as directed. In the same way the final penning will be effected. At a recent sheep-dog trial, when the sheep were exceedingly chary of entering the pen, the dog played a highly interesting part. He was at first crouching about ten feet away from the animals, and his master stood with arms extended as far away on the other side. "Come on a foot!" the latter shouted, and the dog advanced two paces, as near twelve inches as could be, while the shepherd also came forward a foot. The sheep moved a little nearer the pen and stopped, looking back at the dog. Again, "Come on a foot," and the same performance was repeated all around. When it had been repeated eight times, and the sheep were at last secure, both man and dog were almost within the pen themselves.

TWO LANGUAGES

Some of the shepherds have very powerful and far-reaching voices, and command their dogs throughout by shouting, to which, if the wind be favorable, the dogs, as keen as can be to hear their orders, respond immediately. One Welsh shepherd, who enters his dogs in the brace competition (wherein six sheep are liberated and the dogs, one on either side of the animals, work them through the obstacles and eventually secure three in one pen and three in another), works one dog in Welsh and the other in English. Neither dog pays any attention to his comrade's orders, and the

extraordinary performance proceeds amid a bewildering babel of shouts. "Cerdd ffwrdd"—Get off! and both dogs start together to circumvent their sheep. Perhaps the latter breaks away on one side, and the other bursts forth. "Gorwedd lawr"; or they show signs of stampeding on the other side, and out goes the same order in English, "Lie down!" "Gyrr nhw ffwrdd"—Drive them on! "Tyrd yma"—Come here! And so this astonishing display of sheep-dog sagacity continues until the Welsh dog and the English dog have each penned their sheep, and the spectators are wondering what more there is for a shepherd's dog to learn.—London Daily Mail.

CLUB CHIPS

Johannes Tatz says he wants to be a member of the club. He can do it by writing a letter about anything in which boys are interested. He says he is going to trap this winter.

Here's a good experiment to try on Christmas night when everybody wants to be amused. It must be prepared beforehand. Pour a pint of clear water over two or three leaves of red cabbage and let it stand for an hour, then pour the liquid off into a china pitcher or any pitcher not transparent. For the actual exhibition have four apparently empty glasses. Fill them from the pitcher and everyone will be surprised to see the liquid in one become a fine green, in another blue and in another yellow, while the fourth remains red. The secret is that though the glasses appeared empty only one really was. Of the others one had six drops of strong vinegar in the bottom, another six drops of a strong solution of baking soda, and another six drops of strong solution of alum. Try it.

NOT A VERY GOOD CROP

Dear Editor,—This is my first letter to the club, and I would like to join it. I go to Fairmount school. I am in the fifth grade. There are quite a lot going to our school. We are going to have a Christmas tree this year. We live four miles from town, and we have a section and a quarter of land, but we had not a very good crop this year. Wishing your club a success.

FRANK PROVEN.

FOX TERRIER FUN

Dear Editor,—This is the first time I have written to your club, but I have read and enjoyed it. We had to kill a horse this fall and one died. I have a fox terrier pup that is about eight weeks old and he will play with one cat and barks and teases the others. He will sit down on his haunches and eat bread from your hand. He bothered our collie when he had a bone and got bitten in the cheek. I caught forty-seven gophers last summer. On Arbor Day I caught eight gophers. I caught a rabbit this winter in a snare. I have not been to school for a week, for the road is full of snow.

I do not agree with Defender of Nature. I have not a gun, but have caught many gophers, but do not believe in killing song birds. My two older brothers and two older sisters can skate, but I am not able to skate. Yours sincerely,

JOHN BLAIR, JR.



All Good Canadians Now.



The Western Wigwam

A COYOTE FOR A PET

Dear Cousin Dorothy:—This is my first letter to your club, and I hope that you will put it in print. I don't go to school as it is too cold. We had a little coyote for our pet. My brother caught two and one got away and the other died. My birthday was the 28th of November. I was twelve years old. Dear Cousin Dorothy, I saw one of my friend's had a button. Would you please send me one if I will send a two-cent stamp?

SELMA GEISLER.

GONE DEER HUNTING

Dear Cousin Dorothy:—This is my first letter to your club. I did not go to school today because it was so cold, and I have one mile to go to school. I like to go, and I am in grade three. I go every day, and my sister goes, too. My papa has gone hunting deer, and my brother went to help him get a deer. My brother is going to get a deer, too. I like to play with the girls at school and with my little sister. I like to read the letters in THE FARMER'S ADVOCATE. Now, I must close, sending love to the club.

LITTLE PEARL.

NEW ARRIVALS IN CANADA

Dear Cousin Dorothy:—I was reading some of the letters, and thought they were very nice, so I am writing one, too. We came from the state of Minnesota on the 25th of November. I went to school, but have not got started up here yet. We have a car coming up and papa is in town looking for it. There are six of us, and we are staying at my grandmother's till the car comes in.

A NEW COUSIN.

A NICE SEATMATE

Dear Cousin Dorothy:—This is my second letter to your club. I do not go to school every day. I like my teacher fine. Her name is Miss N—. The girl that I sit with is very nice; her name is P—. I am nine years old. My birthday is the first of August. I have one pony. I milk one cow; her name is Polly, and she is a very nice cow. I have five sisters and two brothers. I like the letters in THE FARMER'S ADVOCATE. I would like to have a button very much. I hope I will see this letter in the paper. I am going to join the club.

CURLY HEAD.

FIVE MILES FROM TOWN

Dear Cousin Dorothy:—This is my first letter to the Western Wigwam. My father has taken THE ADVOCATE quite a long time, and I always read the letters every week. We have six horses and one colt. I have got three brothers and one sister. My two brothers, my sister and I go to school. I am in standard III., and I am ten years old. My studies are reading, writing, drawing, arithmetic, history, grammar, and geography, spelling, composition, dictation. Our teacher's name is Mr. K—and he is a nice teacher. I have only got to go to school about a hundred yards. We are only about five miles from town. I am inclosing a two-cent stamp for a button. Wishing your club every success.

HAZEL MELICK.

HOME ALL ALONE

Dear Cousin Dorothy:—I have been very interested reading the little Wig's letters in THE FARMER'S ADVOCATE. We live in Alberta, and have been here twelve years. We like the country fine. We came from the United States to Canada. My brother's and sisters

are all married now, and I am at home all alone. I have a lovely little pony that I ride to church every Sunday; her name is Lady June. We have a yearly school, and I go all the time. I am in the fifth book, and my studies are reading, arithmetic, geometry, agriculture, grammar, history, dictation, spelling. We like our teacher fine; her name is Miss L—. I have been to quite a few skating parties this winter. We live right between the two railroads—the C. N. R. and the G. T. P. We will just be a mile from town. My papa is an auctioneer. I am sending a two-cent stamp; would the editor please send me a button? I will close wishing the club success.

HOPEDALE QUEEN.



Canvassing for a School.

BAD NEWS

Dear Cousin Dorothy:—I ride horseback. We had a pony, and I was on his back one day when he started to run, and I fell off. There is no school now, because our teacher has gone home. She got a telegram that her sister was dead, so she went home. There is no school now till after New Year's Day. I would like to correspond with any girl.

MARIE WHALEY.

HARD PULLING

Dear Editor:—I arrived from the states to Canada. It is nice sleighing. We slide down the hill. We went after a load of wood, and when we came up we could hardly pull it. I am nine years old. I am in the second grade, and have a very good teacher.

ORREN WILCOX.

(You are a little too young for Boy's Club yet, as boys have to be twelve to join that, but it won't be long, and in the meantime you can be a good Wig.—C. D.)

A VISIT TO ONTARIO

Dear Cousin Dorothy:—This is my first letter to the Western Wigwam. I read the letters every week, and they are very interesting. My father has taken THE FARMER'S ADVOCATE for two years.

I am ten years old. I go to school every day I can, and am in grade IV. I have three miles to go to school, and my studies are arithmetic, spelling, composition, reading and writing. My teacher's name is Miss C—.

Last summer, my mother, sister and I took a trip to Ontario. On our way down we went over Lake Huron and Lake Superior on a lake steamer, but came home through the United States. We were away almost two months.

NORMA SCHAFFER.

TWENTY-TWO AT SCHOOL

Dear Cousin Dorothy:—This is my first letter to your club, but I read the letters in THE ADVOCATE every week. I am ten years old and in grade four at school. There are twenty-two children going to school. I have two sisters and one brother; his name is Harvey, and he is five years old. My sister's names are Marie and Marjorie, and mine is Ina. We have seven horses, three calves and two colts, two dogs, two cats and twenty pigs. My letter is getting long, so I guess I will close for this time. I am sending two cents for a button.

INA WHALEY.

A VERY SHORT SECOND LETTER

Dear Cousin Dorothy:—This is my second letter to the Western Wigwam. I am seven years old, and this is the second year that I am going to school. My studies are reading, composition, arithmetic, spelling, dictation, history, writing and drawing. I go to school every day.

GERTRUDE BEYER

FROM TIMBER COUNTRY

Dear Cousin Dorothy:—I am writing a letter to your club, and hope to see it in print as this is my first attempt. I am a little girl eight years old. I came to the West last spring, and I like this country fine, although it seemed very lonesome at first. I didn't like the wind, for I have not been used to it, as I came from Parry Sound district in Ontario, and it is a great timber country. My father was a contractor in that district. My brother takes THE

escape the waste-paper basket. I have sent a stamped and addressed envelope, as I would like very much to get a button.

We live on a farm, ten miles from town and in the summer time I go for the cows on horseback. Some nights it takes me about two hours to find them. I like riding fine. We had a heavy snow storm yesterday, and there is lots of snow on the ground. We did not have much of a garden last summer, for a lot of the seeds never grew. I am very fond of flowers, and I have about eight different sorts of window plants. I think I must close for my letter is getting long.

PURPLE PANSY.

BACK ON THE FARM

Dear Cousin Dorothy,—I have not written to you for ever so long. When I last wrote I lived in Winnipeg, but now, thank goodness, I am on a farm again. I live on the wooded banks of the Red River, nine miles from Winnipeg, on the east side. There are magnificent trees around here. In the summer we often saw the boats, the Winnitoba and Alberta, go down to the lake.

The nearest school is three miles away, and we have stopped going since the cold weather came on. A new two-roomed school a mile from here will be open by New Year's.

The river froze over splendidly, and we had fine skating until this heavy snow fell. The ice will hardly bear a horse yet to clear a large rink, so we have stopped for awhile. Where we live we cannot tell what the weather is like in the open, as we are surrounded and sheltered by the thick bush. I suppose the other Wigs are full of Christmas plans. I am. We all are glad that sleighing has begun.

I am twelve years old and in grade eight, and take up arithmetic, literature, spelling, drawing, composition, British and Canadian history, geography, grammar and writing.

BOOKWORM.

CHRISTMAS

Christmas comes but once a year,
Bringing every kind of cheer,
Christmas trees and dolls and toys
All beloved by girls and boys.

We hang our stockings up at night
And dream of Santa Claus' sights,
What must his work shop look like now,
What smiles light up his cheery brow!

On Christmas morning when we wake,
We rush downstairs our stockings to take,
And see what Santa Claus did bring.
He's children's Christmas fairy king.

He comes with magic reindeer fleet,
Far from that land of snow and sleet,
Called the North Pole, and quickly comes
To bring us children sugar plums.

And toys and every kind of gift,
His pack I'm sure I couldn't lift
When full of things for every child,
He travels swiftly far and wide.

On Christmas Eve he goes to each house,
And comes down each chimney as quiet
as a mouse,
And fills up each stocking in half an eye-wink,
You never find Santa Claus leaving a chink.

But perhaps the dinner is best of all,
When we congregate in the dining hall,
Such a feast was never spread,
Since Thanksgiving came and fled.

Then an afternoon of merry fun—
Christmas Day is nearly done,
We've presents given and presents got,
Oh, Christmas Day will not soon be forgot.

We say good-bye to friends and guests,
Who part with wishes the very best,
And some very tired children go off to their beds,
With merry remembrances fresh in their heads.

But in the midst of all our fun
We never should forget,
'Tis the Birthday of Him who died to save
The world from sin and death.

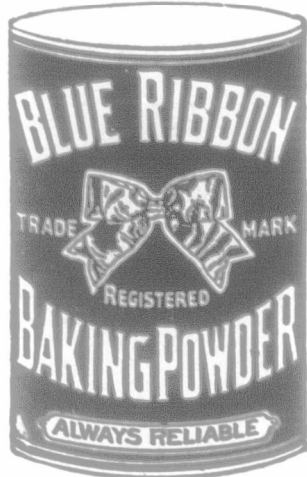
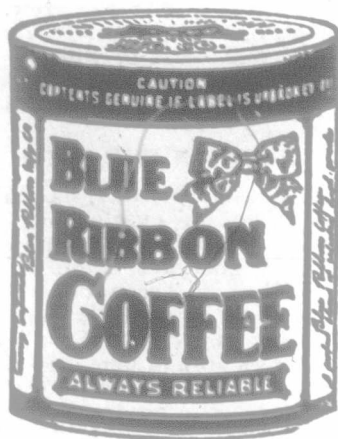
BOOKWORM.

FOND OF FLOWERS

Dear Cousin Dorothy:—My father has taken THE FARMER'S ADVOCATE for some time, and I have been quite interested in the club, so I have taken my courage in my hands and am going to write a few lines, which I hope will

VIOLET LYTZ.

It Pays To Buy Blue Ribbon Goods



When you buy Blue Ribbon Tea, Blue Ribbon Baking Powder or Blue Ribbon Coffee you find their prices are no higher, yet they are guaranteed superior to all others. If you buy any article bearing this trade mark your money will be refunded if you are not fully satisfied.

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You can buy fertile farms with timber, fruit and water for \$10.00 per acre and up. Annual Rainfall 45 inches. Splendid country for fruit growing, dairying, stock raising and general farming. Fine climate, abundant water, convenient Eastern markets, excellent schools, good neighbors. Write for our illustrated Quarterly, maps, Homeowner's Excursion rates and other information. They tell WHY Virginia land is so low in price.

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A Money Saving Offer Is This



The coat is made of 28-ounce, pure wool, imported English black Melton. This material wears like iron, and is guaranteed to retain its color under all conditions. The body is lined with a heavy pure wool, fancy, twilled Italian cloth that will wear as long as the coat itself. The sleeve lining is of durable silk mohair.

The workmanship on the coat is strictly in keeping with the materials that enter into its construction; in fact, is superior to that found on much high-priced custom-made clothing that would cost more than double what we are asking. The collar is made of superior quality silk velvet, and is sewn up by hand. The lapels are felled by hand, and are finished with no stitching on the edge in exactly the same style as the very highest grades of ordered clothing; and the buttonholes, too, are all handmade.

The materials used in this coat were all bought in a very special way, with the intention of selling a thoroughly high-grade coat at a popular price, and it sold well.

We had, however, an opportunity to purchase a few hundred of an over-run from our own work-rooms at a price that enables us to sell our regular \$18.00 coat at almost a third less.

OUR VERY SPECIAL PRICE IS \$10.45

Made in all sizes, from 36 to 44 inches chest measure, taken over vest only. Order early, as our stock is limited.

T. EATON CO. LIMITED
WINNIPEG CANADA

How the Fates Lead the Blind

(Continued from last week)

Everything might have gone on well but for a letter which came from his old partner in the mountains. He had struck it rich again and would be on the royal road to sudden wealth if he could raise the capital to work the new mine, but it would take more money than they had required for their first attempt, as in this case an expensive road would need to be built for hauling the ore down the mountain to the smelter, or they would be compelled to build their own smelter. It was copper this time instead of gold. An older and wiser man would have dropped the matter out of mind at once, but Weldon's imagination kept playing with the possibility of a short cut to wealth, without going through the long, tiresome process mapped out by his father.

It amounted to nothing but an idle dream till a few days before Christmas, when the thought crossed his mind that as he was one of the bachelors of his club who had planned a stag dinner for Christmas eve, and that as Gardner was also one of the party and an inveterate poker player with a tendency to drink a little more than was good for him on special occasions, he might win enough from Gardner to start the copper mine without seriously injuring him, as he was an older man, well established in a lucrative business. It hurt his conscience or pride or honor, or something or another inside, to think of doing such a thing as that, yet he argued with himself that as he would not cheat it was Gardner's own lookout if he drank too much, and besides what could that amount of money mean to Gardner, especially if it was won in a fair game. The temptation got the better of him so far that he wrote his partner that he would let him know within a week what could be done in the matter of raising the necessary funds for opening the mine.

How odd that Eleanor should ask him to help her with a Christmas tree entertainment which she was to give to her class at the college settlement on Christmas eve? She had never before asked a favor of him since he had known her. "Why, yes, certainly!" he had answered. "It will be no end of a jolly diversion, but" — at the *but* a startled look had come into her eyes, which gave him a start quite as realistic as it would if she had pricked him with a needle. Had she after all some occult way of knowing just what was passing in his mind? Did she know that he was planning to beat Gardner out of a nice little amount of money while he was a little the worse for liquor, but too proud to acknowledge it or to account for his loss on that score? The objection got no further than the "but." He hastened to assure her that no other way of spending Christmas eve could possibly afford him greater pleasure. When he had left her he began to upbraid himself for an imaginative fool. What could Eleanor know about his schemes? Then it occurred to him that she had said that she did not believe in keeping her youngsters up late; that the entertainment would begin early and end promptly. He would probably be able to get to the club in time for dinner or for the game after dinner, if he missed the feast.

He was punctual in his appointment with Eleanor, and with his affable, easy manner was soon a favorite among the children, and he was so efficient in the assistance he rendered in manipulating the Christmas tree and its accessories that Eleanor wondered what she could have done without him; but it was as Santa Claus that he most distinguished himself. To the gifts which the children received he added fun enough to make up for many a funless day; but the entertainment lasted longer than he had hoped that it would. When it was over he must see Eleanor home safely, and distances in Chicago are great. There was danger of his being too late at the club to have any chance to win enough to open the new mine. Though he imagined that he concealed it thoroughly he began to be nervous, and shortly afterward began to belabor himself inwardly for a superstitious fool; for he couldn't get it out of his mind that

Eleanor knew all that he was thinking. A cold shiver ran down his back at the thought. What a cad she would consider him if she knew that he thought of playing Gardner for the money he wanted while Gardner was drunk. Of course she would not consider the fact that he did not intend to win enough to in any way inconvenience Gardner, and that he intended to get into a friendly game with him after the mine got under way and let him win it back. She would think him a sneak, and if there was one thing he despised above another it was just that. Then he jerked himself together and told himself what kind of a fool he was to believe such stuff. How was it possible that Eleanor should know anything about it. He had himself somewhat re-assured by the time the children were taking their leave. As he came near to Eleanor she was saying good-night to a crippled boy, who clung to her longer than the rest. As she laid her hand upon his head a tear dropped into his fluffy yellow hair. There was no imagination about that. He saw it as plainly as he ever saw anything, and he knew that while she would do what she could to help him she was not the sort that would shed tears over a child's misfortunes, and when Weldon spoke to her there was an evident unsteadiness in her voice which she struggled to control.

When the last child was gone and their carriage was rolling along the pavement, he said to her:

"Eleanor, one of two things must be true, either you read my mind like an open book or I am the most imaginative, superstitious fool alive."

"You are wrong. Neither of those things is true. I know just this and nothing more: You are contemplating something rash again, and of all your fits of rashness this is the worst I have ever seen you in; but just what you intend to do I have no more idea than one of the horses hitched to this carriage."

"I would give my head to know how you know that much."

"It isn't what I know. It's what I feel, and somehow when anything is going wrong with you I feel it more quickly than when you are happy and cheerful."

A long silence fell over them which lasted till the carriage stopped before her door. As they started up the broad stone steps which raised the main floor of the house above the street she trembled as though from great fatigue. He put his arm about her and almost carried her.

"What can be the matter with you?" he asked, when they were inside, under the night lamp. "I never saw you played out like this before."

"I feel as though I had been running a race against a horse and had to run fast enough to win or lose my life," and she looked up into his face and smiled. When their eyes met he read the secret which she had successfully concealed from him and from everyone else ever since the evening when she first met him at the first Bata social function of their freshman year at the university. A flood of emotion swept over him, and brought the first tears to his eyes that had moistened them since he was a child. He held her close till it passed, and then leaving a kiss on her forehead he was gone without a word.

She sank down upon the stairs leading to the upper floor. How long she sat there she did not know, for a mighty song of triumph was ringing in her ears. From the first time their eyes met she had known that two men of mighty strength struggled within him for the mastery, and she had resolved that the brave and good man should win, and he had won.

The crisis in Weldon's life was passed. He would never again be undecided when he came to the parting of the ways. A great peace had come to her, for a year she had felt the distress of a forceful personality lacking a purpose. Already visions were floating before her of the home she would make for Weldon.

GOSSIP

ERRORS IN PRIZE LIST

A letter from the secretary of Saskatchewan live-stock associations states that slight inaccuracies crept into the prize list of the Saskatchewan Provincial Winter Fair, which will be held at Regina, March 20 to 24, 1911. The inaccuracies all relate to the cattle classes. In section 4, in classes 9, 10 and 11, "spayed heifer, calved previous to 1908," should read "spayed heifer calved previous to July 1st, 1907." In class 13, section 3, "steer, calved previous to July 1st, 1910," should read "steer, calved between July 1st, 1909, and July 1st, 1910." In view of the fact that several thousands of prize lists have been distributed, it is not possible to give publicity to these corrections in any other way than through the press.

DO YOU RECEIVE THE FARMER'S ADVOCATE AND HOME JOURNAL REGULARLY?

From time to time subscribers write us stating that they do not receive THE FARMER'S ADVOCATE regularly.

In nearly every instance we find this due to the subscriber's address having been changed and no notification sent us. When the copies are sent to the former address from our office and then re-mailed by the postmaster it is almost certain that some will go astray.

Now, we are just as anxious as our readers to have everyone receive every copy, and if you miss receiving one we would appreciate it if you notify us promptly so that we may rectify any error in addressing.

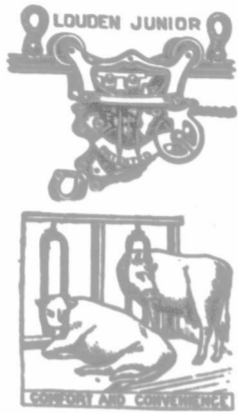
In notifying us as to a change of address please give both the name of the postoffice to which we are at present mailing our publication and the new address so that we may be able to make immediate alterations.

DAIRY CONVENTION ALSO

One of the praiseworthy features of the agricultural societies' conventions, held in Regina during recent years, was the excellence of the programmes. The programme of the convention, which will be held at Regina, January 31 to February 3, gives promise of being up to the high standard set at previous conventions. In fact, with the addition of a women's department, previous records seem likely to be completely retired. W. A. Wilson, superintendent of dairying, is also arranging a convention for Saskatchewan dairymen on the same dates as the agricultural societies' convention.

The arrangement of the three programmes is such that they will conflict

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LOU NIFORM excellence won us three medals, all highest awards, at Halifax, N. S.; St. John, N. B., and The Royal Cornwall Show, England.
LOU ON'T think there was no competition.
LOU VERY medal was awarded in open competition with our strongest opponents.
LOU THING but the best goods properly displayed could win these medals. This our

PERFECT BARN AND STABLE EQUIPMENTS

D I D

The superiority they show in the show ring is equally in evidence in actual operation. Our free catalogue is full of information on Hay Tools for Barn or Field use, Litter Carriers, Steel Stalls and Stanchions, Barn Door Hangers, Pumps, etc., etc. **BE SURE YOU WRITE FOR IT TO-DAY.**

LOUDEN HARDWARE SPECIALTY CO.
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with each other but slightly. The dairymen will hold their sessions at times when agricultural societies' delegates are discussing matters relating particularly to their own work. The main sessions of the women's department will be held during the afternoons. Agricultural societies' representatives will hold sessions for the discussion of agricultural societies' affairs during the forenoons, and on Thursday afternoon, and the other afternoon sessions will be arranged with a view to making them both interesting and instructive for the farmers who attend. The night sessions designed for the entertainment of the joint conventions will consist of illustrated addresses, interspersed with vocal and instrumental music. In a few days a copy of the programmes will appear in these columns.

Convention rates on the certificate plan will be in force from all stations in the West. That is, every person who attends the convention must, in order to get a free return, buy a single fare to Regina and get a standard certificate from the ticket agent. With an attendance of one hundred persons at the convention, this certificate, when countersigned at Regina by F. Hedley Auld, will entitle the bearer to a free return. Persons travelling by two railway lines to the convention will buy a ticket to the nearest junction point and another from that point to Regina, in each case taking a standard certificate from the ticket agent.

Every person attending the convention should observe two points: (1) Buy a one-way ticket, and (2) obtain a standard certificate from the agent when purchasing ticket. F. Hedley Auld, College of Agriculture, Saskatoon, will be glad to supply further information to any person interested.

INCREASE OF FLOUR EXPORT

A recent issue of the Trade and Commerce Report says that the milling of Canadian wheat in Canada for the export trade is rapidly increasing. The exports of Canadian ground flour show a continuous and rapid expansion. For the six months periods ending September, 1908, 1909 and 1910, the values of Canadian flour exported were respectively, \$2,520,655, \$4,414,332 and \$5,606,485. The last two periods show a greater export than in 1907, the total in that year being \$4,285,634, an amount which greatly exceeded the total for any previous six-months period.

A striking feature of this trade is the growing popularity of Canadian flour in the British West Indies. After some years of uncertain fluctuations, this trade now appears to be on a sure basis. For three years the increase has been steady, though not great, but for the first six months of the current fiscal year it totals \$888,539 as compared with only \$152,124 in the previous corresponding period. There is also a large increase in the amount exported to the United Kingdom.

A further marked increase in this business may be expected during the ensuing year when the aggregate capacity of Canadian mills will be largely increased.

EXPORT OF CANADIAN CATTLE

Considerable decrease was shown in Canada's export cattle trade for the season, which closed on Saturday. The total exports for the season were 72,555 head, as compared with 94,314 last season, a decrease of 21,759 head. Shipments of United States cattle via Montreal amounted to only 179 head, as against 7,227 last year, due to high prices at Chicago for export stock. The large decrease is partly accounted

for by the fact that United States exporters had to come to Canada to secure cattle to fill their contracts at United States ports, which sent large numbers of Canadian cattle abroad by United States ports.—Canadian Journal of Commerce.

FARM NEWS

A creamery company has been organized at Elkhorn, Man.. The directors appointed are: President, A. Swan; vice-president, Geo. Lidster; secretary-treasurer, C. W. Crosby. It is the intention of the company to at once apply for a charter, sell stock and select a site for the creamery, the plant to be in operation next season.

Kimball, Alberta, claims a record yield for fall wheat. From 27½ acres measured on the field of R. A. Pilling, there was a yield of 1,423 bushels of Alberta Red wheat.

A farmer, not far from High River, is said to have cleared about \$1,500 on hogs this year.

SPECIAL RENEWAL OFFER

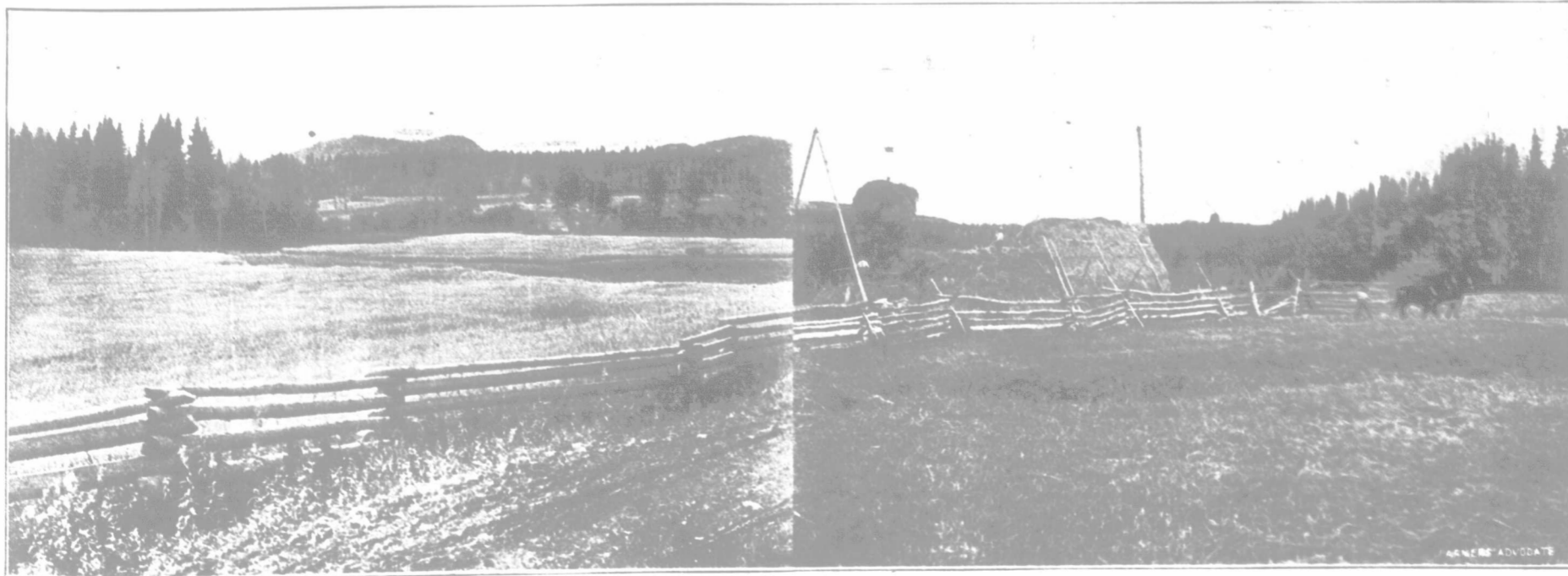
We want you to take advantage of the following offer. By so doing you will not only effect a saving for yourself but also enable us to give you even better value in The Farmer's Advocate, in 1911.

Send us your renewal and one NEW subscription and we will accept \$2.00 as payment for both for one full year. We will also send a copy of our Christmas number free to the new subscriber.

Tell your neighbor what the paper means to you; you'll obtain his subscription without trouble. Remember no matter when your subscription expires we will credit you with one full year and send The Farmer's Advocate for one year to the new subscriber for \$2.00. This offer is open to January 31, 1911.

Salmon Arm blacksmiths have raised the prices for horseshoeing, to take effect as follows: New shoes, single, 65c.; all round, \$2.50; setting shoes, single, 35c.; all round, \$1.25.

A notice from the secretary, Hon. W. M. Hays, announces that the next meeting of the American Breeders' Association will be held at Columbus, Ohio, February 1, 2 and 3, 1911. The officers of the National Corn Exposition have very accommodatingly turned over to the use of the association a hall in which to hold its general meetings; also a lecture room in which it is planned to daily hold a series of illustrated lectures on various phases of the breeding of plants and animals. A very interesting program is being prepared, which will be ready for publication shortly.

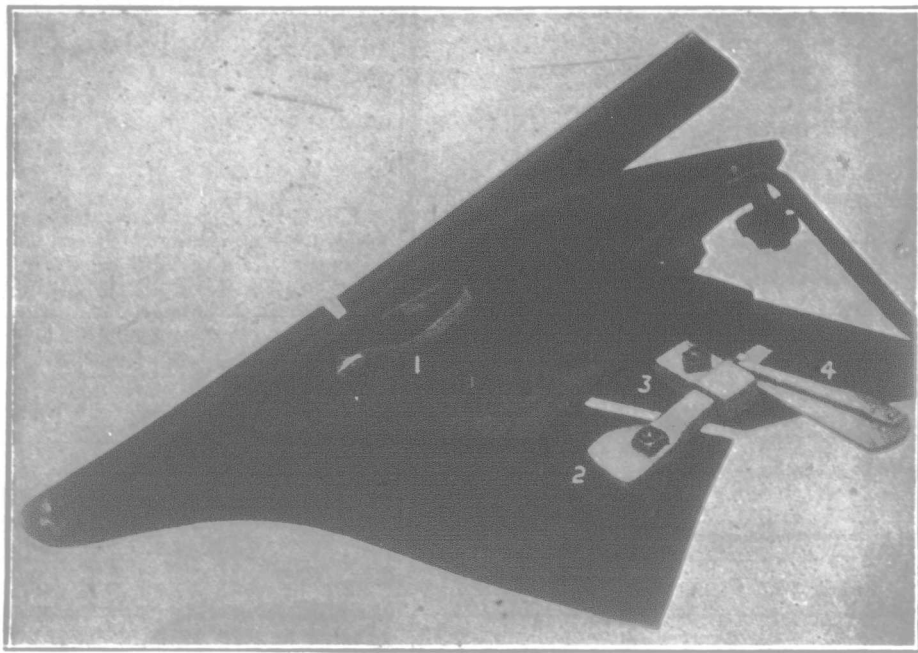


Oat Cutting and Hay Stacking in Bulkley Valley, B. C.

Photo by Courtesy G. T. P.

Plow-Share Fastener

THE PARKS-COUGHILIN PLOW-SHARE FASTENER
(Patented)
ELIMINATES PLOW-SHARE TROUBLES



1, Spring Bolt; 2, Coupler; 3, Lock Bar; 4, Wedge Key.

IT SAVES YOUR TIME. IT SAVES YOUR MONEY.

The expense for fastener is the first cost. The expense for bolts is continuous, with all the extra troubles thrown in. It has stood every test in every soil.

The Wedge Key draws the share on, and holds it on—in spite of rocks, stumps and gumbo—until you release it.

Change shares in forty seconds. Your boy can do it.

Simply lift the plow out of the ground, loosen the wedge key by tapping it at the point with your wrench, remove it, unsnap the spring bolt and lift the share off. Place the new share in position, secure the spring bolt, insert the wedge key, and drive it in with your wrench. Easy? Well, yes.

No burrs to loosen, or bolts to remove.

Sprung shares? Ha! Ha! Ha! A sprung share originated the fastener.

Every part well made. Every set sold under a responsible guarantee.

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Manitoba Winter Fair

Fat Stock Show, Poultry Exhibition and Seed Grain Fair

Brandon

MARCH 11, 13, 14, 15, 16, 17, 1911

\$7,000.00 IN PREMIUMS \$7,000.00

HORSES, CATTLE, SHEEP, SWINE, POULTRY and GRAIN

Annual Meetings of Manitoba Live Stock Associations
Lectures and Demonstrations by Eminent Experts. Judging Competitions

Single Fare Railway Rates. Entries Close Feb. 28th

PRIZE LIST WILL BE READY FOR DISTRIBUTION JAN. 10th

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W. I. SMALE, Brandon, Secretary

STOCKMEN'S ILLUSTRATED GUIDE TO ADVERTISING

FREE UPON REQUEST

FARMER'S ADVOCATE AND HOME JOURNAL

WINNIPEG, MAN.

WORK ON LACOMBE EXPERIMENTAL FARM

(Continued from page 1854)

TWO-ROWED BARLEY

For the first time in the history of this farm, two-rowed varieties of barley have outyielded the six-rowed. Among the varieties which we are recommending are Invincible and Standwell. The objections raised to the two-rowed varieties are, first, that they are more inclined to lodge, and, second, that as a rule they require a greater length of time to mature. The highest yielding variety was this year Swedish Chevalier, with 85 bushels per acre, and the lowest, Beaver, with 44 bushels 18 pounds per acre.

Experiments with both six-rowed and two-rowed barley with different quantities of seed and different dates of sowing have been carried on this year, and the results with barley indicate that the heavier seeding increased the yield and reduced the length of time necessary to mature, as was the case with the wheat and oats. Though increasing the quantity of seed from one bushel up to three bushels per acre with both two-rowed and six-rowed barley we did not reach that point where the yields began to decline, except in the case of the Invincible barley, where two and one-half bushels of seed gave a yield of 81 bushels, 12 pounds, while three bushels made 80 bushels, 30 pounds. Mensury barley sown at the rate of two bushels of seed per acre gave a yield of 83 bushels, 6 pounds, while one bushel more of seed increased the yield by 5 bushels, 30 pounds.

These same two varieties of barley represented the two and six-rowed types in the dates of sowing test. Seeding was made on March 31st, continuing at intervals of one week up to May 12th. Owing, no doubt to the late rains following hard on the dry weather, which promoted a large root development, the late-sown barley gave phenomenal yields. The plot of Invincible sown May 12th yielded at the rate of 85 bushels per acre, while Mensury, sown on the same date, yielded at the rate of 103 bushels, 36 pounds per acre. Speaking generally, the order in which spring grains should be sown, judging from the average of our results, is: Wheat, barley and oats seedings of wheat to commence as early as the land is in condition.

SOIL PACKING

The land on which the soil packing tests was conducted this year was plowed out of timothy sod in the summer of 1909. The packer followed the plow immediately and the land was disced and thoroughly fall-worked. Simply the use of the packer after the drill is responsible for the increased yields shown in the following table. The differences are quite sufficient to warrant the use of the packer, particularly when it is remembered that all the land was packed in 1909, and judg-

	Per acre	Cost of fertilizer	Yield bus.	Yield lbs.	Value minus cost of fertilizer when valued at 50c per bus.	Value at 35c per bus.
Nitrate of Soda	200	\$7.72	477	24	\$213.78	\$142.11
Acid phosphate	400	8.24	...	...	...	...
Muriate of Potash	250	9.02	...	...	...	...
Acid Phosphate	400	8.24	501	36	234.74	159.60
Nitrate of Soda	200	7.72	...	...	...	...
Muriate of Potash	250	9.02	484	...	225.74	152.14
Acid phosphate	400	8.24	...	...	...	...
Muriate of Potash	250	9.02	371	48	169.16	113.38
Nitrate of Soda	200	7.72	...	...	...	...
Sulphate of Potash	250	9.27	536	48	259.13	178.61
Muriate of Potash	250	9.02	402	36	192.28	131.88
Check Plot	...	...	330	...	165.00	115.00

ing from our experience the use of the packer on fall plowing by conserving soil moisture will bring about as great an increase as is shown here by the use of this implement following the grain drill. In 1909, the use of the packer, as compared with land where it was not used at all increased the yield 11.9 per cent., and in 1908, by 23.25 per cent. The use of the packer is advised immediately after the breaker, the plow (whether fall or spring), and after the grain drill.

(The make referred to is the surface type of packer).

GRASSES AND CLOVERS

Western Rye grass and timothy have given the largest yields among the grasses, while alfalfa continues to do well. Turkestan alfalfa yielded this year two tons, and Russian alfalfa 2 tons, 256 lbs. per acre. Letters were written in June to one hundred and fifty farmers living north of Calgary, to whom inoculated soil was sent in 1909, inquiring as to their success with alfalfa. Of all these reporting, only one reports a failure. We feel fairly safe in saying that alfalfa will succeed whenever intelligently handled.

	Days maturing	Weight of straw	Yield in 1910 bus. lbs.
Chelsea, packed	141	5898	55 41
Chelsea, unpk'd	135	4785	50 15
Banner, packed	123	4890	135
Banner, unpk'd	123	4110	131 16
Mensury, packed	114	5130	81 42
Mensury, unpk'd	119	3690	74 18

PEAS SATISFACTORY

The yield of peas has been quite satisfactory this year. The following are the first seven varieties in the list of fourteen tested:

	Yield in 1910 bus. lbs.
1. Prussian Blue	43
2. MacKay	38
3. Early Harvest	37 11
4. Chancellor	37
5. Prince	36 30
6. Picton	35
7. Arthur	33 22 1/2

CORN VARIETIES TESTED

Eleven varieties of corn were tested this year. None of these came to full maturity, but made sufficient growth to provide a large amount of fodder per acre. The weights given below are for the total green crop on the date of cutting, September 9th. Following is the standing and yield of the first six sorts:

	Yield in 1910 tons lbs.
1. Longfellow	21 1327
2. White-Capped Yellow Dent	18 938
3. Golden Dent	17 1196
4. Selected Leaming	17 848
5. Angel of Midnight	17 267
6. Northwestern Dent	16 1686

ROOTS YIELDED WELL

Owing to the dry spring seed of mangels and sugar beets did not germinate very well. The yield of turnips is good. Hall's Westbury turnip stands first with 31 tons, 1096 lbs. per acre. Of the twelve varieties tested Hall's Westbury, Rennie's Prize, Mammoth Clyde, Jumbo, Hartley's Bronze and Derby Bronze Top occupy the first six places in the order named.

Comparison in the varieties of mangels is scarcely fair, on account of lack of uniformity in germination of seed. Half Sugar White, with 12 tons, 948 lbs., stands first.

The Improved Short White leads the list of five varieties of carrots, with 6 tons, 804 lbs.

Of three varieties of sugar beets French Very Rich, yielded 6 tons, 728 lbs. per acre, while Vilmorin's Improved showed the highest sugar content, with 13.4 per cent.

POTATOES ALSO TESTED

Twenty-seven varieties of potatoes were tested, of which the three leading varieties are Table Talk, 577 bushels, 37 lbs., with 85 per cent. marketable; Holborn's Abundance, 534 bushels, 36 lbs., with 90 per cent. marketable; British Queen, 524 bushels, 42 lbs., with 85 per cent. marketable. Other good varieties are Country Gentleman, Ashleaf Kidney and Rochester Rose.

The following table gives the results obtained from the use of various combinations of fertilizer with potatoes:

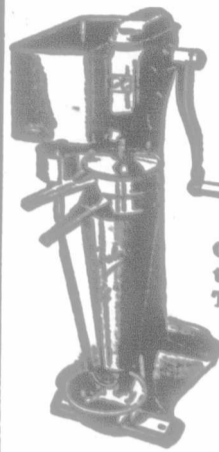
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How Long Should a CREAM SEPARATOR Last?

It Depends Upon The Kind

The average life of the common "peddler's" type of cream separator is one year; many of them barely hold out for three months; others for six; but this gives the "peddler" plenty of time to get his money before the buyer discovers his mistake.

SHARPLES TUBULAR Cream Separators



ARE GUARANTEED FOREVER, and thousands of them, sold ten years ago, are giving perfect service today. Tubulars are built right, by a manufacturer who knows how; who has had thirty years' experience. That's why they last.

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Large English Berkshire. We are offering a choice lot of youngsters, two months old, at \$10. Pairs and trios supplied not akin. We have a number of older ones to dispose of (ready to breed) at \$20. MCGREGOR & BOWMAN RUGBY STOCK FARM FOREST - - - MAN.

QUESTIONS and ANSWERS

VETERINARY. Enquiries dealing with matters of a veterinary nature are answered through our columns by a competent veterinarian free of charge to bona-fide subscribers. Details and symptoms must be clearly stated and on only one side of the paper. Full name and address of the writer must accompany each query, as a guarantee of good faith, but not necessarily for publication. When a reply is required by mail one dollar (\$1.00) must be enclosed.

CLOSURE OF NECK OF WOMB—SPEAR GRASS

1. Mare, weighing about 1,000, six years old, is in good flesh and spirited. Bred her three times, but don't think she is in foal. Stallion owner said her womb was closed up; called it a "dead womb." Is it possible to get her in foal, and, if so, how?

2. Cow, three years old, last spring had bunch come on jaw, which broke and discharged pus. Seemed to get better; then gathered and broke again. Experienced cattlemen told me it was not lump jaw, but caused by spear grass, and would be all right.

What can I do to heal it up? Cow is in good flesh, and gave a good flow of milk all summer.—H. A. C.

Ans.—1. Closure of the neck of the womb is common in mares, and is sometimes easily remedied by dilatation with the fingers. This should be done just before the mare is served by the horse. The hand smeared with vaseline, with the fingers drawn in the form of a cone, is passed into the passage until the neck of the womb is felt. This is opened by careful insertion of one finger at a time until the fingers have passed through the constricted

neck into the womb. This should be done with a gentle, rotatory motion, and no force used. There are patent dilators and impregnators on the market for breeding such mares.

2. Spear grass often causes a wound such as you describe. A wound of such long standing is not likely to heal without surgical metlock being used, as the old abscess walls and dead tissue will have to be removed. You might try washing out the wound several times daily with a solution of burnt alum, half an ounce to the pint. Be sure to keep all particles of food, etc., well picked out.

ENLARGED JOINT

A colt, seven months old, was cut across the fetlock. The cut is healed up, but an enlargement is on the joint. How can I remove the lump, as the colt is a valuable one?—B. R. W.

Ans.—Wounds of any size over a joint usually leave a thickening of the tissues. This thickening is absorbed to a greater or less extent through time. Your colt only being recently injured would advise leaving the enlargement alone for a short time, when, if it does not show signs of diminishing in size, a light blister might be applied.

ASTHMA IN DOG

Water Spaniel bitch, ten months old, has difficulty in breathing, accompanied by a rattling in the throat. Occasionally she chokes, which causes her to cough. Appears worse under excitement or when cold, as she breathes normally when in a warm room or by a stove. Is she liable to transmit any disease to stock, and is she all right for breeding purposes?—X. Z.

Ans.—Your dog is suffering from asthma, probably the result of a neglected attack of catarrh. She is not liable to transmit the disease to her young, but frequently bitches suffering from asthma will not breed. She should be kept in a warm, dry place, well ventilated; should not be fed bulky foods, nor allowed to become fat. You may administer medicinal vapors by putting a teaspoonful of turpentine in a quart of boiling water and hold it so the animal will inhale the steam. If the cough becomes severe, give half a teaspoonful of the syrup of tolu and heroin compound every three or four hours.

SCOURS IN MARE

I have a mare four years old, and her passage seems to keep too soft all the time, no matter what she is fed, and is in poor condition, although she has life enough. What shall I give her? What is best to build up heavy horses that are run down from too much hard work?—G. M. P.

Ans.—Some horses are predisposed to scour, and are called washy. They are those with long bodies, long legs and narrow, flat sides. They are almost sure to scour if fed or watered and immediately put to work. Others scour from debility, improper feeds, etc. Give a tablespoonful of the following in her feed three times a day: Sulphate of iron, three ounces; pulverized nux vomica, one ounce; gentian, four ounces; nitrate of potash, one ounce, and common salt, six ounces. This might also be used with benefit on those horses which are in poor condition.

NASAL GLEET

Gelding coming four years old had distemper about six weeks ago. Had a lump between his jawbones, and, after poulticing it with ground flaxseed, broke open, and healed up in good shape, but still has a whitish discharge from his right nostril when watered. Am feeding him on oat chop three times a day, and oat straw, and seems to be a hearty eater. What shall I do for him?—M. A. S.

Ans.—Horses sometimes suffer from a chronic discharge from the nostrils, after an attack of distemper. Treatment consists of the following: Frequent inhalations of steam to the nostrils, feed the horse from the floor, give a tablespoonful of the following mixture in his feed three times a day: sulphate of iron, one and a half ounces; sulphate of copper, one and a half ounces; pulverized gentian, four ounces, and common salt, six ounces.

RINGBOVE TREATMENT

A horse nine years old, has ringbone. It is getting worse lately. What would you recommend me to use?—S. J. A

Ans.—There is no certainty as to the cure of ringbone, as the cure depends upon the extent of the disease and the structures involved. Firing and blistering, with a long rest, may bring about a cure in favorable cases. We would not advise you to fire this horse yourself. Only a qualified veterinary surgeon is competent to perform such operations. The enlargements should be blistered immediately after firing, and repeated in two weeks, if the new hairs have commenced to grow, but not until then. The following makes a good blister: Powdered cantharides, 4 drams; biniodide of mercury, 4 drams; lard, 6 ounces; Mix. Clip off the hair from the part to be blistered; well rub in the ointment for 48 hours, then wash off with warm water and soap, and smear with vaseline every three days.

QUESTIONS and ANSWERS

GENERAL. Questions of general interest to farmers are answered through our columns without charge to bona-fide subscribers. Details must be clearly stated as briefly as possible, only one side of the paper being written on. Full name and address of the enquirer must accompany each query as an evidence of good faith but not necessarily for publication. When a reply is required by mail one dollar (\$1.00) must be enclosed.

DUTY ON CORN

Is there any duty on corn from the United States? If there is, how much?—P. K.

Ans.—Corn for feeding purposes enters Canada free. Corn for purposes of distillation pays a duty of 7 1/2 per cent.

MAKING SAUERKRAUT

How can I make sauerkraut by the barrel?—S. G. W.

Ans.—There are different ways of making sauerkraut. Following is a method that is recommended. Take a wine, vinegar or rum barrel and clean it out. Slice white cabbage as fine as possible until you have a wash tub full (a wash tub that holds from 3 to 4 pails), and then put that into the barrel and a handful of salt on top. Take a pounder and pound it down as solid as you can. A cordwood stick about the size of a man's arm with a flat end, or an axe will do, only when using an axe the cabbage is cut up by it quite a bit. Then get the next tubful ready and keep on in layers like above till the barrel is full. Then cover with a cheese cloth, or a clean flour sack, put oaken boards on cloth all over the barrel, and a stone on the boards to weigh it down. If the cabbage has no water by the next day (which sometimes will occur) you have to put water on until it comes to the top. Allow it to stand to ferment. Within 12 to 14 days it will be done fermenting, unless it is standing in too cool a place. Whatever you do, don't take the brine off the cabbage. It must be left on at any price, for if you take the brine away you are taking the best part off. Then, again, the fresh water put on, draws all the goodness out of it, till finally it does not taste like sauerkraut at all.

When it is done fermenting, which you can tell by looking at the foam on top (as long as it is bubbling up and making more foam, it is not done fermenting), you may take the weight off, also the boards and cloth, and take a clean broom stick and drive the broom stick into the cabbage right down to the bottom of the barrel. Make in this way from 10 to 12 holes in the cabbage and then let stand in this condition about 2 hours. The air draws the bitterness out of the cabbage. Then cover again with cloth, boards and weight, and clean off the scum every week and inside a month it will be ready for use.

This is the way we have been putting sauerkraut down for many years, and never knew it to spoil. We never put caraway seeds or any kind of seeds in. I've known an odd family here and there put them in, but it's nicer without them. And if the sauerkraut should, in after weeks or months, get too sour all you need to do is wash it a little in cold water (but don't put too much water on it) and then press it out and cook or fry.

McKENZIE'S SEEDS. DROP A POSTCARD FOR. McKenzie's 1911 Seed Catalogue. BRANDON MAN. OF CALGARY ALTA. WILL SOON BE READY. A. E. MCKENZIE CO., Ltd. BRANDON, MAN.

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HUDSON'S BAY COMPANY. LEASING OF LANDS. The company is prepared to lease for hay and grazing purposes all reserved quarters or half-sections. For particulars apply the Land Department, Hudson's Bay Company, Winnipeg.

LAND OF MANATEE. West Coast of Florida—America's Market Garden. Oranges, Grapefruit and Vegetables net \$500 to \$1500 per acre—two to three crops per year—no droughts—no freezes, no extreme heat. Quick transportation, low freight rates to Eastern and Northern markets via S. A. L. Ry. Instructive booklet free now. Address: J. W. WHITE, GENERAL INDUSTRIAL AGENT, SEABOARD AIR LINE RY., DEPT. NORFOLK, VA.

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New Power



Saves Drudgery on the Farm

A Child Can Operate It

Style G. Engine 4, 5, 6, 8, 10, 12, 14, 16, 23 and 27 H.P.

The Gilson Manufacturing Co. owes its success to having concentrated its whole effort on building this engine. Believing in the "whole man to one thing at a time," it does not dissipate its energies on a scattered field, and can give you fifty reasons why it is the simplest, cheapest, most easily operated, and most durable of all gasoline engines.

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This modern power of which we speak is world renowned and simple, too; From shore to shore the word goes round "Goes Like Sixty," oh, so true.

The world has awakened from its sleep; The benefits of modern power to reap; The Gilson in perfection steeped. Sings "Goes Like Sixty" my fame has leaped.

The Flying Machine away did soar; From earth to skies to view the shore; In all the glory and power of man Sings "Goes Like Sixty," yes you can.

The Gilson Engine is sure the best; Unbiased experts claim it stood the test; Canada, with its great and glorious West, Sings "Goes Like Sixty," learn the rest.

TRADE NOTES

FARM BOOKKEEPING A NECESSITY

It is true that farmers have been able to make fortunes out of the soil of the prairie provinces by the simple process of putting in seed and reaping the harvest. Because these operations have required much more physical labor than mental effort, it has taken them a long time to realize that with the inevitable change of conditions there must also come a change in the relation of the farmer as a business man to the business of farming. With the increased cost of labor, the scarcity of laborers and the introduction of modern machinery, a farmer is forced to consider the cost of producing every product offered for sale. To do this by haphazard, guess-work methods is ruinous, if continued from year to year. Moreover, the intelligent farmer desires to know how his farm is paying, not as a whole alone, but by department. If each department pays there is no need to worry about the profits shown by the whole business.

A complete, practical and concise system of farm bookkeeping is absolutely necessary. A theoretical, elaborate, retail mercantile set of books are absolutely useless, worse than useless to a farmer. He has no time to operate such a system. The system must be fitted to the farmer, and not the farmer to the system. It must contain the essentials of cost of production and completeness of records, and at the same time be so compiled as to do away with cumbersome routine or unnecessary detail, and be compilable during the farmer's spare time. Such a system is taught by F. E. Werry's School of Farm Accounting, Brandon, Man. Their system, devised by the founder of the school, F. E. Werry, has been used by a number of prominent farmers throughout the West for some time, and is recognized as the most unique in use. The school teaches this system by correspondence, through their thorough and practical course, written specially for farmers. It deals with farm business exclusively, so that from the first lesson the student begins to learn how

to analyze and classify his farm business.

This new school, having for its aim the training of farmers in the vital subject of bookkeeping, should receive the patronage of every progressive young farmer and farmer's son.

STOCK GOSSIP

Wm. Hassard, Hamiota, sold a fine pair of registered Clydesdale mares recently for \$1,500.00.

In giving the list of purchasers of sheep at the sales concluded by the live-stock associations of Manitoba recently the name of J. C. Wiederhold, of Stony Mountain, was omitted.

Miami horsemen at a meeting recently decided to purchase from Colquhoun & Beattie, Brandon, their well known imported Clydesdale stallion, Polar Star.

Roy Wilkes, 2.06 1-2, foaled twenty-seven years ago, sire Adrian Wilkes, for four years champion pacing stallion and the sire of nearly 50 standard performers, is dead.

A number of farmers in this district have met with serious loss in horses getting an overfeed of wheat, either from carelessness in not clearing up at a setting, or being stored in buildings where the animals had access. As many as three horses have been found dead on one farm. —Moosomin World.

Killarney Agricultural Society at the recent annual meeting elected G. B. Monteith to the office of president, in place of Geo. Lawrence, who resigned after being president of some years. Jas. Miller was appointed secretary-treasurer and manager. It was decided to hold next year's show some time in the latter part of June or first of July.

Jas. Bray, Portage, is advertising a Spanish Jack for sale. Mr. Bray recently, in conversation with a representative of this paper, intimated that he would probably quit farming in the

near future, in which case he would be disposing of his herd of Galloways and flock of Oxfords, not to mention a dozen Angora goats. Mr. Bray has already quit farming several times, but always returned to it from his innate love of the farm and good stock, and, as we know him, he will probably do so again.

Colquhoun & Beattie, Brandon, have just returned from Chicago with a fine string of imported horses, including the splendid aged Shire mare, Lady Grey, which was third in an exceptionally strong class at Chicago, winning also the special of the American Shire Horse Society, for the best American-bred mare any age. From the three-year-old Shire stallion class they have brought the third prize winner which secured this standing in a class of twelve, and in addition another handsome three-year-old that was not shown. Among the nine Percheron stallions they have the first and second prize American-bred two-year-olds, a couple of extremely promising young horses. Four of their nine stallions are American-bred and five of them imported.

BRANDON WINTER FAIR

A letter from W. I. Smale, manager of the Brandon Winter Fair, assures us that despite the fact that the commodious winter fair buildings are given over to housing the unfortunate inmates of the recently burned asylum, arrangements are under way that will ensure a most successful show. Men are at work fitting up the buildings on the summer fair grounds. A large judging arena is being prepared, and the stables will be steam heated. Nothing will be left undone that has to do with providing ample accommodation, comfort and convenience for exhibitors and the public.

This year's premium list includes all of last year's features, with a number of additions of sections and classes. The annual meetings of the live-stock breeders' associations will be held during fair week in the city hall.

CALGARY POULTRY SHOW

The third annual Calgary Poultry Exhibition, held at Calgary, December 13th and 14th, triumphed over the success of former exhibitions. Altogether, the exhibits numbered 970, or three hundred more than had been shown at any previous exhibition of the poultry association. Practically

every breed of poultry was included in the entries. There were exhibits from all over Alberta: from Edmonton in the north to Cardston and Lethbridge in the south.

Dr. A. W. Bell, of Winnipeg, and N. Barker, of Cardston, made the awards. In the Wyandotte classes, over 90 entries were received. H. A. Ross, of Calgary, won first and second in the cockerel class for white Wyandottes. For White Wyandotte cock, the winners were: 1, B. T. Gray, Calgary; 2, Belmont Poultry Farm, Edmonton; 3, B. T. Gray, Calgary; 4, H. C. Richards, Calgary.

Forty birds made up the total as far as Barred Rocks were concerned, and sixty-six Buff Orpingtons. There was also a good showing of Leghorns, the birds numbering over forty. J. H. Wilson and Mrs. W. H. R. Gardiner, both of Calgary, were Brahma winners.

Langshan winners were: E. J. Dewey, of Calgary, and R. Sutor, Calgary.

The display of turkeys, ducks and geese was one of the best in the entire exhibition. The showing of pigeons was also exceeding creditable, over twenty pairs being entered in the various classes. The exhibition was well patronized by poultry fanciers.

RED DEER HOLSTEIN SALES

Michener Bros., importers and breeders of Holstein-Friesian cattle, write to state that they have received a host of enquiries from their advertisement in THE FARMER'S ADVOCATE. They report business as being exceedingly good and they have sold all of their surplus stock and more. Already they are contemplating making more shipments from the east, and intend bringing out a number of notable animals of the Holstein breed this winter.

Michener Bros. handle a high-class line of dairy stock of the producing quality. They report the sales of their two-year-old and yearling females averaging about \$200, and their cows with a record performance averaged about \$250. Michener Bros.' stock won many honors at leading Alberta fairs.

McGREGOR AND SON RETURN

J. D. McGregor, of Brandon, and his son, Kenneth, returned last week from Eastern Canada, where they journeyed after the Chicago International Exposition. In speaking of the winnings of his stock at the big Chicago show, Mr. McGregor, Jr., stated they encountered not only strong competition but also strong American sentiment. However, they went to Chicago expecting this. While they did not receive all awards that they considered were due them, the situation is accepted with an air of satisfaction, though they still feel that their animals stand second to none in America, and that many competent judges would have made different placings at Chicago.

Mr. McGregor, Sr., contemplates visiting Scotland next year, with the purpose of purchasing more prize animals to add to his herd. Last season he purchased many good females, and now it is his intention to buy a stock bull that will stand in the best company. He is not the kind to give up when he does not win all the prizes.

Lord Scott, the champion Clydesdale stallion at Brandon Summer Exhibition in 1909, has been returned to Scotland by his owner, W. J. McCallum, and will travel the Wigton district in Cumberland for the next three years. Lord Scott had a successful showing record before being brought to Canada, being second as a two-year-old at the Highland Show at Edinburgh. He has now a substantial list of Canadian winnings to his credit.

UPPERS' SALES

W. E. and R. C. Upper report as follows: We have sold to C. A. Browning, of Lumsden, Sask., the Percheron stallion, Marquis, age two years, weight 1,825 lbs., girth 8 feet 1 inch; and to F. E. Williams, of Rouleau, two stallions and one mare, which includes a grey two-year-old imported from France in May, of extra quality and action, weight 1,820 pounds; a black American-bred year-old stallion, Castillet, and a four-year-old black mare, bred to a 2,200-pound horse. These horses will all be shown in the ring at Regina spring show.

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CALF REARING

The Holstein-Friesian Association of the United States sends out some suggestions on calf rearing and the care of the dam about gestation period.

They state if strong, healthy calves are expected, the cows must be well fed and cared for; for if a cow be so scantily fed, either at pasture or in the stable, that in her generosity to you she has to turn needed fat and flesh into milk, growing so thin that her hips and ribs are the most prominent features in her make-up, how can you expect her to give you a strong calf? Remember that the calf well born is half reared. Try to be always with your cows during parturition, ready, if necessary, to assist at the proper time; as you will find this extra care the cheapest sort of insurance against loss. Give the cow a well bedded stall, and see that all is dry and clean.

Some breeders remove the calf to its pen as soon as born; but I consider it better for both cow and calf to leave the calf with the cow for 36 to 48 hours, as the cow will be contented at the time when she needs to be quiet, and the calf will suck little and often and so get its digestive organs properly working. These organs of the newborn calf are very delicate, and very subject to disorders if the milk fed be not right in quality, quantity and temperature, or if harmful germs are introduced into the stomach and intestines by feeding from unclean pails. The calf pens should be well lighted and ventilated, be reasonably warm and be kept clean and dry. For the first two or three weeks, the calf should receive only its dam's milk; and it should be fed not less than three times per day with milk warm from the cow. A good Holstein-Friesian cow or heifer will need milking at 5.00 a. m., 1.00 p. m. and 8.30 p. m.; and if the baby calf be fed two quarts at each milking, it is likely to be enough.

By the time the calf is three weeks old, it will be able to dispose of five pints at each of the three feeds; and after it reaches four weeks, it may be fed but twice a day the new milk gradually being replaced with skim milk, till at six weeks the calf is taking four to five quarts of skim milk twice per day. From the time one begins to use skim milk, till the calf is two months old the thermometer should be used so as to be sure the milk is above 90 degrees, but after that age, the hand is a sufficient guide. At about four weeks, the calf will begin to chew bits of hay; and if a little wheat middlings is placed in its mouth after feeding it will quickly learn to eat ground feed. Up to about twelve weeks old the calf should have ground oats or wheat middlings, as well as bright clover hay, before it at all times, all being kept sweet and fresh; and after three months it should have its grain feed as regularly as the cows. While it is better to feed skim milk if one can till a calf is 20 weeks old, warmed water should be offered every day after about the tenth week; but one should be careful that at first the calf does not take it for a new kind of milk, and load up too heavily with it.

PERCHERON REGISTRATION IN UNITED STATES

At the annual meeting of the Percheron Society of America the president, H. G. McMillan, delivered a comprehensive address in which he reviewed fully the whole question of Percheron registry in the United States and established the claim of the Percheron society as the only registration organization worth consideration by breeders of the Percheron horse. From President McMillan's address, the excerpts are taken, which bring down to the present the status of the registration organizations doing business in the country.

The first Percheron society ever organized was organized in the United States in 1876. The original Percheron stud books were turned over to this society. The name given to these stud books was the "Percheron-Norman." In 1883 the Percheron Society of France was organized.

An attempt was made, after the establishment of the Percheron Stud Book of France, in 1883, to have the horses that had been imported prior to that date, and subsequent to the date of the organization of the society in the

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Lost, Strayed or Impounded

This department is for the benefit of paid-up subscribers to THE FARMER'S ADVOCATE, each of whom is entitled to one free insertion of a notice not exceeding five lines. Over this two cents per word.

LOST, on November 18th, from T 36 R 3, one Grey Gelding, aged, film on eye, weight about 1250—H. Connolly, Rutana, P.O. Sask.

STRAYED on the 11th November from 5-21 1W 3 between Eyebrow and Brownlee, Sask. 1 half-bred Clyde gelding, rising seven years dark brown, white stripe on face, two white hind legs, branded L on left shoulder; 1 dark bay filly rising three years, blaze on face, one white hind foot, one white front foot; 1 bay filly rising two years, white star on forehead; 1 dark grey filly, rising two years, one white foot; 1 bay gelding, rising two years, two white hind legs and white face. \$25.00 reward for their return. Walter Simpson, Box 94 Brownlee, Sask.

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MOUNTAIN VIEW POULTRY FARM, breeders of Barred Plymouth Rocks, Buff Orpingtons, S.-C. Brown Leghorns, winners of four championships. Largest and best stock in the West. Prices, single birds, Leghorns, \$2.00 each upwards; Rocks and Orpingtons \$3.00 each, upwards. Joseph Shackleton, Box 268, Olds, Alberta.

SINGLE COMB BROWN LEGHORNS—Special Male Matings. \$5.00 for Cockerels and 3 Pullets. From three birds shown at Winnipeg Fair I took second cock and second and third hen.—Lakeside Poultry Grove, W. J. Saunders, proprietor, Killarney, Man.

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D. SMITH, Gladstone, Man., Shires, Jerseys and Shorthorns, Yorkshire hogs and Pekin ducks.

GUS WIGHT, Evergreen Stock Farm, Napinka, Man. Clydesdales, Shorthorns and Berks. Write for prices.

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McKIRDY BROS., Mount Pleasant Stock Farm Napinka, Man., breeders and importers of Clydesdales and Shorthorns. Stock for sale.

J. MORRISON BRUCE—Tighnduin Stock Farm, Lashburn, Sask., breeder of Clydesdales and milking Shorthorns.

C. G. BULSTRODE, Mount Farm, South Qu-Appelle, Sask. Breeder of Berkshire swine.

HOLSTEINS, HEREFORDS, SHETLAND. J. E. Marples, Poplar Park Farm, Hartney Man.

BROWN BROS., Ellisboro, Sask., breeders of Polled-Angus cattle. Stock for sale.

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United States given place in the French stud book, so that the two books would correspond; but after much effort in this direction it was found to be impracticable. Finally a rule was adopted by the American Society known as the "85" rule. This provided that any animal that had been imported prior to or in the year 1885, regardless of whether it was recorded in the Percheron Stud Book of France or not, if the fact could be shown that the animal was really imported prior to that date the horse was accepted for record in the American stud book. This rule was necessary in order to harmonize the records of the two countries.

Then about 1893 came the depression in horse breeding. Horses could hardly be sold for market, let alone for breeding purposes. In consequence of this condition of affairs, interest seemed to be entirely lost in the Percheron organization, and the new idea of recording, and the establishment of stud books was neglected and almost forgotten. Finally, meetings were no longer held by the society. Nobody paid any attention to the records; and finally, gentlemen, the condition became so serious that the secretary then in charge of the records, who endeavored to maintain them and keep them up, became so hard pressed for the necessary means to maintain the records, and an office to keep them in, that all the books of record were finally sold on execution, to pay the debts that were against the institution. S. D. Thompson, the last secretary elected, and who had charge of the records, bought the books and records at execution sale and became owner of all the property of the old organization.

The Percheron Society of America was organized in 1892 at the suggestion of the Secretary of agriculture. It was at once assailed by Mr. Thompson and his adherents who claimed it had no rights of existence or authority to register Percheron horses. Cases were brought against the society in the courts and finally the society established its rights to continue as an organization. But the litigation caused many breeders to hold back and not record their horses either in the records of the society or those of Mr. Thompson. Finally the society purchased from Mr. Thompson the original records and books of the old society.

During all these years of depression in the draft horse industry, no stud books had been published in this country or France. No stud books was published by Mr. Thompson for a period of about ten years, and when he did publish his volume, in 1898, he only gave the name of the horse recorded, with its number, and the name and number of the sire and dam. There was no extended pedigree, so that it could be traced and compared with any published record.

From 1894 until 1906, a period of twelve years, the Percheron Society of France did not publish a book, so that during this period of twelve years (in the last six of which, large importations were made, and distributed all over the United States) there was absolutely no means of verifying the pedigrees, and knowing whether they were accurate or not.

The only thing was the certificate that was furnished our secretary, when the importer recorded his horse in this country. We could not tell whether that corresponded to the records of the French Society or not, because there were no published volumes during this period.

It is a matter of history that the Percheron Society of France had three different secretaries during this time, all of whom are now dead, the last one dying prior to the publication of the volume in 1906. The manner, too, in which French records are kept makes mistakes probable, and renders it difficult to trace records.

A year ago the Department of Agriculture at Washington called on the Percheron society to explain discrepancies that arose between the certificates issued by the society of France and those of the Percheron society of America. The Department of Agriculture wished the Percheron society to harmonize its records with the records of the society of France. The society undertook to investigate the various points involved, and in many cases it was found impossible to

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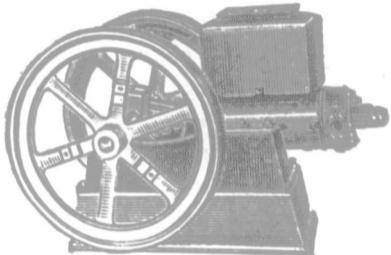
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horses had been recorded by the organization of 15 or 20 years ago, to secure original certificates of registration. Effort also was made to have the Percheron society of France recognize certificates that had been omitted from their volumes.

When we went to Washington the last time we felt that this frequent raising of question as to the genuineness or correctness of pedigrees of horses—many of them imported 10, 15 or 20 years ago, the pedigrees of which had been relied upon by the breeders of the country all this time, and which a very large number of the breeders of the country were interested in—was damaging to the breeding business; and that no good could be accomplished in raising these questions at this late day, for the reason that it would be impossible to find the evidence that would throw full light upon these transactions of 15 or 20 years ago.

We felt that in a large sense the principle of the statute of limitations should apply, and that the breeders and farmers of the country, interested in the Percheron horse, should not be constantly harassed with doubt and uncertainty in their breeding operations.

The action of the Percheron Society of America, in registering imported horses, is necessarily based upon the French certificate, and when the importer presenting such certificate has complied with the rules of the Percheron Society of America, and has received his certificate of registration from this association, we believe it to be the imperative duty of our society to stand behind every pedigree so issued, upon which it has set its seal and the signature of its proper officers. A certificate of pedigree issued in this manner, as provided by the bylaws of the society should be absolute and conclusive on all parties concerned, and no doubt should ever be entertained afterwards as to the genuineness or reliability of such certificate of pedigree and the registration thereof.

So the Percheron Society of America recommended that the Department of Agriculture establish a system of inspection for all imported horses: That it may be accurately determined whether or not such horses have authentic certificates of pedigree from a reliable pedigree association in the country from which they come.

2. "That such horses be inspected as to their identity, for the purpose of ascertaining whether or not they are correctly described in the pedigree submitted with them, and represented to be the pedigree of the said horse, and also for the purpose of determining whether or not said pedigrees are genuine and duly authenticated.

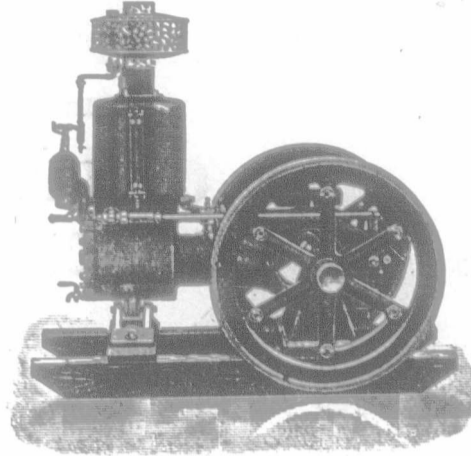
3. "That it may be determined whether or not such horses are free from dangerous, infectious and contagious diseases, and suitable for improving purposes in this country.

"We further recommend that when inspection has been made, as herein provided, that an accurate and careful report of such inspection be transmitted to the Department of Agriculture immediately, and that a complete record of all imported horses, with the results of the inspection, be kept and made a matter of record in the Agricultural Department of the United States, for the information of all American Record Associations interested in the breed of horses; and that when information concerning such record and inspection of horses is requested by this society or any other having an interest in the same, it be furnished with as little delay as possible.

"We further recommend that the Department of Agriculture communicate with the Department of Agriculture of the Republic of France, or the Percheron Society of France, for the purpose of impressing upon said Percheron Society the importance of having authentic pedigrees, and a correct record made in the Percheron Stud book of France, of all horses imported to this country, in order that no conflict may hereafter arise in the published records of the stud book of the Percheron Society of America and the stud book of the Percheron Society of France."

The government have now stationed at the port of entry an official whose duty it is to inspect the horses, pass upon their pedigrees, thus relieving the

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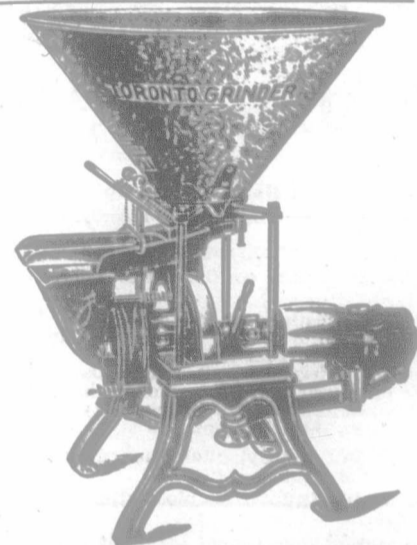
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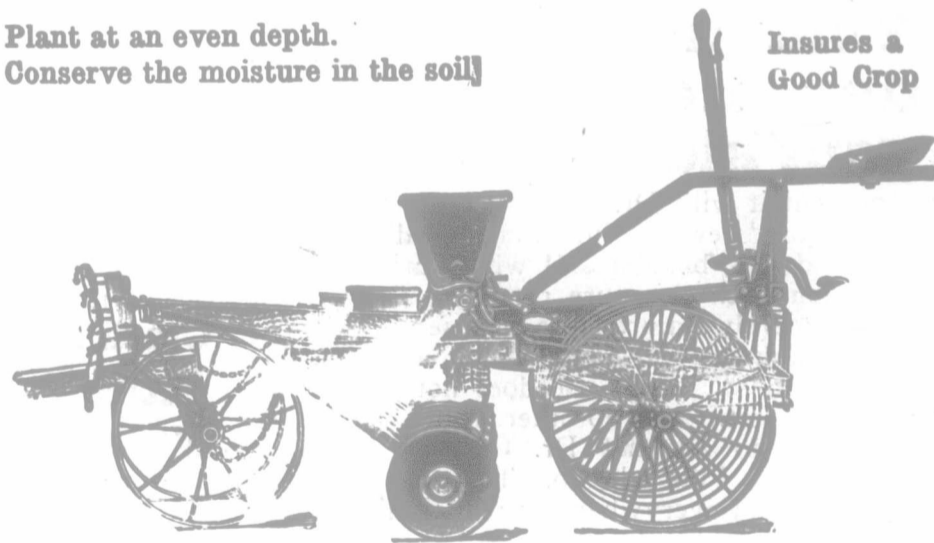
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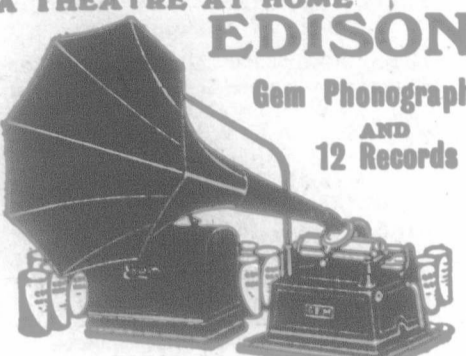
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in sizes from 320 to 960 acres. One of these is a clean seed farm of virgin soil, as good clay loam as can be found in the world.

The Cut Arm Farm Co., Bangor, Sask.

society of the work it undertook in that direction last September.

With regard to the registration of American bred Percherons in the society's stud book the original rules were exceedingly liberal. Encouragement was given the breeder to record his certificates of pedigree and finally much of the stock that had been neglected during the years of depression and litigation were recorded in the volumes. Later transfers were required of the mares, and from time to time the rules were made more rigid, until now a man has to have all the transfers before he can record his colts. In addition there is a rule that every colt is to be recorded before September first of the year after he is foaled. So far as the recording of American-bred horses is concerned, and we believe it is practically impossible for any wrongful or irregular registrations to occur in the future conduct of the affairs of the society, and the pedigrees issued by this society will be so safeguarded that they will be as reliable and trustworthy as those of any breed association in the world.

THE PROVINCIAL FAT-STOCK SHOWS

(OUR ENGLISH CORRESPONDENCE)
 Once more the flight of time has brought us to the season of the fat-stock shows. The Norwich and Birmingham shows are the two chief provincial fixtures in England, and are only surpassed in importance by the Smithfield show. This year's Norwich show was a good one, though the cattle were not of exceptional merit. Entries were slightly fewer than last year.

The King was a prominent exhibitor, taking two firsts and seven seconds. To an Aberdeen-Angus heifer went the champion prize. This was J. J. Cridlan's splendid Clasp 2nd, by the famous bull, Everwise. She is broad, level, of good depth, and at two years eleven months weighs 14 cwt. 1 qr. 11 lbs., and was in every way a worthy champion. Another Angus heifer was reserve for championship, W. H. Brown & Sons' Staysail of Crimphesham.

Red Poll steers were a fine class. G. H. Wilson won in both senior and junior classes with steers by Starson Emperor. Shorthorns were unfortunately few in numbers. R. J. Balston's Duke of Kent was first in the senior steer class, and the King took second place. For steers of certain classes the competition was very close. The Angus Mower of the Burn, owned by H. Hubble, was first; and another Angus, M. Gurry's Edgell Surprise, was second. Altogether Norwich was a great triumph for the Aberdeen-Angus breed.

In the sheep classes D. McCalmont was a winner for Southdown wethers, second going to the King. In Southdown lambs, C. R. W. Adeane was first. The championship for sheep went to H. E. Smith, for a trio of Suffolk lambs. The pig prizes were fairly evenly distributed amongst a number of well known breeders.

This was the 34th show, and the amount offered in prizes was £765. The number of cattle entered was 112, sheep numbered 96, and pigs 34. Fine frosty weather favored the show, and the attendance of the public was excellent.

SHOW AT BIRMINGHAM
 The Birmingham fat-stock show is the largest and most important of the provincial shows, and has a successful record extending over 62 years. This year the total number of entries was considerably in advance of recent years. There were 166 cattle entered, 56 sheep and 100 pigs. King George entered eleven head of cattle from the Windsor herds; four Herefords, three Shorthorns, and four Devons, and was very successful in winning premier awards. Some fine Southdown sheep were also shown from the Royal flock.

The first class in the catalogue was devoted to Herefords, and this is fitting in view of their importance amongst midland breeders. Some excellent beasts were forward in the two-year-old steer class, and the King's Prince, a fine, evenly-fleshed animal, was placed first. At two years and ten and a half months he weighed 16 1-2 cwt. A close competitor was the winner in last year's yearling class, shown by Sir J. G. R. Cotterell. The King's Prince was good enough to afterwards win the breed championship. The yearling steer class was a much larger one, and

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Milburn's Laxa-Liver Pills will regulate the flow of bile to act properly upon the bowels, and will tone, renovate and purify the liver, removing every result of liver trouble from the temporary but disagreeable headache to the severest forms of liver complaint.

Mr. S. Nelson, North Sydney, N.S., writes:—"I have used your Laxa-Liver Pills. I was troubled with liver complaint for three years, and could get no relief. I was persuaded by a friend to try your remedy, and after taking one vial I got relief. After I had taken three more I was cured completely, and I have not been troubled since, thanks to your valuable medicine."

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the beasts were of very uneven quality but above the average as a whole. There was little choice between the first and second class, but eventually a son of Royal Ranger was placed first, and F. G. Wynn's Buan, second. Both were deep, level and finely fleshed.

Only five heifers were entered, but the quality was good. The winner, F. de Pennefather's Ony Lima, was weighty, but somewhat unevenly fleshed. Second place went to Lord Coventry's Galoche, a somewhat lighter beast.

The Shorthorns numbered 20, and were the best seen at Birmingham

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And are easily worried and irritated, chances are that the liver is not right and you need

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Life is too short to be cross and grouchy. You not only make yourself miserable, but also those about you.

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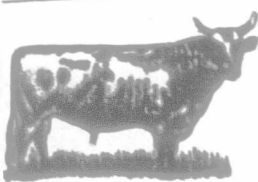
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for several years. The two-year-old steers were grand, and seven were in competition. So closely matched were the first two that an umpire was necessary to a decision. A well fleshed, massive roan, owned by J. J. Cridlan, Gloucester, was given first place. This was Crown Prince, bred by Messrs. Ross, Millcraig, weighing 17 1-4 cwt. at two years eleven months, and a winner at Smithfield last year. Second place went to the King for Fearless, a well topped beast, but slightly deficient in flank.

The yearling steers also numbered seven, but were not of such high quality as the senior class. A good white, the King's Stanley, was first, and was closely followed by Capt. Behren's red and white Swinton Harlequin. The heifer class was of high quality, and produced the breed winner, the King's symmetrical and handsome red, Mystery. There was no question as to her superiority, and she won first and breed championship quite easily. Second in class was a fine white, meaty heifer, Sir O. Mosley's Rolleston Marathon 3rd.

The Devon cattle classes were poorly filled, and this is strange when one considers how many might easily be shown at Birmingham. There were only eleven entries in the three classes. In the senior steer class a referee was necessary, and he placed C. Morris' steer, by Musician, first, and the King's Lancer, second. There was little between them in merit. The winner was excellently topped, and weighed 17 cwt. at two years, ten and a quarter months, and took the Devon championship.

Only three yearlings were forward. First place went to Viscount Portman, and second to the King. In a class of but two Devon heifers, C. Morris' Caption Lily, was preferred to the King's Nita.

Aberdeen-Angus were few in number, but high in quality. There were three two-year-old steers. Sir R. Cooper easily took first place with his fine, square, deep-bodied President of Dalmeny, from the Rosebery herd. At two years eleven months he weighed 15 1-2 cwt. Second honors went to T. B. Earle's Pride of Aldbro. Six were forward in the yearling steer class, and a referee was necessary before a decision was given. J. H. Bridge's Sirdar, a steer of fine type was placed first, and Jas. McWilliam's Rodger of the Dell, second. The Norwich champion, J. J. Cridlan's Clasp 2nd, was in the heifer class, taking first place and Angus championship. Second place in class went to J. McWilliam's Flora 3rd of Wester Pollock.

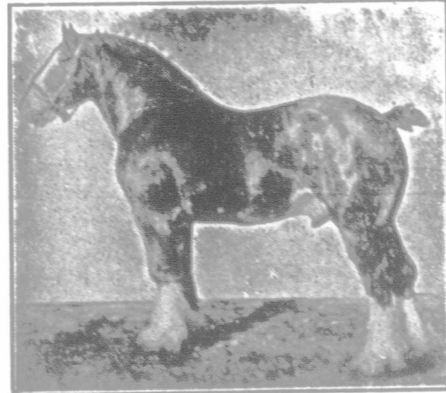
Galloway entries numbered two. A heavy, well fleshed steer took first for H. S. Leon, Bletchley. In West Highland cattle the premier honor for steers was awarded to Lord Durham's yellow, Andrew, and the same exhibitor's heifer, Peggie, was unopposed in the heifer class.

Some grand black Welsh cattle were shown. In the two-year steer class Hon. F. G. Wynn won first and breed prize with a bullock of good length and depth. In yearling steers and heifers, Robt. Hughes was the winner. Cross-breds were a big section, and some prime butcher's beasts faced the judges. Miss de Rothschild owned the winning two-year-old steer, a red roan Shorthorn-Angus cross. In the yearling class, Lord Fitzhardinge took first with a roan, three parts Shorthorn and one part Angus. His top, loin and quarters were excellent, and when championships were awarded he was placed as best animal under two years old.

In the two-year-old heifer class T. B. Earle's red Shorthorn-Angus cross was first, and amongst yearling heifers Sir O. Mosley's blue grey Angus Shorthorn took premier place.

For the cattle championship awards a large crowd assembled and evinced keen interest in the proceedings. The first award was the junior championship and this fell to Lord Fitzhardinge's crossbred, Snowdrift, with the King's Shorthorn steer, Stanley, reserve. This was a popular decision. Then the breed winners came forward for the championship of the show. The King's Shorthorn heifer, Mystery, was declared champion. She was two years ten and a quarter months old, and weighed 16 cwt. 2 lbs. Considerable difficulty was

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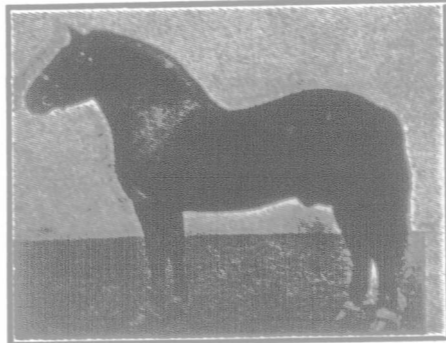
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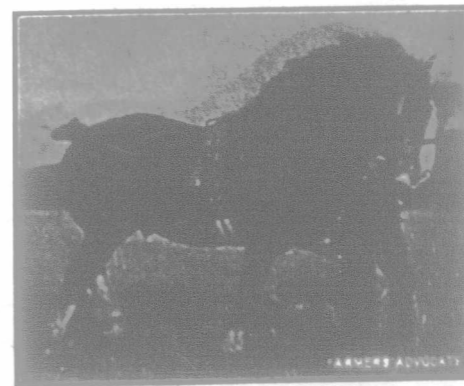
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Sensational Offerings—Young bulls of various ages from my best stock. Young cows and heifers of breeding age. My stock bull, Baron's Voucher, imported. This bull is of grand breeding merit and a sure stock-getter. Correspondence solicited. Inspection invited.



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The proofs of the hundreds of really remarkable cures are too strong to be doubted or denied. Yet she makes no charge for her help, (she asks for no money and accepts none) so there is no reason why you should not write her at once. She only requests that you are personally interested in curing one who drinks. Send your letter with confidence to her home. Here is her address:

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"I have used your Spavin Cure for 10 years and find it the greatest remedy on earth for man and beast."
Sherman Jones,
No telling when your horse will lame itself. Get Kendall's today and keep it handy. Our book—"A Treatise On The Horse"—tells how to cure all horse troubles. Free—at dealers or write us.
Dr. B. J. Kendall Co., Encuberg Park, Wt.

cellent, in spite of the excitement attendant on the elections, and the show will be remembered as one of the best of the series.

F. DEWHIRST.

DODD'S KIDNEY PILLS

CURES ALL KIDNEY DISEASES

RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

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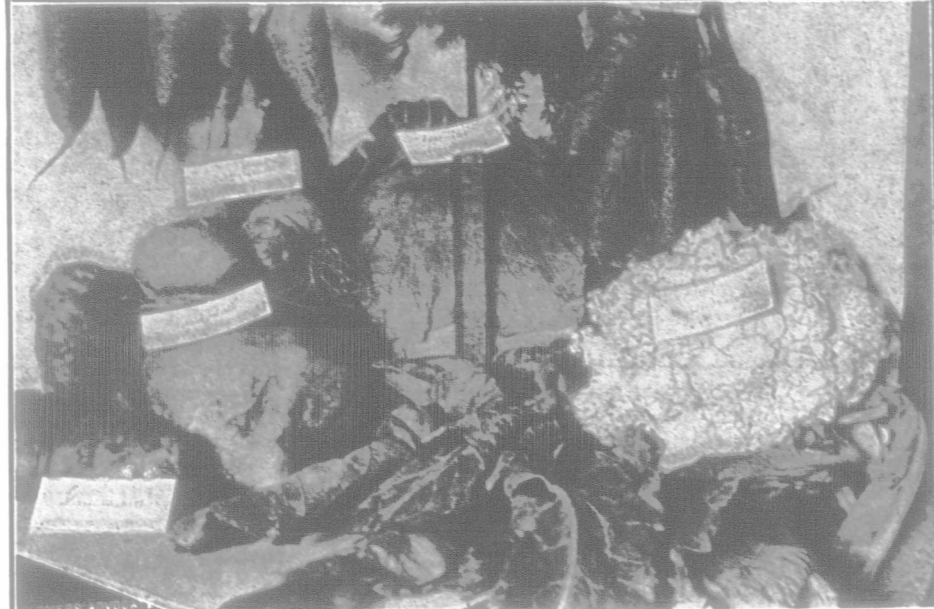


Now is the time to get catalogs and bulletins referring to seeds, plants, shrubs, trees, etc. During the winter months they can be read and studied to advantage, so that intelligent purchasing and planting can be done in the spring.

STRAW AMONG YOUNG TREES

Asked for his opinion regarding the use of straw or manure among trees to keep down grass and weeds, A. P. Stevenson, one of the most practical forestry men in the Canadian West, writes:

"Grass we recognize as being the greatest enemy to the growth of young trees. If the grass and weeds have got a firm hold among one and two-year trees, so that a one-horse cultivator cannot be used, it would be advisable to take up the young trees and transplant in clean land. If three and four year trees are fairly thrifty mulch heavily with rough manure, or partially rotted straw, so as to thoroughly choke out all grass and weeds."



VEGETABLES WERE GOOD IN THE VICINITY OF HIGH RIVER, ALBERTA

CHOICE AND CULTURE OF HOUSE PLANTS

EDITOR FARMER'S ADVOCATE:

We must first consider what space we have for plants, the time we have to devote to their care and then take our own individual choice. It is much better to have a few well kept plants than to have more than can be well taken care of.

For those who prefer the most blossoms with the least care, geraniums are the most hardy of house plants. There are several varieties, the best being almost always in blossom. I prefer the double but not the very double, which do not open in large bunches. A choice of colors are scarlet, pink, apple blossom, salmon, white and dark red. The pansy geraniums are handsome, but only blossom once a year. Petunias are hardy and easily grown. The white, pink and variegated are very free bloomers.

Foliages and colons, fuchsias, begonias and the brilliant and ever beautiful sultana with its glossy green leaves and rose-colored blossoms are easily grown but will not stand any frost. Foliages need to be in sunny windows.

For those who have flower gardens, geraniums, carnations, petunias, verbenas, stocks or asters, which have a nice start, and even in blossom if carefully potted so as not to disturb the roots, may be taken indoors and make nice window plants or supply cut flowers.

Primroses and primulas are pretty and make nice table plants. These start from the root. Asparagus fern is also a pretty table plant and requires little sun.

For large rooms jard. neirs stands

will hold ferns, palms, asparagus fern and oleanders and can be scattered around the room.

For hanging plants the fern ball, ornamental asparagus, or the more common musk will do.

Cinerarias make handsome window plants, with their masses of velvety, foliage, and are easily started from seed.

I have tried several roses and find the tea roses and the "Champion," a large, pink, ever-blooming rose, the best house roses. I have more beautiful roses which only bloom once a year.

Bulbs, especially the hyacinths and lilies, make nice window or table plants but are not ever-bloomers.

This is an inexhaustible subject so I shall not mention any more plants, but give a few general rules for new beginners.

A good soil can be obtained by scraping away upper portion of cow yard and taking the soil underneath, or a good rotten leaf mould is good and can be found in damy bluffs. The pots should not be too large or they will be inconvenient, but the roots must not touch the rusty sides of a tin can or it will kill them.

Geraniums, petunias, foliages and the sultana are easily started from slips in water or place right in earth. I start mine in quart cans and they do not have to be moved for a year. Begonias I find better started in water. Some start from a feal, as the rex. Do not change water. Fuchsias and roses I place directly in earth and insert a glass tumbler over to exclude air and keep in moisture. Oleander slips can be started by making holes in a cock of a pickle

THERE ARE FEW PEOPLE

Who Have Never Experienced A HEADACHE.

Headaches effect all ages and both sexes alike, but the female sex is naturally the more effected through the higher nervous development and more delicate organization of the system.

Burdock Blood Bitters has, for years, been curing all kinds of headaches, and if you will only give it a trial we feel sure it will do for you what it has done for thousands of others during the past thirty-five years.

Mrs. C. Meadows, Clarksburg, Ont., writes:—"For years I was troubled with sick headache and dizziness, and was also constipated. I was advised to try Burdock Blood Bitters. I only took three bottles of the medicine; now I feel like a new woman. I find I am completely cured, and I can truthfully testify that it is the best medicine I have ever used.

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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—even bad 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

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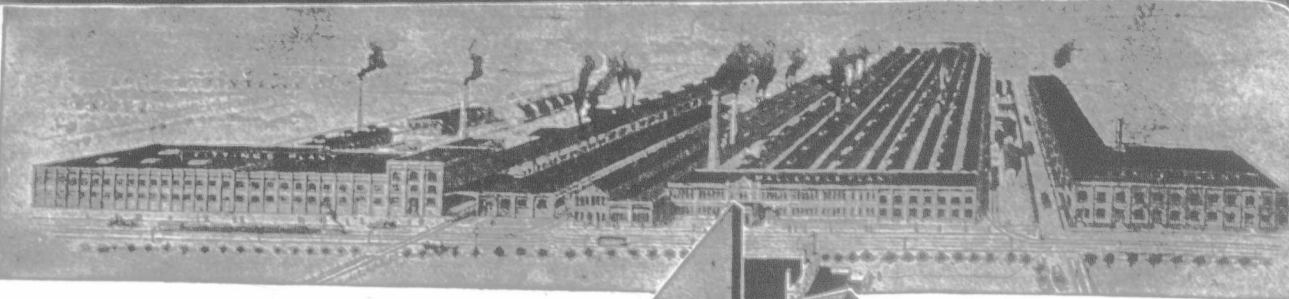
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"DOMINION PRIDE" RANGES

would cost from \$69 to \$78 if sold by retail stores. Our square deal way of dealing direct with you—and saving you all the profits made on ordinary ranges—enables you to have a "Dominion Pride" Range for \$41 to \$49.

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Over 6,000 of our RANGES are in use in Toronto alone, and many thousands more in other parts of Canada. You get a Range that has proved its superiority in every way when you buy a "Dominion Pride," and our guarantee holds good for a year. This guarantee means everything to you—because you have an enormous factory and an old established Canadian Company back of the guarantee. Here's another point about "Dominion Pride" Ranges that is missing in Ranges bought at retail stores. You can always get new parts if you need them.

WE PAY THE FREIGHT—RIGHT TO YOUR STATION

Our price—direct from our Factory to your Kitchen is this—a "Dominion Pride" Range 8-18 or 9-18 top, with high closet shelf or elevated tank or flush reservoir, with zinc sheet to go under Range, 8 joints of blue polished steel pipe and 2 elbows—delivered to any railroad express station in Ontario, Quebec, New Brunswick, Nova Scotia or Prince Edward Island—for \$41—OR delivered to any railroad express station in Manitoba, Alberta, Saskatchewan or British Columbia—\$49. \$5 to be sent with order, balance to be paid when Range is delivered at your railroad station. If not convenient to pay cash we will arrange to accept your Note.

Our illustrated booklets tell the whole story of "Dominion Pride" Ranges, and explain the details of our "Factory to Kitchen" plan of saving you money. At least, write for the booklets. You'll find them wonderfully interesting. Send to-day.

Canada Malleable & Steel Range Mfg. Co., Limited, OSHAWA ONTARIO

[IN WRITING PLEASE MENTION THIS PAPER]

CANADIAN FORESTRY ASSOCIATION

Since a call has been issued for a Dominion forestry convention to be held in the city of Quebec, January 18, 19, 1911, the work of preparation has been going forward rapidly. The convention is to be held under the auspices of the Canadian Forestry Association, of which His Excellency Earl Grey is the Patron, Sir Wilfrid Laurier honorary president, and Hon. W. C. Edwards, the great Ottawa lumberman, president. The ministers of crown lands in the various provinces are territorial vice-presidents, and Mr. R. L. Borden, M.P., is on the board of directors, which includes leading lumbermen, forest administrators and forestry educationists.

The commission of conservation, of which Hon. Clifford Sifton is chairman, will hold its annual meeting in the city of Quebec on January 17, so that the ancient capital will that week be the mecca of all interested in the preservation of forests and all that depends upon them, such as navigation, water-powers, agriculture, fish and game, recreation, health and tourist travel. The absolute dependence of the miner upon the forest for pit props will also be fully dealt with. The commission of conservation, which has been all year gathering information about all of Canada's natural resources, will, through its experts, indicate the present state of each. The forestry convention will discuss and make clear the duty of the public, the press and the governments to Canada's forests.

The premier of Quebec, Sir Lomer Gouin, and the members of the government are enthusiastically taking up the project, the details of which will come under the direction of Hon. Jules Allard, the minister of lands and forests. James Lawler, the secretary of the Canadian Forestry Association, whose headquarters are in Ottawa, and to whom en-

quiries about the programme, etc., may be addressed, will visit Quebec frequently between now and the date of the convention to confer with Mr. Allard and the committee of the association, there to see that no detail of the work is left undone.

Everything points to the largest and most practical forestry convention ever

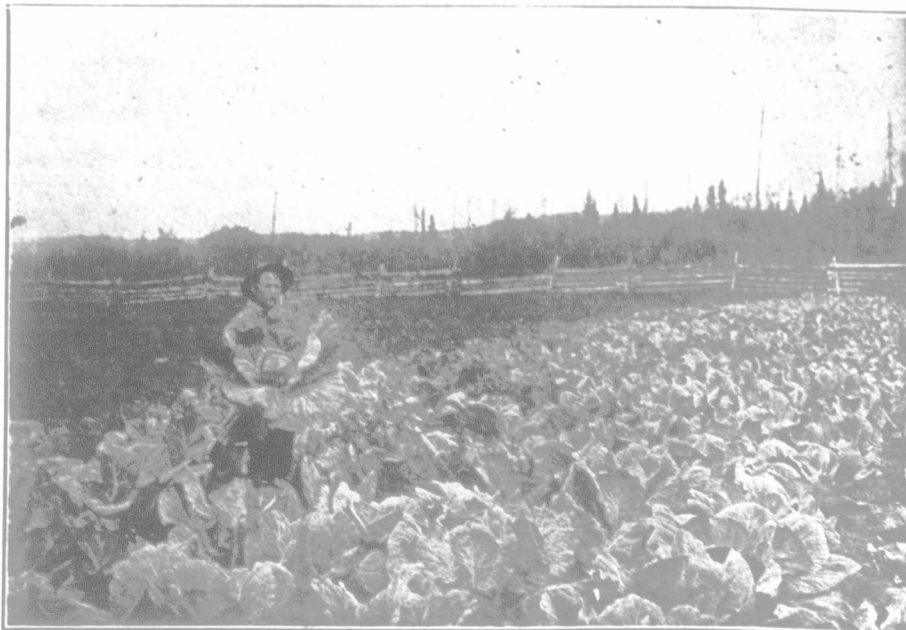
held in Canada. The legislature of Quebec will be in session at this time. Railways have granted special rates, and a strong programme is being prepared, the details of which will be announced later, or may be had from the secretary.

TAMARACK ON HIGH LAND

Interesting work is being carried on at Wolseley, Sask., where the Canadian Pacific Railway has 40 acres on which they grow planting material for the right-of-way from Winnipeg to the Rocky Mountains, as well as flowers, plants and shrubs for station agents and others. Every foot of the 40 acres is being put to good use. Before winter came trees were heeled in to have them in readiness for spring shipping.

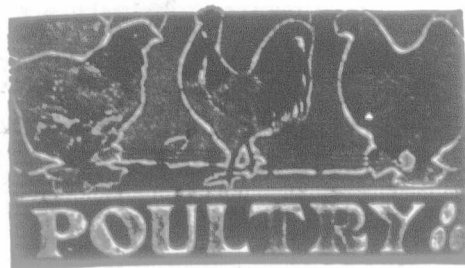
Speaking of the work done, G. A. B. Krook, who is in charge, referred to an interesting tamarack plantation. An endeavor is being made to find out whether or not this tree will thrive on high, dry land. In 1908 trees 4 or 5 years old were taken from a slough near Molson, east of Winnipeg. They have been well cultivated, and so far have done well. It has been found, however, that spring frosts after fine weather has a damaging effect.

On the farm, also, there are many varieties of trees commonly planted in the West and also evergreen seedlings of about a dozen varieties, including pines (jack, Scotch and bull) and spruces.



Cabbage Patch at Aldermere

[Photo by courtesy G.T.F.]



LIMBER NECK IN POULTRY

What are the cause, symptoms and cure for what is known as limber neck among fowls? We have lost some the past summer and fall. It was hard to tell what was the cause. Some would mope around for some days, then die. Others would be all right seemingly one day, and the next day would not have the power to lift their heads any more than if there were no bone in their necks. They have had the run of the stable and stack yards all summer and fall; are in good condition, and have had milk and vegetables almost every day.—
B. A. S.

Ans.—Limber neck is a condition, or disease, of poultry brought about usually from overfeeding, or the long continued feeding on some particular kind of grain, or other indigestible food. The symptoms have been very well depicted by you in your query. The reason the neck becomes so placid is the poisons resulting from indigestion are absorbed and produce paralysis of the brain, from which they seldom, if ever, recover. The treatment is rarely successful, but, as a preventative, they should have a change of grain, or mixed grains should be fed not too abundantly with fresh vegetables and plenty of clean pure water and exercise. In your case the cause may be found in feeding milk too freely. It is generally advisable to kill those affected, and change the feed of those not yet showing any symptoms. Isolate the sick birds from the healthy.

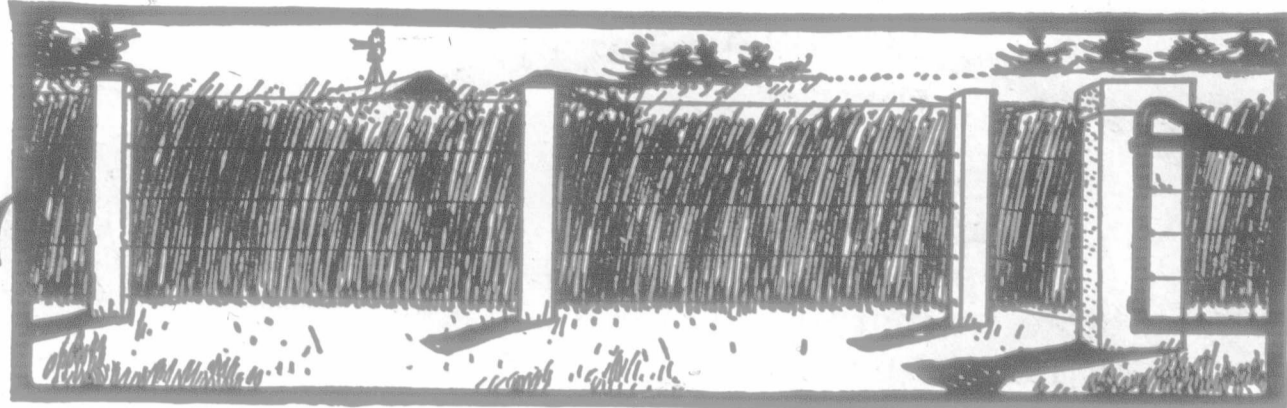
EGGS BOUGHT ON GRADE

In eastern America the authorities are worked up over the frequency with which bad eggs are supplied to the unsuspecting consumer. As usual, various means of putting an end to such imposition are suggested. At the National Poultry, Butter and Egg convention held in Chicago recently, practical means of eliminating the circulation of eggs unfit for food were discussed by Henry Brownell, as follows:

It is impossible for any man long to continue successful in supplying food for the people, unless that food be furnished in the best, purest and most wholesome form. This general statement applies with multiplied force to eggs. There is only one way to stop the circulation of eggs unfit for food and that is to fill up the markets with eggs that are fit for food. It is possible to so gather eggs and to so grade, pack and deliver them as to always deliver a perfectly good egg.

Let us consider for a moment what and where an egg is when first produced. Unlike some other articles of food, an egg is at its very best when it is first laid. Man has never discovered any way of improving an egg. The fresh laid egg is perfect. Eggs are laid in the country, frequently far from market. Many farmers produce eggs several miles from the nearest market. A peddling wagon may call once a week or the farmer may go to market with his eggs. It has been my experience that the worst carelessness in handling eggs is always that which comes first. More eggs are spoiled and more eggs are tainted in the hands of the farmers, the country storekeeper and the peddler than are ever spoiled or tainted after they are received by the shipper. All shippers should be prepared to keep their eggs cool, clean and dry, and if the shipper receives good eggs, it is not very difficult to get the eggs to market and to get them to the consumer while still good. The difficulty has been to keep the eggs good until they get into the hands of the shipper.

The producing of eggs is a business. Eggs are produced for profit. The only way to get the producer of eggs to take care of his eggs is to make it profitable for him to do so. We can educate the producer, we can tell him that a large percentage of his eggs are spoiled, but until we show him that it is money in his pocket to take care of his eggs,



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You may send me a copy of "What the Farmer Can Do With Concrete."

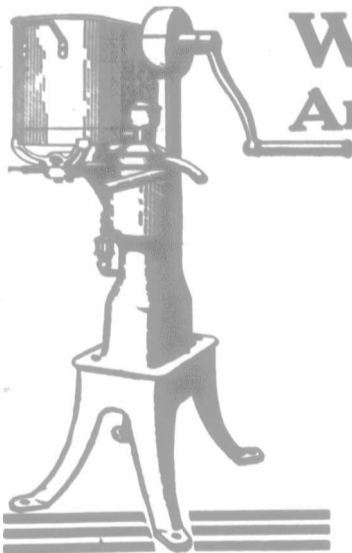
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Comparison proves IHC superiority in materials, construction, and efficiency. For instance, you will find that IHC Cream Harvesters are the only separators with gears which are dust and milk proof and at the same time easily accessible; IHC Cream Harvesters are protected against wear at all points by phosphor bronze bushings; IHC Cream Harvesters are constructed with larger spindles, shafts, and bearings than any other separator, insuring greater efficiency and durability; the IHC bowl is free from slots or minute crevices—that is why it is so remarkably easy to clean.

You will find an IHC in a style and size to meet your needs. Dairymaid is chain drive—Bluebell is gear drive. Each is made in four sizes, from 350 to 850 pounds capacity. The IHC local dealer will be glad to explain the above IHC Cream Harvester advantages and many others, all of which have much to do with your dairy profits. Ask him for catalogues and all information, or, write nearest branch house for the information desired.

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The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizer, stock, etc., write to the IHC Service Bureau, and learn what our experts and others have found out concerning those subjects.



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keep the feet warm and comfortable, no matter how long you are out. They are the only possible means of protecting the feet against cold. They prevent you taking cold—and make walking—driving and curling an extra pleasure.

Elmira Felt Slippers are fine for the house. See that the trademark, as shown above, appears on the sole. All genuine Elmira goods have the above trademark.

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No matter what may be your work; whether you are a teamster, a blacksmith, a salesman or a college professor, it's the man with the greatest Vitality in any walk in life that wins! It's the man who jumps out of bed in the morning after eight hours' refreshing sleep, the man with a clear head, a strong heart and warm, red blood dancing through his veins, who makes his mark in the world!

Give me a man who crawls around, "Packing" a load of Dyspepsia, dullness of eye, a drowsy brain, a lame back, tired legs and a woeful look in his face, and I can transform him into a man of brawn and brain with my Electric Belt—a man full of life and action, able to face the world, to fight its battles and conquer.

It's a grand thing to meet a healthy, hearty, cheery man. He gives your hand a grip that's an inspiration—the very tones of his voice proclaim his power; he radiates cordiality like a depot stove radiates heat. What is the secret of his success? Energy Magnetism, a body full of animal vitality.

This Magnet force is within reach of all of us. Thousands and thousands of men—forceful men, successful men, today—came to me wrecked in mind and body, and I have restored them to health and happiness with my Electric Belt. These men are shouting the praises of my Belt, and they'll gladly tell you what my great appliance has done for them.

Electricity is life! It's the greatest curative force in the world to-day. I have developed a method of applying this force to the body by means of my Belt that has resulted in more actual cures than any system of applying Electricity yet devised by man.

It restores the Vital Force to men and women. It makes strong and healthy men and women out of mental and physical wrecks. It is a positive and lasting cure for Indigestion (Dyspepsia), Constipation, Headache, Drowsiness, Rheumatism, Neuralgia, Lumbago, Sciatica, Weakness of the Back, Weakness of the Nervous System, Sleeplessness (Insomnia). It overcomes the terrible results of early indiscretions. It restores the vitality that is lost. It corrects every sign of mental and physical breakdown. Here I give you a few samples of the kind of letters I receive every day by the score from people who have found Health, Strength and Happiness through the use of my Belt:

MR. G. PRATT, TREHERNE, MAN., writes:—"Dear Sir:—I have worn your Belt as I should for over a month now, and I feel as if life was worth living. I now spring at everything and never quit until it is done. I now have no pains if I bend my back, and no racking headaches. People say, "Is that the young fellow that used to walk around like an old man? What has come over him?" If they ask me the question I will tell them My ambitions have risen sky-high; before, they were in the grave. I cannot thank you enough."

MR. SAMUEL QUINN, EDMONTON, ALTA., expresses himself in these words:—"Dear Sir:—I have been using your Belt for Lumbago and Weak Kidneys and have found it just what I needed, as my back is stronger and I feel better in every way. I can recommend it very highly to any one suffering from these troubles, as I was a chronic sufferer for many years before I got the Belt. Thanking you for the benefits I have received."

MR. E. H. DOHERTY, FROBISHER SASK., has this to say:—"Dear Sir:—I am getting along nicely now. My nervous system is getting stronger all the time. Your Electric Belt has certainly worked wonders for me, and I will have great pleasure in recommending it to any one who may wish to use one. I would not be without it now for far more than it cost me. You may use this as you wish."

If you come to me and I tell you that I can cure you. I've got confidence enough in my treatment to take all the chances. I am curing hundreds of weak men and women every day, and I know what I can cure and what I can't. If you will secure me, I may

Take My Belt, Wear It Until Cured—Then Pay Me My Price

The Dr. McLaughlin Electric Belt is a cure for all signs of Breakdown in Men and Women. The Vitality of the body is Electricity—the force in the Nerve Cells. My Electric Belt will give you back this power and enable you to fight on in the Battle of Life!

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If you can't call send coupon for free book

there are very few producers, who will use sufficient care.

I see samples of sugar in a retail grocery, marked at various prices, each grade of sugar marked a different price. There are half a dozen different grades of sugar and the difference between cheapest and the highest is only two cents per pound. This sugar is all sweet and fit to eat. Would you count it good business if the grocerman instead of offering his sugar at different prices for each grade, would simply say: It is too much bother. I am going to dump the sugar all in one pile; it is all sweet and all good to eat, and I am going to sell all my sugar at six cents per pound. If our grocerman should do that, he would immediately become the laughing stock of his neighbors, and perhaps he would be sent to an insane asylum.

Turn from the sugar a moment to eggs. In most primary egg markets, you will find only one price paid for eggs, good eggs, bad eggs, little eggs, big eggs, dirty eggs all thrown together all count at one price. Practically all of the farmers of this country sell eggs in a market that does not distinguish between values. There is no incentive for the farmer to keep his eggs good. There is no incentive for him to get them to market. The difference in the value of different grades of eggs is very much greater than the difference in the value of sugar. For twelve years I have been buying eggs on a graded basis. At present we are paying 32, 26 and 22c. for the three grades of eggs, which we make, that are good to eat. We are not paying anything at all for the rotten, which is the fourth grade. So far as we know, we have no competitors who buy eggs in this way. So far as we know all of our competitors pay a straight price for mixed grades of eggs. During the twelve years we have been buying eggs graded, we have seen the average quality of the stock in our territory raised until our second grade is now a better egg than any first grade that we could possibly make under the old system of buying.

There is nothing hard or nothing difficult in buying eggs graded. The first thing necessary to do is to get a man who has had proper training in a microscopical laboratory, so that he can make a careful study of eggs in order to get the data from which to train the men who do the egg grading. After this data is secured, it is only necessary to train a bunch of intelligent men to grade eggs the way you want it done, then pay for each grade exactly what it is worth. This hangs up a premium for good stock. It pays the man who produces the good eggs good money, and it pays the man who produces the rotten eggs nothing at all. It puts each producer of eggs on his mettle. Each producer starts out to give you the best possible egg he can. They will pay attention when you try to educate them how to handle their eggs. They will read everything they can find on the proper handling of eggs. They will watch the result obtained by their neighbors and will watch the result of their own efforts.

This system of paying for eggs insures a constant supply of good stock to the shipper. I am well aware of the fact that each shipper must watch his expense account, and I am well aware of the fact that this way of handling eggs increase expenses. If, however, this system of buying eggs increases the value of the eggs faster than it increases expense accounts it becomes a profitable system. It has been our experience that the grading of eggs has enabled us to put on the market stock of a higher value than we could ever make under the old system. We meet very little competition. We are enabled to get a satisfactory price for our good stock and have never been able to get a surplus. Because of the fact that we pay a high price for our good eggs, we can lower our price for cheap stock to a point where they will show us a profit.

This system of handling eggs is simply an application of common sense to the egg business. We appeal to you, who have not tried it, to make an effort to encourage the farmers of this fertile land to help us to furnish our people with the best supply of eggs that any of the peoples of the earth receive.

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New Year

Holidays

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Between all stations on the Main Line, Port Arthur to Vancouver and intermediate branch lines.

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SOIL FERTILITY AND PERMANENT AGRICULTURE

(Continued from page 1846)

and Dr. Cameron. The theory in brief is that each plant throws on a toxic substance into the soil which is poisonous to itself. He regards the theory as absurd and says that there are no facts to support it. Also that it is only the position which Prof. Whitney occupies as the head of the bureau of soils, which makes it necessary to consider the theory in a discussion of the subject. Right down through the centuries man has recognized the importance of maintaining the productivity of the soil as assuring the progress of the race.

Vance (B. C. 116 to 28) wrote: "The most exhaustive method of soil cultivation is the one which proves less exhaustive to the soil."

Virgil says: "The farmer who chooses his soil, and the farmer who chooses his crop, will not each year the largest and the best." "This is by destiny, all things decay and retrograde with the seasons, and the farmer who has but a single eye for the present, will not see the future."

Columella says: "No one gifted with common sense will ever permit himself to be persuaded that our earth has grown old, as a man grows old. The sterility of our fields is to be imputed to our doings, because we hand over the cultivation of them to the unreasoning management of ignorant and unskillful slaves."

Columella also recommended the growing of alfalfa and vetches, commending their virtues in the highest terms.

Baron Von Liebig wrote in 1859, relative to these sayings and quoted from Golumella. He says: "All these rules had, as history tells us, only a temporary effect: They hastened the decay of Roman agriculture, and the farmer ultimately found that he had exhausted all his expedients to keep his fields fruitful and reap remunerative crops from them. Even in Golumella's time, the produce of the land was only four-fold."

He quotes Abraham Lincoln as follows: "The thought recurs that education, cultivated thought, can best be combined with agricultural labor, or any labor, on the principle of thorough work; that careless, half performed, slovenly work makes no place for such combination; and thorough work, again renders sufficient the smallest quantity of ground to each man; and this, again, conforms to what must occur in a world less inclined to wars and more devoted to arts of peace than heretofore. Population must increase rapidly, more rapidly than in former times, and ere long the most valuable of all arts will be the art of deriving a comfortable subsistence from the smallest area of soil. No community whose every member possesses this art can ever be the victim of oppression in any of its forms. Such community will be alike independent of

SOIL FERTILITY AND PERMANENT AGRICULTURE

crowned kings, money kings and land kings." "Public prosperity is like a tree: agriculture is its roots; industry and commerce are its branches and leaves. If the root suffers, the leaves fall, the branches break, and the tree dies." Chinese philosophy.

"Let us never forget that the cultivation of the earth is the most important labor of man. Unstable is the future of a country which has lost its taste for agriculture. If there is one lesson of history that is unmistakable, it is that national strength lies very near the soil." Daniel Webster.

"The farm is the basis of all industry, but for many years this country has made the mistake of unduly assisting manufacture, commerce and other activities that center in cities, at the expense of the farm." James J. Hill.

It has been clearly recognized by thoughtful men among the people that civilization and progress depend upon the maintenance of the productivity of the soil, and the permanent agricultural shop for a sustained progress.

ALL HIS BOARDERS The Israelites once made a calf of gold and raised it up on high, but not so high by half as the calves are wont to fly.

The farmer winks the other eye, The fowls will show you how to "make food" in high and brooding—in feeding them right—and pinning them most rightly to market size or to egg production—to the profit of the farmer.



Watering Place on J. Williamson's Farm, Near Indian Head

When at the price we moan and groan We used to skin him, sell or buy— Today he's come into his own.

The hen that laid the golden egg, According as the fables say, Just now is taken down a peg By hens of ordinary lay.

The farmer smiles and takes away Our money like a bold brigand. We used to own him once—to-day, Alas! we're eating from his hand.

The farmer has an eye for biz, Full well he knows all flesh is grass, Also that all the grass is his. He used to be a docile ass.

To whom, in pity, we could pass The straw when he had threshed the grain.

To-day he's in another class: He's come into his own again. He's smiling at the price of wheat, He's tickled at the price of hay, He's laughing at the price of meat, The cost of living makes him gay.

For things are coming fast his way, He isn't buying gold bricks now And mortgaging the farm to pay; At last the farmer's learning how.

His ox, his ass, his swine, his sheep, And all his stocks are over par, No more on sore backed mules he'll creep,

He's riding in a touring car, His wagon's hitched onto a star. His lean and fallow years are passed, He's going fast, he's going far, He's laughing best, he's laughing last.

L'Envoi The farmer's garnering the dust And adding shekels to his hoard, For board with him the whole world must, And he can fix the price of board.

—New York Sun.

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SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS

ANY person who is sole head of a family or any male over eighteen years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency for the district. Entry by proxy may be made in any agency, on certain conditions, by father, mother, son, daughter, brother or sister, of the intending homesteader.

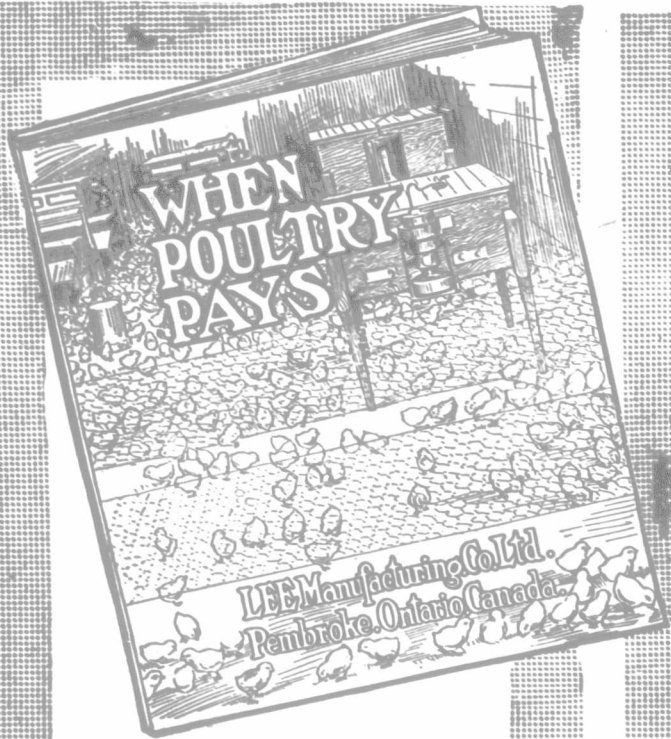
Duties—Six months residence upon, and cultivation of the land in each of three years. A homesteader may live within one mile of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father.

In certain districts a homesteader in good standing may buy a quarter-section alongside of his homestead. Price \$3.00 per acre.

Duties—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. DEWEY, Deputy of the Minister of the Interior. N. B.—Unauthorized publication of this advertisement will not be paid for.



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