

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED
FOUNDED 1886

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

VOL. XXXVI. WINNIPEG. MARCH 20, 1901. MANITOBA. No. 522

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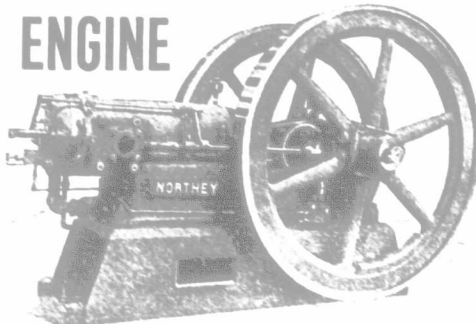
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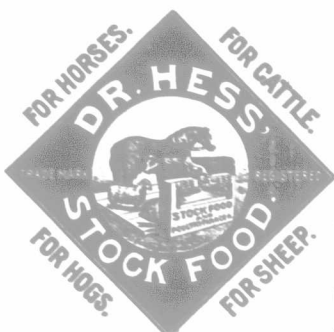
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VOL. XXXVI.

WINNIPEG, MANITOBA, MARCH 20, 1901.

No. 522

The Horse Breeders' Lien Act.

There is in Manitoba a statute entitled the Horse Breeders' Lien Act, calculated as a protection to the farmer, in that the Provincial Government certificate is a guarantee that the stallion bearing it is duly registered in a recognized studbook of the breed to which he belongs; and to the stallion owner, in affording him an opportunity to legally protect his claims for service fees by obtaining through a very inexpensive process a lien of the colt until such claims are satisfied. Such a protective measure for the owner of a stallion should prove a great benefit to the country by encouraging the use of a higher class of stallions, through the protection thus afforded to the capital invested in valuable animals, and in encouraging the use by farmers of pedigreed horses only.

The Act is not, however, taken advantage of as generally as it might be, as the fact of its being on the statutes serves of itself a decided protection to the stallion owner; yet, the farmer should demand his share of the protection by insisting on the guarantee of registration. A recently-inserted amendment to the Act is worthy of special attention in this connection. The original registration fee, payable to the Department, is \$5, but "in the case of a sale or transfer of a stallion once so registered, the new owner, upon filing proof of such sale or transfer to him and, if required, surrendering the original certificate, shall be entitled to a new certificate of registration upon payment of the sum of one dollar." Copies of the Act and also printed forms of statutory declaration, upon which to enter liens against foals, under provisions of the Act, may be had on application to the Department of Agriculture, Winnipeg.

It has been suggested that this Act might go further in the way of protecting the farmer by providing that the certificate should not be granted by the Department unless a qualified veterinarian's certificate guaranteeing the horse free from hereditary unsoundness accompany the studbook certificate. There is no question but that pedigreed stallions with hereditary unsoundnesses are a greater injury to the horse-breeding interests than sound, clean stallions that may not be eligible to record in any recognized studbook. A discussion on this point in our columns would likely be conducive to good results. The Act at present does not recognize the American Clydesdale Studbook; this is surely an omission that should be rectified.

This subject is a timely one for horse-breeders to consider, not only in Manitoba, but, perhaps, more especially in other provinces of the Dominion, where no such legislation exists.

Seed Grain Competition.

OATS.

In our March 5th issue were published the names of the successful competitors in Manitoba and the Northwest Territories, for the prizes offered by Sir Wm. Macdonald for the best samples of wheat. Below are the names of those boys and girls successful in the seed-oats competition:

In Manitoba: John Wells, Roland, 825; Rene Landron, Lorette, 820; Marriion Sherris, Rapid City, 817; Fritz Lundgren, Scandinavia, 812; Ragnhild Lundgren, Scandinavia, 810.

In the Northwest Territories: Annie H. Bourne, Inisfail, 825; Talbot E. Stueck, Abernethy, 824; David M. Strong, Olds, 815; S. Kirkham, Saltcoats, 812; Jessie M. Guthrie, Adair, 810; Hubert Anslow, Wessana, 88; Melomise Provost, Flett Springs, 87; John Strong, Olds, 85; Arthur Mitchell, Grenfell,

A Linseed Mill for Edmonton.

A company has been organized at Edmonton, known as the Linseed Syndicate. It is proposed to build linseed oil works, and also to use the fiber for company purpose having seven hundred acres sown in flax this year, for which they are bringing the seed for distribution.

Raise the Quality Standard of Stock.

Following up the idea advanced in an article in our last issue, advocating the use of only pure-bred sires of good quality, with a view to improving the character of the general live stock of the country, we desire at this time to emphasize the advantage of such a course, by calling attention to the very marked improvement visible in the progeny of a pure-bred sire from a common or low-grade dam, an improvement which is attractive and from the first appearance in life of an animal engenders a feeling of pride and pleasure in the mind of the owner, and at the same time gives an increased relative value, whether a calf, lamb or pig, before it is many weeks old, an increase more than equal to the extra cost of the service fee of the sire, if hired, or to its share of the price where the sire has been purchased. This is due to the fact that the first cross of a pure-bred sire gives to the offspring fully 50 per cent. of pure blood, which in its influence really amounts to much more than 50 per cent., owing to the prepotency of the pure blood of the sire, which stamps its impress so forcibly on the produce that often the result of the first cross is an animal bearing nearly all the appearance and quality of a pure-bred, and which, with reasonable care in the feeding and treatment, will, for the practical purposes of the butcher's block, or the dairy, make as good return for the feed it consumes as a pure-bred animal of the same age, that has received similar treatment. And when pure-bred sires of the same breed, of good quality, are persistently used, it requires only four or five crosses to produce a herd or flock that will breed true to the desired type with reasonable certainty and with much satisfaction. This is a method by which the average farmer may, in a short time, and at little cost, greatly improve the standard of his stock, and find himself in possession of a class of animals that will respond quickly to good feeding in gain of weight for the meat market or of milk for the dairy, and will sell for much higher prices than the ordinary, at any age, when he wants to dispose of them. In regard to early maturity, we are quite sure we are within the mark in stating that, given the same treatment, a grade steer sired by a pure-bred bull will, owing to his superior form and quality, sell for at least one third more at two and a half years old than a scrub will at three and a half years, besides being more satisfactory in every way to the feeder, the dealer, and the butcher. One only needs to visit the stock yards, and read the reports from week to week, to be convinced of the soundness of this opinion. It will be observed that we have been careful to stipulate that the sire must be not only pure-bred, but of good quality, even to breed good grades, and we stand by this, that even the owner of a grade herd of cattle can not afford to use an inferior pure-bred bull, but that it will pay him well to give a higher price for a good one, for we regret to say that it is too true that there are more than a few pure-bred scrubs in the country, as was evidenced at the Government sales held in the East, where much inferior stuff was offered, with little more than a paper pedigree to recommend them. There are hundreds of far better bulls in the hands of reputable breeders in the country than three-fourths of those put up at these sales, that can be bought at reasonable prices, and better worth the money than were those at the prices they brought. To buy intelligently a man should see the sire and dam of the animal he selects, and know something of the general character of the family from which it comes. Pedigree is well in its place, but there are so few in some families that bear a high sounding name, and it is seldom, if ever, safe to base one's judgment of the value of a beast on the paper that represents his breeding, if he be not individually robust, of good form, and possessed of good feeding and fleshing qualities. The failure to

observe this precaution accounts for most of the misfits found in pure-bred herds, and to breed from one of those generally means the perpetuation of its meanness in its offspring, and in future generations to which its influence extends.

Government Auction Sale of Pure-bred Cattle at Calgary.

Arrangements have now been made whereby an auction sale of pure-bred cattle will be held at Calgary during the second week in April, probably on the 12th, when the Western Stock Growers', the Territorial Horse Breeders' and Pure-bred Cattle Breeders' Associations hold their annual conventions. The sale will be under the auspices of the Pure-bred Cattle Breeders' Association, assisted by the Territorial and Federal Departments of Agriculture.

The Association expects to be in a position to take a delivery of all animals intended for the sale, at any railway point in the Territories, and carry them to Calgary in its own care, free of all charges. The Local Government has promised to aid the venture, by paying all cost of transportation to the point of sale. Very complete arrangements will be made at Calgary for the reception and care of the animals, all at the expense of the Association. An entry charge of one dollar per head for members and two dollars per head for non-members will be made, which will represent the total cost of the sale to the seller, from the time his animal leaves his care until a sale has been made.

The scheme has received the enthusiastic support of nearly every pure-bred cattle breeder in the country. A carload of excellent individuals is going to the sale from the Prince Albert line, one from Crane Lake, and one from the Edmonton line. The sale will be extensively advertised by the Association, and a large attendance of *bona-fide* buyers is now an assured fact. All persons having pure-bred cattle to sell, males or females, should at once communicate with the Secretary, C. W. Peterson, Government Buildings, Regina, who will supply entry forms and give further information on the subject.

C. W. PETERSON,

Deputy Commissioner of Agriculture, Regina.

A Woman's Plea for a Garden.

Those who make gardens will now be looking over their seed catalogues and talking over their plans. I say those who make gardens, for it is a deplorable fact that there are many in this broad land who own and cultivate hundreds of acres who never plant a garden seed. They make a great mistake, for a little money spent and a little time expended in this direction would be rewarded by added comforts, and probably more robust health. Every farmer is in receipt of some seed catalogues, and good selections can be made from almost any of them. If one is inexperienced, there are always obliging neighbors who are glad to help, and also advise in other details. A corner of the best-worked land near the house can be chosen, and when this is done, always keep to this spot. It will not wear out, if you replenish the waste each year by applying some well-rotted manure. For the sake of marking out the plot, plant something around the edge, a row or two of trees being the most enduring, either starting them from seed or by transplanting. A thick row of Artemisia cuttings will in three years grow into a very nice hedge, and these can be obtained from the experimental farms. [NOTE: Care should be taken to keep the Artemisia well trimmed back to prevent its going to seed, or it may become a nuisance. — Ed. F. A.] Some small fruits should be set out. The easiest to begin with are currants, native black, and red and white; the latter to be had for the asking, from Experimental Farms. Perhaps you will not have decided to do all these things early enough to get trees and bushes this year, but you can put in vegetable seeds at any rate. Some readers may ask: Who is to do all this? Where is the time to come from? With the garden near the house, there will be little trouble about getting the work done when there is *the will*, as odd moments can always be found. There are few farmers' wives and daughters who, if given the chance, will not be delighted to work the garden. The change from regular housework, and the prospect of having a variety of vegetables for the table during the summer and fall, and a cellar full for winter use, is sufficient to gladden the heart of any true woman.

Central Assn.

Mrs. A. N.

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13. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the Advocate, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
WINNIPEG, MANITOBA.

Small Fruits in the Yukon.

To the Editor FARMER'S ADVOCATE:

Enclosed you will find an extract of a letter from Wm. Drynan, of Dawson City. Mr. Drynan is a practical farmer and fruit-grower, from Paris, Ont., but is now in the wood business at Dawson City. I thought this very interesting, and well worth sending to you.

JOHN CALDWELL.

They talk of Manitoba not growing fruit. Here I am within a few miles of the arctic circle: this summer we had small fruits in abundance: red and black currants, huckleberries and raspberries growing in the highest state of perfection: several varieties of cranberries grown in profusion. There is a red currant here that excels anything I have ever seen. It is the same shape as the Houghton's Gooseberry, and very nearly as large. I intended to mail you a few of the plants or cuttings last fall, but neglected doing so. In the Teslin country I have seen acres of splendid red raspberries, loaded to the ground, with no one to consume them but Indians and bears. In Dawson and the Yukon flats they grow almost every kind of vegetable, and even as high as (13) Eldorado they had potatoes as large as goose eggs. If this country develops good quartz, as it is likely to, I would feel tempted to go into the business and put in five acres of rhubarb. I think it would grow to perfection, and there would be no limit to the demand. Potatoes never sold less than nine cents per pound all last summer: oats at twelve cents all summer and as high as twenty-five cents per pound in winter.

There is a Government farm at Selkirk. I am sorry I did not go over to see how things were when I came down the river, but I may have an opportunity of doing so again.

Seed Wheat for Alberta Farmers.

In order to improve the quality of wheat grown in Central and Northern Alberta, the Canadian Pacific Railway have arranged to supply farmers with seed of No. 1 Red Fife from Eastern Assiniboia and Manitoba, at a cost of seventy-seven cents per bushel, free of freight, to be paid on delivery. Orders must be in before 1st of April, and seed will be delivered at any of the following points: Edmonton, Leduc, Wetaskiwin, Ponoka, Lacombe, H. D. Galt, Timiskam, Olds, Didsbury, Carstairs, Crowsnest, High River, Macleod, Pincher, and ...

The Germinating Power of Damaged Wheat.

The following interesting extracts are from reports of germination tests of damaged wheat made by Prof. J. H. Shepherd, of the North Dakota Experiment Station:

There is much demand for information regarding the germinating power of sprouted wheat. It is impossible to tell by inspection what length the sprouts upon such wheat have been, for the separator and general handling have broken them off in nearly every case. The value of a sprouted kernel for seed depends very largely upon what length the sprout had reached, and upon how quickly and thoroughly the seed has been dried after sprouting.

In the 10th annual report of this Station is the result of a trial with sprouted seeds. Wheat from several fields was taken, in most cases just as it came from the separator, for trial. A small measure of each of seven samples was separated by hand to determine the percentage of sprouted berries. Following is a summary of results:

Sample number.	Percentage of sprouted seed.	No. of seeds in 100 of the original samples which sprouted.
1	7.5	97.5
2	31.0	92
3	40.5	92
4	13.5	90
5	12.1	98.3
6	6.6	93
7	7.9	96.8

In the above samples sprouted and sound kernels from each sample were tried separately, with the following results:

Sample number.	No. of sprouted seeds in 100 which grew.	No. of sound seeds in 100 which grew.
4	84	97
5	86	99
6	68	96
7	73	99
Average	77.5	97.5

It will be seen that sprouting injured grain for seed, although the injury in these cases is not as great as would naturally be expected. The sound seed in this case gave a germination percentage of 87½, while sprouted wheat from the same shocks gave only 77½ per cent., and the sprouts were not so strong as those from the sound seed. Sprouting always weakens seed, and the best results never come from weak seed.

A study of the length which sprouts can reach and leave the seed strong enough to grow followed the above trial. Sound, hand-picked wheat was used in this trial. A number of seeds were placed in the germinator to sprout. When the little sprouts could just be seen, a sample was taken out and dried for 8½ days: the following day a second lot was taken to dry, and so on until a certain number had been started to dry daily for a week. Following are the results:

No. of sample.	Age of sprouts, days.	Length of stem sprouts.	Length of root sprouts.	No. of seeds in 100 which grew.
5	2	Just showing.	1/4 in.	91
4	2	1/4 in.	1/4 in.	81
1	3	3/16 "	1/2 "	75
2	4	1 "	1 1/2 "	75
3	5	1 1/2 "	2 1/2 "	54
6	6	2 1/4 "	3 1/2 "	61
7	7	3 1/4 "	4 1/2 "	58
8	8	3 3/4 "	5 "	45

This trial shows that the length of the sprout has much to do with the value of the sprouted kernels for seed. Sprouting always injures seed by weakening all of it, and by causing a certain number of the weaker ones to fail entirely, and when the sprouts exceed 1/4 inch in length the value of the sprouted kernels is very small, for the resulting plants lack vigor.

Bin-Burned Wheat.—There is a large quantity of stack-burned and bin-burned wheat in the Northwest this season. Tests show too small a percentage of germination to warrant the use of either for seed, although neither sample tested gave evidence of having been burned to more than a slight degree. In reporting upon extended trials with bin-burned grain, in Bulletin No. 9 of this Station, Prof. H. L. Bolley writes: "Any seeds which have at any time been heated because of moisture when in bulk are very liable to have been injured beyond ability to grow."

Seed Wheat of 1899.—The following, from the 10th annual report of this Station, gives the results of a trial with one-year-old seed wheat:

A trial was made with one-year-old wheat to determine whether it is fit for seed when that old. The different varieties varied in the percentage of germination from 73 to 100 per cent., the average being 90½ per cent. Seven of the varieties showing the lower percentage of germination were given a second trial, this time in sand, and the results differed very little from those obtained in the first trial. The results indicate that most one-year-old wheat which has been kept in a dry place was fit for seed.

The foregoing reports indicate that sprouted and burned wheat may be fit for seed, but they also show that a germination trial is the only way by which their fitness can be proven.

Simple Device for Testing.—Take an ordinary dinner plate, put in it a small quantity of water and a piece of wool or cotton flannel white is best, and wool preferred large enough to cover the plate, or nearly so, when doubled. Between the folds of flannel place the seed, counting the kernels care-

fully and making a note of their number. Then invert a somewhat smaller plate over the first, and keep in a moderately warm atmosphere, both day and night. The seeds can be examined occasionally without injury by taking off upper plate and raising top fold of cloth carefully. Water must be kept in the plate all the time, of course. Germination should take place in three full days, or seventy-two hours. This device may be used for testing other seeds, including the grasses and clovers, and corn.

Manitoba Government to Appoint a Commission on Agricultural Education.

In reply to an inquiry as to the establishment of a school of agriculture, the Premier and Minister of Agriculture Roblin made the following announcement:

It gives me pleasure to answer the question of the hon. gentleman at once. I have not been an idle man during the past two months, and the railway question has occupied most of my time, but this topic of agriculture and what can be done for it has always been before me. Indeed, our railway policy is in a sense a phase, or form, of our agricultural policy. I cannot forget that the commanding interest of this Province is agriculture, and that it is the duty of the Government to do all it can on its behalf. Accordingly, I have been reflecting from time to time on the steps which should be taken to promote the higher agricultural education which every intelligent farmer sees to be required if the Province is to hold its own amid the keen and increasing competition which we have to encounter. This question, too, has been brought under my notice by correspondents, by members of this House, and by deputations. Among these deputations I may mention more particularly one from the Council of the University. Representative members of that body have assured of the readiness of the University to further the interests of agriculture by providing any scientific instruction at its command and by welcoming the establishment of a chair of agriculture. The conclusion to which the Government has come is that now is the time for a full and deliberate survey of the whole question of agricultural education, so that we may know exactly what we need and that there be no waste of resources or of men. I am thinking of what is taught in our schools and of what might be taught if our teachers were themselves taught as they might be, and I am also thinking of the provision which might be made training men and women to be agriculturists, and for carrying to a higher point the education of those who have already a practical knowledge of the main process, but who feel the need of fuller and more thorough instruction. It seems to the Government that what is desirable is to institute an inquiry into what has been done elsewhere to further the interests of agriculture, and to invite suggestion on the whole subject from all parties concerned. On the basis of the information thus acquired our further action and legislation should be based. The Government, therefore, propose to appoint a commission, of the ablest men whom it can induce to serve, in order that this great question may be dealt with in the most thorough and effective manner. I may read, for the information of the House, the terms in which we describe the scope of the commission and the instructions to be given to the commissioners.

The Government resolve to appoint a commission to take into consideration the whole question of agricultural education in the Province, and especially how provision may be best made for the higher technical education, both the theoretical and practical. They instruct the commission:

1. To inquire as far as they deem necessary into existing systems of agricultural education in America and Europe.
2. To invite suggestions on the subject from all individuals and bodies interested; and
3. To make recommendations as to the means by which the teaching of agriculture may be furthered throughout the Province, and particularly the higher teaching of those young men and women who mean to devote themselves to farming, for whom adequate technical instruction and training should be provided.

Iron Roofing.

In February 5th issue of the FARMER'S ADVOCATE, I notice, under Miscellaneous, a question, asking what is the best material for roofing a barn, and you ask any of your readers, who have had any experience in that line, as to durability, price, cost of laying, etc. We have had experience with metal roofing, which is advertised in your paper, known as the "Safe-lock shingle." It costs about the same as the wooden shingles, and can be laid by any ordinary carpenter in less than half the time required for wooden shingles, and they will last a lifetime; but they must be painted after they are on awhile, as the paint that is on them is of very little use. We have had them on our house for a number of years, and they are giving perfect satisfaction, standing some very hard storms, and they are both fire and lightning proof. The roof is prepared the same as for the ordinary shingles, putting the boards close together and laying paper under the shingles for a house, but I don't think paper is needed on a barn.

Oak Lake, Man.

L. J. S.

An Institute Trip in Southern Alberta.

BY J. H. GRISDALE, AGRICULTURIST, CENTRAL EXPERIMENTAL FARM, OTTAWA.

The stranger who arrives in the night and gets at sunrise his first impressions of Lethbridge, the principal center in this vast and fertile territory, is impressed by the natural beauties of the country rather than the architectural grandeur of the buildings which go to make up the scattering town. Far to the south and west loom the mighty Rockies, with sentinel summits rising, snow-capped, above the long, dark range. Between the observer and the "great divide," the rolling foothills lie, covered with cattle in herds, whose dark forms show against the white snow or rise clear-cut above the horizon. Scarce a low-browed hill but bears its rancher's shack or cot or house, surrounded not infrequently with stacks and corral, with here and there a stable or shed or barn.

The Belly River almost surrounds the town, and countless coulees show where the melted snow has rushed to join its muddy springtime torrent through the ages.

The coal mines lie to the north of the town, and upon these, rather than upon agricultural pursuits, Lethbridge depends for her present, and, in part, her future prosperity.

The canals of the Canadian Northwest Irrigation Company are stretching, with their life-giving currents, hither and thither through these fertile plains, and now that one of the long, silvery streams has found its sinuous way to Lethbridge, the thirsty soil and dusty streets, the gasping trees and sere brown grass shall next summer drink in great drafts of the gentle waters.

The townspeople and surrounding gardeners and farmers are enthusiastic over the prospect of controlling the water content of their soil, and are filled with bright anticipation of waving avenues, shady parks, lawns whose verdure shall know no fading, gardens whose crops shall be fabulous, and fields whose harvests shall never fail. It is to be hoped their dreams will materialize.

At present, and for the past 15 or 20 years, the chief agricultural line has been ranching. A visit to a few of the ranches in the immediate neighborhood of the town showed the cattle wintering only fairly well. The grass was plentiful, also quite easily obtained, and the winter had not been severe, but water was scarce, and this great lack affects the condition of cattle on the ranges more, even, than poor pastures, for usually the one may be supplemented with hay, but the other is an irremediable contingency. In the more southerly, however, as well as in the more northerly parts of the Territory, the supply of water is better, and, as a consequence, the great majority of the hundreds of bunches observed are in good condition. Practically no feeding has been done yet, and an easy winter is considered to be on, as the three most severe months are over. The mortality from various causes has been very light, and, while here and there a shipwrecked steer or calf mars the beauty of the plain, the total is small and much below the average. Two of the largest ranches visited were the Cochrane and the Hatfield. On both of these the cattle are coming through in most excellent condition, and thousands of steers were seen, the great majority of which were fit for the slaughter-house.

Across country from Mountain View to Fishburn, between which two hamlets these ranches lie, is a most interesting drive of twenty-five miles. The interest is considerably intensified, however, if the traveller venture in winter and a chinook prevail at the time. Between the two lie the Belly River, traversing the Cochrane ranch; the Kootenay, forming one boundary of the Hatfield estate; the North Kootenay, a picturesque stream, of uncertain demeanor, and the Dry Forks of the Kootenay, anything but dry when the chinook prevails. The crossing of any one of these streams in summer is usually easy, but when the snow is going off at the rate of a foot a day there is a considerable spice of danger connected therewith.

The thoughtful traveller who drives from Lethbridge southward to Cardston, across to the foothills and then northward, observing the signs and talking with the settlers, soon becomes convinced of one thing: The years, if not the very days, of the rancher are numbered. In the last two or three years it is evident that a rapid change has been going on. Settlers from all parts of the world have been rolling in on prairie schooners, cayuse back, or afoot, and now countless sections are being homesteaded, many more pre-empted, and practically the whole land is applied for. A line of railway is being built and already extends 50 miles south of Lethbridge, where it joins the C. P. R. An irrigation system, the same as mentioned above, will water thousands of acres, and a population of sturdy, thrifty people, accustomed to irrigation, already occupy these plains in thousands, and thousands more are coming in from the great north to the south.

The Mormon settlement, which began some 15 or 16 years ago, under the direction of President Card, kept growing slowly until two years ago, when some thousand or more were added to their number, and now every day sees some new families added to the "stake." The industry, patience, perseverance and intelligence of these pioneers is quite remarkable and worthy the highest commendation. In the newer settlements, more especially, are observable a keen appreciation of the existing conditions, and the proper steps to take to insure success, such as is seldom seen in the individual, let alone the community. Coming as they do for the most part from Utah, where irrigation is the rule, it may be expected that the problems of irrigation agriculture, under the rather unique climatic conditions of Alberta, will be solved in the shortest time and with a minimum of loss.

The question naturally arises: "What are the actual prospects for mixed farming in the country?" As would be inferred from the mention of irrigation canals, the seasons are frequently so dry as to destroy all, or almost all, vegetation before maturity. It has been found, however, that, with proper cultivation and precautions, all grain crops are fairly certain of giving good results. In that part of the Territory immediately surrounding Pincher Creek, as well as in most of the country lying to the south and east thereof, fall wheat has been grown for the past ten years. Crops yielding variously from 30 to 70 bushels per acre are reported, and the unanimous opinion of the farmers appears to be that this is their surest crop.

Vegetables, such as potatoes, ruta-baga, mangels and sugar beets, yield immense crops per acre, with a minimum of labor. In the case of sugar beets grown the past year and analyzed in Utah, the sugar content averaged 15 to 20 per cent., reaching over 80 per cent. pure. With irrigation in some

Horse Breeding in the Last Thirty Years.

[An address by Alex. Galbraith, Janesville, Wis., before the Manitoba Horse Breeders' Association.]

(Continued from page 175.)

It may be stated broadly that for every imported stallion of this breed whose stock turned out satisfactorily, there were ten that proved a disappointment. I think myself that a good, well-bred Cleveland Bay horse, not too large or heavy boned, but with considerable quality and action (and such could occasionally be found), would, when judiciously crossed with fine trotting-bred mares, or mares having a dash of Thoroughbred blood, produce some excellent carriage horses. I have seen a few of that class, but, speaking generally, the Cleveland Bay horse in America has not been in any sense a success.

The Hackney horse was not imported in any numbers until just before the depression in 1883, and therefore had not the same chance to make a reputation as the Cleveland Bay. A strong and general prejudice existed against this breed on account of his size, and prevented a liberal patronage of the earliest imported stallions, especially in the middle and Western States, where the great bulk of American horses are produced. Those owned in the East (and nearly all the best bred and most valuable Hackneys were in the East) were in the hands of very wealthy men, and as the service fees for most of them were necessarily high, they were beyond the reach of the average farmer. The results, therefore, were not so beneficial as they would have been had those horses been standing at a fee within the reach of the ordinary farmer. Notwithstanding this drawback, the popularity of the Hackney steadily increased, and he was hailed by many of the best horsemen in the United States as by far the greatest improver of our light harness stock. Wherever the Hackney has been judiciously

crossed he has proved a splendid success, and many half-breds have distinguished themselves in harness at the principal shows on this continent. I would recommend the same class of mares for crossing with the Hackney as with the Cleveland Bay, only that the Hackney is much the better and more prepotent horse, and is especially adapted for improving our harness horses in the very points where they are weakest: in strength, constitution, rotundity, and action. The only unsatisfactory results I have ever observed from the use of the Hackney were in the case of them being crossed with grade draft mares, and this would apply with even greater force to the other coach breeds, both English, French and German; but where judiciously mated, the well-bred Hackney, more than any other breed, certainly has the ability to improve and ameliorate the condition of the American light harness horses.

The principal changes in the Hackney horses of 30 years ago, as compared with those of the present day, are that chestnut colors, with flash white markings, are much more prevalent now than then, and there has been during that time a general increase in the height, of probably 2 to 3 inches. The latter change is the result of public sentiment, and is in the right direction. The vulnerable point in the genuine Hackney yet, is the lack of height, not weight, and I am glad this is being gradually remedied. The chestnuts with white legs, so frequently seen in the leading showrings of England, are mostly the descendants of that magnificent sire, Danegelt, who attained a celebrity and fame which has not been approached by any of the other horses of the breed. Twenty or thirty years ago the prevailing Hackney color was solid dark brown, the great sires, Lord Derby 2nd, Triffith's Fireway, and Doyley's Confidence, leaving the great bulk of their stock that rich, dark color, but the influence of the more fashionable Danegelt, and his sire, Denmark, both of whom were chestnuts, so predominated, that nearly three-fourths of the best Hackneys to-day are of chestnut color, and many of them have so much white on face and legs as to be quite objectionable to foreign buyers. Americans are sticklers for color. The late Mr. Dunham, probably the ablest and most successful horse-breeder in the United States, told me that he deplored this American craze for solid colors, as it compelled him to import from France inferior black Percherons, and leave behind superior grays, the latter being the natural color of the Percheron horse.

CRAZE FOR COLOR AND OTHER NON-ESSENTIALS.

All Shorthorn breeders know the injury wrought to the breed years ago by discarding all roans, however good, in favor of red colors. Black is at present the most popular color among draft horses in the United States, but five or ten years hence it may be gray, bay, or chestnut; who can tell? Twenty-five years ago the typical Percheron horse, as imported to the United States, was a gray, usually a dappled gray, with fairly heavy bone, short hind quarters, chubby neck, and although showy, vigorous and lively, with fairly good action, was far from being

Valued Appreciation.

BRANDON, MAN., February 27th, 1901.

THE WM. WELD COMPANY, WINNIPEG, MAN.:

SIRS,—Allow me to congratulate you on your issue of February 20th. It is, I think, the best number to come under my notice. The numerous articles from well-known and successful farmers throughout the Province should make this number particularly useful to the average farmer of the Province. If more of our successful farmers would only consent to give us their experience from time to time, it would prove of inestimable benefit to all. The question of "Soil Cultivation," for instance, will stand a most thorough discussion without being exhausted.

Trusting that you may continue to receive the assistance of such farmers, I remain,

Yours truly,

S. A. BEDFORD,
Superintendent Exp. Farm, Brandon.

parts, in other sections without this aid, immense crops of Brome and timothy hay are grown. The most difficult problem would appear to be the growing of trees and shrubs. The winter is usually a series of cold spells, followed by warm southerly or south-westerly winds ("the chinook"), which take away all snow, and very often the soil is thawed to a depth of 3 to 4 inches. This climatic peculiarity, together with the strength and persistence of these same prevailing winds, render tree culture, up to the present, a most unsatisfactory pursuit.

From the present indications and conditions, one would say that if there is any place where the "dual-purpose" cow should belong *par excellence*, it is in Southern Alberta. The pastures are well fitted for dairy husbandry, while there will for some time be more or less range available for feeding steers. This is more especially true in the neighborhood of the foothills, whose elevation militates against successful grain-growing, but where excellent pasturage is found.

The Institute party consisted of Angus MacKay, Esq., Manager of the Experimental Farm, Indian Head; Mr. George Lang, recently Horticulturist at the same institution; and the writer. Lectures were delivered to large and representative audiences at Lethbridge, Magrath, Cardston, Mountain View, Fishburn, and Pincher Creek, these being some of the principal centers of farming sections south of the Crow's Nest line of the C. P. R. The subjects discussed were: "Soil Cultivation," "Weed Eradication," "Tree Planting," "Fruit Growing," "Beef Breeding," "Milk Production," "Pig Feeding," "Mixed Farming," and "Hen Culture." All the subjects were apparently quite interesting to the farmers present, and every man is a farmer in this country. The fact of a change being imminent seems to have dawned on many of the smaller ranchers, and the problems of mixed farming were discussed quite warmly in some cases, showing the antipathy of the ranchers to the change now going on. The change is coming, however, and no amount of objection raised will retard it in the least.

symmetrical in his general outline. To-day we see hardly anything but black, with lighter bone, but better necks and hindquarters—a handsome horse, but possibly not a better one for draft purposes. The other draft breeds, the Suffolk Punch and the Belgian, have not, in my observation, changed noticeably in that time, unless it be that the Suffolk breeders have paid increased attention to the feet of their horses and have improved them materially in that respect, while preserving their splendid bodies and excellent constitutions. The periodical spells of depression which visit the United States every twenty years or so seem to come with unerring regularity, and often the breeder of horses had better look out in advance and get his house in order. The panic of 1873 affected the prices of horses very seriously, and it was nearly five years later before they had fully recovered; then in 1883, from a combination of causes, the chief of which were indiscriminate overproduction, the advent of the bicycle, electricity in street cars, and the general industrial depression, the price of all kinds of horses in the United States fell to an unprecedentedly low figure, and continued low three or four years, during which time very few horses were bred. When business improved and the scare of an alleged horseless age had passed by, it was found that there was actually a decrease of 3,000,000 horses in the country, and prices then advanced gradually to the present rates. For the future, the Canadian or American breeder need have no fears, provided he uses good judgment, feeds his young stock liberally, and avoids the rocks and shallows of indiscriminate breeding.

REMINISCENCES.

It has been my privilege to have met and been acquainted with a great many noted breeders, both in Great Britain and America. My earliest recollections of prominent Clydesdale breeders were of such men as Samuel Clark, Peter Crawford, Sr., Lawrence Drew, and David Riddell, all friends of my father 25 to 30 years ago, and the most prominent men of their time in the Clydesdale world. In later years, Peter Crawford, Jr., the Lords Cecil, Sir John Gilmore, William Taylor, the Renwicks, the Parks, and, more than all the others combined, Andrew and William Montgomery, have been the most prominent and successful in breeding, handling and exhibiting Clydesdales. Amongst the great horses I have seen may be named the celebrated Victor, Sir Walter Scott, General, Prince of Wales, which horse I well remember as a 2-year-old colt 33 years ago. I also knew Darnley well, and his sons, MacGregor, Toppallant, and Hashwood. The celebrated Topsman was my father's property, as was also Tintock, or Conqueror, which Simon Beattie imported to Ontario in 1867. My father also owned George Buchanan, before my time. He came to Canada nearly 50 years ago, being one of the first sires imported. I remember Ivanhoe quite distinctly, as well as Druid and Old Times, Prince of Avondale, Lord Erskine, the two Compsies, Drumflower Farmer, and many others of more recent date.

In Shire horses, I know most of the leading sires in the last twenty years, including Bar None, Harold, Vulcan, Bury Victor Chief, Wellington Boy, Hitchin Conqueror, King Charming, Enterprise of Cannock, etc.

I also knew the leading Hackneys and their breeders from the days of Denmark and Lord Derby 2nd down to the present day, and have taken a good deal of pleasure and active interest in watching the progress of this breed, both in England and America.

Time forbids saying more at present, but in summing up I will state my opinion to the effect that in every breed of horses now being raised in Great Britain, and probably in Canada and the United States also, there is more care, skill and intelligence brought to bear on the matter than at any time in the past, and that the changes which have undoubtedly taken place in the various breeds during the last 30 or 40 years have all been the result of increased knowledge and wider experience, and are in the main a distinct benefit to the respective breeds. The new century will open up problems of breeding yet to be solved by the most skillful breeders of the present day, the successors to those noted pioneer breeders I have referred to, and it behooves the present generation to take up the work earnestly and try, if possible, to improve upon the best products of the 19th century, as bequeathed by our forefathers.

A Meeting of Municipal Representatives.

A meeting of the reeves and representatives of the municipalities of the Province was held in Winnipeg during the first week of March. There was a large attendance, and the legislation affecting municipal government received a pretty thorough thrashing out. Resolutions suggesting amendments of many important points were carried and submitted to the Government, which promises due consideration to all points raised. We will not attempt even a summary of amendments proposed, as they will be fully dealt with by the local press. Apart from the usual technical points discussed, resolutions were passed favoring an increase in the wolf bounty, a better system of hail insurance, the establishment of a department of agriculture in the Province, and a bill which would also pass, changing the Dominion tariff, and also to increase the duty on lumber.

Suitable Varieties of Vegetables for Manitoba.

One of the most important items in connection with the cultivation of vegetables in Manitoba, is a judicious selection of varieties, and many failures may be attributed to indiscriminate ordering from catalogues, especially when (as is often the case) the orders are based upon overdrawn descriptions and engravings. The comparative shortness of our growing season renders it imperative that in many vegetables, such as onions, corn, tomatoes, squash, pumpkins, etc., only varieties showing the greatest tendency to early maturity should be given consideration, and the following notes, carefully culled from the records of large varietal tests at the Experimental Farm, and covering a period of several years, will perhaps serve as a guide to farmers and others contemplating the growing of vegetables during the coming season.

All the varieties of asparagus listed in Canadian and American catalogues do exceptionally well in Manitoba, but the following seem to be the cream of those tested: "Columbia Mammoth White" and "Giant Argenteuil." Three years is necessary to obtain maturity from seed.

Three of the best varieties of dwarf beans are: "Scarlet Flagpole Wax," "Canadian Wonder" and "Stringless Green Pod." The "Lima Bean" does not mature in Manitoba, and the climbing varieties are only used for decorative purposes. Sow 24th May, in rows 30 inches apart, and thin to 9 inches in row.

In beets, "Edmund's Blood" (turnip-shaped) and "Long Smooth Deep Blood Red" (long) are excellent varieties, the latter being of very superior quality. They should be sown about 10th of May, in rows 30 inches apart, and thinned to 8 inches in the row.

For first early cabbage, "Early Jersey Wakefield" will give satisfaction; "Early Winningstadt" for summer use, and "The Lupton" for winter storage; while "Mammoth Rock Red" is the cream of red varieties. Sow in hotbed, early in April, and transplant to the open during May.

"Early Snowball" and "Large Early Erfurt" are the best varieties of cauliflowers yet tested, and should be sown about 20th of April. Being more susceptible to frost than cabbage, they must not be planted while any doubt remains as to visitations from sharp frosts.

When water is procurable, celery will give an excellent crop, and "White Plum," "Paris Golden Yellow" and "London Prize Red" furnish a good succession of varieties. On account of slow germination, the seed should be sown as early as possible, preferably in March, and the middle of June is early enough to plant outside seeds.

In table corn, our choice of varieties is very limited, being confined to "Early Cory" and "First of All." "Spruce Corn" is a desirable variety when obtainable. Sow about 20th of May, in hills 2 feet apart, with rows 3 feet apart.

Cucumbers are invariably a successful crop here, nearly all varieties doing well. "Early Cluster," "Paris Pickling," "White Spine," "White Wonder" and "Giant Peru" are suitable for all purposes. Sowing should be done about 24th of May, in hills 3 feet apart by 5 feet in the row.

All varieties of lettuce may be depended upon, but the following will give entire satisfaction: "Toronto Gem," "All Heart" and "Big Boston" (cabbage varieties), with "Self Folding Cos" for a Cos variety. I would specially recommend a trial of the latter, as it is far superior to the cabbage type. Sow early in April, in rows 18 inches apart, and every three weeks afterwards for succession.

Neither "watermelons" nor "muskmelons" have proved satisfactory here, and anyone wishing to experiment may choose their own varieties.

"Extra Early Red," "Yellow Globe Danvers," "Red Danvers" and "Michigan Yellow Globe" are the only varieties of seed onions that can be depended upon to invariably produce a ripe product. Sowing should be made as early as the soil will permit in the spring, in rows 16 inches apart. "Yellow Dutch Sets" and "Shallots" should always be planted in addition. In pickling onions, "Adriatic White Barbetta" has given the greatest percentage of suitable bulbs.

There is very little room for selection in "parsnips," "Holloe Crown" being the most suitable variety, and early sowing and thinning are indispensable for the production of a good crop.

The following are excellent varieties of peas: For first early, "Chelsea" and "Nott's Excelsior"; for second early, "Horsford's Market Garden" and "Heroine"; while "Saiders' Marrow" is the best late pea we have tested. The sowing is preferably done in double rows 1 foot apart, and 3 feet between the double rows, about the end of April.

In pumpkins, "Sweet or Sugar" and "Winter Lacry" are two fine varieties, and should be sown in hills 10x5 feet apart, about the 24th of May.

In the selection of radish, nearly all depends on the special taste of the growers for color and form, and all varieties are suitable for cultivation.

The most satisfactory form of squash for Manitoba is that known as the "bush" type, and of this the best variety is "Long White Bush Marrow." Of the running forms, "English Vegetable Marrow" is superior to all others for culinary use; but as a substitute for pumpkins in pumpkin pie, "Extra Early Running Marrow" is very desirable on account of its crispness and long keeping properties, and I would strongly recommend a trial of this variety. Sow in hills 16x5 feet apart, on the 24th of May, for running

varieties, although 5x5 feet is sufficient for the bush form.

In "tomatoes" our range of selection is extremely limited, and only two varieties can be recommended, viz., "Earliest of All" and "Early Ruby." They should be sown in April, and not planted in the open until all danger from frost is past. Owing, no doubt, to the summer's extreme heat, the garden varieties of turnips are not to be recommended for general cultivation in Manitoba, as the product is usually very stringy and hot. "Early White Milan" is one of the best of this class.

The salad vegetables, such as "Endive," "Cress," "Chervil," "Chickory," etc., may all be cultivated here successfully, and the same applies to nearly all the savory herbs. It is also very desirable to include in your seed order a quantity of rhubarb seed, as this is the readiest means of propagation for this vegetable in quantity, on account of the expense of procuring roots, and very strong plants can be grown in three years from seed. A small quantity of this can be obtained on application to the Supt. of Brandon Experimental Farm, as long as the supply lasts. HARRY BROWN, Brandon.

Dairying Profitable in Alberta.

To the Editor FARMER'S ADVOCATE:

You ask for my experience in the dairy department of my farm, and while I do not feel competent to do the subject justice, yet, as I am very much interested in dairying, I will do what I can towards its advancement. I cannot say anything about feeding balanced rations, etc., as I have got to learn that myself. But what I do, any other farmer can do as well or better, as I expect to do much better myself.

My herd of milk cows now consists of 20 head. I have two girls, aged 16 and 11, and two boys, aged 12 and 10, who assist us in the milking. The oldest boy only milks until we have enough milk ahead, when he starts the separator, and we all finish together, and all help in feeding the calves, etc. It takes us about one hour to finish up entirely. A good milker should milk eight cows per hour, and each cow should return at least \$2 per month from the creamery. My returns from the creamery last year were \$2.53 per cow per month, for the 12 months of 1900. Our creamery (the Red Deer, Alta.) year is from November to May (winter season) and May to November (summer season). I milk my cows from 9 to 10 months. They come in principally in the winter, but I like a few coming in at all seasons, except July and August. Last year I milked 11 cows; only 11 of these came in fresh. I sold 2126.5 pounds of butter, and received \$365.11 cash, and also made 300 pounds for home use, averaging \$30 per cow, besides the 11 calves.

My herd is steadily improving, and I am steadily increasing my supply of cream to the creamery, first by taking better care of the stock, and thus getting more milk from them; second, by increasing the herd as fast as I can by milking all desirable heifers. I find in our creamery the majority of patrons are doing the same. There are a few people in the neighborhood who still make their own butter, but the number is gradually getting less. We strive to make it pay them to co-operate with us, and we are succeeding. Generally speaking, the people who hold back from the creamery are those who are slow to see the merits of the cream separator, but they are not patrons very long before they make comparison with the monthly cheques of their neighbors who have separators, and the result is very satisfactory to the separator agents. I believe every patron of a creamery should use a separator if he wants to make his business a success.

The best of cream can be spoiled before it gets to the factory, by careless handling. I have about as difficult conditions as most farmers have to contend with in keeping cream sweet. I am 10 miles from where I can cut ice, and have never put up any, placing all my dependence in the well. I have a log building with sod roof, over the well, in which there is a good pump. Between well and side of building is the cream box. Outside of building the watering trough is so arranged that every drop of water the cattle and horses drink must go through the cream box. I have never had a complaint about my cream. It is gathered twice a week in summer and once a week in winter. We operate our creamery all the year round. We have our yearly patrons about one-third of the whole, the rest only milk in the summer. We are not greatly troubled by patrons leaving us at any time to go back to making their own butter. The merchants are loyal to the creamery, and would rather handle Government cheques than dairy butter. They rarely offer more in trade than can reasonably be expected from the creamery without the trouble of making. We strive to make every patron satisfied that he is getting all there is in it. If anyone has a complaint to make, it is promptly investigated, and if there is anything found wrong, it is at once made right, and we keep at it until the patron is satisfied. We have a board of nine directors; each director is supposed to represent one of nine districts. We try to elect the best man in each district, one in whom the patrons have confidence, and he is expected to look after the interests of the patrons from his district. E. CARSWELL, Northern Alta.

The Science of Breeding.

At this season, when breeding is to be considered, the mating of mares and stallions should be a subject of much thought on the part of breeders. Breeding has long been considered a science as far as it pertains to blood lines, and many hours are spent by enthusiasts on the subject of crosses, out-crosses, and inbreeding. The subject is a most fascinating one, and is susceptible of much research. The proper nicks are looked for, the best crosses aimed at, and when the average breeder has discovered what he thinks to be the most suitable strains of blood with which to produce a champion, he considers his labors ended. In reality he has only just begun, for after having builded for himself a pedigree, he often leaves out his plan of the structure. As much importance should be attached to this as to the blood lines, for it is as contrary to all laws of heredity to double up defects as it is to multiply crosses of bad blood. If all brood mares and stallions were perfect, nothing would be necessary for the breeder to do but to study the various blood lines and out-crosses and mate accordingly, but as conformation plays a very important part in the science of producing special types of horses, the breeder who ignores this part and confines himself exclusively to the pedigree, finds his work half done, and, as a rule, his efforts in vain.

The old saying that they trot in all sizes and shapes is misleading, and has been given as an excuse by more than one breeder for his practice of breeding without due regard to conformation. They trot in spite of and not by virtue of their ill shapes.

A horse's action is largely influenced by his conformation, and the nearer one follows the laws of heredity as regards shape, size and general conformation, the more successful he will be. Bad qualities and defects in conformation are more often transmitted to the get of a horse than the perfections, and the only way a breeder can expect to succeed in producing a type of well formed, properly-shaped horse is to use for breeding purposes only those mares and stallions that are free from defects, and whose conformation is as near perfect as possible. By defects, blemishes are not alone meant, but especially those that come from coarseness. If it is not possible to find mares and stallions of anything like perfection in conformation, the breeder should attempt to eradicate as nearly as possible the defects of each by mating with those whose faults are not the same. It would be unwise to breed a coarse mare to a coarse stallion if one wished to produce quality with regularity. A mare with curbs, when bred to a stallion with the same defects, is likely to produce curbed-hocked foals, and the same rule applies to all other faults in conformation. Good points are reproduced in like manner, and the ideal light-harness horse must come from ancestors who for generations have not only lacked defects, but whose excellence in conformation has been intensified through generations of judicious breeding. All the advantages of producing blood lines and prolific strains can be lost through the negligence on the part of the breeder to properly mate his stallions and mares, avoiding the misshapen and illy-formed. In the past so little attention has been paid to individuality that the country has become flooded with defective animals—long backs, crooked hind legs, and coarseness have been produced by the mismatching of brood mares, and the highly-formed horse of quality has become the exception instead of the rule. Not one stallion in ten is fit to be used for breeding purposes, and the sooner breeders learn the importance of using only those whose conformation somewhat nearly approaches perfection, the sooner will a distinct type be produced. The best is none too good, and anything short of the best is worthless.—*Kentucky Stock Farm.*

Important to Breeders.

In compliance with requisitions made by the Breeders' Associations, the Freight Department of the Canadian Pacific Railway have made further important concessions for the transportation of pure-bred stock. They now admit horses registered in the recognized Studbooks as well as cattle, sheep and swine at the half rate, shipped in less than car lots. It is pointed out, however, by the Freight Department, that these concessions only apply to pure-bred stock intended for breeding purposes, and that horses for racing purposes are not included in the above concessions. It certainly will be to the interests of horse-breeders themselves that no evasion in this respect be attempted, as it may result in the cancellation of the rates for pure-bred horses.

In regard to the weight classification of pure-bred bulls, which was greatly reduced a year ago, the recently-issued circular makes a reduction in the weight classification for heifers one year and under two, from 2,000 pounds to 1,500, making them the same as bulls one year and under two. The foresight of the Railway Company in facilitating local trade in pure-bred stock is certainly to be commended.

Preserving Soil Fertility.

A number of years ago, Ontario and the Eastern States produced large crops of wheat; but before the farmers realized what they were doing, the average had lowered one-half. Then the wheat belt moved westward, and it has moved several times in a comparatively short time. The idea got abroad in Manitoba that the soil would never give out—would stand continued cropping and still yield good returns—but that illusion is just being dispelled. When a boy, my father experimented on a piece of virgin bush land in Ontario, and raised in succession thirteen crops of wheat, and though the land was several times well treated with barnyard manure, the yield came down to five or six bushels an acre. Then it was seeded with clover, and after several good crops of hay, it was again broken up, and gave a good crop of wheat. Although the soil was still rich, the wheat-producing qualities had been exhausted. The clover supplied again these properties, or unlocked them. Another case: I live near the Indian Reserve at Oak River, and have seen a number of cases where the Indians, when the land got too dirty or too poor to give a crop, just let it lie idle. Of course, it grew a crop of weeds, but soon was back to sod again, and could scarcely be detected from the original prairie. Then it was broken up, and gave good crops again. But the trouble is, most of us feel that we cannot afford to have one-fourth of our ground seeded to grass—at least, not just yet—and there is too much of a tendency to put off "the evil day" when we will not sow so many acres of wheat, when, in reality, we are hastening with a certainty the day when we cannot grow so many bushels of wheat. I am of opinion that before many years the best farmers will keep as many acres in grass as they sow in wheat. Some will say, that will not pay; but, suppose two farmers, each having 300 acres of cultivated land. One has each year 100

as to the manner of sowing—some in favor of sowing with a grain crop, while better results are claimed by sowing alone. I am quite satisfied with the practicability of sowing with a crop of grain.

If I were starting on a new prairie farm, I would endeavor to begin to fallow after the second crop, and sow grass after the third or fourth, and would aim, on a farm of 300 acres of cultivation, to make a rotation of 50 acres fallow, 100 to 150 wheat, 50 to 100 coarse grain, 50 to 100 grass, cutting the grass one or two years and pasturing one or two years. By doing so, there would be no necessity for growing more than two crops of wheat in succession on the same ground. No doubt some would think this extravagant farming, but in the end it will be found that it is living from the product of your capital, and not drawing on the principal, as the farmer does who crops too long without seeding down.

In order to get the full benefit from fallow and grass land, the farms should be fenced, and the man who is first to "get a move on" in this direction and "stays with it" is the one who will best preserve the fertility of his farm. T. R. TOMB.
Woodworth Municipality, Man.

"Humus is Needed."

The poorer yields on older lands are undoubtedly due to lack of rainfall. Ten years ago, one well watered all my stock. Now we have three wells, and they do not furnish as much water as the one did then. The moisture is dried out for several feet down. Wet seasons, like last fall, would fill the ground again to the surface. In the summers of '81 and '82, if we dug a hole two feet deep we would touch water almost any place. The land is not run out. We will have to plow more in the spring, not so deep as in the fall, and cut narrower furrows. Humus is needed. Timothy grass and manure is the remedy. Timothy is best. Land should be summer-fallowed the previous season.

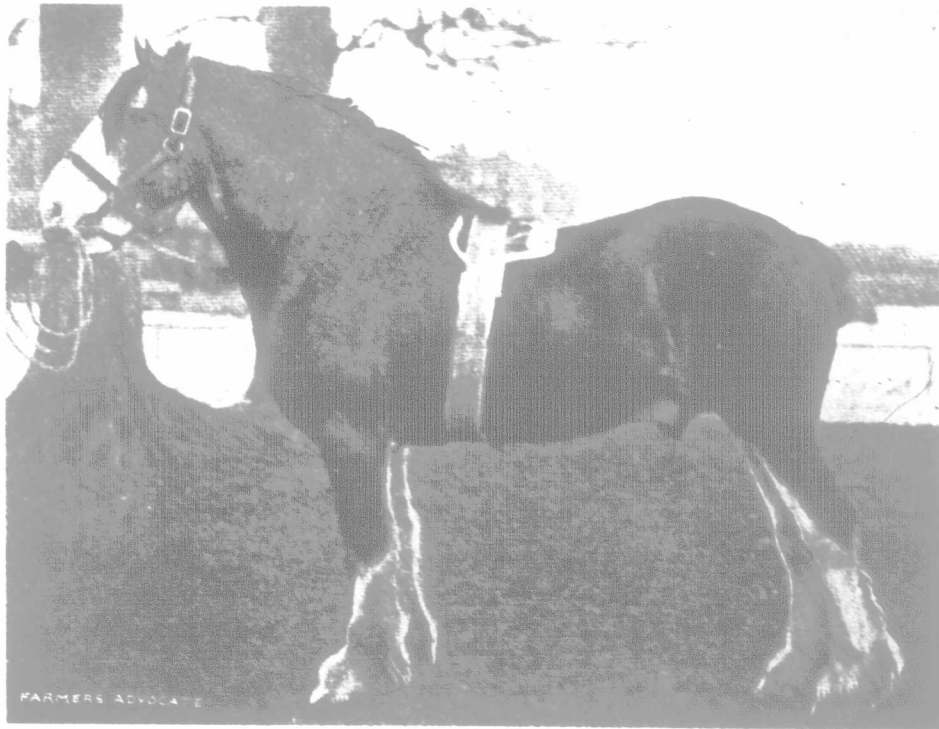
We prefer to sow grass seed by hand, after wheat has been sown, and give one stroke of harrow after sowing; 6 to 8 lbs. timothy grass to the acre. Twenty-five per cent. of cultivated land should be under grass. Cut for hay two seasons, then plow for crop the next summer. Never cut twice in one season. We have had timothy that would cut a good second crop, but preferred to let our cattle run on it and manure the land.

To apply manure: Draw from stables during winter onto field we intend to fallow the next summer. We put in heaps from sleigh-box, and spread as soon as frost is out in spring. We prefer this to spreading on snow, as it is easier to plow down and the manure does not leach so much when snow is going off.

To break a new farm: Plow as light as possible, and keep plowshare and coulter sharp. Roll before the soil becomes dry or after rain, driving roller across the plowing. When sod is sufficiently rotten, backset two inches deeper than it was broken. Harrow every day's backsetting on the following day, or as soon as soil does not adhere to harrow teeth. The better it is harrowed, the more will be the yield in bushels. Roll after seeding. For second crop we seed wheat again. Fall plowing is preferred. We harrow after plowing in the fall. Harrow well in spring and roll after seeding; no danger of blowing at this stage. Third crop, oats or barley, and then summer-fallow. Then wheat, oats next, and summer-fallow and seed to grass, as above.
Cameron Municipality, Man. W. J. HIGGINS.

The Old Arguments of a New District Against Grass and Stock.

Your remarks in last issue, on "Preservation of Soil Fertility," may be considered premature by most of your Saskatchewan readers, who will, up to the present, have little or no experience with "worn-out soil," but, being convinced that it is a good thing to have it rich, we must admit that it would be wise to keep it so, as far as the means available will permit. We know that in most cases it is impossible for farmers in the West to handle as much stock as would keep their farms in new-land condition by the use of the manure produced. We also know that in very many cases it is necessary for the settler to make a living, and improve his home by securing the best possible income with the least possible outlay of capital, and the labor that costs him money; and most people believe this is done by utilizing the fertility stored in their farms by raising wheat. If we admit that this is of necessity the position of the average settler, the usual advice, "Raise stock," does not quite meet the case. When we consider the vast amount of straw burned yearly in a wheat section, and remember that it means a waste of matter which, if utilized, would restore to the soil a large quantity of the elements necessary to plant growth, and improve the condition of the land for producing crops, we are forced to admit that the present state of things should not last longer than is absolutely necessary, and as far as possible it should be modified where it must exist.



CASABIANCA (10523).

Clyde-dale stallion. Bay. Rising 5 years old. Bred by David Dunn, Roxburgh Mains, Kelso. Property of John Crawford, Manrahead, Beith. Winner of first prize and championship in 1889; the Buchlyvie Premium in 1889 and 1900; and the Glasgow Premium and Second in the Open Class in 1901.

acres of wheat giving twenty-five bushels per acre; the other has each year 200 acres giving thirteen or fifteen bushels per acre. Which is doing the better? Any thinking person will see the first has the advantage, and, beside the grain, he is probably making something out of stock. We have heard so often of late about mixed farming that we are almost ashamed to mention it, but the sooner we realize that the trouble and feed expended on live stock is a paying investment, the better for our farms and farmers. I do not claim to have fully unlearned the old ideas we imbibed about growing wheat when we first came to Manitoba, and have not the proportion of "seeded-down" land that I should have; but, from experience and observation, I am fully persuaded that the sooner we all get a large percentage of our cultivation under a rotation of crops, of which grass forms a prominent part, the sooner will our troubles with blown soil and dry seasons be over.

As to manuring, the weight of evidence at present seems to be in favor of putting it on fresh during winter, but I prefer putting it in a heap, rather flat and not too high; then let it stand till next summer and spread it thinly over the summer-fallow after plowing, harrowing well after each day's spreading. Of course, I know I lose some of the value by evaporation and decomposition, but the ground is not made open with loose straw and manure, and the weed seeds are all killed before going on the ground, or if any should be left, they are on the top, and, after germinating, will be easily killed with harrow or cultivator.

As to grasses, my choice is Western Rye, then Brome, then timothy, but I am of opinion there is a difference in soils and locality as to which is most suitable, for I find some districts almost entirely in favor of timothy, others entirely in favor of Brome. There is just as much difference of opinion

What's the matter with leaving a larger proportion of that straw on the fields as stubble, since it cannot be turned into manure? In this way so much of it could be evenly deposited in the land again. I had feared that plowing down a thick, long stubble, would leave the crop open to injury by certain weather conditions, but last spring I found it impossible to get the stubble burned off a field required for oats. It was thick, and the longest I ever cut, but no fire could be set because of surroundings and direction of prevailing winds. Result: 50 bushels per acre of oats of finest quality, a top yield, as it was an off season for oats here. The stubble was plowed under, deep enough to make clear working at surface, harrowed, and seeded with shoe drill, and not even rolled. No damage to first crop; may not benefit be expected later? Another thing is suggested by the above: Manufacturers of plows say they supply Scotch Clipper form of mouldboards almost invariably on plows for Manitoba and N.-W. trade. Now, I have found it impossible to make a 14-inch gang do work to suit me when fitted with those mouldboards. Even when weed hooks are used, they fail to cover the stubble properly, and will leave the nodding head of a wounded weed here and there, and as surely as you will always find a wounded poplar bear a large crop of seed, those weeds will ripen seeds if they can. Scotch Clipper plows don't cover stubble so that it will be harmless, but on clay loam it can be done without using a sand plow. Another way to utilize more of the straw than is often done is to pile all manure instead of applying to fields fresh, as but little straw can be used when this is done, and sometimes it is necessary to burn it over in order to get the rest turned down, and thus most of the liquid manure is destroyed. Another good reason for heating manure is to destroy weed seeds. As the weeds that are troublesome in this district are plants which naturally grow here, their seeds may be present to some extent in all feed used for stock.

Looking far into the future, grass rotation is the ideal plan, but that means stock barns and fencing—all expensive—an impossibility to the average Western farmer at present; but with our natural advantages, time will make the ideal condition possible. In the meantime, plowing down a green crop occasionally, and avoiding waste, should keep our naturally well-endowed soil in working condition.

Sask.

J. ALBERT SMITH.

The Difficulties and Advantages of a Grass Rotation.

Your questions make rather a formidable list, and very few are in a position to answer the bulk of them from actual experience. The replies will be, necessarily, largely conjecture. I think if we had the soil in anything like the mechanical condition it used to be, we might safely risk the fertility part of it. It is only now we are beginning to realize what a heritage we had in the centuries-old virgin sod, when it is about completely gone from our older lands, and, as no very great proportion of the proceeds seem to have found their way into the average Manitoba farmer's bank account, your questions might be about all boiled into one: "How can we best replace it and still continue to get a living from our farms?"

The question as to whether it can best be done by manure or grass need not perplex us: we can't very well have the one without the other. The question of a grass rotation in our climate presents peculiar difficulties, and the quicker the conditions necessary to success are understood, the fewer will be the failures and discouragements and the quicker we will arrive at our goal. In the first place, I don't think we can seed down to grass in this country with a grain crop; the supply of moisture in most seasons is too limited, and the grain absorbs too much of it. I notice an occasional correspondent who says he has been successful by doing so, and I have managed to get a fairly good catch myself with native rye grass, but am satisfied that if we were sowing on a large scale, and engaged in a systematic rotation, that the method would be too unreliable. This means a year in which we get no returns. But this is not the only one. It has been found that plowing up the sod after the hay crop is taken off is no use as a preparation for wheat; it must be broken and backset like prairie. This consumes another year, with no return. Now, as it would take at least two years to form a sod that would be worth calling one—longer would be better—we are confronted with the fact that it would take at least four years to fit in a grass rotation in this country. This gives us somewhat of a clue to one of your other questions: "What proportion of total cultivated acreage to have in grass?" As this sod would not have, by any means, the wearing qualities of the original one, four crops of grain would probably be all that would be advisable to take off before seeding to grass again, as a summer-fallow would have to intervene in the fourth; or, better still, as stock would enter largely into such farming, a crop of corn or other cultivated crop. This means that barely one-half of our land would be available for grain.

The first question which will occur to you will be, how will the revenue from a system compare with our present, say, two crops of grain and a summer fallow? A rotation system, as I have indicated would occupy nine years to produce two crops

of grain and two crops hay in that period. Our present system would give six crops of grain. Would the two crops of hay be worth as much as the two crops of grain? Considering that they would cost less to produce, the second crop requiring no labor but the harvesting, and that no twine would be required and no threshing expenses, the net results would probably be little short of what we have been realizing on wheat lately, were the hay sold. I am satisfied, also, that the four crops of wheat grown with a grass rotation would yield better than four crops under a continuous grain system. But there is another feature in the situation to be taken into account. Nearly all farmers have good-sized pastures of prairie that have never been broken. Many of these, that have been pastured for a long time, have become of very little use; cattle can hardly be got to stay in them till the grain is cut. Under a grass rotation, where these were fit for cultivation they could be broken up and added to the crop area. Brome grass comes very much earlier in the spring than the natives, and the piece which was to be broken up each season would afford excellent pasture till the end of June or until the breaking was finished. The hay would then be ready to cut, and the aftermath would afford good pasture till snow came. In this way, a very small permanent pasture would suffice. Taking into account the very considerable increase which would be made to the cultivated area in this way, with the increase which should result in the yield of the older land under a grass rotation, I doubt very much if the total annual output from a half-section of land of wheat alone would fall very much short of what it is at present. So far, I have taken no account of any increase of revenue from stock, and as my letter is already of considerable length, I will only remark that the farmer who cannot add very materially to his income from the considerable herd that this system will enable him to carry, had better try something else.

The manure from this herd would also be another source of fertility. Just when and where to apply it is still an open question with me. I have never had much satisfaction in applying it to a grain crop—the resulting increase is usually more in the direction of straw and weeds than grain. As drawing direct from the stable in winter will always have its advocates, would try it on the second year's stubble, after the grass. Plow it as early in spring as possible, and keep thoroughly cultivated for a couple of weeks, then plant to corn. If this is kept clean with weeder and cultivator, it is an excellent preparation for wheat, as good as a bare fallow, and as corn is a gross-feeding plant, can dispose of the raw manure better than anything else. The question of fencing can safely be left in the meantime.

JAMES FLEMING.

Morton Municipality, Man.

Grass Rotation.

Following up a former article on this subject, it might be well to consider the return of humus to the soil by growing grasses. My plan would be: Select that portion of the farm longest under cultivation, summer-fallow thoroughly; then, before sowing in spring—say, about the time rain is expected, the latter part of May—cultivate the surface to destroy any weeds not killed the previous summer or by winter frost. Sow down to *Bromus* or Native Rye grass. Perhaps the latter would bring the soil nearer to its original condition, owing to its finer roots more easily assimilated. If any weeds still persisted in growing in the hay the first season, run the mowing machine over the field, leaving all grass to act as a mulch to prevent the drying out of the surface. I would grow two crops of hay, and, if not practicable to pasture, then summer-fallow, or you might call it breaking the sod anew if a good catch has taken. Occasionally we have a season so favorable that a crop of hay may be cut the first year. This plan may to some seem too expensive. A cheaper one would be: Plow the land in the fall immediately after the grain is cut (a busy time, no doubt), so that some of the weeds would start and be killed by the winter frost; then cultivate as above in the spring. This would save one year's use of the land and give it four years' rest from grain-growing. Many of your readers will, no doubt, call this absurd, and that no one could stand that kind of farming. I would ask all such critics just to stop and consider. We are getting on an average a return of from fifteen to twenty bushels of wheat per acre, and, in a very favorable season, a little better; sometimes worse, as witness last season. Now, I claim for grass-growing we may reasonably expect, on well cultivated land, from one and a half to two tons of hay per acre, worth from eight to ten dollars per acre for hay, apart from the value of seed raised, and two crops for the labor of one sowing. The following summer fallow should reasonably give thirty or more bushels per acre, as well as leave the land in much better condition for subsequent crops.

The seeding down to hay opens the question of pasturing the land. At present I have left this out of consideration, owing to the expense of fencing in this district. While many farmers have the means to fence, their education as farmers has not led them to take kindly to stock-raising.

Indian Head, Assn.

Deeper Cultivation and Deeper Thought.

I have noticed a gradual decrease in our crops for a number of years, and I attribute this principally to lack of moisture. Even new land will not give as still straw and big yields as we had in the early '80s, so it is little wonder that land long cropped does not produce the quantity and quality it formerly did. Considering, however, the constant cropping (much of it for 20 years), it is astonishing how productive the land is, considering the light rainfall. I do not mean to say that moisture is the only thing needed. The FARMER'S ADVOCATE is doing a good work in keeping constantly before us the necessity of returning something to the soil to replace what is taken out by the crops.

Our methods of cultivation and cropping must be changed or our land will become like that of the New England States. Many farmers are now in a position to do some experimenting and learn from their own experience the best methods. Then we have the valuable work that is carried on by our experimental farms, but I fear we do not study this as we ought. I believe deeper cultivation is necessary. Too many farmers continue to plow only three or four inches deep. We should plow seven or eight inches deep, and there is no fear of turning up too much subsoil. It might possibly affect the first crop detrimentally, but subsequent crops would certainly be benefited, as deep cultivation would, besides adding new soil, assist in conserving moisture.

Humus may be restored to the soil by the cultivation of grasses. Timothy formerly did fairly well with me, but the past dry seasons have resulted in failure. Brome and Native Rye grasses are more reliable and should be largely used. On the sod is the best place to put barnyard manure, whether fresh or rotted—the latter to be preferred. The manure from the horse and cattle stables should be well mixed, and care taken that it does not heat too much and become fire-fanged. But the supply of manure is so small, compared with the large extent of land under cultivation, that we must look to something else to re-fertilize worn land, and for this I would suggest some leguminous plant. I have not tried vetches, but think they would do very well. I have grown peas, but with indifferent results. Buckwheat might answer if plowed in green. The difficulty is in the expense of seed. Possibly the railway companies, if they could be shown that it was to their advantage, might bring in seed of this kind free. They have done a good deal to encourage cattle-breeding, why should they not do something to assist the wheat business, thus saving the "goose that lays the golden egg"? The majority of farmers have been taking everything out of the land and putting nothing back. In our early days that seemed a necessity, and it is so yet with many. I would urge farmers to take counsel from the praiseworthy efforts of the FARMER'S ADVOCATE to arouse the country to the dangers of such a policy. In this progressive age, are the farmers to be the only class to stand still? We are encouraged by our Governments and by the press, and I doubt if there is a finer country in the world for agriculture. Let us make the most of our advantages and read and think more carefully and intelligently about our own business. Theory, of course, without practice, is useless, and both may fail, for "Paul soweth, Apollo watereth, but God giveth the increase."

Glenwood Municipality, Man. W. WENMAN.

In Favor of the Quarter-section Mixed Farmer.

I was much interested in Mr. Curtis' letter in your issue of February 5th. Most of what he says is all right, but if he thinks it necessary to have 35 or 40 acres in Brome to pasture seven or eight cows, then Brome is a failure. As a matter of fact, less than half that acreage would pasture that number of cows. I quite agree with him when he says that the wheat-grower is not worthy of being called a farmer. I would rather die a poor man and leave my sons with a farm in good shape, than leave them \$10,000 each and a worn-out farm, because in the first instance they would have learned how to farm well and could do for themselves; whereas, in the latter case, they would neither know how to farm nor how to take care of the money left them. The young man, brought up with the knowledge of live stock, its care and management, is much more likely to succeed than if brought up on a wheat farm. The man who will burn his straw, rather than draw it to the stables in winter, deserves to starve. These are generally the kind of men who are too lazy to get their firewood during the winter, as they prefer sitting in the house, and then have to draw their wood during the summer; and such men generally let their wives saw it or do without.

One frequently hears the statement that a quarter-section is not enough land to make a living from wheat-growing; then I say wheat-growing is a failure, and 20 years from now it will require a township for one man. It is all nonsense: a small farmer on a quarter-section, if he goes in for mixed farming, can do well. The trouble is, there is too much of an inclination to buy land. If the small farmer, when he has a little money ahead, would invest it in improving his quarter-section and procuring better stock, instead of buying more land upon which he can perhaps make but one payment, and then if bad luck comes, he gets behind—he would not only be more successful, but more contented. The great curse of the present day seems to be that every man wants to get ahead of his neighbor. It is a

noted fact that the settlers who came to this country with little capital have succeeded better than those who started with means, for with them it was not "what I would like to do," but "like what I have to do." This is certainly one of the best countries in America for a poor man. I have also noticed that it is the small farmer, generally, who has a garden and some trees planted about his homestead. I cannot understand how a man can stay on a farm, in this country, without trees. The very pleasure of seeing them leaf out in spring is sufficient reward for the little trouble required in growing them, without saying anything about the advantages of the shelter obtained. One frequently hears farmers talking about growing rape and other fodder plants for hog pasture, in order to keep them in good health, but they do not seem to think that a

Spring in the Apiary.

BY MORLEY PETTIT.

It is high time for the apiarist to plan for setting out bees if they are in cellar. The first favorable day in April is the time. Let the day be bright and comparatively calm; thermometer not below 50° F. in the shade. The stands should have been arranged last November, as soon as the bees were put in the cellar, but if this has not been done, clear away the snow (if any remains) enough to level the stands on the ground. Be sure they are level from side to side and about one inch lower in front than behind. An inch block tacked on one end of the spirit level for this purpose is very convenient. The stands may be set on four bricks and then adjusted with small blocks of wood. Some set the hive directly on the bricks. Examine the hives occasionally during early spring to see that the frost going out of the ground does not leave them tipped up.

Now, a word as to the arrangement of the apiary. Every hive should be as convenient to the extracting room as possible. In all our work we must study short cuts, in order to accomplish as much as possible in the limited time at our disposal. The hives should be on separate stands, not on a single plank or bench. Bees are so sensitive to jars that one must be able to disturb one a little without disturbing the whole row. Then they must be far enough apart, either in pairs or singly, to allow the operator to stand beside the hive while manipulating combs. To set them in straight rows ten or twelve feet apart, leaving 20-in. spaces between hives in the row, is a very economical and convenient arrangement. A row that is long, however, becomes confusing to the returning bees. In the apiary of the present writer, the space allows some of the rows to contain fourteen hives so spaced; but the tenth hive is omitted from each row, leaving a path through the yard. To further relieve the monotony, two boxes are set in the row between the third and fourth and the sixth and seventh, and allowed to project beyond the entrances. Thus the workers and the virgin queens have less difficulty in locating their homes; as far as possible, the hives face southward. Bees do better if the hives are shaded in summer; hence it is advantageous to locate the apiary in an orchard, provided the limbs do not hang too low and the ground is not to be cultivated. The rows should be arranged with a view to giving the bees a clear way out between the tree-tops while working, and especially not across the public highway.

In removing them from the cellar, some of the leading speakers at the Ontario convention recommended setting out only a few hives daily, the reason given being that when a great many bees are liberated at once they are apt to become excited and "drift" to one part of the yard, nearly deserting many of the hives and overcrowding a few. That has not been the writer's experience; in fact, he sees strong reason why they should all be set out on the same day. On their first day the workers, engrossed with their cleansing flight and the novelty of their changed circumstances, give little thought to robbing or warding off robbers. The next morning, however, they are ready for business. Now set out more bees, and they fall an easy prey to the first. But, if all have an equal start, all have guards posted on the second morning, and the robbers have a poor chance.

Even then, some are weak, and some by nature defend themselves but poorly, and eternal vigilance must be exercised to ward off robbing, for "an ounce of prevention is worth a pound of cure." Then, too, one should encourage breeding by sheltering the hives from cold winds, and providing clear water, containing a little salt (about a teaspoonful to ten or twelve quarts), in a sunny, sheltered spot in the apiary. This, by the way, if kept up all summer, will make the bees better-natured, and also keep them away from where the cattle and horses are watered. A wooden pail and a ten or twelve foot piece of matched flooring will make the fountain and trough. In the side of the pail, close to the bottom, bore a hole and insert a plug perforated longitudinally with a gimlet. A nail placed loosely in this hole will regulate the flow of water. Adjust the board edgewise, groove upward, with one end beneath this spout and the other slightly lower to cause the water to flow slowly down the groove after it drops from the spout of the "fountain." One who has never before tried this simple device will be surprised how the bees gather on the edge of the trough. Although the water always runs, the trough should be washed out each morning. Cover the pail with a board to keep out the sun.

Profitable All-Year Dairying.

We have between twenty and twenty-five fair grade milking cows, some coming in every month in the year: milking at most nineteen cows, of which we have now thirteen, bring up their own calves. For the last three years we have sent our cream to Fairplay Creamery, where, I believe, they give us fair play. We have a separator, and would not wish to go back to the old system of pan-setting and warming milk for calves. We have a No. 1 Melotte separator, which, in my opinion, is hard to beat. We put all our milking cows in byre to milk night and morning. Mrs. Playfair and our own girl, together with myself and the men, all give a hand with the milking, and it is done in short order. We milk at regular hours, winter and summer, 6.30 a. m. and 7.30 p. m. Cows are fed and bedded three times a day, same as our horses. They never stand out a night in September frosts. We are milking eight now, in February. We have a large feed boiler, and boil small wheat and pigweed seeds, and mix with bran to feed milkers and Shorthorns suckling their calves, and all are doing well. We are sending our cream to Brandon this winter, and are realizing 18 cents per pound clear over all expenses. There are no "periodical" farmers here; all send to creamery, and not a farmer in our vicinity owning five cows but has a separator, and our women folk would not think of going back to old system. Twenty minutes after cows are milked, work is done. Our boy, eleven years old, separates as fast as milking can be done. We are careful as to cleanliness, putting all cream in the well in warm weather and never mixing warm and cold cream together. In the summer time we allow our cows to go down in to pasture for the night, after milking, till first frosty nights. After that we keep them in, and feed cornstalks grown from North Dakota Flint corn, planted with shoe drill about 20th May. We drew \$295 from creamery last year previous to 10th of November, besides having three private customers in the city for our own make of butter and two in our own village.

Southern Manitoba. A. W. PLAYFAIR.

Sub-surface Entrance Fresh Air to Stables.

SIR,—I will give you my experience re ventilation of stable. My barn is 52 by 92 feet; height of basement, 9 feet. My cattle stalls are placed across the short way (or the 52 ft.), and under the feed alleys I have 8-inch tile running the entire length and through the south walls. About one foot from surface (one side only) I have gas pipe inserted into tile opposite every stall (double), which project over the parting block in the feed manger. There is concrete floor laid over tile and pipes in alleys. For ventilating shafts, I find that the small shaft, say 4 by 8 inches, running up posts of barn, are much better than larger ones, as there are no down drafts and no dampness or frost attaching to them to fall down in mild weather, and they draw better. I find this system the most perfect. There is always a small current of fresh air tempered coming through the tile and coming out of small pipe

END VIEW OF R. J. PHIN'S BARN, SHOWING FRAMEWORK OF EACH OF FIVE BENTS.

Rafters, 2 by 6 inches; posts, 6 by 6 inches; plates, 2 by 6 inches, doubled; purline plates, 6 by 6 inches; braces, 1 by 4 inches by 3 to 7 feet, according to length of span; upper tie beam, 6 by 6 inches by 28 feet; lower tie beams, 1 by 8 inches by 13 and 14 feet; upper purlines, 2 by 6 inches, doubled; girts, 6 by 6 inches.

similar variety of food, in the shape of vegetables, is just as necessary for the welfare and health of their own households. Of course, in the pig they see the chance of making the almighty dollar. The sooner farmers give up the grab for money, and live for good, honest comfort, the better, and the small mixed farmer will, in the long run, come out ahead every time.

Regina, Assa.

H. A.

Description of R. J. Phin's Barn.

To the Editor FARMER'S ADVOCATE:

Enclosed find plan of one of the five bents of my barn. The timbers are almost entirely 6 by 6 inch, which I find is quite heavy enough when well braced. The braces are almost all 4 by 4 inch, and vary in length according to the span, making the building quite solid. The only weakness in a 6 by 6 inch frame lies in the tenons, where two beams are tenoned in one post, as at A, which gives only a three-inch tenon. To obviate any chance of these joints giving and the barn spreading, either from any settlement in the foundation or any other cause, we spiked tamarack 2 by 8 inch planks from B to B, breaking joints at the posts, making this timber 6 by 8 inches, and also spiked on short lengths of 2 by 6 inches on all joints of timbers running through the barn.

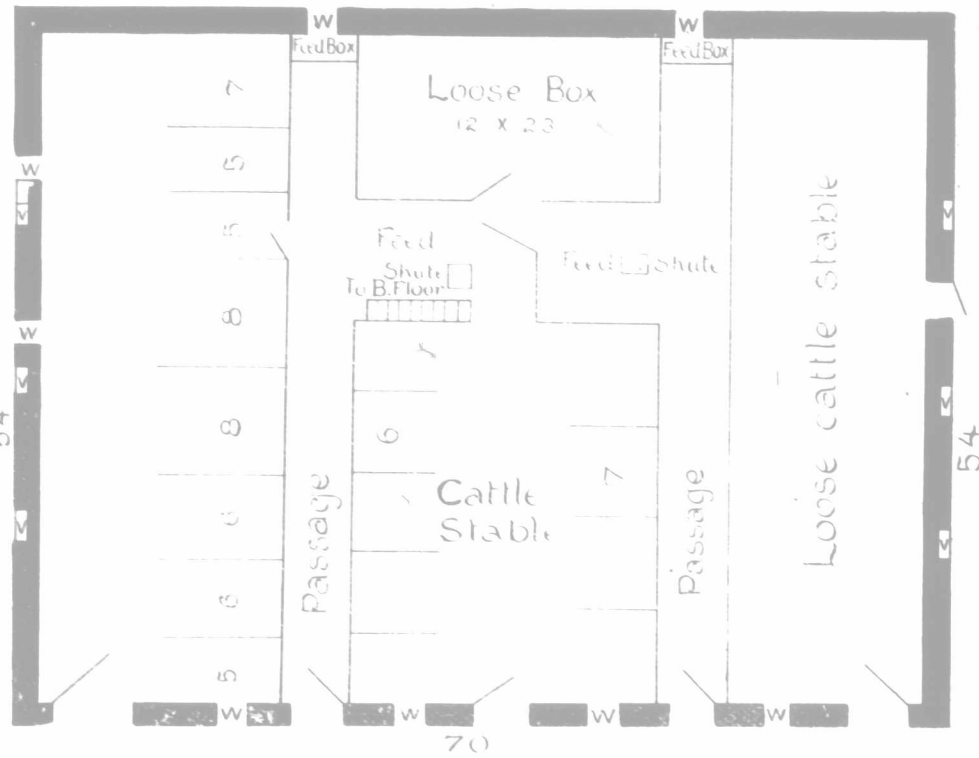
The siding is 1 by 12 inch boards and half-round 2-inch battens, put on upright. It has cover joints, and a regular house cornice, which keeps out all snow from driving storms. The floor is two thicknesses of half-inch lumber, with paper between, except threshing floor (the full width of the barn), which is half-inch boards, tar paper, then 2-inch plank on top. A feed granary, 13 by 34 feet, is situated in the north-west corner, with chutes to feed bins in the passages below, and trapdoors to two feed rooms below for hay, straw, etc., makes handy feeding.

The basement is laid out in the old Ontario style, which is hard to beat; that is, a single stable at each end and double stable in the middle, with heads to the two feed passages. One of the single stables is for horses (18 by 54), the other (15 by 54) for loose cattle. The center stable (23 by 54) is for cows and any other stock I find it convenient to tie up, or it may be used for loose stock, as desired. Passages are 5 feet wide. There is a window over each door, 12 inches high and the full width of the door, and also four other windows between doors, each having four lights 10 by 12, on south side, and one at each end of passage on north side, and a couple in horse stable on west side, making the stables very light. Walls are stone, 8 feet high. The sills are of 6 by 8 tamarack, and joists 2 by 8 inches, running lengthwise of the building. Ventilation is on the horizontal plan, made by boarding up the bottom of three of the pairs of joists the full length of the building, with openings through the stone walls at each end, and slides throughout the stables to open or shut as desired, which system I find works well.

Moosomin, Assa.

R. J. PHIN.

The wise farmer needs not to be reminded that there is economy in having all things ready to commence the spring seeding just as soon as the land is dry enough to work well. To this end he will have his seed grain and grass seed well cleaned and ready to sow, his harness and implements repaired, his harrows and cultivators sharpened, and his horses in good condition for the work. The early bird gets the worm, and the early-sown grain generally turns out the best yield at harvest. It is well to be ready for early seeding, but not well to begin before the land is in fairly good condition.



BASEMENT PLAN OF R. J. PHIN'S BARN, 54 BY 70 FEET.

just where it is wanted at the animals' noses—which current of air is sufficient to lift the foul breath of cattle and send it up ventilating shaft, yet without any cold air on the cattle. You are unable to smell the odor from feeding turnips in my stables at any time. I stable from 40 to 50 head of cattle, besides other stock. I have about twelve shafts, with covers on top, so I can close any or all of them if necessary. The shafts are about 16 feet long from ceiling of stable. I would advise two through roof. I have tile in my stables continue through under my root bins, with ventilation, which works very successfully. One can bore hole in tile for gas pipe with an ordinary bit. D. K. ROSS. P. S. Temperature never varies five degrees with this system. D. K. R.

A Well Planned Farmhouse.

Accompanying the renewal of my subscription to your most valuable paper, you will find enclosed the photo and plans of a farmhouse, which we hope may be of use to some of your readers. The kitchen is not yet built, but the actual cost of the part built and the estimated cost of the kitchen is about \$1,800.

DAVID PENNINGTON.



EXTERIOR VIEW OF RESIDENCE OF MR. DAVID PENNINGTON, MIDDLESEX CO., ONT.

Changes in the Tuberculin Test Regulations.

DEAR SIR,—I have yours of the 7th in regard to tuberculin testing. In consequence of the imbrolio which the testing for tuberculosis of cattle going into the United States had reached, I arranged to discuss the matter with Secretary Wilson in Washington, and went down there last week. I found that what the breeders had so insistently demanded, and what the *Breeder's Gazette* had so aggressively insisted upon, namely, that the tuberculin test should be done away with for animals going into the United States from foreign countries, was quite impossible.

Mr. Wilson, the Secretary of Agriculture, said that he felt that he was absolutely right in his policy, and that he was not going to be driven from that position, especially as the law of the United States required such action.

Under these circumstances, the hopes of our own breeders that the tuberculin test should be entirely removed, as between Canada and the United States, were impossible of fulfilment.

Formerly the United States Department accepted the certificate of test from any Canadian veterinary whose name I submitted to them. Having taken the steps which they did, they now are not prepared to go as far as this, but they will accept the certificates of any of my Departmental officers just in the same way as they take the certificates of their own Departmental officers.

For the purpose of facilitating this work and relieving the burden as much as possible on the breeders of Canada, I have decided to appoint a few more Departmental officers and do this testing free of charge for export, as well as for the freeing of our herds of tuberculosis.

In connection with the importations from England, the United States Department is also willing to accept the certificate of an officer of mine in England, just the same as they accept the certificate of their own officer whom they have sent over.

As our own importers much prefer to have their cattle tested in Great Britain rather than in our quarantine on this side, I have decided to facilitate importation by sending over a thoroughly qualified officer, who will remain in Britain, and be at the disposal of breeders there who wish to export to this country, and his certificate of test will be accepted for cattle going through to the United States without further test here or at the frontier. This will be a considerable expense to my Department, but I feel that it will facilitate the important work of our live-stock breeders so much that I am justified in adopting the course. I am sure that the Canadian live-stock men will appreciate these steps, and while they have not secured all that they had hoped, the arrangements made will relieve them of much embarrassment and assist them to continue that profitable trade in cattle between Canada and England and the United States in which they have done so well.

Yours very truly,
SYDNEY FISHER.

Dept. of Agriculture, Ottawa, March 9th, 1901.

Edmonton Creamery.

The annual meeting of the Edmonton District Butter and Cheese Association was held on Feb. 23rd. There was a fair attendance of patrons. The following resolutions were passed:

"That the Government be requested to collect cream for the creamery and charge the patrons for hauling."

"That, in the opinion of the patrons, the operations of the past season have been satisfactory, and they would request that the creamery be continued under the same management."

The following were elected officers for the ensuing year:

President, John Kennedy; Vice-President, Gus. Daze; Directors—G. T. Montgomery, F. S. Mitchell, Geo. A. Clapp, Robt. Hare, M. G. S. Symons, Philip John, Jr., and T. G. H. Jones; A. C. Roth, secretary, S. J. Texas.

The Ventilation Problem.

To the Editor FARMER'S ADVOCATE:

SIR, In order to the preservation of the good health of the live stock of this country, it seems to me you have done a wise thing in taking up the subject of ventilation in stables. To keep the stable air pure, free from dampness and not too low in temperature in winter, is a serious and difficult problem. In my observation, the best plan is to bring in a supply of fresh air, through say a five- or six-inch tile, down the feed alley, with openings to the mangers or manger posts. If the main in-take pipe simply opens through the end wall of the feed passage, the opening must be above ground and unobstructed with rubbish or snow, as I have sometimes seen, so that no sort of air could get in. The sub-earth duct plan, with a cowl over the pipe where it comes up through the ground, to catch the air from all points, should "fill the bill" on that score. Next, with regard to stable interior. If that plan is to work right, there must be no open windows, cracks or spaces under doors to let in cold air. The supply of fresh air should come in through the duct and tile provided. The entrance of cold air from other sources being shut off, their a of the stable will soon become heated from the animals, and rise. For its escape, ventilating shafts must be provided. Some depend on one or two feed chutes, but these are not sufficient, and, being large, naturally allow a downward rush of cold air. To prevent this, they have to be closed with hay, etc., and then the stable air becomes foul. It seems to me the best place for the ventilating shafts is extending up from the stable ceiling, inside the barn wall, and through the roof two or three feet, with a gable cap above to keep out rain or snow. Where they come through roof, finish off with zinc or galvanized iron, like a chimney. These ventilators are made of inch boards or galvanized iron, and about 4x10 inches, inside measurement. The posts of the barn frame should not be used as one side of the shaft, as the dampness will rot the timbers. Some have not run their shafts through the roof, but simply made them open sideways under the eaves; but that plan does not work. (Tiles through the basement walls, near top, are not serviceable ventilators, and one generally sees them plugged with straw or old rags.) There should be one shaft every 10 or 15 feet along side of barn. These will let off the damp, heated air, and the cold air will flow in through the duct to take its place. Someone may ask: How about the heavy carbonic acid gas which the animals throw off in breathing and settling to the floor? The law of the diffusion of gases overcomes that difficulty. The in-coming fresh air mixes with the foul air near the floor, which, as it becomes heated, also rises and passes off. The reader will readily see that to have this plan of ventilation work, the conditions must be correct, but, these secured, it is a success.

FRESH AIR.

The Care of Consumptives.

A valued correspondent writes: "Your report of the Ottawa conference for the prevention of tuberculosis is very good, but in regard to the third statement at the head of the article, to the effect that germs are conveyed from diseased lungs by moist particles expelled in breathing and in the matter (sputa) cast off in coughing, I would be in favor of striking out the three words, 'in breathing and.' Some of the ablest authorities state that the germs, unless in very rare cases, are never expelled in ordinary breathing—a gasp will do it sometimes, but that is more akin to a cough. The germs always cling to a moist surface. You can see that this will make a wonderful difference in the nursing of a patient. While some separation of individuals is desirable, care to destroy the *sputum* is quite as good as the isolation which is now being clamored for, and which is difficult to get by poor people."

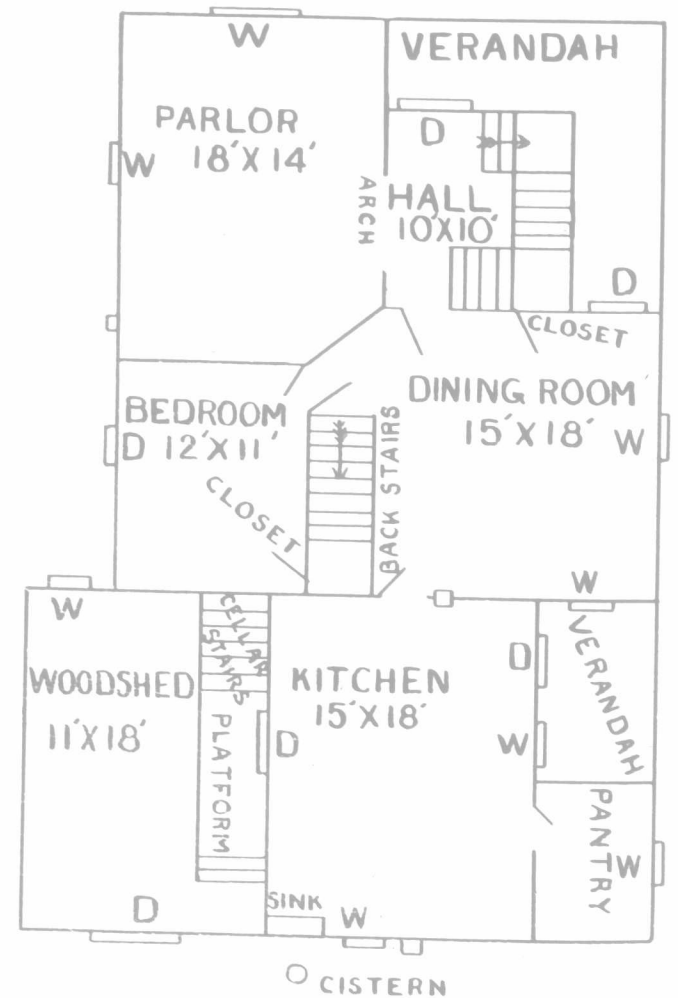
The same paragraph intimated the general view of the medical men at the tuberculosis conference to be that the germs floated in the air on being dried, and so found their way into the lungs of other persons. That they come almost altogether from the *sputa* is doubtless true, and only in rare instances expelled in hard breathing. It has been claimed, however, that germs have been found in that way on moist surfaces. There is certainly a danger of the isolation idea being carried to an absurd extreme, that would deprive the unfortunate patient of certain nursing and friendly attention, or possibly desirable medical attendance, which would militate against recovery even under sanatoria conditions. The healthy human organism is surely proof against myriads of disease germs, else the race would speedily perish. The tuberculin-test fad has done a vast deal of damage and little or no good, and there is now a possibility of the fatal neglect of homes and home conditions, in which many, unable ever to reach a sanatorium, will die through the danger which our correspondent points out.

In so far as bovine tuberculosis is concerned—apart from what differences may exist between it and human consumption, and the latter not finding its source in animals—there is little doubt that the true safeguards and remedial measures are cleanliness and ample sunlight and fresh air, secured in stables by good ventilation, with ample nourishment. A case was reported to the conference where the ailment had been eliminated from a herd without separation, and Mr. Edwards, M. P., inclined to the view that isolation was not the necessity which some had claimed.

The Secret of Success.

To the Editor FARMER'S ADVOCATE:

We have entered on a new century, with the South African war still dragging on, but now speedily nearing a close. There is, however, another war upon us of a different nature, but one that cannot help affecting each one of us as Canadians, viz., the commercial or industrial war, which, as Lord Roseberry puts it, Great Britain has more need to fear than one that could be decided by force of arms. It seems to me that we Canadian farmers have been engaged in this latter war for some time, and will continue to be for a long time to come. Our produce has been competing in the markets of the world with produce from all parts of the world, each land producing it under different conditions. The country that finds the readiest sale for its produce, at the most remunerative prices, is the one, in my way of thinking, that is winning in this battle for supremacy. When we look at the great increase in exports of the last few years, is it not proof positive that we are more than holding our own in fighting for the trade of the motherland? Butter, cheese, pork and poultry have made the greatest increases, and it is necessary that we should not only hold this trade, but keep on increasing it. The poultry industry is only in its infancy in Canada, the farmers having only realized within the last few years what profits are to be derived from it, chiefly through the agricultural press and colleges throughout the land. The agriculturist, to be successful, has a great deal of thinking to do, and, as a rule, he must do his own thinking, as no hard and fast rule can be made that will apply to all farmers, each working under different conditions, unless it is in a general way. This way, I would say, is education in our particular line of business. Lord Roseberry, in his last famous speech, warns the British people of the approaching danger, and advises them to educate themselves, in order to keep in the van in this march of progress that the world is making. Might we, as Canadian farmers, not take the same advice? Where would we have been to-day had it not been for the agricultural papers and colleges? What a grand thing those two sources have been to us. The former has been giving the very best ideas that could be got together from practical farmers and agriculturists all over the land, in such a manner that any farmer, for a very small cost, can keep abreast of the times; the latter is doing an equally good work, showing us how to get a maximum amount of produce at a minimum cost. It has also been educating young men who have been fortunate enough to be able to go out and demonstrate, by practical farming, to their brother farmers, who, through circumstances, perhaps, had not the opportunity that those young men had. Is it not natural that we should look to those young men for information and new ideas? It is the educated man, more than ever, that wins in these modern times. In no branch of business does education count for more than in farming. When



GROUND FLOOR PLAN OF D. PENNINGTON'S HOUSE.

we look around among our most progressive neighbors, do we not almost invariably find that they are men who have had a fair education and who are always ready to learn, from whatever source it may come. Experience teaches, but his fee is too high for the farmer. In no way do we learn more at so cheap a cost as through a good agricultural paper. The FARMER'S ADVOCATE, as Prof. Shaw says, is doing a grand work for the farmers in this respect, and I think, with him, that it is but right that we

should let the staff of such a paper know that we appreciate what they are doing for us. The farmer of the 20th century must be progressive, must learn how to produce the maximum amount at a minimum cost, must supply nothing but the best quality of goods, in order to get and hold trade, and must be honest and straightforward in all his dealings. By sticking as closely as we can to these four rules, I think we need fear no nation on earth when our agricultural interests are at stake. I often think we might help each other more by telling of our suc-

can grow first-class fruit, but we can all do it if we only go at it in real earnest. Read good papers, put in practice what you read, and if you set out a strawberry bed, or if you start something else, tend to it wisely. It is sure to prove a success.

L. R. F.

Hotbeds.

Numerous failures in the management of hotbeds are annually reported to the Experimental Farm, and this seems to be an opportune season in which to give a few hints with reference to the making and care of this necessary adjunct to the cultivation of flowers and vegetables, as there is absolutely no reason for non-success, provided that proper precautions are taken.

The best material for hotbeds is, of course, horse manure, and this should be as free from straw as possible, though its total elimination is not absolutely necessary to success. Should the pile show signs of heating before it is convenient for building the hotbed, it will have to be turned, which operation must be repeated on every recurrence of fermentation, the last week in March or the first week of April being usually the best period for commencing hotbed work.

There is no doubt that efficiency is increased by making an excavation instead of building on the surface level. By the latter method, the whole surface of the bed is exposed to the cold winds, especially when the hotbed is a small one. By making an excavation two feet deep, and filling this so that, when finished, the manure is about one foot above the level, the foregoing danger is minimized, although care must be taken to select a location where the hole will not become filled with water, and it is unnecessary to add that the position should be as sheltered as possible, a southern aspect with protection on the north and north-west being preferable. A fruitful source of mischief in connection with hotbeds is the careless packing of the material. The manure should be put on in thin layers, each layer being well tramped, as, if this is neglected, the bed is certain to settle and heat unevenly, rendering proper watering and sowing impossibilities. As soon as the bed is thoroughly packed, the frame may be placed in position, a thermometer inserted in such a way that the sun's rays do not strike it, and the sash closed. It is necessary that, when completed, the manure should extend at least one foot beyond the outside of the frame on all sides, and this, of course, must be taken into consideration before building the hotbed, the size of which will necessarily be regulated by the length of sash obtainable. The standard hotbed sash is six feet by three feet, but when these are not available, storm sash, or windows of any description, will answer the purpose, and in order to carry off the rain, the frame should be twelve inches high at the rear, sloping to six inches in front. In the course of a few days the bed will commence to heat, the thermometer rising to 100° Fahr., or even higher, and when this has receded to about 75° or 80° Fahr., the bed may be considered ready for sowing. There are several ways of accomplishing this operation, the one most generally in vogue being to place six or eight inches of soil on the surface of the bed, and sow directly into this. While this may be considered as fairly satisfactory for such plants as *cabbage*, *tomatoes*, etc., it has many disadvantages, and I would not recommend it for tender plants. Perhaps the greatest argument against this manner of sowing is that very often, even with the best of care, the heat will rise a second time after sowing, and as the plants cannot possibly be removed, there is no chance of saving them when this occurs. Another undesirable feature attendant upon sowing directly in the bed is the difficulty experienced in watering evenly, as it is practically impossible to retain an absolutely level surface. By far the better plan is to procure some boxes about sixteen inches square and three inches deep and sow in these; old soap boxes sawn into three answer admirably for this purpose. By this means, should the bed settle unevenly, leveling is easily accomplished, and should it become necessary at any time to remove the plants, it can be done quite easily, and without injury. When the plants are large enough to be handled, they may be transplanted into other boxes or (as by this time there is no danger from overheating in the bed) into the bed direct.

The soil used should always be passed through a fine sieve, and contain a liberal mixture of sand, the latter tending to keep in check that dreaded fungous disease known as "damping off" (which often destroys a large percentage of plants in the hotbed), besides allowing free drainage. Of course, when transplanting, a richer compost may be used, but even then it is desirable to sprinkle the surface with sand. I omitted to mention that when employing boxes, only enough soil should be put on the bed to admit of more easily leveling, and should transplanting be made direct to the frame, this must be brought to the depth of six or eight inches.

Watering should be performed with the utmost care, as many failures may be attributed to carelessness in this respect. Until the plants have become quite vigorous, they should never be watered with the spout of the can, but with a spray attachment, which can be procured very cheaply. Another prevalent error among amateurs is the supposed necessity of regular watering—that is, that the plants must be watered at certain intervals, irrespective of their condition. Nothing is more disastrous to the successful cultivation of

plants than this fallacy. No water should be given at any time until it has been ascertained, by the condition of the soil, that they are in need of same, and then a *thorough* watering should be given, and entirely withheld until the soil is again dry.

Ventilation is an important factor in the successful management of hotbeds. The continuous steaming of the manure renders it imperative that air should be given at all times of the day, when possible, by drawing down the sash a few inches, and on cool nights some covering should be applied. Another necessary precaution is the whitewashing of the glass as soon as the sun's rays become strong, this operation being rendered necessary towards the end of April. When the season for planting out arrives, the frames should be gradually thrown open, so that the plants may be thoroughly hardened off, thus insuring greater success in transplanting. By bearing in mind the above rules, there is no reason for non-success in this branch of horticulture.

H. BROWN.

Exp'l Farm, Brandon.

Eggs and Chickens.

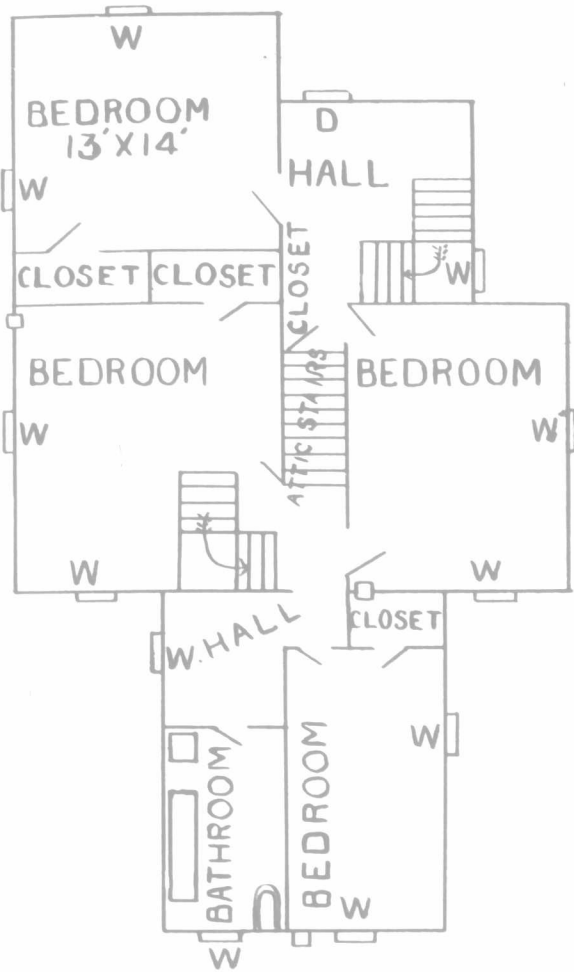
Who can describe the happiness,
The joy and pleasure when
The women hear the welcome sound—
The cackling of the hen.

"I do believe the hens are laying at last," says the farmer's wife. The daughter drops her work and runs out to the henhouse to see whether biddie has given a false alarm or not; but she has told the truth, for there is the beautiful fresh egg in the nest. The daughter looks in the other nests, and is much pleased to find that there is a hen on nearly every nest.

"O mother," she says, "here is one egg, and five more hens are laying. We shall soon have some egg money now, mother."

The hens should be all laying now. Only a few of ours were laying until we gave them an extra supply of ground bone and plaster. I pounded up some plaster and gave it to them as a substitute for lime. They ate it greedily. It seemed as though they had been just waiting for this to give the finishing touches, as it were, to the eggs, for they commenced to lay well all at once. Plaster is good for hens. Some years ago we kept hens in town. There was a building in the yard formerly used as a dwelling house, with nice rooms upstairs, where the sun used to shine in all day long. We gave the hens possession of one of these rooms for the winter. The plaster was broken in places and beginning to fall off, so the hens helped themselves to it. How happy they were! How they talked and rejoiced over their good fortune! They laid well all winter. The recipe was: plenty of light and sunshine, a variety of food, fresh water, good attendance, and plenty of plaster.

People have been complaining of a scarcity of eggs this winter. They were selling for 20 cents a dozen in the market here the first of February.



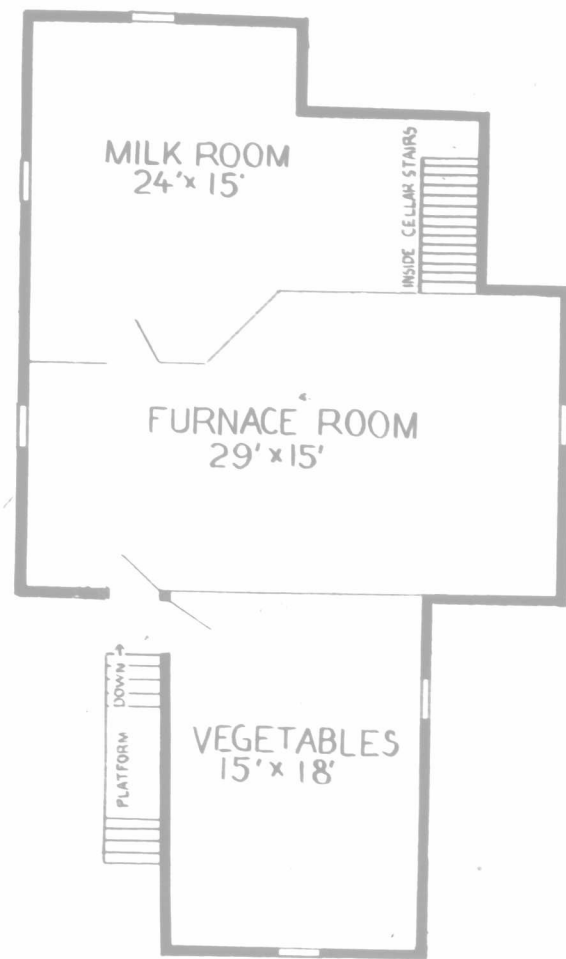
SECOND FLOOR PLAN OF D. PENNINGTON'S HOUSE.

cesses, along certain lines, through the columns of some widely-circulated paper. Before concluding, however, I wish to draw the attention of my brother farmers to two books that should be in every home, viz., "Successful Farming" and "Veterinary Elements," the former by William Rennie, Toronto, late of the O. A. C., Guelph, and the latter by Prof. A. G. Hopkins, late of Wisconsin Agricultural College, but now of the FARMER'S ADVOCATE staff, both practical books by practical men.

FARMER.

Raising Strawberries.

SIR,—I have been very successful in raising strawberries the last four years, so thought I would give you my experience. First have your ground heavily manured in the fall and plowed. As early in spring as it is dry enough, work it up, and when it would do to sow wheat on, it is in good shape to plant. I prefer to set in long rows, as there is less turning around with the scuffler. I put the rows four feet apart, and two feet apart in the row. I grow a hill of early potatoes between each row of strawberries, so the use of the ground is not lost and the plants are taken care of with very little more work than it would take for the potatoes alone. I find it best to pick all the blossoms the first spring, and keep the runners cut back until the first of August. You then have good strong plants, and they will more than repay for the extra trouble. The potatoes are dug by this time, and so do not interfere with the strawberry vines. About the last of November is the time to cover. Before doing this, go over the patch carefully and dig out any plantain, dock or other weeds that might be started. A clean bed of strawberries is a beauty spot in any garden. I cover with manure. Some object to this on account of the weed seeds, but the weeds are easily destroyed, as the roots are in the manure, not in the soil. On a warm day take a hoe, and where you see they have started just stir the manure and the sun will soon fix the weeds. The manure keeps the ground rich, which it has to be if you would get a good crop of berries. Concerning the plants, do not set out inferior kinds, even if you can get them for nothing; they will prove the dearest in the end. But you say, I could not buy enough to set out a big patch. Well, then, start a small one. I started with three dozen plants, and the third year I could have set out several acres if I had wished to. I had several berries that measured between five and six inches around. I sent samples to some friends, and they told me after that they seemed more like apples or pomegranates than strawberries. I do not say they were all large, but they were a good sample. Our grocer told me he would rather give me fifteen cents a basket than pay ten for others that were offered. There is always a better demand for first-class fruit. Many are of the opinion that only nurserymen



BASEMENT PLAN OF D. PENNINGTON'S HOUSE.

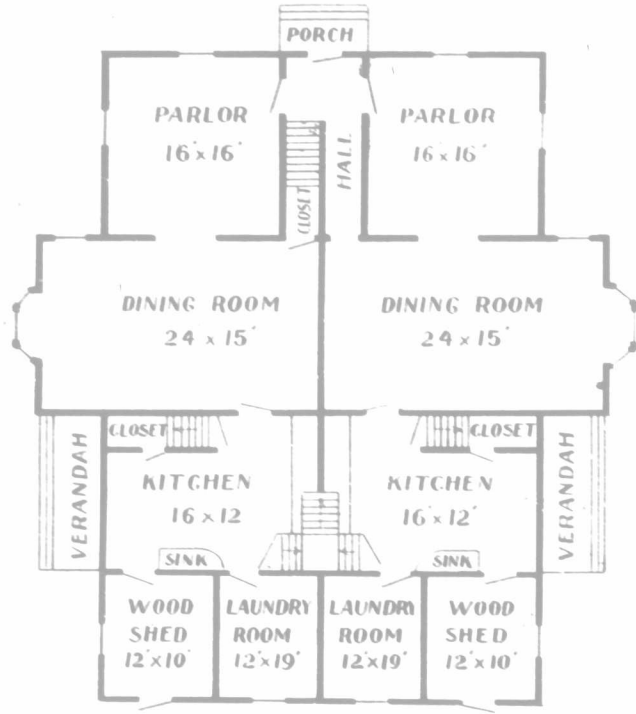
But the market has been overstocked with chickens ever since the fall. Had the quantity been less and the quality better, they would not have been such a drug on the market. People want good large, fat chickens, not scrubs. I have seen women stand in the market all day with chickens and almost give them away in the evening rather than take them home. "Oh, I wish I could sell my chickens," says the poor, tired woman to her neighbor, who, like herself, has been patiently, or

impatiently, waiting and watching for customers to come and buy. Of course, they are bringing in better chickens now than they did in the fall, but one cannot feed them so long and sell them for fifty or sixty cents a pair without losing money. Geese, turkeys and ducks are scarce, but fowl and chickens never seem to be scarce. Their name is legion. It doesn't pay to raise late chickens. We had twelve last summer, and nearly every one of them turned out to be roosters. Late chickens are too small to sell in the fall, and if kept on

take up my mending basket and join the party, I feel sure my boys will never leave this home to find a happier spot.

The plan is large enough for an average family. The chamber above the dining-room is large and makes a nice family room. If you think, as some do, there must be a bedroom downstairs, the laundry room could be in the cellar and the present one used as a sleeping room. There is no pantry, but two large cupboards built across ends of kitchens. They, with the closet, will be found as convenient as a pantry, and do not take near the room. There is a back stairway, which opens into both kitchens. The walls and ceilings of kitchens and laundries, also the cupboards, are finished with matched chestnut lumber. On the floor is a good piece of linoleum. The remainder of the house is lathed and plastered. All the woodwork (natural wood) is oiled and polished; the floors the same. What a saving of work these floors are. Instead of a dirty carpet to sweep, just a few mats to brush. These are the ideal floors for sleeping apartments, and I think more appropriate for the whole house. Then, what a change in the house-cleaning time! The men scarcely know when it does occur. Wherever I have seen a chance for improving our house, I have given you the benefit of it in the plan I am sending, and hope this will meet the requirements of inquirer.

A READER OF THE FARMER'S ADVOCATE.



FIRST FLOOR
GROUND PLAN OF DOUBLE HOUSE.

through the winter, one can't get enough for them to pay for the food they consume, to say nothing of the trouble of getting them ready and taking them to market. There is too much competition. If one won't sell them cheap, another will. That is the way. But someone will say: "We have them, and we must try to sell them." But, my dear woman, don't have them. Try a new plan for next summer. If you have no full-bred Plymouth Rock fowls, go and buy eggs for setting from someone who has. Don't keep any mixed breeds. Set your hens early. If possible, try to have your chickens hatched by the first week in April. Set the hens in a warm place, and dust them with sulphur or insect powder twice while they are sitting. You will have to take good care of the little chicks for the first three or four weeks after they are hatched. Then, by September (if you are good to them) you will have your beautiful, large Plymouth Rocks ready for sale. All you will have to do then will be to catch them, take a pleasant drive to the fattening station, sell your chickens and receive your money. This is the way to make poultry-raising pay. All that is required to start is a little forethought, industry, and good management. Now, women folk, take a friend's advice. Put on your thinking-caps. There is money in this business if properly managed. You want to make money, don't you? Start early in the spring and raise chickens for the fattening station. You have been taking chickens to market and working for nothing long enough. You will have less labor and more money by this method. Spring is coming. It will soon be time to get to work.

When March winds whistle round your door,
Just think the storms are nearly o'er,
Don't say the weather is not fit
When you find biddie wants to sit.

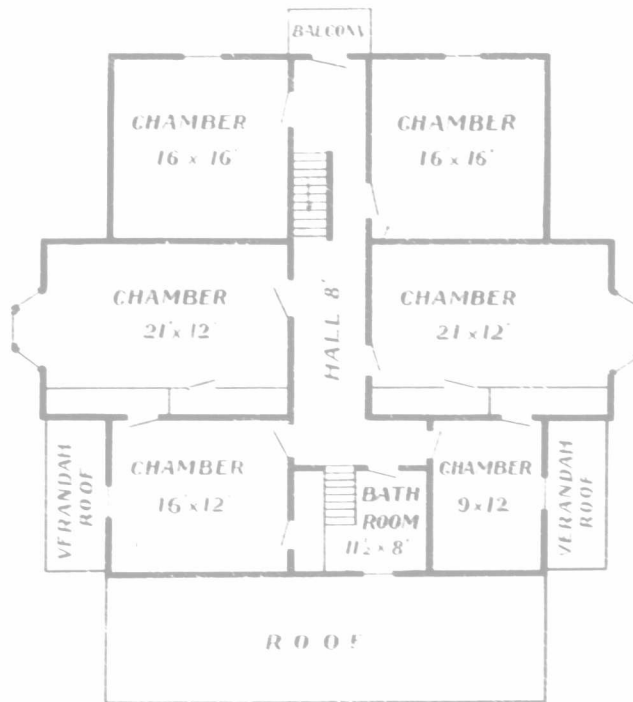
A. R.

Plan of House for Two Families.

I have lived, in a harmonious and satisfactory manner, for the last five years in a double house. To be sure, there are some disadvantages, and a great many advantages, especially in cost of building and maintaining. One furnace will heat it, and, as in our case, both families use same halls, stair, and bathroom. If one family is absent, the other keeps up the fires, so the much-prized plants, which so often keep one at home these cold days, are safe. In our case it is son and wife and two children living with his father and mother. I think this about the only case that calls for double houses. Father and mother never want their last boy to leave them. We all know, large houses, elegantly furnished, never bring happiness to the occupants. I can see no use whatever in rooms richly furnished and kept shut up, for fear a speck of dirt should find its way into them, to be opened for some special company, which the boys rarely ever see into and which seem to say to them, "Don't step on my carpet, don't sit in this chair." They take a look at the new picture mother has just bought, and go back to the kitchen to sit in an old wooden chair, tilt back against the wall, with nothing interesting to read and no games with which to amuse themselves. There is no pleasant sight, to my mind, than to see a father, seated by the table in the very best room, reading his Advocate, or the latest best-selling novel, with his doll family in the parlor, and a son, with his school books, opposite the door. As I

Beginning in the Poultry Business.

If the beginner has not had any experience with poultry, it is best not to begin on too large a scale. Many who know nothing about poultry think there is a fortune in it, and rush into it, investing a large sum of money, and then when they have the equipments and fowls, know nothing about the care of them; the fowls are not cared for properly, and



SECOND FLOOR
UPSTAIRS PLAN OF DOUBLE HOUSE.

the result is as nothing else can be expected—a partial or total loss. Then the loser condemns the poultry business, and convinces some others that there is nothing to be gained from the keeping of poultry.

First, money must be invested in buildings, in good foundation stock, and in food and other materials; and, finally, work in the care and management is unavoidable.

The fowls, to do their best, must live in comfort and shelter. The land under and around their quarters should not be wet, and a soil containing stagnant water is especially to be avoided. A slightly elevated site, facing and sloping to the south or south-west, if attainable, is preferable. The cold of winter and heat of summer must be tempered for the comfort of the fowls, if they are to thrive and do well for their owner.

Whatever the form or style of the building intended may be, it should be so placed that the surface water will flow away from and not into or under the house. There have been many forms and plans of poultry houses given in the Advocate, some of which are desirable and some are not. Each poultry-keeper ought to make a study of this matter as related to the particular conditions of his location and the scope of his plans. A great many henhouses are adapted only to winter conditions. The nature of each season and of all kinds of weather must be kept in mind, in building, if the house is to provide a comfortable home for the poultry throughout the entire year. Winter and summer quarters and a scratching shed may be combined in one house, or in one room if so desired. Make the interior fittings of the house as few, as simple and as economical as possible, and all easily removable, so that they can occasionally be placed out of doors in the sunshine and fresh air.

I hope that this rough pen-sketch of a plan has made plain the desirability of so constructing a poultry house that the whole floor space will be available for use by the hens; that it will catch the

first rays of the sun in the morning, and, unless clouds interfere, be blessed with sunshine in some part of the house throughout the entire day; that the house may be tightly closed and yet well lighted in cold and stormy weather; that it may be opened in front on warm days in winter, and thrown widely open on three sides in the hot summer days.

If the fowls are not to be allowed free range in summer, then, if available, double yards should be provided—that is, two yards for each house or pen of fowls. By having the double yards, the poultryman is allowed to cultivate the soil and grow a crop of green grain in one yard while the other is in use by the fowls.

Make the poultry house and yards as attractive to the eye as possible, instead of being a blot on the landscape and a disgrace to the farm. Plant fruit-bearing trees in the yards, and grapevines trained upon the fences furnish an agreeable shade in summer for the fowls, and an abundance of delicious fruit in the autumn for the owner.

Now comes the momentous question of what breed to select and where to get the best fowls to start with. This is a problem for earnest study, and each beginner must think it out for himself. The quality of the individual birds you select is, however, of more importance than the breed. There are poor specimens in every breed, which would prove unprofitable under even the best of conditions, and this new poultry house should shelter nothing but first-class business birds. Consider the market, the local conditions, and your own likes and dislikes in the matter.

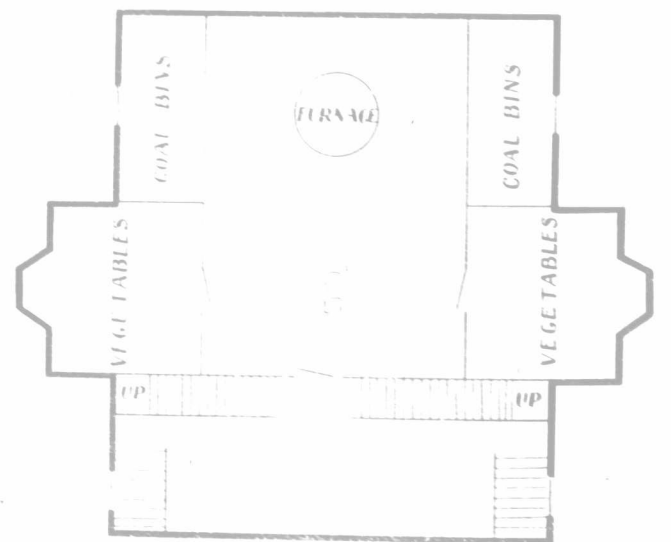
As the chicks grow and develop, note which ones are the most thrifty, the earliest to mature, develop into early layers, resemble most their parents and in what respects, and which come nearest to the type of the breed. Study all this with the idea of learning which birds to select for future breeders. One of the chief points of successful chicken-raising is to keep them constantly growing. To do this, no condition can be tolerated which gives the bird a check in its development.

Dispose of the poultry products direct to the consumer at the time when the condition of the same and the state of the market yield the greatest net profit. In some localities it is better to sell the chickens as broilers or roasters than at maturity, as you will get a better price and the food and care necessary for the added growth and weight may be saved. When culling out the chickens to be killed and sold as dressed poultry, save the promising young thoroughbreds for breeders to replenish your stock, and, in case of a surplus, to sell to other poultrymen who are in need of good breeding stock.

It would be best to keep a record of each pen, at least a record of the eggs laid by each pen of fowls; but it would prove still better and more profitable to keep a record of the eggs laid by each of your best breeders.

A financial record could also be easily and simply kept. Make an inventory at least once a year of all money invested in land, buildings, furnishings, fences, tools, stock, and the estimated value of the poultry and their products on hand. Then, during the year, make an entry of everything that is purchased, including food, tools, lumber, nails, or supplies of any kind, new fowls, etc., and the labor at a fair price. This is all charged against the business.

Then, for the credit side, enter the value of every egg and every fowl sold or used for the house table, and of everything that is disposed of,



CELLAR
BASEMENT PLAN OF DOUBLE HOUSE.

including the poultry manure and the feathers, if they can be sold, and at the end of the year balance your accounts. The difference between the debit and credit sides of the book will show the profit or loss. We will hope that it is a good round sum on the right side of the account. Of course, if you enter into the business extensively and put up expensive houses, the poultry may not be able to pay for it all in one year, especially if you are not very heavily stocked; but in two or three years, with good management of the poultry and shrewd management of money matters, you should be set on a fair basis. PERRY F. DORRÉ.

Dairying Up to Date --- III.

BY GEORGE RICE,
FEEDING.

In former papers I have tried to show the importance of proper care, etc., because there is where it seems to me most feeders stumble. I will relate one more instance to show how feed may practically be wasted for lack of regularity and care. While away for a few days attending the breeders' meetings, I left my man, with a new man to help, in charge, with nothing to do but to look after the stock. Well, in four days, the cows, I found, were giving 50 lbs. daily less, as shown by the milk book. Such carelessness cannot be tolerated. Men will get so indifferent that the only thing to do is to let them hunt another job, which I did, and in four more days the cows were giving over 25 lbs. daily more than before, or a gain under my full care of 75 lbs. daily for the same 16 cows, on practically the same feed. In fact, a careless man is no use even as help. It is absolute thoroughness and regularity that counts. 'Tis the finishing touches that make a picture a work of art, instead of an ordinary daub.

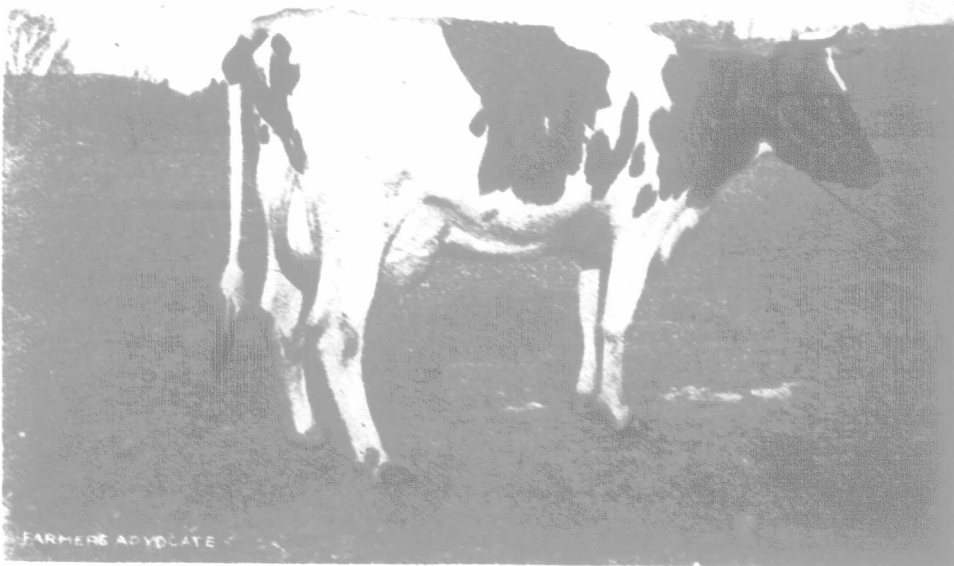
We may feed cows for good work, from \$35 to \$45 yearly, and they should make \$60 to \$80 each, but it by no means follows that the most costly feeding will give the largest return, but can easily do quite the reverse. Production can be cheapened by keeping the right kind of cows—heavy producers—giving them the best of care and providing the most suitable feed, and the more feed that can be produced on the farm, the better, as that is obtained at first cost. For instance, roots can be produced for \$1 a ton on rich land, and a large crop, but if we had to draw these roots several miles, it would cost that for teaming, same with ensilage. Now, with a good supply of roots, ensilage and well-saved straw, we have a cheap basis for cheap production, but it is only a basis in up-to-date dairying, as it will be found very profitable to feed grain also. A cow that it will not pay to feed grain to will not pay to keep at all, because, even if she does produce some profit, she is taking the room and labor which, if given to a better cow, would give vastly better returns. The amount of grain, etc., that can be profitably fed, depends upon the cow and the period of lactation. A fresh cow requires a more concentrated feed than one longer in milk (more nutriment in less bulk). Now I will give a few details from our actual work:

As we have been doing considerable official testing this winter, we have the exact production as well as feed given. We will also take the work of the heifers, which will help to illustrate how these theories in breeding, etc., work out in practice. I cannot give details of all, but think it best to give a minute description of the care, etc., of at least one, so that they that desire to get down to "fine work" can follow.

Heifer No. 1—Commenced first test at 28 months old, 7 days after calving; first day of test, 40 lbs. 3 ozs. milk, gradually increased in 7 days to 49 lbs. Total milk for 7 days, 308 lbs. 2 ozs.; butter, 12.62 lbs. During the test she was fed, at 6 a. m., 9 lbs. silage, on which was put 1 lb. oat chop, 1 lb. bran, 1 lb. oil cake; milked, and then fed 10 lbs. of mangels. At 9 a. m. she got 3 lbs. bran mash (with salt) and a little hay. The same quantity was fed from 12:30 to 2, and again at 7 to 9 p. m. That is, she had about two hours to eat each meal. As she continued to increase, the feed was not increased during the test. The total cost for food was \$1.337; product, \$2.972; net profit, \$1.635. Now, we see it paid well to feed well, but not only for this work, but improvement continued. The same ration was continued, with the addition of 1 lb. linseed meal, scalded and poured on the 3 lbs. of bran mash. This heifer was again tested 3 days later for 7 days more. Though fed the linseed meal, rich in fat, extra, she now tested lower, and after 5 days' feeding of it I changed the 1 lb. linseed meal to 1 lb. more bran in the mash. During the test the heifer gained steadily from 50 lbs. to 53 lbs. 9 ozs. Total for 7 days, 303 lbs. 9 ozs. milk; 13.09 lbs. butter, net profit would be some higher than before. This ration seemed to suit very well, as she never missed a meal or left a handful, and continued to milk over 50 lbs. daily for over two weeks longer. During all this time milking was done three times daily, then we changed to twice daily, and she dropped at once 6 lbs. a day, but in 10 days more of regular milking twice a day she came up to 49 lbs. daily.

No. 2—Three-year-old heifer, gave 322 lbs. 3 ozs. milk, 11.16 lbs. butter—less milk, but a high test.
No. 3—At twenty-four months old, gave 279 lbs. 5 1/2 ozs. milk; she was giving more, and should have been tested sooner. No. 4 Calved at twenty-four months old, and received a knock-down blow, from having an abnormally large calf, which badly lacerated her, and she retained afterbirth, but was promptly treated with 20 drops carbolic acid, diluted in a cup of water, and given in her mash twice daily; this soon cleaned her out, so the discharge ceased, and she was carefully built up until three months after calving she made an official test of 245 lbs. 5 ozs. milk in seven days. At time

of testing, these heifers were fed the same, so we see that the yield depended not so much upon the feed as upon the capacity of each animal, time of testing, and condition. Heifers producing less would eat about as much, and cows producing more would need but little more. A heifer starting in at 40 to 50 lbs. daily should give at least 25 more milk in a year than a cow would starting at 40 to 50 lbs. Under proper care, development in the heifer should offset shrinkage, owing to advanced milk period. Heifers should have the best of care and easily-digested food, so as to aid in developing into great cows. Cows in milk 6 to 8 months can be fed more roughage, such as ensilage, straw, etc. To a cow at this period, giving 30 to 40 lbs. 6 to 8 months after calving, I feed 15 lbs. ensilage, 15 lbs. roots and 2 to 3 lbs. oat chop and bran on the ensilage (roots are fed whole), good well-saved straw *ad lib.*—this morning and evening. At noon, I feed cut hay, about a pailful to each cow, and 2 lbs. of bran for each cow, all mixed in a large box and steamed. Some cows are fed more, and some less, according to how they are milking. I also feed at noon, after this, a very small feed of clover hay. When a cow is dry I like to feed her liberally on ensilage, and some bran and oat chop, depending upon her condition. It is not required that a cow should be beef-fat before coming in, but she should be in good health and have some marrow in her old bones. When we have to stint a cow for a week before calving, and a week after, it weakens her, and a poor cow, though really requiring more, cannot digest as much, just as it is harder to keep up steam at low pressure in an engine than it is at a higher pressure. So we see that absolute regularity, good care, etc., are required to be highly successful in dairying. Anyone can be an up-to-date dairyman if he will follow on these lines. There is no "science" about it, just good common sense from start to finish, and a genuine love for the business.



LILITH PAULINE DE KOL.
Holstein-Friesian cow; 28.23 lbs. butter in seven days (official test).
OWNED BY H. D. ROE, AUGUSTA, N. J.

A Summer Fair for Edmonton.

The Edmonton Industrial Exhibition Association has been incorporated, with the following officers: President, Con. Gallagher. Directors, Thomas Bellamy, D. Brox, John Kennedy, J. H. Garipey, J. H. Morris, M. McAuley, W. S. Robertson, Donald Ross. Treasurer, E. C. Emery; Secretary, A. G. Harrison. The capital of the company is \$15,000, divided into 600 shares of \$25 each, of which 122 are subscribed.

The Association owns 43 acres of land, situated in the center of the town of Edmonton and adjoining the Saskatchewan River, a beautiful piece of property, forming a natural park, on which they have laid out one of the fastest half-mile tracks in the West. The fair is to be held on July 1st, 2nd and 3rd, and no effort will be spared to make this summer fair a practical one, at which delegates from Eastern Canada, the United States, and Europe will be enabled to form a good idea of the vast resources and richness of the Edmonton District.

For prize lists and full particulars, address:
A. G. HARRISON, Edmonton, Alta.

The prospect for the dairy business was never brighter than at present. The market for dairy products is steadily expanding, and Canada has established a reputation for high-class goods in this line, which it should be the ambition of every buttermaker and cheesemaker to maintain unsullied. Our herds of cattle of the special-purpose dairy breeds compare well with the best in the world. Our people are well informed regarding the best methods of manufacturing high-class dairy products, and we are assured that the most improved and approved means of rapid and safe transportation of such export goods, and of placing them upon the British market in the best condition to secure the best prices, will this year be adopted by the officers of the Department of Agriculture.

The Cheesemaker and the Flavor Question

In these times of keen competition, which is being felt amongst the makers of cheese as well as every other class of tradesmen, I find that directors and proprietors of factories are not always fair and reasonable in the terms which they demand from a maker before engaging his services. Many makers, in their eagerness to obtain factories, which is more difficult than it formerly was, are willing to run risks which they know full well they should not run, but as the directors or proprietors of the factory in question demand that their terms be accepted, he must comply, knowing that if he does not someone else will.

One of the most unreasonable demands which directors make upon the maker is that which says that he must guarantee the flavor of his cheese. Some factories will not engage a maker unless he is willing to meet these terms, and I am sorry that they can find makers who, for the sake of having "a job" for the approaching season, are willing to undertake the risk, even though they know at the time that they are not doing justice to themselves. This particular part of the agreement between director and maker has been the cause of a great deal of trouble. I myself can point to a number of cases where the maker found, when it was too late, that he had made a bad bargain and was considerably out of pocket thereby.

Now, cheesemakers need all they get. They are not an overpaid class, by any means. Wages are on the decrease, while responsibility is on the increase. Under these circumstances, a maker has no business to increase his responsibility to a point where he guarantees to do that which is not under his control, and no board of directors with any reason or fairness will ask him to do so.

Bad flavors will creep into curds in spite of the best makers living. The producer of the milk is the man who is the cause of nine of these bad flavors out of every ten; therefore, if there is any money to be lost on account of these bad flavors, he is the party that should lose it, and not a maker who is unwise enough to enter into an agreement which binds him to make a good article out of poor raw material. To be sure, he has the privilege of rejecting all milk thought to be unsuitable; but this is no safeguard whatever, as some of the worst flavors with which we have to deal cannot be detected in the milk until it is too late to reject it. For instance, the flavor commonly known as "bitter flavor," which has given so much trouble during the last three or four seasons, does not show any signs, either by taste or smell, until the milk is heated up in the vat, and sometimes not until you begin to cook your curd. No matter how careful a cheesemaker may be, he will find that he will have bad flavors to contend with, and there is more trouble in this respect at present than ever, owing to the fact that patrons of cheese factories practice soiling their cows during most of the cheese season, with the exception of a few weeks in June and July, when the grass is at its best. Grass is the natural milk-producing food, and anything else which is fed to a cow has a tendency to leave some particular flavor, and generally an objectionable one, in the milk; hence, the increasing difficulty a maker has to keep bad flavors out of his cheese.

Patrons of factories are the people who should suffer for this, and to many of them a little touch in the pocket is about the only thing that will impress upon them the importance of caring for their milk and having it arrive at the factory in the proper condition.

Where circumstances exist where patrons know that the man at the other end, and not themselves, is responsible for any loss incurred from their negligence, it encourages a tendency on the part of the patrons to neglect the proper care of their milk, and so long as it is good enough to pass the weigh stand, they do not care. I believe the only way to get patrons to properly care for their milk is to give them to understand that their maker is exempt from any responsibility in this question of flavor, and in case of any culling from this cause, that they, and not their maker, are the losers.

Cheesemakers are, as a rule, a class of men who always do their best. A good maker does not consist so much of a man who will guarantee his flavors, as of one who knows how to handle a bad flavored curd when he has it on his hands. A bad flavor can be improved, but very few can be got rid of completely, and a great many will develop as the cheese grows older. There are, in fact, some flavors which cannot be detected until the cheese has been in the curing room for several days.

Another bad feature of making the maker responsible for his flavor, is that it encourages the practice such makers have of laying aside any cheese of which he is any way dubious and feeding it to his patrons. This is a very common practice, and the maker cannot be censured for following it when he is bound by a bad bargain. I do not think that in many cases the patrons know that they are doing away with the worst cheese produced in their factory, or they would insist on a change. I think if directors who are trying to make a success of

their factory would reason this matter out for themselves, give their maker a rate with which he can afford to send all milk home which will not make first quality of cheese, and tell the patrons that they were the losers in cases of any losses from bad flavor, that we would have no more trouble in obtaining good, pure milk, such as is necessary for the manufacture of first-class cheese.

"A CHEESEMAKER."

How Can Farmers Get Fair Pay for Their Work?

The *ADVOCATE*, which I have read for a good number of years with great interest, confines itself chiefly to the productive side of the farm business, teaching us how to make the best of our farms; that is, how to raise farm products of all sorts in the largest quantity and of the best quality, in the most economical way. And, of course, this is the first step to success. But when we have done our best at the raising business, when we have put our hardest work and our best brains into working our farms, is it not equally essential to find the best way of selling and buying, so that it is really we, and not somebody else, who get the profit? This opens out a number of interesting topics which I rarely see handled in a farm paper, but which are in some respects more important even than the scientific aspects of crop-growing or cattle-raising.

Are farmers generally satisfied with the money returns for their farm work? Have they reason for being content? I am not now speaking of exceptionally clever men, or men with large capital, who may have been able to establish a wide reputation and can command their own prices, but we, ordinary average farmers, who are working hard to make our living, do we get a fair return for our work? Of course, seasons may go against us; crops may fail; we may have had luck with cattle in spite of all our care. These are things we can not help. But when we have succeeded in raising crops or cattle, are we in a position to get a fair value for them, and after we have got our money, do we get our money's worth when we buy? I think, on the whole, farmers work as hard as any workers in the community, and our work is as necessary and useful in the community as any work that can be done; but after long experience, it is my conviction that in most countries, perhaps in all, farm work is the worst paid of all. It ought to be well paid. We ought to be able to have bright homes, with books and music and pictures, and some of the pleasures which give color to life, and some leisure for enjoying them. And our children ought not to be crushed down with early labor, monotonous chores and drudgery. They ought to have time for play and school, aye, and college too, with the best.

I think most farmers will agree with me that the money returns for our farm work are not satisfactory. Is it not worth while, then, to try to look into the reasons for this and see if some improvement is not possible in this direction? Certainly let us grow more intelligent in our farming, so as to get better results out of our farms, but would it not also be wise to learn how to be better paid for such results as we do get? If we are not paid the real worth of our work, it is not the fault of our business. We do not deal in fancy articles, in luxuries, that people can take or leave, we produce the absolute necessities of life, which human society must have. If we do not get the right profit on our work, there is something wrong in the conditions under which we have to work, or some middleman is getting our share, or the consumer is paying too little. In any case, we have a right to fair pay for our work. In this article, which can only be a short, general introduction to what ought to be a series of articles on this side of the farm business, I can only just glance at some of the directions in which our profits are leaking away. In the discussion on the appointment of a railway commission to control railway rates, you have opened up a great underground river which is carrying away much of our hard earnings. Our protective tariff is another, making us pay about five dollars for every two dollars that go into the national treasury, the three dollars flowing into the pockets of manufacturers and middlemen. A big pork-packer said, a few years ago, to farmers: "Quit politics, stick to pork." Yes, all right, so far as blind party politics go. But if it means letting the pork-packer and the other commercial and professional gentlemen make all our laws, it simply leads to the farmer raising the pork and the packer pocketing the profit—a division of labor which I don't admire. And how do we fare when we come to sell our stuff and buy our supplies? The farmer comes to the storekeeper: "What are you giving for pork? What can you pay for grain?" And, generally speaking, he has to take what the buyer is willing to give. Then, to come to the other side, does the storekeeper say to the farmer: "What are you giving for flour?" Not a bit. He says, my price is so much. So the merchant fixes both prices, buying and selling. Rather one-sided, isn't it? Even if the prices are fair—which, no doubt, they often are, for storekeepers in many cases are honorable men—doesn't it go against the grain to be so completely helpless? In most other businesses the seller fixes his own price, subject, of course, to the state of the market.

Well, not to prolong these illustrations, what is the remedy? Nothing very new, something very simple, but apparently very difficult. **UNION, COOPERATION.** We farmers are the majority in the whole country; if we stood together we could

dictate the laws. I can imagine the laugh into which many a reader will burst when he reads this. You might as well say if we had wings we could fly. Yes, I know. I am not a young man. I have had a good bit of experience, during the last ten years, of the difficulty of getting farmers to unite, but, after all, the conviction is not knocked out of me yet, that even farmers have got a lot of common sense hidden away somewhere, if one could only get at it. Co-operative creameries, though hardly run on very good lines, have already, under difficult circumstances, proved a fair success in our own country. Co-operative stores have done an immense work in the Old Country. One of the biggest of them, with a turnover of many millions a year, was started, not a great many years ago, by two or three post-office clerks combining to buy a chest of tea. Co-operative agricultural banks, granting small loans on reasonable conditions, have made an immense improvement in some farm districts in Germany, France, and Italy. If peasants in Italy and France and Germany can work together, why cannot we? **NORTHERN ALBERTA.** **JAS. SPEAKMAN.**

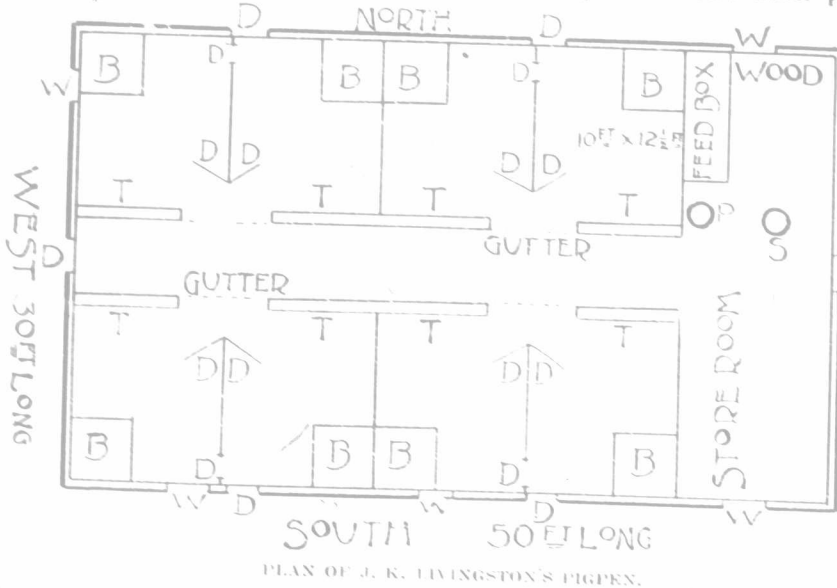
Turkey Raising.

Preparation. In the first place, I believe the most important feature of the business is that one should like to work with poultry. There is money in the business if one can get it out. Many persons report failure after failure—the young dying, some when a few days old, others in two weeks, and still others in about four months' time. I conclude from my neighbors' failures that those who report these failures do not like turkeys, and are, therefore, not adapted to taking care of them. They may get eggs from the finest strains (which is very important), and get a fair percentage of them hatched, and then when they begin to die from lice or damp, etc., they simply cram them with every kind of food, trying to get on the right one, instead of searching for the cause of their death.

Selection of Stock.—The second factor is to get eggs from hardy stock. I always keep five hens and a tom. This will insure about seventy-five eggs, which is as many as an ordinary farmer can attend to. My hens are selected from the finest young hens in my flock. A small, stunted turkey is an expense, and should never be wintered. I keep two yearlings and three young hens over each year, and always have a tom two years old, as I believe the eggs are stronger, larger, and the young easier to raise. You may ask, "How do you always have a two-year-old?" I answer, "I buy him, at whatever cost." It always pays, and you will see the wisdom of this before fall. I never keep a tom which is in any way closely related to my hens. This is very important, as all turkey-raisers know. There is no animal or bird which will run out by inbreeding so quickly as turkeys do, and here is where many a poor farmer's wife makes her failure. She keeps a pair of turkeys from the same flock, and the young are sure to be too weak to live, no matter how they are treated. So, never try it.

Feeding for Laying.—Having selected my stock, I feed them plentifully on good wholesome food, consisting of oats and buckwheat mixed, and later on in the spring an occasional pot of boiled vegetables. I am never afraid of getting them too fat, as turkeys are not apt to eat too much in winter, nor are they as easily affected by being overfat as hens are.

Care of Eggs. I gather the eggs carefully and



PLAN OF J. K. LIVINGSTON'S PIGPEN.

lay them away in a cool, dry place, turning them every night when I bring in the day's eggs.

Sitting.—In setting, I follow nature as closely as possible, and set either on the ground or in a box half filled with earth. If you set on chaff, they are apt to get too dry unless you moisten them occasionally. But the better plan is to set on earth, as it keeps them from drying out and also keeps an even heat in the nest. Always set the oldest eggs first, so that you will never have any eggs very old. Put fifteen to sixteen under each turkey. Good turkeys lay from fifteen to sixteen eggs. After a turkey is over two years old she will not lay more than eight or nine before she wants to sit, and an old turkey's eggs are liable to be sterile. Some make their turkeys lay a second

time, setting the first eggs under hens, and in this way claim double profits. This plan works out nicely on paper, but not so well in practice, as the second laying is always too late, and are in "pinfeathers" when selling time comes and are generally a drug on the market. Then, the first setting, which is raised with hens and should be good, are stunted for want of a proper run in the fields when young, and when the hen leaves them they wander away and are often lost.

In setting, I always like my turkeys tame enough to be handled easily. I sprinkle both turkey and nest with insect powder, and again on the 24th or 25th day, to make sure that she is free from lice. Do not let the male near her while sitting, and see that she gets off regularly for food, because if neglected, turkeys often sit till they starve.

Feeding and Care. When the young are hatched, leave in the nest for twenty-four hours and then feed some hard boiled egg mixed with bread soaked in sweet milk and squeezed dry. Do not feed too much, but give feed often. For the first week feed at least five times a day. After the first day grease their heads, using but little grease, and put in coops where the young can run out in the sunshine, and feed bread moistened with sweet milk, chopped up with dandelions or onions, and at night feed raw corn meal mixed thick with milk. Always give fresh water to drink in a shallow plate. When a week old I feed morning and evening with small wheat, and in the middle of the day bread and milk or corn meal and milk. Do not give potatoes or warm bread, as it chokes them. Never feed more than they will eat up clean, as they are ravenous little things, and often eat till it kills them. Shut up at night and do not let them run till the grass is dry in the morning.

When two weeks old I let the old ones run all day if nice, but never let them out if wet, as damp grass is fatal. Do not let too many run together, or when feeding; the stronger ones get too much food and the weaker not enough, and both are fatal. For two years past I have fed wheat exclusively after two weeks old and never lost a turkey. If kept dry, you will never have any trouble with black heads, which is easily cured by feeding lots of black pepper and only warm feed.

Fattening. Turkeys must be stuffed from the shell to the day of killing. In fattening, I boil buckwheat, oats and potatoes, and feed all they will eat three times a day, and finish off the last week on corn to give a better color.

Breeds. The best variety is the Bronze or Narragansett crossed on the white, black or slate. The Bronze and Narragansett are large; do not lay so many eggs, and are not so hardy as the smaller, which lays nearly double the eggs. So, by repeatedly crossing you can get perfection.

W. T. F.

Description of Pigpen.

The size of my pigpen is 30x50 feet, with 9-foot wall, boarded horizontally on the inside and out, with tar paper and shingles on the outside, shingles put five inches to the weather. There is a fall of four inches on the floor of each pen from outside to passage, and there is a gutter on each side of passage with a fall of about six inches from feed room to west end to carry off water. The troughs are one inch from floor, to let water run underneath. There is a swinging door over each trough, two feet wide, with a button on it to fasten on either side of trough. There is a door from passage into each pen, through which they are cleaned.

The manure is wheeled out through the door in west end, and the water from gutter runs into manure pile. B in cut represents the bed, which is raised up the width of a scantling from floor. D represents door; W, window; S, stove or feed cooker; P, pump or well. The doors in the end are three feet wide, and those in the sides are small and slide up and down on the inside, with a rope fastened to the top of each and run through a pulley at ceiling and from there to passage, so that they can be opened and closed readily. The ceiling is eight feet high, boarded on the bottom side of joist. The loft is for straw. The feed is mixed in a box that holds about a barrel. There are three small eight-inch wheels on the box, and the feed is wheeled down the passage and fed to pigs.

I feed my pigs on boiled roots and chop in winter. I boil the roots in the afternoon and mix them with chop when boiling hot in the evening and let it stand over night in the feed box with a tight cover, and feed it next day when it is warm. In summer I have two fields of about two acres each, one on each side of pen, and I sow grain in one field one year, and seed it down to red clover and pasture pigs on it the next year, so that I have a fresh field every spring for pigs. I used to pasture each field for two years, but it did not give satisfaction, as red clover does not seem to be of any value for pasture after the first year. Now I pasture the fields year about. I have never missed a catch of clover yet.

J. K. LIVINGSTON.

QUESTIONS AND ANSWERS.

Veterinary.

ABORTION, PROBABLY CONTAGIOUS.

SUBSCRIBER, Miami: "I have had trouble with my cows to get them with calf. They come in heat irregularly every week or two weeks. Two cows dropped calves at six and seven months, the calves being dead. The cows were brought up from the east last spring. I am feeding upland hay in the morning, straw at noon, green oat hay cut when nicely headed out at night. Would the green oats cause the trouble? The cows have a slimy discharge from them since."

"2. Would they be with calf and act like this?"
 "3. Do you think it is anything contagious, and if so, would taking the herd to another farm clear them of it?"

"4. Would acclimatization cause the trouble? Had a mare lose a foal at four months last fall."

"5. I have a cow, when eating will hold up her head, and appears to have some trouble to masticate. Her plates are unlevel, one long tooth in the upper plate and a hollow opposite it in the lower plate. She is dry in the coat, and is not doing well."

"1. You evidently have had some abortions in your herd. Whether of the contagious form or not, I am unable to state definitely. The oats would not cause the trouble unless they were musty, smutty, etc."

"2. The cows are not with calf, nor are they likely to be so long as the discharge continues. They should both receive injections of some fluid antiseptic daily and be given a tonic powder. For the injection use one ounce permanganate of potash to two quarts of water. Consult your veterinarian regarding the tonic powder. Would advise the plentiful use of hot lime wash in the stable, so as to minimize any chances of infection."

"3. See above."
 "4. No."
 "5. The treatment is entirely surgical; hence, would advise the calling in of a veterinarian."

EPITHELIAL TUMORS OR WARTS ON HEIFER.

D. C. McD., Chateaugay Co., Que.: "I would like to get your opinion about a heifer coming two years that is literally covered with warts, some of them bleeding sometimes and causing a bad smell. In all my experience with stock I have never seen anything like it. They are hanging in clusters about the flanks and on other parts of the body, some of which would weigh, if clipped off, several pounds. Some of the single warts and clusters are of a light color, while others are purple. She seems to be thriving fairly well, and has a good appetite. She is well fed (including ensilage once a day) and is in a first-class stable. Water is good. As your space is valuable, I would ask you only to answer the following questions:

- "1. What causes warts on cattle?"
- "2. What treatment would you advise?"
- "3. Will they go away or get worse yet?"
- "4. If they don't go away, will the flesh be fit for human food or will it be safe to use her milk when she comes in at three years?"

"1. Warts consist in an abnormal and unhealthy growth of the outer layer of the skin, and are technically called epithelial tumors. The cause of their appearance is obscure. There appears to be a congenital predisposition in some animals."

"2. Treatment consists (in cases like yours, where they are large) in removing them with the knife and applying a caustic, say butter of antimony, once daily with a feather to the raw surface for a few applications. When the warts are small, they can be removed with the caustic alone."

"3. In some cases they disappear spontaneously, while in others they do not, and may continue to grow."

"4. The growths affect only the skin, and hence the flesh and milk are healthy."

CONSTIPATION IN YOUNG PIGS.

H. McK. BEDGOOD, Manitoba: "I have a litter of pigs about four weeks old. One of them acted very stupid, and humped up as though it was cold. It would stand away by itself and grunt and squeal; sometimes under the straw it would do the same. It was this way for about two or three days, and then it died. There was no looseness of the bowels. The other pigs are contracting the same disease. What would be the best thing to do in this case? The pen is warm, plank floor, lots of straw; they get skim milk and oat chop for feed."

"Your pigs have constipation, a trouble that is common in young pigs, especially when the sow has not had sufficient exercise, laxative diet before farrowing, and sometimes the young pigs suffer from a like condition, due to the food taken. Skim milk and oat chop are likely to cause this trouble, especially when little exercise is taken. I would advise a change of food for both sow and pigs; feed laxative food, as boiled roots, and table scraps, bran with a little shorts, and you might add say oat chop. The mixture would be better cooked, or, at the least, scalded and let get cool or nearly cool before feeding. Give each pig sufficient raw linseed oil to cause slight purgation: about four to eight drams should act; if not, repeat in twenty-four hours. Also give the sow enough to act upon her bowels; the dose will be from six to twelve ounces, according to size. Feed daily a little of the following mixture: Equal parts of Epsom salts, sulphur and powdered charcoal. If possible, let them have exercise."

INVERSION OF THE RECTUM IN PIGS.

M. J. BELL, Manitoba: "I am much pleased with your paper; I think it should be in every farmer's house. If you allow me space I would like to ask a few questions through the ADVOCATE. First: I bought some seven pigs last fall, about three months old. They were very thin, having been poorly cared for. I put them in a comfortable pen, dry and warm, fed skim milk with bran and shorts, scalded, barley and oats chopped, and sugar beets. I gave sulphur, charcoal and salt, and after two or three weeks three of them took something like piles. The bowels came out about one and a half inches and remained so till one died and I killed the others. Since then I have heard of others who have lost pigs the same way. What is the cause and is there any cure?"

"Your pigs suffered from inversion of the rectum, which is caused by digestive trouble, either from constipation, when by excessive pressing the intestine becomes protruded, or the reverse condition, viz., diarrhea, when on account of the irritable condition of the lining membrane the animal presses excessively with the same result. It is probable in your case the trouble was caused by a too sudden change of food and surroundings, associated probably with want of exercise. The condition is hard to treat. The bowels must be regulated, the protruded portion washed thoroughly with warm water and bathed with laudanum and gently returned, then a truss arranged to prevent its protrusion, and removed to allow the animal to defecate and a little laudanum injected into the rectum to allay irritability. If constipated, a physic must be given. If diarrhea be present, laudanum in one-half to four dram doses, according to the size of animal, should be given every four hours until the diarrhea ceases. It is very hard to cure. Better prevent it by careful feeding and plenty of exercise."

SUDDEN DEATH OF PIGS AND SICKNESS IN OTHERS.

JAS. G. MOORHEAD, Que.: "Having two hogs die in one night and three more sick, I would like to know, through the ADVOCATE, the cause of death? I am feeding gluten meal from the starch factory all winter. Two days before they died I emptied the salt out of a pork barrel into the barrel that I feed the hogs from. Please give me some idea of the cause of death, and is there any treatment for the sick ones?"

"You apparently suppose that we are possessed of wonderful powers. You state that two of your pigs have died and three others are sick, and ask for the cause of death and a cure for the sick ones. You do not give post-mortem appearances of the dead, nor the symptoms of the sick. It is, in many cases, hard to arrive at satisfactory conclusions when these symptoms are given; but when we have nothing to work on, it certainly may be called "shooting in the dark." However, I will make a shot. My opinion is that they died from digestive troubles, caused, probably, by the refuse from the starch works, aided by the salt you mixed with it. For the sick pigs I would advise purging with Epsom salts, from 2 to 3 ozs., according to size, with an entire change of food for all. Feed a little powdered charcoal, Epsom salts and sulphur (equal parts) regularly once daily, in order to keep bowels in normal condition."

BONE SPAVIN IN MARE OLD ENOUGH TO VOTE.

SAMUEL McCLINTON, Man.: "We have a mare twenty-one years of age this spring. She has raised seventeen foals, and is with foal again. I think she has never been harnessed nor had a shoe on her foot. She has what some call a jack spavin. It has been on for some years, and this winter it seemed to cause her much pain, especially in rising. Could it be cured? Would it be advisable to blister?"

"There is a possibility that firing and blistering might cure the lameness in your mare, but the probability of affecting a cure in a mare of that age that has had a spavin for some years is slight. Your mare has certainly rendered you good service as a brood mare, and is not through yet, and if she were mine I do not think I would inflict her with the pain and distress of an operation; there would be no use of blistering. The old mare deserves all the kindness you can give her, and especially as you do not ask her to perform any work, I would advise you to leave the hock alone, and if she become helpless (which will not likely occur from the spavin) have her destroyed."

WEAK EYES IN MARE.

WALTER RAWLINGS, Can.: "I bought a mare last fall, and learned afterwards she had pink eye before I bought her. Her eyes are inclined to be milky-looking. Now, is there any danger of it returning again? Are horses subject to it after having it once? She is not doing as well as I would like her to, but she has been working pretty hard. What kind of treatment would you advise?"

"The fact that your mare has suffered from pink-eye does not predispose her to further attacks, neither does it render her immune. It may be that she has suffered from a disease of the eyes called periodic ophthalmia; the milky-looking condition of the eyes would indicate this. If so, she is liable to a recurrence at any time without apparent cause, and nothing can be done to prevent it, as it is a constitutional disease, and will eventually end in cataract, causing blindness. I would advise you to put a few drops of the following lotion into the eyes twice daily with a feather: sulphate of zinc, eight grs.; fluid extract belladonna, ten drops; distilled water, one ounce. If her eyes at any time become sore, keep her in a darkened stall. Give her a purgative, followed by light food, and use the lotion as directed."

INDIGESTION IN STEER.

BEISTER BROS., Man.: "One of our steers that we are feeding is not doing well. He bloats after eating and seems uneasy, and is constantly switching his tail. He will eat his feed in one half the time it takes the others, then will lie down, the bloating then appearing, but will disappear soon after he rises. He breathes harder than the others, and while lying down groans considerably. We feed equal parts ensilage and cut oat straw, with about one and a half pecks of pulped turnips and about three quarts equal parts of ground oats and barley, night and morning, and at noon about three quarts of the meal only. We presume it is indigestion, but from what cause we are unable to determine, as the others fed just as he is are doing nicely. What can we do for him?"

"Your steer certainly suffers from indigestion, caused probably by overtaxing the stomach, as he is a greedy feeder, or possibly the weakness is congenital. I would advise you to give him a smart purgative of two pounds Epsom salts, feed nothing but a little bran until the purgative acts, and then feed lightly, gradually increasing the amount until you have reached as great a quantity as he can digest without distress. It would be better to feed less at a time and oftener. Animals with weak digestion, of course, cannot be fattened as quickly as others. They must be fed according to their powers of assimilation and digestion. Give the following powders, which will tone and stimulate the digestive glands: Powdered sulphate of iron, powdered gentian, powdered nux vomica, of each 3 ozs.; soda bicarbonate, 6 ozs. Mix and make into 24 powders, and give one night and morning, shaken up with half a pint of cold water and given as a drench."

EITHER CHRONIC LAMINITIS OR NAVICULAR DISEASE IN PONY.

H. P. H., Southern Manitoba: "I have a fine French-Canadian stallion pony, three years old. He is lame in front feet. His hoof is too dry and hard, does not grow. What shall I do to cure him?"

"Your pony evidently is affected with either chronic founder or navicular disease. In either case a permanent cure is not likely to be effected, but the symptoms can be relieved by the following treatment: Remove the shoes, pare feet and heels well down and blister the coronet (that part just above the hoof) all around every three weeks. Let him have a long rest. Use for blister 2 drs. each biniodide of mercury and powdered cantharides, mixed with 2 ozs vaseline. Clip the hair off for 1/2 inch above hoof, rub the blister well in. Tie his head so that he cannot bite the part, and in 24 hours rub well again, and in 24 hours longer wash off and apply vaseline to the parts every day until the scale comes off. Repeat the blistering every three weeks. If you cannot allow the pony the necessary rest for the above treatment, get him shod with bar shoes and poultice his feet every night with boiled turnips or linseed meal. Get the shoes changed every three weeks."

NAVEL RUPTURE.

SUBSCRIBER, Manor, N.-W. T.: "I have a year-old heifer, has a lump underneath her belly, on navel, size of a big apple. Can I do anything for it? Will it stop her from breeding?"

"Your heifer has what is termed a navel rupture, I should judge, which can be removed by an operation. It will not hinder her from breeding."

Miscellaneous.

SEVERAL QUERIES.

J. W., Sanborn, Sask.: "Will you please, through ADVOCATE, tell me: 1. Terms on which sheep are taken on shares. 2. If cows are put out, and return is to be 2 for 1 in 3 years, does that mean 2 cows for each put out, or 2 cattle? 3. Is there a poultry paper published in Canada, and what is the address? 4. In your Feb. 20th number, page 121, J. J. White says that he gave his cow salt herrings to make her "clean." Will you kindly explain if they were administered by the mouth or by the vagina? 5. If twice as many herrings had been given, would the cow have come in season in one week instead of two weeks?"

"[To questions 1 and 2 no direct answer can be given, as such partnership arrangements are governed by the bargain made by the individuals concerned in each transaction. Agreements of this sort should always be made in writing, in duplicate, signed by the parties to the bargain, and a witness.]

"3. The *Canadian Poultry Review*, Toronto, Ont. and 5. Mr. White will, perhaps, answer these enquiries."

MULCHING TREE CUTTINGS.

G. H. G., Manitoba: "In the ADVOCATE of February 5th, I read a very interesting article by Mr. A. P. Stevenson on the propagation of trees by cuttings. There is one point I should like more light on. He advises a "heavy mulch with good manure" in the fall of the second year after setting out the cuttings. What is "good manure" for this purpose, and how should it be applied?"

"Well-rotted manure should be used, and may be applied to a depth of six inches, extending at least two feet on each side of the row of cuttings."

A. P. STEVENSON.]

CURING HAMS.

J. H., Hagan, B. C.: "Could you tell me, through the ADVOCATE, the best and simplest method to cure hams and bacon, say four or five hundredweight, for home use?"

"[See answers to correspondents and article in the two last issues.]

CEMENT FLOORS, STEER FEEDING, ETC.

P. S. Langdon, N. D.: "Please find enclosed one dollar (\$1) for one year's subscription to paper. We were greatly pleased with your Christmas number, and think it is well worth the subscription price alone. Would you kindly answer a few questions?"

"1. We are going to put a cement floor in our stable. There is no gravel near us. Would it do to put in a stone bottom and lay the cement on it? About what amount of cement would it take to floor a building 30x60 feet inside? What proportion of sand is necessary to have the best results?"

"2. Do you think ground barley, fed alone to steers, is too strong? We have been feeding half oats and half barley, but think they would be finished up better with something stronger. We commenced feeding $\frac{1}{2}$ of a gallon three times a day, in November, and gradually increased to 1 $\frac{1}{2}$ gallons at the present time. We feed half a pail of roots a day (had only a few), and give salt liberally. They appear to be doing fairly well. Do you think it pays better to feed steers at 2 years old or at 3 years? Ours are all coming 2. We fed four a year ago, and they averaged 1,150 pounds. Do you think that a good weight? We do not know much about it, as there are no cattle fed here of any account."

"3. We have our root house under the approach to the barn. The ceiling overhead is very damp and mildewed all the time. Is there not a danger of it rotting soon? Would a good coat of paint help it? Is there any way to remedy the dampness gathering there? The rest of the ceiling, over the stock, is quite dry."

"4. What is the cause of the pointing all falling off the inside of the stone wall of the stable? It was firm and hard as stone last fall, but it froze and thawed out a number of times during the winter, and now whenever it thaws out the plaster will fall off."

"Please answer the above questions and you will greatly oblige."

[1. Stone may be used under cement, but care should be taken to make it very solid, leaving no loose spaces that would afterwards settle under cement. If the stone were broken and well pounded in, all the better. The quantity of cement required for a given floor space would depend upon the kind and strength of cement used. Of the rock cements generally used for such purposes, it would require for a stable floor 30x60, 3 inches thick, about 3 $\frac{1}{2}$ barrels, of 240 pounds, and about 4 cords of gravel. Don't use sand, but gravel, and it may be pretty coarse, in the proportion of 3 of gravel to 1 of cement. It is important, in laying cement, to ram it down very solid. Full information is given in the pamphlets issued by the manufacturers of cement, and may be had on application. For their addresses, consult our advertising columns.

2. In feeding steers, much depends upon the breeding of animals as to their early-maturing qualities. Fairly well graded steers, of the modern beef breeds, will mature at 2 years old, making good profits. Long-continued feeding of any one kind of grain is never advisable. It would be well to add some bran and oil cake to the barley, and perhaps make a change sometimes with chopped wheat. It would greatly assist if you had more roots. Palatability of food is of great consequence, especially as the finishing season advances. The following extracts from Prof. Henry's "Feeds and Feeding" will be of interest in this connection:

What fattening the steer means.—It is important to have a clear knowledge of what the fattening process is. The grown steer, with framework of bone overlaid with muscles and encased in hide, requires a certain amount of nutriment for mere existence. To supply this only, enables him to continue existence, but does not appease his appetite, which craves still more food. If provender beyond the requirements for maintenance is supplied, more or less of the surplus is converted into fat and stowed away among the muscular tissues of the body, in the bones, under the hide and about the viscera. This fat is fuel in the animal economy, for which nature shows an eagerness by manufacturing and laying up a certain amount against the time of need. Impelled by a hearty appetite, the steer at first gains rapidly in fat, gratifying the feeder in the increase reported by the scales. After fattening has progressed a few months, the appetite of the steer loses its keen edge, and he shows a daintiness when taking his food not at first exhibited. If placed on the scales from time to time, he shows smaller and smaller gains. Every pound of increase now requires more pounds of feed than at first. The fattening process may be likened to inflating a bicycle tire or a football with air. The operation is rapid and easy at first, but becomes more and more difficult until the limit is reached. Finally, the steer, though consuming a fair amount of feed, shows no gain whatever. He has been fattened to his limit, and though he may be held there for a time, he will soon begin to retrograde, just as a ripened apple grows poorer in quality after perfection has been reached. The feeder, recognizing this, should aim to fatten his cattle rapidly, and, as soon as they are acceptably fat, dispose of them without delay. To continue fattening longer than demanded by the market, or to hold cattle when once fattened, adds greatly to the cost.

Cost of feeding increases with age.—Excluding birth weight, the steer maintains a practically uniform rate of gain until he becomes 2 years old. While this is true in relation to the weight, we have shown that the cost of producing the gain in the second year is about double that of the first, and for the third the cost is about three times that

of the first year. Recognizing these facts, the stockman who grows the cattle he feeds should place them on the market at as early a date as possible, other conditions being equal.

3. A coat of paint or good whitewash might help preserve the lumber. If the room was ceiled over, so as to make an air space below the covering of approach, and then ventilation put in to keep the root house from becoming warm, the dampness might be avoided. A sod or dry-earth covering on top of approach during the winter might possibly assist matters, and would be cheaper than ceiling.

4. The pointing must have been put on late in the fall and been frozen before it dried on properly; or maybe your plaster was too weak. Strong lime is required for such work, especially if boulder stone is used in the wall. Pointing adheres to quarried stone much more readily. When pointing again, do it early in the season, to make sure of its drying properly before frost comes.]

HOW TO TREAT TWICE-PLOWED SUMMER-FALLOW

G. C., Opawaka, Man.:—"I summer-fallowed thirty acres last year. I first gave it a good deep plowing, after finishing seeding, then cross harrowed, intending to keep the weeds down by frequent harrowing. But the first part of the season was so dry no weeds started until haying, and then we could not give it attention when we should. The weeds got the start, so tried harrowing, and succeeded in killing French weed, buckwheat and part of the pigweed, but not hurting the dogbane, with which parts of this field was badly overrun. We sharpened the plows and went at it again, and succeeded in giving it another good plowing. By using a chain, we buried all weeds very well; then by cultivating what we had plowed first of all, we have a pretty clean field. What I want to know is how much seed wheat to sow and how to cultivate to prevent too much straw and the crop from lodging?"

[You do not state what is the nature of the soil on this particular piece of land, and therefore we are at some disadvantage in replying. The cultivation given, including a second plowing, will doubtless have left the soil very loose. This, however, may have been overcome to some extent by the late rains last fall. If it is loose to the bottom of the plowing, any implement you could use to compact the lower portion to within two inches of the surface will certainly help in avoiding an excessive growth of straw. Some farmers who have used the subsoil packer (see letters in last July issues of the *ADVOCATE*) claim great benefits from its use for this purpose, and some claim equally good results from using disk harrow, loaded and run without dishing. We are inclined to think that slightly heavier seeding, say two bushels with a shoe drill, than is necessary when the soil is firm below and in prime condition, would tend somewhat to lessen the growth of straw. It will be well to put the seed in pretty deep, as there may be danger of drifting.]

We should be pleased to publish the experience of any reader who has had experience in treating land under above conditions.]

RHUBARB FROM SEED.

O. W., Manitoba: "Is it possible to grow rhubarb true to name from seed?"

[We find from actual experience that such long-established varieties as Victoria produce in nearly every instance plants true to type. For that reason we have preferred sending out rhubarb seed from this farm instead of incurring heavy charges for carriage by sending roots. The seed should be sown in the spring, in a well-prepared bed, and the weeds kept down during the summer months, and the young plants can be transplanted to a permanent location in the fall.]

S. A. BEDFORD, Brandon Exp'l Farm.]

LICE IN HENHOUSE.

ALEX. PRENTICE, N.-W.T.: "Would you kindly, through the *FARMER'S ADVOCATE*, tell me how to rid my henhouse of what I believe to be spider lice? They are of a steel-gray color, but when full of blood are red. I have a new henhouse, shingled and tar-papered outside and boarded inside, and last summer it was nearly impossible to gather the eggs, for these vermin, and they were outside on the ground around the henhouse."

[The best treatment for lice we know of is to dust the fowls thoroughly with insect powder by opening the feathers at intervals of about two inches, and applying it with a pepper caster or powder gun. They should then be transferred to a clean house, while the henhouse is receiving treatment. Then thoroughly clean the house, remove nest boxes, roosts, etc., and spray the entire inside surface, touching all the cracks and crevices with the following solution: Corrosive sublimate, 4 ounces; common salt, 4 ounces; dissolved in 4 quarts of water. Then dilute to 25 gallons and force it into every crack and crevice. It would be well also to close the house tightly, set in a pot of live coals and throw on them half a pound of sulphur. After a few hours open the doors, and, after the fumes have escaped, replace the roosts, nests, etc., after thorough cleansing, put in fresh straw and return the fowls. It would be well to give the hens a second dusting with insect powder. It is a good plan to apply coal oil to the roosts once a week, and occasionally spray the house with sheep dip, cattle wash, creolin or diluted crude carbolic acid. Corrosive sublimate, referred to above, is strong poison, and should be used accordingly. Nothing short of very thorough measures will rid a badly infested henhouse of lice.]

CHARACTERISTICS OF SHROPSHIRE SHEEP.

SUBSCRIBER: "Please let me know through columns of your so valuable journal characteristic and distinctive features of the up-to-date Shropshire sheep."

[Constitution and quality, indicated by a deep body on short, strong, well placed legs, wide in breast and between fore legs, thick through the heart, fair length, but compact, strong loin, back wide, straight, and well covered with lean flesh, full in twist, deep in flank, skin thick, but soft, and of fresh pink color; neck short, thick, and strong, especially in rams; head short and broad between ears and eyes, ears short and of medium size; color of face dark brown; head well covered with wool to a point even with the eyes; any appearance of horns an objection, as also is black wool in the head covering; fleece fine, dense and lustrous, with no tendency to mat or felt together, and no coarseness in wool on thighs or hips; scrotum of rams well covered; weight when matured, in fair condition, rams about 225 lbs., ewes about 175 lbs.]

OATS AND PEAS: GREEN OR RIPE AS FODDER.

C. J. S., Halton Co., Ont.: "If I sow an acre of ground with peas and oats mixed, and cut it green and cure it like hay, and sow another acre with the same and let it ripen and thresh it, cut the straw and grind the grain and mix it all together, which will have the most feeding value for milking cows?"

[As you put the question, I am of the opinion that you could get more feed—that is, could feed an animal longer—from an acre of peas and oats ripened, threshed, etc., than from an acre cut green for hay. But the acre cut green and cured would make better feed for milch cows, because it would contain a larger per cent. of digestible protein, and cows would give a larger flow of milk on it while it lasted. Besides this, that cut green would not cost as much to prepare it for feeding, which would probably fully compensate for the slightly less time it would feed the same animals.]

C. P. GOODRICH,

President Wisconsin Dairymen's Association.]

RED CALVES BY HOLSTEIN BULL.

SUBSCRIBER, Frontenac Co., Ont.:—"Would you please let me know, if possible, through your valuable paper, the reason why a thoroughbred Holstein bull should throw red calves, when a half-bred bull threw black and white calves for two successive years from the same cows. The animals were fed about the same?"

[No definite reason can be given. Thoroughbred Holstein bulls generally stamp their color on their offspring from common or grade cows, but if the cow's breeding is mixed and miscellaneous, she may sometimes hark back to some vigorous ancestor whose characteristics will reappear in future generations. This explanation, we confess, does not satisfactorily account for the occurrence where a number of instances of the kind crop up in a herd, and one is almost forced to the conclusion that there has either been a mistake as to the breeding of the alleged pure-bred bull, or if not, that he is not a prepotent sire, else he would leave his impression more clearly on his progeny in regard to color.]

POTATOES FOR PREGNANT EWES.

SUBSCRIBER, Middlesex Co., Ont.:—"Can you tell me, in your next issue, if potatoes are good feed for breeding ewes? I have fed twelve ewes one half bushel once a day all winter, and may have done wrong, but we have a great many potatoes, and the sheep are very fond of them. They are due to lamb about the tenth of April."

[The proof of the pudding is in the eating. So far the results seem all right, and we expect they will continue so. We would like subscriber to report to the *FARMER'S ADVOCATE* the luck he has with lambs, which will be a guide to others in feeding pregnant ewes potatoes.]

POTATOES FOR HORSES.

E. H. B., Elva, Man.: "What action have potatoes on the system of a horse when fed raw? Would boiling improve them?"

[They give variety and succulence to the diet. There is nothing gained by cooking them for horses.]

Chicago Markets.

Chicago, March 11. *Cattle*.—Receipts, 22,000, including 1,200 Texans; good to prime steers, \$5 to \$6; poor to medium, \$3.60 to \$4.90; stockers and feeders, \$2.75 to \$4.65; cows, \$2.50 to \$4.25; heifers, \$2.30 to \$4.40; bulls, \$2.75 to \$4.20; calves, \$4.50 to \$6.25; Texas fed steers, \$4 to \$4.90; Texas grass steers, \$3.35 to \$4.

Hogs.—Receipts, 35,000; mixed and butchers', \$5.35 to \$5.65; good to choice, heavy, \$5.50 to \$5.70; rough, heavy, \$5.35 to \$5.45; light, \$5.35 to \$6.02.

Sheep.—Receipts, 15,000; good to choice wethers, \$4.40 to \$4.90; fair to choice mixed, \$4 to \$4.50; western sheep, \$4.40 to \$4.90; Texas sheep, \$2.50 to \$4.75; native lambs, \$4.50 to \$5.35; western lambs, \$5 to \$5.35.

Official receipts of stock for the week ending March 9th were 46,354 cattle, 144 calves, 126,367 hogs, 53,254 sheep, and 2,204 horses. Shipments were 17,149 cattle, 71 calves, 29,964 hogs, 13,071 sheep, and 2,770 horses. By comparing these figures with those of the corresponding week a year ago, we find very little difference in the receipts of cattle and calves, a decrease of 21,600 hogs, a decrease of 7,578 sheep, and an increase of 129 horses. Shipments last week, as compared with the corresponding week a year ago, show an increase of 1,091 cattle, a decrease of 10 calves, a decrease of 5,341 hogs, an increase of 7,183 sheep, and an increase of 126 horses.

Horses for South Africa.

Montreal, March 10.—C. M. Hasworth, freight traffic manager of the Canadian Pacific Railway, has been advised by cable from London that Lord Strathcona and Mount Royal has completed arrangements with the Imperial Government to send an officer of the War Department to Canada to purchase horses for use in South Africa. It is understood the officer will soon sail from London, arriving in Canada during the latter part of this month or early in April, and will purchase from 1,500 to 2,000 horses, which will be shipped from Halifax.



THE GRIPPE: FROM TWO POINTS OF VIEW.

BY JOSEPHINE HANFORD.

It might be mentioned right here that Mr. John King was in a bad humor one dismal, rainy evening, toward the end of January. When he reached home, tired and hungry, he found no pretty little wife bustling about the kitchen, and worst of all no supper ready.

"Meg, Meg!" he called. "Yes, dear," came a faint answer from the sitting room. "Where are you?" "Here in the sitting room." But the last part of the sentence must have been lost on Mr. King, for he broke in with, "Where in the dickens is 'here'?" No answer.

This did not improve his temper, and he threw his muddy rubbers into one corner, regardless of the clean kitchen floor. "Isn't supper ready?" "No, dear; come here and I'll explain. I'm in the sitting room."

Mr. King hung his coat and hat on a nail behind the door, and stalked into the sitting room, feeling very much abused. "Pretty state of affairs, this is! No supper ready!" he muttered, as he pushed aside the curtains of the sitting room door.

There on the sofa, drawn up close to the fire, with two shawls over her, lay pretty Mrs. King, her cheeks flushed and a feverish light in her brown eyes.

"I'm so sorry supper isn't ready," said she. "The doctor's been here, and he said I must keep quiet or I would have pneumonia."

"Oh, are you sick, dear?" in a kinder tone of voice. "Yes, I haven't been feeling very well for a day or two, and this afternoon I was so much worse that I sent for the doctor."

"That's too bad, Meg." "Oh, it's nothing. I shall be all right in a day or two." "Well, is there anything in the house to eat?"

"There is a little cold meat in the kitchen cupboard, and the bread is in a jar down cellar. I'm so sorry that you have to eat a cold supper."

"Never mind, my little wife!" said he, as he stooped to kiss her. "By the way, what's the matter?" "It's the grippe."

Never was there a more astonished-looking man than was Mr. John when he heard that.

"The grippe!" he exclaimed. "Why, that's nothing but a bad cold, my dear. I don't see why you should be down sick with the grippe."

"No, I don't either," murmured Mrs. John meekly, as a cold chill crept over her.

"I should think you might do as much as get a fellow's supper for him, when he is dead tired and nearly famished."

Mrs. John murmured something unintelligible, and drew the shawls closer about her shoulders.

"Where do you suppose my business would go to if I stayed home every time I had a cold? What do you think I would do if I let a cold keep me in?" grumbled Mr. King, as the dining-room door banged behind him.

"What, indeed!" sighed Mrs. King. Then she thought of how tired he was, and how hungry.

"Yes, he must have a cup of nice hot tea," she said to herself. And she threw back the shawls and stood up. How dizzy she was! But John must have his tea.

So she stumbled out to the kitchen, filled up the teapot and put it on the stove. Then she brought the bread and a can of John's favorite preserves from the cellar, boiled a couple of eggs, and stumbled back to the sofa in the sitting room.

Meanwhile John stood by with a plate of cold meat in one hand and the butter in the other.

Two days passed and Mrs. John did not improve; but she managed to get something for John's breakfasts and suppers (she didn't want anything to eat), and he took his dinners down town.

The third day he was called out of town on business, and during his absence Mrs. John improved rapidly, so that when he returned, four days later, a smiling Meg greeted him at the door.

"My little wife is well now, eh?" he said as he kissed her. "Yes, dear. I am entirely well now," she answered bravely, although at that very moment she felt - well, if you have ever had the grippe, you know how one feels when "just getting over it."

Three weeks passed, and on another dismal, rainy night, Mr. John dragged his weary feet up to the door of his cheerful home, and wondered if anyone ever felt as he did then. His head ached, his back ached, his chest ached - yes, he believed every bone in his body was trying to outlive all the others in aching.

He found Meg bustling about the kitchen, enveloped in a big gingham apron.

"Hello, dear," she called out cheerily. "Aren't you home early?"

"Home - well, I guess you would come home early if you felt the way I do."

"Why, what's the matter?" she asked anxiously. "Don't you feel well? Does your head ache?"

"What's the matter? Don't I feel well? Does my head ache? Oh, Meg, don't you see that I'm sick?"

"You poor dear, I'm afraid you've the grippe. Go in by the sitting-room fire and I'll bring your supper in there. It's chilly in the dining-room."

"All right. Oh, this confounded headache!"

In the sitting room, he flung his ulster on one chair, hat on another, one glove went on the floor, the other on top of the afternoon tea-table. Rubbers in one corner, umbrella in another. And the pile of old newspapers, which he had brought up from the office was left in the middle of the floor.

"Meg, Meg, bring me my slippers," he called, as he settled himself on the lounge.

After supper, just as Mr. John, covered with the identical two shawls that had done service a few weeks ago for Mrs. John, was as comfortable as possible on the sitting-room sofa, the front door bell rang.

"Can I see Mr. King?" inquired the spruce young man whom Mrs. John admitted.

"Yes; he isn't feeling very well this evening, but I think you can see him," replied Meg.

"Well, I'm rather in a hurry, and if I could see him right away - I want to catch this next train."

"Very well; sit down, and I will tell him."

Mrs. John pushed forward an easy-chair, and returned to the sitting room.

"John," said she, "there is a gentleman to see you, and he is in a hurry."

"Oh!" groaned John. "Well, bring him in."

"What? In here? Why, see how the room looks. Can't you go into the hall?"

"Meg, you can't realize how I feel. I can't stir. Oh, my head! Why in the dickens don't you keep the room looking decent?"

"They are your things, just as you threw them down," said Meg quietly. "I haven't had time to care for them."

"I'm - I've been home for an hour." Mrs. John sighed.

"The gentleman is waiting," she suggested. "Confound it! Bring him in," roared Mr. John, just as the spruce young man tapped impatiently on the sitting-room door.

"Pardon me, but I must catch this train," said he, opening the door slightly.

"Oh! Is that you, Parsons," said John, languidly. "Come in. I'm about laid up, you see."

"Grippe?" "I'm yes. Take a seat."

"Well, it does use a person up. Now, King, you know those 38 stocks," etc., etc.

Meg hurried from the room, while her husband talked business with Parsons.

Ten minutes later she heard the front door close. Silence reigned for possibly three minutes and a half. Then, "Meg, where are you?" came from the sitting-room.

"Do you want anything?" Meg answered wearily.

"Well, yes, I want to go to bed," growled John.

"Can't you go to bed alone?" in the sweetest of tones from Meg.

"When I'm so sick I can't stir! I only wish you knew how I feel."

She thought that, from experience, she did know very well, but wisely refrained from saying so.

John was confined to the house for exactly ten days, during which time he growled and grumbled at everything from the mouse that gnawed in the wall by night, to his patient little wife who hustled about the house by day.

At last, on the eleventh day, he got into his ulster, with Meg's help, and started forth to his neglected business.

As he kissed Meg good-bye at the door, he said: "My dear, I don't believe you had the grippe as hard as I did. If you only knew how I felt part of the time there!"

"I do know," said she quietly.

But the queer part of it all is, that he never thought that she did.

The Bridge.

The poet Longfellow, speaking of the writing of 'The Bridge,' said: "It was written in sorrow, which made me feel for the loneliness of others. I was a widower at the time, and I used sometimes to go over the bridge to Boston evenings to meet friends, and to return near midnight by the same way. The way was silent, save here and there a belated footstep. The sea rose or fell among the wooden piers, and there was a great furnace on the Brighton hills whose red light was reflected by the waves. It was on such a late solitary walk that the spirit of the poem came upon me. The bridge has been greatly altered, but the place of it is the same."

The poet was twice married, and "Hyperion," according to a pleasing legend, was written to win the heart of her who became his second wife. Her death, as many know, was pathetic. She had been diverting her children by making figures on the floor with melting sealing-wax, when her dress took fire and she was fatally injured by the flames. It is said that a week after the event the poet appeared on the streets so changed as to excite the surprise as well as the pity of his friends. Age seemed to have come on in a day. Many years afterward, in reference to this event, he wrote the "Cross in the Snow." He used to take a few choice friends into the room where her portrait hung, and turn aside to weep, saying: "That was my dear wife!"

"The Bridge" has been set to music and is a popular song.

I stood on the bridge at midnight, As the clocks were striking the hour, And the moon rose o'er the city, Behind the dark church tower.

I saw her bright reflection In the waters under me, Like a golden goblet falling And sinking in the sea.

And far in the hazy distance Of that lovely night in June, The blaze of the flaming furnace Gleaned redder than the moon.

Among the long, black rafters The wavering shadows lay, And the current that came from the ocean Seemed to lift and bear them away;

As, sweeping and eddying through them, Rose the belated tide, And streaming into the moonlight, The seaweed floated wide.

And like those waters rushing Among the wooden piers, A flood of thoughts came o'er me That filled my eyes with tears.

How often, oh, how often, In the days that had gone by, I had stood on that bridge at midnight, And gazed on that wave and sky!

How often, oh, how often, I had wished that the ebbing tide Would bear me away on its bosom, O'er the ocean wild and wide!

For my heart was hot and restless, And my life was full of care, And the burden laid upon me Seemed greater than I could bear.

But now it has fallen from me, It is buried in the sea; And only the sorrow of others Throws its shadow o'er me.

Yet whenever I cross the river, On its bridge with wooden piers, Like the odor of brine from the ocean Comes the thought of other years.

And I think how many thousands Of care-cumbered men, Each bearing his burden of sorrow, Have crossed the bridge since then!

I see the long procession Still passing to and fro, The young heart hot and restless, And the old subdued and slow.

And for ever and for ever, As long as the river flows, As long as the heart has passions, As long as the heart has woes.

The moon and its broken reflection And its shadows shall appear, As the symbol of love in heaven, And its wavering image here.

The Painter and His Pupil.

Amerling, the famous Vienna artist, who died in 1886, had a decided objection to taking pupils. One day a plainly-dressed elderly lady called upon him with her daughter, and entreated him to admit her to his studio. The artist replied:

"I dislike playing the teacher. Any person with talent will attain to excellence by his own unaided efforts; he that has none had far better not dabble in art. However, if your daughter would like to see what is going on here and try her hand a bit, she may go and sit in that corner."

Notwithstanding this cool reception, the young lady went to the studio every day, accompanied by her mother, who never spoke a word, but sat with her child in the corner knitting stockings, while Amerling paid not the slightest attention to either of them. One day, however, the painter sat down opposite the old lady and said:

"Excuse my not having asked you before with whom I have the honor. Are you married?"

"I am a widow."

"What family have you?"

"Only a son and a daughter?"

"Is your son a merchant or an artisan?"

"Neither."

"A Government employe?"

"Something of the kind."

"A soldier?"

"Not always."

"Why, what is he then?"

"A king."

Amerling thought the old lady was wrong in her head. At that moment the mother of the Emperor of Austria, the Archduchess Sophia, who often visited the studio, was shown in, and at once embraced the old lady, whom she afterwards introduced to the astonished artist as the Princess Christina of Saxony, the mother of King Charles Albert.

Recipes.

FIVE O'CLOCK TEA SCONES.

Those who try these scones will be delighted with them. Mix one spoonful of baking powder and a quarter spoonful of salt into half pound of flour; rub in three ounces of butter with the finger tips; beat up an egg and add, with one-quarter pint of milk. Mix. Turn on to a floured board, and make into a light dough, and roll once lightly to one-half inch thickness. Cut round with a saucer, and mark each twice with a knife, so that they will break into four pieces when cooked. Bake from fifteen to twenty minutes. Cut open, butter over well, and serve piping hot.

LIGHT SUET PUDDING.

Two large cupfuls of flour, one of chopped suet, one of golden syrup, one teaspoonful cream of tartar, one of carbonate of soda, one of ground ginger, and a pinch of salt. Quarter-pound of sultanas is a great improvement. Mix well together in a floured cloth, giving it room to swell. Put quickly into a saucepan of boiling water, and boil for two hours. Serve with sweet sauce.

DELICIOUS BARLEY PUDDING.

Take a quarter of a pound of Scotch barley. Wash and simmer it in a small quantity of water; pour off the water, and add milk and flavorings as for rice pudding. Beat up with sugar, and mix the milk and barley in the usual way. Put the mixture into a buttered deep dish, add to it six ounces of currants, an ounce of candied peel cut fine, with a few apples cut in small pieces. Mix all together, put a few pieces of butter on the top, and bake the pudding in a moderately hot oven for an hour. This is a most nutritious pudding.

TO CLEAN WINDOWS.

A nice way for you to clean windows, or the glass in bookcase doors or cupboards, is to take a small bunch of cotton batting, dampen it with kerosene, and wipe the glass all over carefully. After allowing it to stay on a short time, take a soft, clean cloth and polish the glass. You will be surprised at its brilliancy and cleanness. There are no streaks to rub off over and over again, and it can be done in a very little while without any muss whatever. The smell evaporates almost immediately. One can rub the glass all over well, then go about other work, leaving it for several hours, and then it will polish just the same.

Good Health.

CHAPPED LIPS.

During the winter months the following preparation will be found of service in the curing of chapped lips: Take two teaspoonfuls of clarified honey, and mix this with a few drops of lavender water or any other perfume that may be preferred. The lips should be frequently anointed with the preparation when they have become chapped.

THE NERVOUS HEADACHE.

When the day has been long and hard, when a sharp pain begins to make itself felt in the busy woman's forehead, and a dull ache in the back of her neck, there is only one thing for her to do.

First, she must get out of her tight clothes and bunch her hair on the top of her head. Then she must bathe her face and neck for five minutes in the hottest water she can bear. After that she should lie down flat on her back.

If she does not fall asleep, she should rise at the end of half an hour. She will feel ten years younger. There will be no pain anywhere.

THE QUIET HOUR.

Our Toys.

My little son, who looked from thoughtful eyes
And moved and spoke in quiet, grown-up wise,
Having my law the seventh time disobeyed,
I struck him and dismissed
With hard words and unkind
His mother, who was patient, being dead.
Then, fearing lest his grief should hinder sleep,
I visited his bed,
But found him slumbering deep,
With darkened eyelids, and their lashes yet
From his late sobbing wet;
And I, with moan,
Kissing away his tears, left others of my own;
For, on a table drawn beside his head,
He had put beside his reach
A box of counters and a red-veined stone,
A piece of glass abraded by the beach,
And six or seven shells,
A bottle of bluebells,
And two French copper coins, ranged there with careful art
To comfort his sad heart.

So when that night I prayed
To God, I wept and said,
"Ah, when at last we lie with tranced breath,
Not seeing Thee in death,
And Thou rememberest of what toys
We make our joys,
How weakly understood
Thy great commanded good,
Then fatherly, not less
Than I, whom Thou hast moulded from the clay,
Thou'lt leave thy wrath and say
"I will be sorry for their childishness."

"But we are grown-up," you may say: "we have done with toys long ago." Grown-up! Surely we must continue to grow or decay, in this life at least—whether we shall be grown-up in the next remains to be seen. Our bodies continually throw off old particles and absorb new ones—mentally and spiritually we are growing up, or down.

Have we done with toys altogether? What does the word mean, anyway? My dictionary defines it as "a trifle, a plaything, a bawble; sport." The child grows away from ball and drum, only to substitute other toys. These also are soon discarded, because new playthings crowd them out of the affections. We can't work all the time, and indeed the old saying about "all work and no play" has been proved to be true over and over again. Children get on better at school if they have a reasonable amount of play—poor things, they don't get any too much nowadays!—and the same rule holds good all through life. One finds relaxation in games, another in reading, another in fancywork; and, as long as it is relaxation, it may be a great gain. It does not always rest and refresh, though. A game of football or baseball may be far more exhausting than a hard day's work in the fields, and almost as dangerous as a battle. As for fancywork—a gray-haired lady once showed me a sofa cushion she had made nearly forty years before. Working steadily at it for weeks injured her spine so seriously that she never recovered completely from the strain. Surely that cushion was a very expensive toy.

Of course this is an extreme case; but how often do people exchange priceless treasures, such as health, eyesight or time, for some trifle of which they tire almost immediately. We poor mortals are so apt to make mistakes in the relative values of things. Like the fairy gold in the old legends, the treasures we prized so highly may prove, in the clear light of day, to be only withered leaves. We may be straining every nerve to win riches, fame or some other worldly distinction, only to find that our own soul, which we had no time to attend to, was worth more than all the riches and honors of the world put together. How often do we, like Esau, value the passing gratification of the moment more highly than our birthright of true and lasting joy.

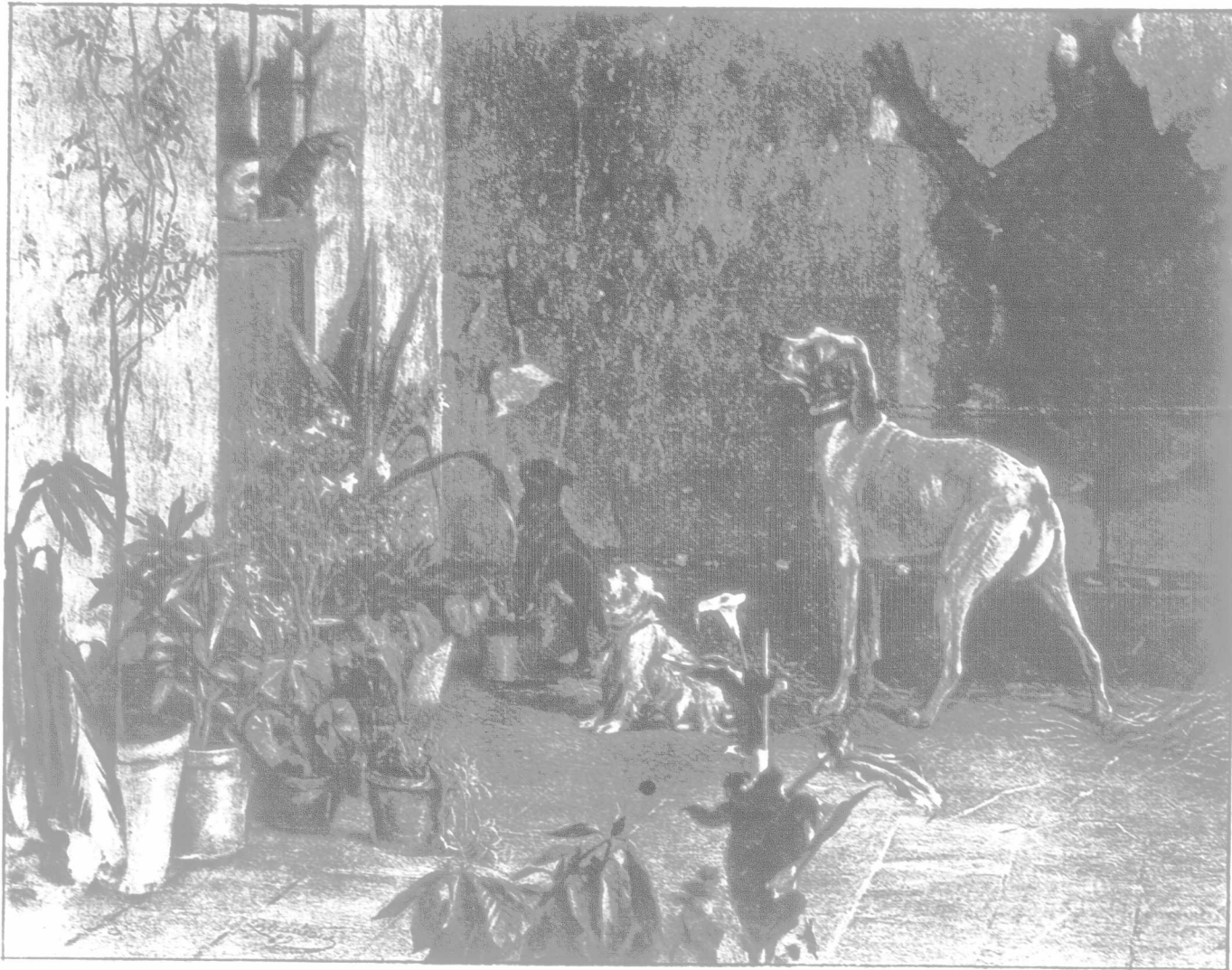
"We barter life for potage! sell truth for a lie,
For wealth or power, for pleasure, for delight,
That, Esau-like, our Father's blessing we have sold,
Then wish with fruitless tears our bargain to be sold."

The story is told of a widow who had recently lost a good and loving husband. Seeing in a her bereavement she happened to glance at a fashion magazine. Her face paled, her eyes started, a nervous shudder passed over her, for she had

heard of another death. "Sleeves!" she gasped: "sleeves have changed again this month! And all my new gowns have been sent home." The great calamity of being a month behind the fashion touched her almost as nearly as the loss of her husband. Of course, a woman should be interested in clothes to a reasonable extent, but these things should not be credited with a false value.

It has been said that we don't really possess anything that can be taken from us. A miner from California, with a thousand dollars' worth of gold in his belt, was shipwrecked. The gold was heavy and dragged him to the bottom. The question has been raised whether he had the gold or whether the gold had him. That is a question we might often ask in regard to what we call our possessions. Many things are lawful and yet not expedient. St. Paul's determination not to be brought "under the power of any," might well be adopted by all of us. The hurry and worry which makes people old before their time, generally comes from a mistake in values. We use up health and nerves in racing to get ahead of our neighbors, only to find that the prize is not worth one hundredth part of the price paid for it.

Let us make sure that we are working for real treasures, not for toys that lose their value almost as soon as they are grasped. Then our labor will not be thrown away. Being busy is not everything. Some are building with gold, silver, precious stones; others with wood, hay, stubble;—and "the fire shall try every man's work, of what sort it is."



From the original painting by G. B. Quadroni.

"THREE PRISONERS."

"The work of our hands—establish Thou it."
How often with thoughtless lips we pray!
But He Who sits in the heavens shall say,
"Is the work of your hands so fair and fit
That we dare thus pray?"
Softly we answer, "Lord make it fit."
The work of our hands—that so we may
Lift up our eyes and dare to pray,
The work of our hands—establish Thou it."

HOPE.

"Three Prisoners."

Of all animals, none appear so peculiarly fitted for companionship with man as the dog. This implies a sensitiveness of nature and a social instinct which would tend to make the separation of a dog from his master almost as painful as the separation of attached human friends. In rare instances, it is known that emotional suffering in a dog at the loss of a master has been so great that the animal has refused food, and so languished unto death. The dogs in our picture are not in so sad a case as that. Their imprisonment and consequent separation from human society is, let us hope, but temporary. Moreover, although in duration, they are not in solitary confinement. There is an old saying, that "misery loves company," and certainly companionship of any kind does ordinarily mitigate the pains of imprisonment; yet, in the case of these dogs, it may be that each is so occupied with yearning for his master that he fails to relieve the gloom of his comrades. In any case, we can imagine how their light, fitful slumbers are roused by every passing footfall; how their ears prick up to catch some sound hopeful of release and restoration. Just at present their attention is engaged by a visit from some sympathetic or

curious youth, who is exciting them by a doubtful prospect of a repast. Each of the prisoners wears a downcast look that is quite pathetic. It is interesting, by way of contrast, to form a mental picture of them as they will doubtless appear when the master returns to set them free; then their sorrow will be at once forgotten, as they leap in wild excess of joy, covering him with kisses, and barking in a way that seems like a frantic effort at speech.

Signor Quadroni evidently is a sympathetic interpreter of canine nature, and has given us a picture infused with appropriate sentiment.

THE CHILDREN'S CORNER.

The "Pass-It-Along Club."

There had been a long silence as the family sat around the center-table, papa reading, mamma sewing, and Ralph—well, what was Ralph doing?

Mamma looked up from her work once or twice, for the boy was usually talkative after supper, but now he was still, very still. He wasn't reading, and he wasn't playing a game, but there he sat looking intently at nothing.

Even papa noted the unusual silence, and lowered his paper for a moment and looked at his son with an amused expression on his face.

"Well, Ralph?" he said at length.

The boy jumped at his father's voice and colored a little.

"Is it school, or scrapes, or what?" his father continued.

Ralph put on a bold face. "It's a club we boys have formed," he explained. "Ernest Lacy started it, and we call it the 'Pass-it-along' club."

"Twas when Ernest got that fine new bicycle and lent it one day to Clark Benson. You know Clark is very poor, and never had a chance to ride on a wheel, except an old one once in a while, and we boys were awfully astonished to see him one day on Ernest's, because his was the best wheel in town, and you don't exactly like to let other folks take your best things—that is, unless you are very fond of the person."

This last Ralph added in a different tone. The excuse seemed rather a poor one with those eyes upon him.

"Well, at any rate, he let Clark take it one whole day, and when we asked how he happened to, he said 'twas such a fine one he thought he ought to pass it along and let someone else have some

enjoyment out of it. And somehow we got to talking about the things we had and someone else didn't have, and how 'twasn't just fair to keep things to ourselves, and I don't know just how it was, but we said we'd pass all our good things along and let other folks enjoy them, and that's how the club started."

"Aren't you splendid!" Susie clapped her hands. "I think it's just lovely, and I'd like to help pass things along."

"Well, it isn't so easy," Ralph interrupted. "Sounds easy enough, only you don't know where to stop."

"Why do you have to stop?" mamma queried. "I shouldn't suppose there would be any limit, if you are really pledged to pass it along."

"Well, it gets to be pretty serious business," Ralph explained.

"It isn't only helping fellows do sums, and lending them books and things, but it makes you want to make folks happy when you're happy, if you are really going to pass everything along, and oh, dear me, I get all bothered up!"

He came closer to his mother, and she pressed her hand tenderly over his tumbled hair. He gave her a quick little undecided look, then broke out, speaking rapidly:

"Look here—this is what I've been wanting to say, only somehow I couldn't get round to it. I wish you'd let me have some of the boys round to supper nights. Oh, yes, I know," as his mother started to speak, "you've always been just splendid about that, and let me ask the boys, only they've all been the boys 'round here who are used to having things, and I was thinking to-night when that sugar gingerbread came on and I knew ma had

Dora make it because I liked it so well, how good 'twould taste to Clark and some of the others. I guess they don't have things as nice as we do, and I think they'd like to sit round awhile and hear you read, sir. It's different from what some of them have who haven't any father at all, or else ones they're ashamed of."

His father held out his hand. "I think we'll all help pass it along," he said. "Bring the boys here, Ralph; and we'll do all we can."

The "Pass-it-along" club was holding a very interesting meeting at Ralph's house. Every member was present and there was a great deal of interested talk.

"I know five boys who want to join," young Bagley announced when there was a moment's pause, "and I guess we'd better let them; don't you?"

"Of course," the rest agreed. "I didn't suppose 'twould be anything like what it is," George Thompson confessed. "I thought we'd be just helping other folks who weren't so well off as ourselves, but it doesn't work that way one bit; you have to kind of pass-it-along to everybody, and we get things passed along to us too."

Ralph suddenly looked up. His father and mother were standing in the doorway. How long they had been there he didn't know. As the other boys followed Ralph's glance there was a silence.

"I've been wondering," said Mr. Taber, as he stepped into the room and looked down into the earnest boy faces, "if it is possible, if you would be so very good as to be willing to admit such an old boy as I am into your club, or is there an age limit?"

His eyes twinkled, and the boys drew about him eagerly. Mr. Taber was a great favorite with them all.

But the idea of a grown man, and such a splendid one as he, wanting to join their club! Mr. Taber's face grew serious as he heard the cries of "yes," "of course," on all sides.

"I thank you," he said gravely. "I shall consider it the greatest honor of my life to be allowed to become one with you, and I promise—I promise solemnly to do all that I can in this world to help pass it along."

There was a little break in his voice as he went on: "You boys can never know just what it has taught me, for you are young and not yet hardened by the world's selfishness, but since Ralph has told me and I have had the thought in my mind, I have seen countless opportunities to pass it along which I never dreamed of before, and I have been trying to do it daily, and I thank you from the bottom of my heart for the beautiful thought, and I am proud to be a member of the Pass-it-along club."

The boys shook hands with their new member almost silently. Things were taking on great proportions, and they wondered where it all would end.—From "The Ladies' World."

Humorous.

Lodger (quarrelling with his landlady)—"I haven't been in lodgings for years for nothing." Landlady—"I suppose not, and you're not going to be here for nothing neither."

The other day Pat was travelling in a train accompanied by a minister, when two very stout ladies entered their compartment. They placed themselves one on each side of Pat. He had hardly room to breathe between them. The minister, on seeing him so placed, said, "I suppose you feel discontented there?" Pat—"Sure, sir, I have not much room to grumble."

The other day a miner was passing a farmhouse, when the dog suddenly sprang at him, and bit him. The farmer, who had seen all, immediately rushed to his assistance, and asked:—"Whaur did it bite ye?" "Oh," replied the miner (with his hand on the affected part, and grinning with pain)—"atween the stackyard an' the hayshed."

The inmates of a Scottish asylum, working in the garden, decided upon an attempt at escape. Watching their opportunity when their keeper was absent, they approached the wall. "Noo, bend doon, Sandy," said the one, "and I'll climb up your shoulder to the top and then I'll gie ye a hand tae." Sandy accordingly bent down. Tam, mounting his back, gained the top of the wall, and, dropping over on the other side, shouted, as he prepared to make off:—"I'm thinking, Sandy, you'll be better to bide another fortnicht, for ye're no near richt yet."

Two Irishmen went into a restaurant and ordered some soup. The waiter brought in the soup, and a fork and spoon instead of two spoons. Pat lifted the spoon and began, while his friend made an attempt with the fork, but failed. At last turning to Pat, he said:—"Here, Pat, you dig and I'll shovel now."

An Irishman went with a friend to hear a concert in one of the music halls in Glasgow lately, at which that well-known song was sung, "Bonnie Dundee." About the middle of the song Pat got very interested in it, and leaning over to his friend, he said in a loud whisper—"Sure, I know Philip McCann well enough, but who is this Philip McCann?"

"How are you to-day?" said a Scottish landlord to one of his tenants on meeting him on the road. "Vera well, sir, vera well," answered Sandy in his usual way; "gin it wasna for the rheumatism in my right leg." "Ah, well, Sandy, be thankful, for there's no mistake you are getting old like the rest of us, and old age does not come alone." "Auld age, sir," returned Sandy, "I wouner to hear ye. Auld age has naething to do wi't. Here's my other leg, just as auld, an' it is quite soond an' soople yet."

Literary Note.

Friend—How are you coming on? Author—Good. I've got the material on hand for a first-class novel.

"You are a lucky man." "That's not all. I've got the material for a splendid comedy, besides."

"You are fortunate." "Yes, all I need now is the material for a new pair of pants."—Texas Siftings.

Poems by Charles Kingsley.

Charles Kingsley was a stirring figure in the life of the mid-century; he was preacher, theologian, social reformer, historian, novelist, poet, and in all these varied fields of mental activity he displayed high talent. He was born in 1819; entered the English Church; was rector of Eversley; professor of modern history in Cambridge for nine years, and in 1872 became Canon of Westminster, and three years later died. His greatest novels are "Westward Ho!" and "Hypatia." We reproduce three of his short poems:

A FAREWELL.

My fairest child, I have no song to give you; No lark could pipe to skies so dull and gray; Yet, ere we part, one lesson I can leave you For every day.

Be good, sweet maid, and let who will be clever; Do noble things, nor dream them, all day long; And so make life, death and the vast forever One grand sweet song.

THE WORLD GOES UP.

The world goes up and the world goes down, And the sunshine follows the rain; And yesterday's sneer and yesterday's frown, Can never come over again.

Sweet wife, No, never come over again. For woman is warm, though man be cold, And the night will hallow the day; Till the heart which at even was weary and cold Can rise in the morning gay.

Sweet wife, To its work in the morning gay.

THE OLD, OLD SONG.

When all the world is young, lad, And all the trees are green; And every goose a swan, lad, And every lass a queen; Then beg for boot and horse, lad, And 'round the world away; Young blood must have its course, lad, And every dog his day.

When all the world is old, lad, And all the trees are brown; And all the sport is stale, lad, And all the wheels run down; Creep home and take your place there, The spent and maimed among; God grant you find one face there You loved when you were young.

Ingle Nook Chats.

MY DEAR GUESTS,—

There has been such an influx of visitors of late, I shall be able to welcome them collectively only, and not individually, as I should wish to do; but I trust that each will accept a hearty greeting. Our club now numbers over eighty members—not a bad showing for its age, is it? Jemmie Matchet, who, by the way, bears the title, "Captain," says he favors C. S. Edwards' idea of the guests discussing subjects with one another. Jemmie also sent me an original valentine, which was very good for a small boy to compose. Oh, dear, no; I'd be too shy to tell the nice things it contained. Laura E. Marshall and Master Austin Bunn have acknowledged receipt of prizes in contest V. I had wrongfully supposed the latter to be a girl. You see the name, Mossie, was rather non-committal, and your work and writing was neat enough to have been a girl's, hence the mistake. There now, I expect to be freely forgiven after that compliment. J. MacF. asks if all the Ingle Nook chatters are the intimate friends of the Hostess. The Hostess has not the pleasure of knowing personally any one of her numerous guests, and American visitors are quite as welcome as Canadians. "Thelma's" kind wishes are thankfully received; I should like to accept her invitation when that "Ideal Home" has become a reality, which I consider very possible. "Morag's" ideal, which is a very laudable one, is to become a Red Cross nurse, and follow in the footsteps of Florence Nightingale. Mrs. H. Cornell Bennett and Miss Laura E. Marshall also sent essays worthy of much commendation.

One of our guests writes as follows: "I believe this is a needed work, increasing the literary talent of fair young Canada, and, more than we can realize, elevating the thoughts of our youth. Wishing you every success in both social and literary effort. "Yours aiming for progress," "MIND AND PEN."

Will "Margareta" kindly tell us what she does with the bulbs she uses for winter blooming? If planted in the garden, would they bloom next year after a full year's rest? Information of this sort will prove useful to many.

OUR COMPETITIONS.

As there were no competitors in Class III. of Contest VI., we have awarded two prizes in Class I. The winners in this contest are: Class I.—Miss Jennie MacFaden, Kansas City, Kansas, and Mr. Chas. S. Edwards, Cumberland, Class II.—Miss Alice M. Nowlin, Middleton, Annapolis Co., N. S.

Contest VIII.—Poem on Queen Victoria (see Feb. 20th issue) does not close until April 5th, and I expect a large number of entries; several are already in.

So many of our guests desire a contest in the puzzling line, I have decided to accede to their requests by announcing

CONTEST IX.

The following phrases are in a certain degree descriptive or suggestive of celebrated persons whose initials are the same as the initials of the words used; e. g., "Cherished Deservedly"; initials C. D. almost instantly suggest Charles Dickens. Those given below are all equally applicable. We offer three prizes to the persons guessing correctly the greatest number of names in the list appended. In case of a tie, neatness will be considered:

- 1. Absolutely Loyal. 11. Delayed Long.
2. Rare Loving Spirit. 12. Makes Travesties.
3. Worth Studying. 13. Left Many Admirers.
4. Wit; Much Tenderness. 14. Strong, Just, Truthful.
5. Extravagant and Peculiar. 15. Really Worth Emulating.
6. Loved Animals. 16. Terribly Caustic.
7. Her Books Sell. 17. Clever Romancer.
8. He Wrote Lyrics. 18. He Made Search.
9. Conquering Cruiser. 19. Who's England's Glory?
10. Oh, What Humor. 20. New Words.

All answers must be properly numbered, and

name of sender attached to list. Contest closes May 5th. Where are the puzzle lovers now? Address all work to THE HOSTESS, Ingle Nook Chats, Pakenham, Ont.

PRIZE ESSAYS—CONTEST VI., CLASS I.

My Ideal—My Aim in Life.

BY JENNIE MACFADEN, KANSAS CITY, KANSAS.

There are not many, perhaps, without an ideal in life; but alas! how few of us attain to it. Often we are seized with a desire to soar to the realms of which we catch but a momentary glimpse at rarest moments of inspired vision. We look longingly, eagerly, but it is far too lofty for such flight as ours, so we flap disconsolately our earthly wings, and, soon forgetting these higher aspirations, we resume our monotonous picking away at the sordid sod—enough for our baser needs.

We have repeatedly heard—and is there not an intuitive echo!—that every ideal in life has its realization. But the key to this realization is work,—unflinching, unremitting energy, without which there is no solution. We may long, we may hope, we may aspire, but all are vain if we are not willing to "build the ladder by which we rise." "There is no royal road" to ideals.

I would that I possessed the pen of the ready writer or the tongue of the fluent speaker; that I might stir within the breast of discouraged humanity the desire for an ideal, an ideal that will lift them up from the depths of disconsolation and teach them that there is something higher and better in every life, if they are but willing to strive for it.

This would be my ideal, in striving to better myself, to be able to teach the disheartened ones around me that "far beyond the toiling and the striving" there is something better to be attained in this life, and something worth the strife. And cannot we all do this to a greater or less extent?

My Ideal.

Strength of body, mind and heart, Strength my labor to perform, Strength to bear the raging storm, Strength to do a manly part;

Strength to save in danger's hour, Strength the injured to redress, Strength to succor from distress, Strength to break the tyrant's power;

Strength to stand when fears assail, Strength to march where dangers lie, Strength all terrors to defy, Strength to struggle and prevail;

Strength of spirit, strength of soul, Strength to match the foes of right, Strength for virtue's cause to fight, Strength to reach a winner's goal;

Strength bad habits to correct, Strength to stifle hate and spite, Strength to conquer appetite, Strength temptations to reject;

Strength all vileness to regret, Strength to rescue sinful men, Strength to love the vile again, Strength to pardon and forget;

Strength true sympathy to feel, Strength to hope and trust and love, Strength to steadfast gaze above, Strength, great strength, is my ideal.

"ESSEX."

CLASS II.

My Ideal—What I Should Like to Do With My Life.

BY ALICE M. NOWLIN, MIDDLETON, N. S.

I should like to use my life in doing acts of charity and kindness, in teaching others the way of salvation, and in doing what my Heavenly Father would have me, to the best of my ability.

What Famous Women Think About Men.

"Man is very apt to contemplate himself out of all proportion to his surroundings."—Christina G. Rossetti.

"In the average man there is still a dreadful amount of Eastern feeling with regard to women."—Edna Lyall.

"Love occupies a vast space in woman's thoughts, but fills a small portion in a man's life."—Maria Edgeworth.

"The best augury of a man's success in his profession is that he thinks it the finest in the world."—George Eliot.

"Man is not made for that selfish concentration of despair which is called either abnegation or stoicism."—Georges Sand.

"It is easier for the Ethiopian to change his skin than for a man to live down the past in public opinion."—Edna Lyall.

"The just living of a lifetime makes a man incapable of any more selfish handling of another's interests."—Mrs. Humphry Ward.

"No insult offered to a man can ever degrade him; the only real degradation is when he degrades himself."—Dinah C. Mulock.

Some of Emerson's Sayings.

Man is the image of God; why run after a ghost or a dream? My creed is very simple—that goodness is the only reality.

Men are respectable only as they respect. Nature hates monopolies and exceptions. Never mind the ridicule, never mind the defeat; up again, old heart!

No aristocrat, no prince born to the purple, can begin to compare with the self-respect of the saint. No man ever stated his griefs as lightly as he might.

Obedience alone gives the right to command. Nature loves analogies, but not repetition. Omit the negative proposition; nerve us with incessant affirmations.

Valuable Premiums!

These very liberal premiums are given our subscribers for sending us
NEW SUBSCRIBERS,
accompanied with the cash.

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EVERY farmer who reads the FARMER'S ADVOCATE is benefited many times the subscription price. No better time than now to get new names.

"Post" Fountain Pen

SOMETHING THAT EVERY MAN, WOMAN, BOY AND GIRL NEEDS.

It is a wonderful tribute

to the greatest invention in fountain-pen construction of the age.

THE PRICE OF THE POST IS **\$3.00**. IT CANNOT BE PURCHASED UNDER THIS PRICE ANYWHERE.

The patentee has a hard-and-fast agreement with the trade and agents that \$3 shall be the lowest retail price. By a special agreement we are in a position to make

A Great Offer: We will send one of these pens to anyone who sends us three new subscribers, accompanied by \$3.00 in cash.



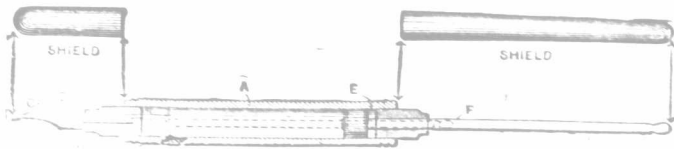
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge sooner. "I have tried every pen of the kind on the market, and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

Lew Wallace

To show our confidence in this pen, we will send you one on trial for a week upon receipt of \$1.00, which, if not entirely satisfactory, you can return to us and we will refund you the \$1.00 paid us. If satisfactory, you must send us the names and addresses of the three new subscribers and \$2.00 additional cash.



This only self-feeding and self-cleaning pen in the world. To fill the pen, the ink is drawn up the barrel and water and draw the pen tip downwards and forward a few times.



A, Barrel; B, Nozzle; C, Pen; D, Feed; E, Plunger; F, Res.



The world's greatest singing evangelist, who has thrilled thousands and tens of thousands, now raises his voice in praise of the Post Fountain Pen.

Mr. S. says in the following characteristic letter: "I have used the Post pen for some time, and have had great satisfaction. It never fails or gets cranky. One can at least have a fountain pen that works, whatever the heat may be."

S. S. S.

The Wm. Weld Co., Ltd., Winnipeg.

Want a Good Watch?

WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means trashy goods, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

Gents' Watches.

No.	Description	New Subscribers
No. 1.	Yankee Nickel Watch	2
No. 2.	Trump Nickel Watch	4
No. 3.	Trump Gun Metal Watch	5
No. 4.	No. 14 Silver Watch	8
No. 5.	7 Jeweled Gent's Elgin in 3 oz. Nickel Case	10
No. 6.	7 Jeweled Gent's Elgin in Gun Metal Case	11
No. 7.	7 Jeweled Gent's Elgin in Sterling Silver Case	14
No. 8.	7 Jeweled Gent's Elgin in 20-year Filled Case	18
No. 9.	7 Jeweled Gent's Elgin in 25-year Filled Case	21
No. 10.	15 Jeweled Gent's Elgin in 3 oz. Nickel Case	15
No. 11.	15 Jeweled Gent's Elgin in Gun Metal Case	15
No. 12.	15 Jeweled Gent's Elgin in Sterling Silver Case	18
No. 13.	15 Jeweled Gent's Elgin in 20-year Filled Case	21
No. 14.	15 Jeweled Gent's Elgin in 25-year Filled Case	25

Ladies' Watches.

No.	Description	New Subscribers
No. 15.	Gun Metal Swiss Chatelaine	4
No. 16.	Sterling Silver Swiss Chatelaine	0
No. 17.	Nickel American O. F., large size	5
No. 18.	Gun Metal American O. F., large size	5
No. 19.	Nickel, small size	9
No. 20.	Gun Metal, small size	10
No. 21.	Sterling Silver, small size	10
No. 22.	7 Jeweled Elgin in 20-year Filled Hunting Case	20
No. 23.	7 Jeweled Elgin in 25-year Filled Hunting Case	22
No. 24.	15 Jeweled Elgin in 20-year Filled Hunting Case	23
No. 25.	15 Jeweled Elgin in 25-year Filled Hunting Case	25

Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows:

No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O. F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.

No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

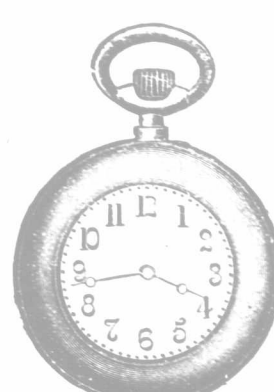
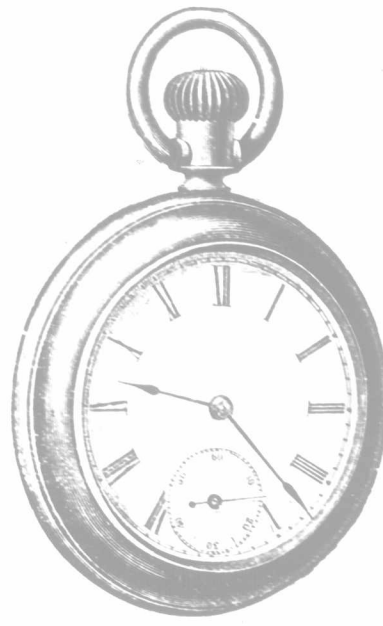
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14K Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.

THE WILLIAM WELD CO., LTD., WINNIPEG, MAN.



GOSSIP.

M. Maw, of the S. John's Poultry Yards, Winnipeg, handles the utility breeds of poultry and the Cyphers incubator.

Note the Fort Rouge Poultry Yards' change in their advertisement this issue. Cockerels of that noted breed for meat, Indian Games, are for sale.

In the neighborhood of Louise Bridge, two up-to-date Manitoba poultrymen are to be found, viz., Messrs. Chas. Midwinter and Geo. Wood.

Our readers should note the chances offered by Wm. McDonald, Pilot Mound, in the line of Shorthorns. King Christopher (22861), by Sir Christopher (3877), is offered for sale.

C. W. Peterson, Commissioner of the Department of Agriculture of the Northwest Territories, announces that an arrangement has again been made this year with the Canadian Pacific Railway for the importation of pure-bred bulls into the Northwest Territories.

Menzies Bros., of Shoal Lake, purchased from J. A. S. Macmillan, of Brandon, two Clydesdale stallions, Pilgrim and Glenbuck.

Cyphers Incubators. The Cyphers incubator has proved such a great success that we would draw our readers' special attention to it.

Fort Worth (Texas) Stock Show. The special prizes of \$15 each, offered by the Pasture Vaccine Company, for the best Texas bred and raised Hereford and Shorthorn yearlings in the show, were won by Messrs. W. S. & J. B. Ikard.

Some Plain Facts About the CREAM SEPARATOR AWARDS AT THE PARIS EXPOSITION.

THE very nature of the cream separator business is, perforce, productive of fraudulent claims and misrepresentation of facts.

Hence, there is nothing strange in the misrepresentation and contortion of facts respecting the Paris Exposition awards upon separators.

There were five grades of awards at the Paris Exhibition: 1st Grand Prize, or highest award, which was confined to one or two exhibits of undoubted superior excellence.

Only two Grand Prizes were awarded to cream separators—one to the De Laval machines and the other to a duplication of the De Laval machines.

The lower awards were a Gold Medal to the "Sharples" and "U. S." machines, together with two makes of foreign separators.

One of our competitors was advised by the Department of Agriculture, at Washington, that "a" cream separator sent to Paris by him had received "a" gold medal.

Another competitor publishes the fact of their having received a Gold Medal at Paris in conjunction with the cut of a cup won by some battermaker at a State fair over a year ago.

Another competitor advertises the claim of having "captured" the "only" Grand Prize awarded at Paris to a separator of "purely American manufacture."

In conclusion, it is interesting to note that the De Laval Working Dairy at Paris was awarded a Gold Medal, in addition to the Grand Prize to the De Laval Cream Separators.

THE DE LAVAL SEPARATOR CO.

Western Canadian Offices, Stores and Shops:

248 McDermot Ave. - - - WINNIPEG, MANITOBA. CHICAGO. NEW YORK. MONTREAL.

800-ACRE FARM FOR SALE.

4 MILES FROM MOOSOMIN, N.-W. T.

AS I am leaving the West, owing to unforeseen circumstances, I offer my farm, herd of Shorthorn cattle, Berkshire pigs, and horses for sale.

The farm is situated in one of the best grain districts in the West, and produced 5,000 b. of hard in 1899. 49 acres under cultivation: 250 acres ready for wheat, including 75 a. breaking and 75 a. summer-fallow; 275 a. tenced. Land nearly new, worked only seven years.

R. J. PHIN,

MOOSOMIN, - - - N.-W. T.

As a rule, there is no place where cattle look as well as sell as well as in their own stables, and, as a rule, that is the safest place to buy.

J. E. SMITH.



J. E. SMITH offers for sale 45 Shorthorn bulls (all ages), a number sired by Lord Stanley 2nd 22260, some imported from Ontario.

A few young Clydesdale stallions and Clydesdale mares and fillies of all ages for sale.

Everything for sale, except my stock bulls, Lord Stanley 2nd and Golden Measure (imported), and the Clydesdale stallion, Prince Charles (imported).

Clydesdales and Shorthorns. Young stallions, bulls, and heifers.

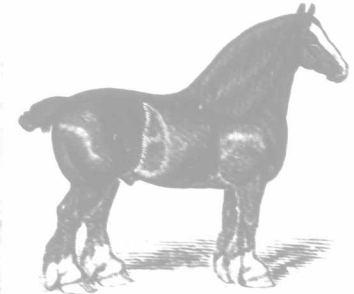
Herd headed by Best Vet—1871 and Mint-horn—21084—, bulls bred by Hon. John Dryden and H. Cargill & Son.

D. McBeth, Oak Lake, Manitoba

GOSSIP.

"Wee'l gang na mair to you toon," was the song of the Ayrshire men returning from the Government "roups" at Guelph and Bytown.

Clydesdale Horses for sale.



Three young stallions, bred from the best strains in America and all first-class quality.

A. & G. MUTCH. Craigie Mains. Lumsden P.O., Assa.



PIONEER HERD OF SHORTHORNS

Won the gold medal at the last Winnipeg Industrial Exhibition; also first for bull and two of his get, first for cow and two of her progeny, and numerous prizes for individuals.

WALTER LYNCH, Westbourne, Man. P. O., Railway and Telegraph.

I HAVE FOR SALE
SHORTHORNS

My herd bull, King Christopher (22861), 4 young bulls (reds and roans), and a few females. Write for prices.

Wm. McDonald, Pilot Mound, Man.

FOR SALE:

3 Fine Pure-bred Aberdeen-Angus Bulls,
20 months old, solid black; sire, McHenry Blackbird
5th 28063. **G. W. FOGGMAN,**
Grafton, N. D.

BULLS FOR N.W.T.

Arrangements have again been made by the Pure-bred Cattle Breeders' Association of Manitoba whereby pure-bred bulls will be shipped from Manitoba to the Territories under arrangements with the Territorial Government. Apply to Department of Agriculture, Regina, for conditions, etc. Freight charges only \$3.00 per head. Cars will be dispatched as soon as sufficient animals are booked. The Association can confidently recommend parties desiring to purchase stock to place their orders with Mr. William Sharman, Souris, Man., who will again take charge of the shipments.

GEORGE H. GREIG,

Sec'y Pure-bred Cattle Breeders' Association

ANDREW GRAHAM, President, Pomeroy, Man.

Note.—Breeders should keep Mr. Sharman posted as to stock for sale, etc.

FOREST HOME FARM
SHORTHORNS



Cows and heifers, prizewinners at Winnipeg and Brandon Fairs, and others equally good. Yorkshire pigs—a few choice ones of both sexes. B. P. Rock Cockerels—large, strong, well-marked birds. First orders received get the choice.

Carman, C. P. R.

Roland, N. P. R.

ANDREW GRAHAM,
Pomeroy, Man.

MAPLE GROVE STOCK FARM.

7 young SHORTHORN BULLS, by a son of Indian Warrior. Also a few choice heifers. Lord Stanley 25 = 29217 = at head of herd. Write

WALTER JAMES, ROSSER, MANITOBA.
15 miles west of Winnipeg, on main line C.P.R.

D. FRASER & SONS,
EMERSON, MAN.

Breeders and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale. 9-y-m

Shorthorns.

Two young bulls—one by Imported Knuckle Duster, one by Lord Loosie 22nd.



Yorkshires.

Ten choice boars ready for service. Also some young sows. All from prizewinning stock.



JAMES BRAY,
LONGBURN, MAN.

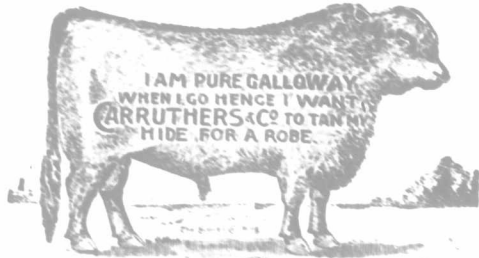
HOPE FARM
Galloways

SPECIAL NOTICE!

IN supplying some of our Western friends with their requirements of Galloway bulls for this season, we have taken the opportunity of buying from the best herds in the United States a few extra good yearlings and two-year-old bulls, among which are prizewinners at the Chicago and Iowa and Minnesota fairs in 1900. Greatest opportunity ever offered Western men to get Silver Medal stock. No culls. For prices and particulars apply to

T. M. CAMPBELL,
Manager Hope Farm. ST. JEAN BAPTISTE, MAN.

WILD AND IMPROVED LANDS FOR SALE.
Several tracts of land are present for sale in the celebrated Red River district. All particulars apply to
O. C. PEDERSON, Box 182, Strathcona, Man.



"What a Wise Old Chap!"

He has left his hide in good hands. Send for our circular in reference to custom tanning. We send samples of work with circular.

CARRUTHERS & CO.,
TANNERS.

and dealers in hides, wool, sheepskins, furs, tallow, etc.
9th Street, Brandon, Man.

Queenston Heights Stock Farm

Shorthorn Cattle.

Eight young bulls for sale: any age, any color. Three sired by Royal Standard 27633, by Judge 23119. Well known as winners at Toronto Industrial and Winnipeg. Also good cows and heifers: straight Scotch crosses.

Isaac Usher & Son, Queenston, Ont.
Manufacturers of Queenston Cement.

SHORTHORNS, YORKSHIRES AND TAMWORTHS. Stock of all ages and both sexes, at prices according to quality. Write **W. G. STYLES, ROSSER P. O.,** Box 1213-1, West. C. P. R.

SHORTHORNS FOR SALE
of Scotch breeding, seven bulls and forty cows and heifers, mostly all in calf or calf at foot. A few Clydesdales of both sexes.
Geo Rankin, Melrose Stock Farm, Hamiota, Man.

Thorndale Shorthorns.

8 BULLS, under one year, and about **100 FEMALES,** of all ages, to choose from.

JOHN S. ROBSON, Manitou, Man.

LAKE VIEW RANCH

Herefords and Galloways

Young bulls for sale. For prices write

J. P. D. Van Veen, FILE HILLS P.O.,
N.-W. T.



POPLAR GROVE

HEREFORDS.

Champion herd of Western Canada.

Best beef cattle in the world. **Sturdy young bulls** for sale. Also cows and heifers. Nearly 100 head to select from.

J. E. MARPLES,
Deleau, Manitoba.

Roxey Stock Farm,
BRANDON, MAN.

J. A. S. MACMILLAN,
IMPORTER AND BREEDER OF PURE-BRED

Clydesdales, Shires, Hackneys.

STALLIONS AND MARES.

Shorthorn Cattle



Shropshire Sheep

INSPECTION INVITED.

GRATUOUSLY SOLICITED. **Prices Right.**

FOR PARTICULARS BY APPLICATION,
APPLY **P. O. BOX 403.**

TWIN GROVE FARM.

Young Yorkshire pigs, some over two years old, and some sows. Prices still low. Also Buff P. Cockerels. Write
J. S. LITTLE, Proprietor, Oak Lake, Man.

PLEASE MENTION FARMER'S ADVOCATE.

First prize for Creamery Butter, Toronto and Ottawa. The highest awards for cheese, World's Fair, Chicago.

Winnipeg Creamery and Produce Co.



LIMITED.
CAPITAL STOCK, \$50,000.
S. M. BARRE,
Dealers in **MANAGER**
DAIRY SUPPLIES
AND PRODUCE.
238 AND 240 KING STREET.

Owing to the large increase in all departments of our business, we have organized a stock company with sufficient capital to meet all business requirements. We are now open to receive consignments of all kinds of farm produce, including butter, cheese, eggs, poultry, etc. Our creamery will be operated all winter, and farmers would do far better to send us cream than to make butter.

For further particulars please address: S. M. BARRE, MANAGER, Winnipeg Creamery & Produce Co., Ltd.

Argentine Flax for Seed.

We are importing a quantity of Flax from the Argentine Republic, to be sold for seed this spring. Home-grown flax being so much damaged by weather last fall, farmers ought to be careful to procure good seed this year. Where it only takes half a bushel of flax to seed an acre, the extra expense of imported seed is nothing.

Argentine Flax sown in North Dakota last year yielded five bushels per acre more than native seed, and ripened a week earlier.

Flax is a better paying crop than wheat, besides giving the farmer a diversity of crops.

Don't risk all on one crop. Try some Flax.

FOR PRICES APPLY TO

The Northern Elevator Company,

WINNIPEG, MANITOBA.

SEVENTH ANNUAL **Canadian Horse Show**

UNDER THE JOINT AUSPICES OF

The Canadian Horse Breeders' Association and The Toronto Hunt, Ltd.,

IN CONJUNCTION WITH THE

MILITARY TOURNAMENT
THE ARMOURIES, TORONTO, CANADA,

WEDNESDAY, THURSDAY, FRIDAY AND SATURDAY.

April 24th, 25th, 26th, 27th, 1901.

Entries close on Thursday, April 11th, 1901, and should be addressed to
HENRY WADE, Parliament Buildings, Toronto.

JERSEYS FOR SALE

YORKSHIRES.

If you want a first-class family cow, or want a few to start a herd of pure Jerseys, come and see my herd or write me. A lot of the daughters of Old Massena (900 lbs. butter a year). Two bulls. All registered in A. J. C. C.

Farmers who keep pigs might just as well keep good ones. Once purchased, they are easier kept and give better returns than poor animals. Now is the time to improve your stock. Seven choice young boars and some fine sows for sale. Address:

KING BROS.,
WAWANESA, MAN.

J. B. POWELL, Wapella, Assa. PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

THE GOVERNMENT STOCK SALES.

The convening of the annual meeting of the Dominion Shorthorn Association at Guelph, at the time of the stock sale there, together with the reduced railway fares, brought a large crowd of people to the Royal City on the occasion, and was calculated to give a good send-off to the initial stock sale under Government supervision.

The sale was exceedingly well conducted, reflecting credit on the officials and auctioneers, Messrs. John Smith, Brampton; Thomas Ingram, Guelph; and Geo. Jackson, Port Perry, who worked as hard to make it a success as though the stock had been their own. The catalogue, compiled by Mr. Frank Wade, of Toronto, who clerked the sale, was the most complete production of the kind ever seen in this country, and was much appreciated by visitors.

There was a large entry of stock for a first venture, the total number of all classes of cattle and hogs contributed to this sale being 191 head, of which 126 were Shorthorns, 6 Herefords, 2 Galloways, 7 Aberdeen-Angus, 19 Ayrshires, 4 Holsteins, 2 Jerseys, 7 Berkshires, 6 Tamworths, and 15 Yorkshires.

The Shorthorn class, as was expected, was the principal feature of the sale. There were a few good things offered, and these sold well, as that class always do, either publicly or privately. Of the 119 sold, only one brought over \$200, and only two others reached that mark. The highest price, \$315, was paid by Mr. N. Dymont, Barrie, for the excellent roan calf, Lord Roberts, calved March 18th, 1900, a broad, blocky fellow, with high-class flesh and plenty of hair. He is of the good "Syme" family, tracing to imp. Louisa, brought out from Scotland by the Millers, of Markham, his sire being the imported Irish-bred bull, Sirius 1281, his dam by imp. Indian Chief, and grandam by imp. Vengarth, both bred by Amos Cruickshank.

This bull was bred and entered by Alex. Moore, Greenwood. The other bull sold for \$200 was the rich roan, Rantin's Pride, contributed by C. and G. W. Blyth, Marden, and bought by Geo. Jamieson, Lucknow. He was calved March 16th, 1900, sired by Rantin Alex, bred by H. Cargill & Son, is descended from the good old Provincial prize cow, imported Margaret =317=, and is a bull of exceptionally good quality and symmetry, and a bargain at the price.

The bull sold for the third highest price, \$190, and for which it was publicly stated that \$200 had been offered at home, was the red two-year-old "Look at Me," bred and entered by Wm. Grainger & Son, London, sired by Beau Ideal, bred by John Miller & Sons, a son of Sittion Stamp, and is of the good milking Maid of Atha family. He is a grand young bull, and cheap at the price to the buyer, Mr. T. L. Pardo, M.P.P., Cedar Springs. One other bull reached \$112, and 16 in all sold for \$100 and upwards, while 57 brought less than \$75 each. Fair to medium would be a liberal description of the best half of the remainder, and a look over a large proportion of the other half gave one the feeling that Uncle Abe Lenick, of Kentucky, used to say he always experienced on seeing bulls of that class, the feeling of his knife turning over in his pocket. We have often heard it said, "It's a pity to spoil a good steer to make a mean bull," but of a considerable number of these it is not easy to imagine that they would have made decent steers or a higher class than those ranked as "butchers' cattle" for local trade, but all the same, they should have been "cut" when they were younger, and never allowed to reproduce their meanness.

That they sold for all they were worth was generally admitted, though in many cases the owners were much disappointed, and since some 35 brought less than \$50 each, and many of these were 18 months and some 2-year-old, it is clear they were raised at a loss, having had the whole milk of a cow for 8 months and grain for a year or more, and that as steers they would have paid much better, as the expense and trouble of rearing them would have been much less. An idea of the depth of the inferiority of the age end may be formed from the fact that 18 bulls brought only \$25 to \$30 each, 10 of them going below \$20. Accepting the statement of a prominent official, that 80 head offered were rejected, one is impressed with the need of missionary work in the Shorthorn Association. It has always been the tendency of this class of sales in Canada to make them the dumping ground for inferior stuff. Some of the older bulls were bought by local butchers and dealers, and a considerable number of the younger ones by dealers for the ranch trade, but these men were too shrewd to bid on the worst ones, as they know from experience that a bull must have some shape and constitution to rustle on the ranch. The quality of this section of the stock caused quite a shock to visitors, who were led to believe that there was to be inspection, and that only good stock in good condition would be accepted. Many were curious to learn who was the inspector, but his identity was not revealed. Otherwise the Shorthorn breeders' meeting might well have voted a leather medal in recognition of the service, and no doubt a resolution to that effect would have carried unanimously, since a motion conveying congratulations to the promoters on the success of the sale was adopted by common consent.

Of the 26 Shorthorn females sold, little need be said further than that the prices ranged from \$25 to \$200, one half selling for \$75 and under, and the \$200 mark being reached in only one case, for a highly-fitted 15-months heifer calf of the old Lydia Linguish family, slack in her back, light in her thighs, and dear at the price. She was sired by Spicy Robin, a bull bred by J. & W. B. Watt, Salem, was bred and entered by G. D. Fletcher, Binkham, and bought by A. M. Todd, of Kalamazoo, Michigan, who took several animals, the only ones purchased for the States, with the exception of one bull, C. W. Holmes and D. C. Black, of Nova Scotia, took several fairly useful numbers, and Mr. Kattie, of Gore Bay, Manitoulin, bought three or four.

A half dozen Herefords were offered, three of each sex, and they were not a bad lot, but there were few bidders, and four of them were knocked down to Herbert Wright, of Guelph, at prices ranging from \$85 to \$125 for 3 bulls, and \$12 for a heifer coming two in May. One other heifer brought \$80, and the O. A. C. heifer, a year old, was withdrawn at a bid of \$25.

Chicago Sheep Shearing Machine



Guaranteed to shear any kind of wool that grows. All gears cut from the solid metal and hardened.

BOOK ON SHEARING just published. Finely illustrated, with valuable hints for a successful shearing. By R. M. Marjals, chairman of the world, will be sent free to any sheep owner on application. Address: CHICAGO FLEXIBLE SHAFT CO., 138-140 Huron Street, Chicago, Ills.

British Columbia.

Anyone thinking of farming in British Columbia should write for descriptive pamphlet of farms for sale in the Lower Fraser Valley—the garden spot of the Province.

We have compiled the largest and most complete list of farms, orchards, cattle-grazing and garden lands, and fishermen's attentions, in the Province. It has been very carefully selected, and we have a personal knowledge of every property described. Prices range from \$3.00 per acre to \$250.00 per acre, and in extent from 1 acre to 1,000 acres.

In the Lower Fraser Valley, and on the coast lands around Vancouver, we rarely have more than a month of frost and snow at outside, and the thermometer has only sunk to zero twice in ten years.

HOPE, GRAVELEY & CO.,

536 Hastings St. VANCOUVER, B. C.

Six Aberdeen-Angus bulls were entered, most of them very good ones, but bids were scarce and prices low, two being withdrawn and four sold at from \$13 to \$25. One yearling heifer was run up to \$72, and knocked down at that figure, but we are informed was not sold to the reputed buyer.

The dairy breeds struck an uncongenial climate at Guelph, and yet Guelph is less than 50 miles from the famous dairy counties of Perth and Oxford, with first-class railway facilities, which makes the result of the sale in this class difficult to account for. There were 11 Ayrshire bulls catalogued, most of them fairly good ones, and all in nice condition, but buyers were much scarcer than bulls, and only two were sold at \$31 and \$32, the others being withdrawn at absurd bids. Eight cows and heifers, from 2 to 11 years old, were sold at from \$33 to \$75, only three going above \$50, and four at under that figure. They were a very middling lot.

Holsteins were represented by four females of very indifferent character, and sold at from \$22 for a two-year-old heifer, to \$87.50 for a four-year-old cow, three of them going at less than \$50 each. Jersey cows were represented by one bull and one cow. The bull, Bim of Dentonia, bred and contributed by Mr. W. E. H. Massey, Toronto, was the champion bull at Toronto Exhibition last year, a first-class animal. He sold for \$125 to J. L. Clarke, Norval, and is a good bargain at the price. The cow was withdrawn.

One would have thought that if anything in live stock would sell well at auction in these days, hogs would go off briskly at fair prices, but such was not the case. Seven Berkshire boars were catalogued, and two were sold at \$5 each. Of course, they were inferior. Of five Tamworth boars offered, three were sold at \$8 to \$10. Of five Yorkshire boars offered, four went at from \$8 to \$10, and one was knocked down to F. W. Hodson & Co. at \$25. Nine Yorkshire sows, supposed to be in farrow, were bid off at from \$23 to \$35 each. They would have sold for more at home, or at any farm sale.

THE OTTAWA SALE.

The Government stock sale on the exhibition grounds at Ottawa on March 6th, attracted quite a large attendance, estimated at between 300 and 600, made up, we are informed, largely of recruits for the Baden-Powell South African constabulary, some 400 of whom were camping on the ground, and were not buying bulls. Mr. George Jackson, of Port Perry, was the principal auctioneer, and won golden opinions by his manly and courteous manner and his skill and tact in the conduct of the sale. The entries catalogued for part of the sale included 35 Shorthorns (25 of which were bulls and 10 females), 3 Herefords, 3 Ayrshires (2 of which were bulls and 3 females), 4 Holstein bulls, 5 Jersey bulls, 1 Guernsey, 4 Berkshires, 7 Tamworths, and 17 Yorkshires. The quality and condition of the stock, on the whole, was better than at Guelph, but the prices obtained were not better proportionately to the quality of the offerings, except possibly in the Shorthorn class, in which there was a larger proportion of females than at Guelph, which averaged better prices at both sales, as they have been doing at all auctions in the country. The record price of the two sales, \$365, was made at Ottawa by the roan yearling Shorthorn bull, Triumph =34066=, bred and contributed by Hon. John Dryden, and purchased for the Prince Edward Island Government farm. Needless to say, he was a good one and well bred, being sired by Revenue =21033=, and out of Miss Lavender of the Cruickshank Lavender family. The Island Government agent also took the red yearling bull, Patrician, offered by Jeffrey Bros., Whitby, at \$230, while Roan Lad, a yearling, entered by Wm. Ormiston, Jr., Columbus, was taken by Wm. Metcalf, McGarry, Ont., at \$225. These were the only bulls that reached the \$200 mark, the remainder ranging from \$55 to \$180. The highest price for a female was \$210, for Queen Alexandra, a roan yearling of the Zora family, bred and contributed by John Bright, Myrtle, who supplied all the females offered here, and the purchaser in this case was Col. A. M. Todd, the peppermint man from Kalamazoo, Mich., who was the largest buyer at this sale, taking six out of the ten cows and heifers and one bull. Mr. E. R. Elderkin, Amherst, N. S., secured three female at \$80 to \$120 each.

Only one of the three Herefords entered was sold, a cow which brought \$100.

The Ayrshires were a fairly good lot, in good condition, but it was even more chilly for them here than at Guelph, quality considered, and with the exception of one yearling bull, Glenora Dairy King, contributed by Mr. W. W. Ogilvie, Lachine Rapids, Que., and bought by W. C. Edwards, M. P., at \$130, the prices were discouragingly low, running from \$25 to \$100, with only one at that figure, more than one-half of them selling at and under \$50. Of the six females entered, four were sold at an average of \$90, one making \$100.

Three young Holstein bulls were sold at \$22, \$37 and \$50. The latter two, contributed by G. W. Clemons, St. George, were richly bred and good individuals, and were purchased by F. E. Caine, St. Andrews, N. B., and W. J. McNaughton, Lancaster, Ont. Of the five Jersey bulls entered, only one was sold, and that at a ridiculously low price. The one Guernsey bull offered brought \$35. Three Berkshire boars sold at \$10 to \$16, and one sow at \$21; two Tamworth boars at \$10 each, and three sows at \$10 to \$20; six Yorkshire boars at \$11 to \$30, and eight out of eleven sows at \$11 to \$30. Such is the record of the first instalment of stock sales under Government auspices. Whether they will be helpful or otherwise to the pure-bred stock industry, breeders will judge for themselves.

Dominion Shorthorn Breeders' Association Annual Meeting.

The 15th annual meeting of the Dominion Shorthorn Breeders' Association was held at Guelph, February 28th. The attendance was probably the largest on record at an annual meeting of the Association, between 400 and 500 members being present. Mr. Robert Miller, Stouffville, First Vice-President, occupied the chair and ably presided over the business of the meeting. The report of the Secretary and Executive Committee showed that the affairs of the Association are in a very flourishing condition, the registrations in the Herdbook having steadily increased during the last four years, 1900 having been the banner year. The number of registrations paid for last year was 7,990, against 7,065 in 1899 and 5,386 in 1898. The number of transfers in 1900 were 3,397, as against 2,006 in 1899. Four hundred and fifty-eight head of Shorthorns were imported by 16 breeders in 1900, of which 115 were bulls and 343 females. The executive had thought it advisable, on solicitation of the Live Stock Commission, as an experiment, to make the Ontario members of the Association members of the Dominion Cattle Breeders' Association, paying from the funds the sum of 50 cents per capita, amounting to \$475, the money to be used for prizes at the Winter Show, and to be under the control of the Executive of the Shorthorn Breeders' Association, to be apportioned as was thought advisable.

The attention of the Executive had been called to a shipment of Shorthorn cattle taken to Manitoba by one, C. Smith, formerly of Hagersville, now said to be of Carman, Man., and upon examination had found that two of the bulls, namely, Ringleader 2nd =2701 and Sampson =27284=, both recorded by A. C. Smith, were pronounced forgeries and at once cancelled. A. C. Smith was also expelled from the Association.

The financial statement showed the receipts, including \$8,513, balance on hand at last annual meeting, to have been \$19,131, and the expenditure, \$11,211, leaving a cash balance on hand of \$8,220.

The recommendation of the Executive that \$2,925 be offered as prize money at the fall shows, and \$600 at the Winter Fair for Shorthorns and Shorthorn grades, was approved. Of this, \$1,000 to be offered at Toronto Exhibition, and \$500 at the Western Fair, London, on condition that those Fair Boards give a similar amount in prizes to this class. To Winnipeg Industrial Exhibition, \$500; Brandon, \$250; To Ottawa, Sherbrooke, Que.; St. John, N. B.; Halifax, N. S.; Charlottetown, P. E. I., and New Westminster, B. C., \$100 each; Assiniboia, Saskatchewan and Alberta, \$25 each.

A resolution conveying a message of condolence to the widow and daughter of the late Mr. John I. Hobson, President of the Association, was unanimously adopted. A motion by Major J. A. McGillivray, seconded by Mr. A. W. Smith, conveying congratulations to the Dominion Minister of Agriculture and the Live Stock Commissioner on the success of the stock sale, was declared carried without dissent.

OFFICERS ELECTED FOR 1901.

President, Robt. Miller, Stouffville, Ont.; 1st Vice-President, Wm. Linton, Aurora, Ont.; 2nd Vice-President, W. G. Pettit, Freeman, Ont. Vice-Presidents from Provinces—A. W. Smith, Maple Lodge, Ont.; F. G. Boyver, Georgetown, P. E. I.; W. H. Ladner, Ladner, B. C.; James A. Cochrane, Hillhurst, Que.; Geo. A. Fawcett, Sackville, N. B.; R. A. Wallace, High River, Alta.; C. A. Archibald, Truro, N. S.; W. H. Heusch, Touchwood Hills, Assa.; J. E. Smith, Brandon, Man.; Board of Directors—1st—W. D. Cargill, Cargill; W. Dymont, Barrie; John Isaac, Markham; Geo. Raikes, Barrie; C. M. Simmons, Ivan. 2nd—W. J. Biggins, Clinton; Wm. B. Watt, Salem; Jas. Tolton, Walkerton; W. D. Flatt, Hamilton; John Davidson, Ashburn. A list—Edward Jeffs, Bondhead; H. Smith, Hay; T. E. Robson, M. P. P., Ilderton; James M. Garthouse, Highfield; Thos. Russell, Exeter. Executive and Finance Committee—Robt. Miller, Stouffville, Ont.; Arthur Johnston, Greenwood, Ont.; W. D. Flatt, Hamilton; W. G. Pettit, Freeman; and H. Smith, Hay. Delegates: To Industrial Exhibition—Hon. John Dryden, Brooklin; R. Miller, Stouffville. To Western Fair—Henry Smith, Hay, Ont.; C. M. Simmons, Ivan, Ont.; To Central Fair, Ottawa—R. R. Sangster, Lancaster, Ont.; D. McLaren, Dunmore, Ont. To Provincial Exhibition, Nova Scotia—S. Dickie, Pt. Williams; C. W. Holmes, Amherst. To Provincial Exhibition, New Brunswick—Senator Josiah Wood, Sackville, N. B.; Geo. A. Fawcett, Sackville. To Provincial Exhibition, Prince Edward Island—C. C. Gardner, Charlottetown, P. E. I.; F. G. Boyver, Georgetown, P. E. I. To Winnipeg Industrial Exhibition—Hon. T. Greenwood, Crystal City, Man.; W. S. Lister, Middle Church, Man. Secretary and Editor, Henry Wade, Parliament Buildings, Toronto. Directors to Cattle Breeders' Association, A. Johnston, T. E. Robson, M. P. P.

Mr. R. J. Phin, of Moosomin, N. W. T., offers an 80-acre farm for sale. This farm is highly cultivated, has excellent buildings, and no doubt will satisfy anyone desiring an extensive farm, with a good, substantial home. All desiring to purchase a farm should correspond with Mr. Phin regarding terms of sale, etc.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Hemorrhoids from Horses and Cattle. SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or bleed. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

TAM WORTHS.

This is the kind of pig to raise for profit. Young stock for sale from imported animals. Write W. F. BALDWIN, Manitou, Man.

Thorold Hydraulic Cement.—The estate of John Battle, manufacturers of the well-known Thorold cement, report having had a very busy year during 1900, and from the hundreds of farmers with whom they are in correspondence and who have given estimates and drawings and advice regarding the structures they intend building, and who took advantage of the good sleighing to get the gravel, etc., hauled, the outlook for the present year is most favorable. The large number of silos erected all over Ontario with Thorold cement during the past year would indicate that the farmers are about tired of the wooden silo. The estate of John Battle strongly recommend the octagonal silo, as it is nearly round, and the round silo is considered by all farmers the best-shaped silo.

Machine Sheep Shearing.—We are asked a great many times, will it pay to buy a sheep-shearing machine? Our answer is that it will pay a sheep owner, if he has 25 sheep or more, to invest in a hand power sheep-shearing machine, the price of which is \$15. The principal advantages of shearing sheep by machinery are as follows: Sheep are not butchered or hacked as we have seen them done by hand; the machine leaves them as smooth as a billiard ball. Then again, there are no second cuts, which depreciate the value of the wool. The staple is left longer, which also increases the value of the wool from one to two cents a lb., according to London market. Machine shearing saves from one-half to one and one-half pounds of wool off each sheep. Again, the greatly improved appearance of the sheep after being machine shorn must be taken into consideration, which is an important item. They can be dipped or sent to the market immediately after shearing. Unlike the hand shears, no skilled labor is required, and sheep can be shorn much faster by machine without the operator being troubled with sore wrists as when using the hand shears. Shearing with the machine is so much easier, and does the work so much better, that when your day's work is done you feel satisfied that it has been well done.

Snell & Lyons, Snelgrove, Ont., in ordering change of advertisement, write that they have for sale a number of large, lengthy young sows, in farrow to their best boars, due in March and April, and are prepared to book orders for spring pigs, singly or in pairs or trios not akin; having in service four high-class boars of different families.

At the London, England, Shire Horse Show, Feb. 26th to March 1st, the cup for the best of the young stallions went to Messrs. Walwyn's Bearwade Blaze, with Messrs. Thompson's Bedford Combination as reserve. For the cup for the best stallion above three years old, the chief candidates were Messrs. Forshaw & Sons' Stroxtan Tom, Mr. John Rowell's Bury Premier Duke, Lord Middleton's Menestrel, and Mr. Green's Moors Regent. Stroxtan Tom was a popular winner, with Bury Premier Duke as reserve. The champion cup for the best stallion was awarded, after a protracted struggle, to Bearwade Blaze, Stroxtan Tom being reserve.

MR. WM. WYLIE'S AYRSHIRES. A recent inspection of the noted Elm-shade herd of Ayrshires at Howick, Quebec, some 40 miles from Montreal, found the cattle in fine condition, and doing good work in the dairy. With such a richly-bred and high-class stock bull to breed from as Uncle Sam 7914, by imp. Baron Renfrew, and out of the World's Fair champion cow, imp. Nellie Osborn, and having had the use of the grand young bull, Cock o' the North, by imp. Napoleon of Auchenbain, champion-ship winner at Toronto in 1899, the herd is well equipped with sires. And with such a selection of cows as is found in the Elm-shade herd, including the fine imported cows, White Glen of Holehouse, Countess of Langside, White Rose of Langside, by the great Peter of Whitehill, and half-sister to Senatoria, winner of the Derby, and championship at Ayr, Scotland, last year; Daisy 1th and Favorite of Broomhill, Stately of Cross-house, Beauty of Langside, and others of the same importation and their produce, together with imp. Kate Wallace of Auchenbain and Nellie Osborn 2nd of Burnside, the best daughter of imported Nellie Osborn, there should be no difficulty in finding show stock and dairy stock in strong combination. Nellie Osborn 2nd, winner of sweepstakes at Ottawa in 1899, has been bred to Duke of Clarence of Barcheskie, the champion bull at Toronto, London and Ottawa in 1900, and the produce should be something phenomenal. Seven grand yearling and two year-old heifers in the herd are a sight worth seeing, and among the young bulls is a November son of Nellie Osborn 2nd, by imp. Scotland's Glory, son of Kate Wallace and Lord Nelson. The herd which won the gold medal at the Ottawa Exhibition in 1899 is being well maintained, and should be seen by parties looking for high class Ayrshires.

GOSSIP.

The good pastor of a church not a hundred miles from Guelph recently caused a succession of smiles to ripple over the faces of his congregation by quietly remarking, at the close of an operatic performance by the salaried soloist, "We will now resume the worship of God."

At the Ipswich spring sale, Lord Lovat's roan yearling Shorthorn bull, Alastair, by Royal Star (1892), and out of Maggie Laidie VIII, by Merry Archer, won the championship of the Shorthorn section, and at the auction was secured by Mr. Wm. Duthie, of Collynie, at 400 guineas (\$2,100).

NOTICE.

Fleming's Seed Catalogue—We are in receipt of the 9th annual catalogue sent out by Fleming & Sons, Brandon, dealing with the various garden, field and flower seeds handled by this firm.

S. G. B. Minorcas.

Eggs for hatching now ready. English importations. Birds from the celebrated Pitt and Abbott strains. Our birds are in prime condition for ensuring good vigorous stock.

B. P. Rocks.

Eggs for hatching. Also a few fine cockerels for sale, from best Canadian strains—sturdy, vigorous stock.

HOME OF BARRED PLYMOUTH ROCKS

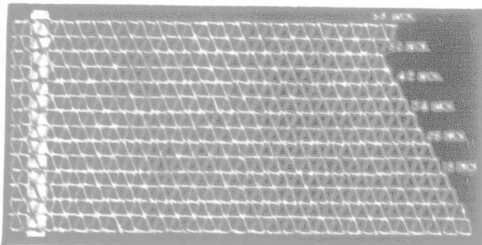


I keep only this good, old-fashioned, reliable, best in the Province. EGGS \$1.00 PER SETTING, TWO SETTINGS \$2.00. Black African, Game, and other breeds for sale.

FORT ROUGE POULTRY YARDS

High quality Golden Wyandottes, Light Brahma, and other breeds. Eggs for hatching.

S. LING & SONS, WINNIPEG, MAN.



MILLIONS OF ACRES fenced with them this year. The fences that grow more popular every season. Real saving, service and satisfaction in Ellwood Steel Wire Fences.

NORWOOD BRIDGE POULTRY YARDS.



Eggs for Hatching. Of White Wyandottes, White Rocks, Houdans—eggs, \$2.00 for 13; Mammoth Bronze Turkeys—eggs, \$2.00 for 10; and Pekin Ducks—eggs, \$1.50 for 11.

JOSEPH WILDING, PROPRIETOR, WINNIPEG, MAN.

PURE-BRED LIGHT BRAHMAS

Prizewinners, Ninth year. Stock for sale. EGGS, \$2.00. Address: GEO. HANBY, cor. Smith St. and Portage Ave., WINNIPEG, MAN.

STEAMSHIP Tickets

If you are going to the Old Country, or sending for your friends, apply to our nearest railway or ticket agent, who can supply outward and prepaid tickets at lowest rates.

W. P. F. CUMMINGS, General Agent, C. P. R. Offices, WINNIPEG, MAN.

CANADIAN PACIFIC RY.

THE QUICKEST AND ONLY ROUTE TO THE

East and West

TORONTO, MONTREAL, VANCOUVER, SEATTLE.

Tourist Cars

BOSTON, TORONTO, MONTREAL, VANCOUVER, AND SEATTLE.

TOURIST RATES TO CALIFORNIA, CHINA, JAPAN, AUSTRALIA, Around the World.

WM STITT, C. E. McPHERSON, Winnipeg.

FOR SALE: H. D. Boscum and Co., Ltd., Toronto, Ont.

GOSSIP.

AYRSHIRE BULLS. Mr. W. W. Ballantyne, Stratford, Ont., advertises in this issue young Ayrshire bulls for sale. Mr. Ballantyne has a first class herd, up to date in type and breeding.

HORSE SHOW.

The Canadian Horse Show, to be held in Toronto, on April 21th to 27th, inclusive, will be in conjunction with a grand military tournament, according to prize list just issued.

J. & W. RUSSELL'S SHORTHORNS—A HERD WITH A RECORD.

J. & W. Russell, Richmond Hill, Ont., advertise in this issue seven Shorthorn bulls from their noted herd, which, for the production of prizewinners, has undoubtedly the most brilliant record of any in the Dominion.



To produce the best results in fruit, vegetable or grain, the fertilizer used must contain enough Potash. For particulars see our pamphlets. We send them free.

GERMAN KALI WORKS, New York.

"LAP-SEAL" IMPROVED

Asbestos Roofing

Is Reliable, Durable, and Economical.

"GIANT" ASBESTOS ROOFING, \$3.50

3 ply, price per square, complete. We furnish with this roofing the same Red Asbestos Coating as with our "Lap-Seal" roofing.

"BLACK JACK" ROOFING, 3 ply, \$3.00

price per square, complete.

ROBT. BLACK, 131 BANNATYNE ST., WINNIPEG.

Seeds 1901

SEND TO KEITH & CO., WINNIPEG, MAN.

Catalogues mailed on application. P. O. Box 156.

SEEDS

J. M. PERKINS, the Seedsman of Winnipeg, as he carries the greatest stock of Flower, Garden and Field Seeds west of Toronto.

J. M. PERKINS, MARKET SQUARE, WINNIPEG.

DR. BARNARDO'S HOME.

The managers of these institutions invite applications from farmers and others for boys and youths, who are being sent out periodically, after careful training in English homes.

GOSSIP.

Want of confidence in that class of sales fully accounts for the disastrous failure met by the owners of cattle of the dairy breeds who were induced to risk their cattle at the Government "vents" at Guelph and Ottawa.

John Traquair, Welwyn, Assa, writes, under recent date: "I had a visit from Hon. W. Clifford, Austin, a couple of weeks ago, and sold him a fine yearling bull, Reformer 472, sired by Athelstone, out of Belle's Regina. I will be surprised if we don't hear from this bull at the Industrial this year."

Mr. John E. Smith, of Brandon, left for Ontario on March 21st. He will return about the end of the month, bringing with him the imported cows purchased at the Isaacs sale, and also a number of young Clyde-dale stallions. The latter will be for sale, and intending purchasers of Clyde-dales would do well to look them over when they arrive at Brandon.

EGGS FOR SALE.

STOCK FOR SALE.

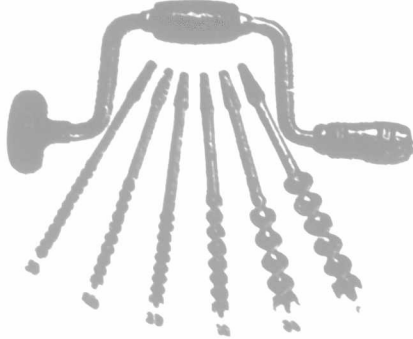
Cyphers Incubators

BRONZE TURKEYS, TOULOUSE GEESE, PEKIN AND ROUEN DUCKS, PLY. ROCK & WYANDOTTE CHICKENS.

I have the stock that pays to keep. Large descriptive catalogue mailed free. Don't buy a poor incubator; get a Cyphers outfit, endorsed by Dominion and American agricultural colleges, and used by all the largest and best poultry and duck farms.

N.-W. Agent for Cyphers Incubator. **M. Maw, Winnipeg, Man.**

SEND FOR ILLUSTRATED PRICE LIST



Brace and 6 Best Auger Bits, only \$1.50. Postpaid anywhere in the Dominion for 50c. extra.

Farm Bells
40 lbs. only \$1.75
50 " " 2.25
75 " " 3.00
100 " " 4.50



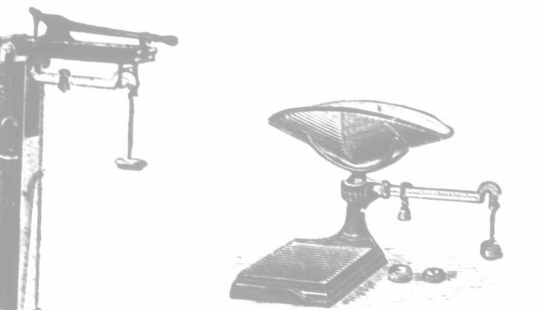
Sap Buckets, 9 imperial quarts, 9c. each.
Sap Spiles, 75c. per 100



4-lb. Butter Scales, \$2.50

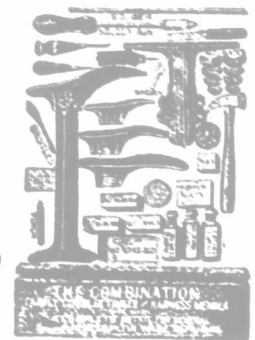


1,200-lb. Platform Scale, only \$13.50



240-lb. Platform Scale, \$5.00.

Combination Cobbler's, harness-maker's and tinker's outfit, only \$2.00. This article should be in the possession of every one. It will save its cost over and over again.



Wilkins & Co.

166 and 168 King St. East, Toronto.

GOSSIP.

The demand for young stock of Durham character has for the present depleted James Morrow's herd of all the stock he would sell.

Walter James, of Rosser, has sold to Donald McKay, of Rosser, a thirteen-month-old roan Shorthorn bull, sired by Rosser Lad, out of Lady Gray. There has also been a strong demand for Barred Plymouth Rock cockerels, says Mr. James, and he has sold a large number.

The Shorthorn prize list at the Winnipeg Industrial promises to be as large as last year. The Dominion Shorthorn Breeders' Association has granted \$300 again towards the list, and the C. P. R. are donating their special prizes for Manitoba-bred animals, the same as last year.

The C. P. R. are also donating about \$50 in cash prizes to the Short-horn class at the Brandon Fair, and handsome cash prizes for Red Fife wheat.

A visit to W. E. Baldwin's (Manitou) showed his Tamworths to be of marked excellence. Lady Elgin, showing first-class bacon character. She has been a winner at the shows, and is a money-maker for her owner. The stock-bred Dr. Leyds, is a newcomer from the East, and is of such excellence as to have been picked out by Prof. Day for the O. A. C. Tamworth herd. Fortunately for the breed in Manitoba, Mr. Baldwin had secured him, and he will doubtless be heard from at the shows. Several litters are expected soon, so that breeders of bacon hogs should get their orders in early. While Tamworths are the main breeding stock, we noticed a very good Shorthorn bull, Village Duke, by Village Boy, a third prize yearling in Winnipeg two years ago. He is a typical beef bull, having good ribs, a good back, and well-covered loins. His calves are coming like him.

John S. Robson, Manitou, is fast disposing of his stock of young bulls. Note the change in the advertisement. Sixteen were sold recently to Mr. Spofford, Port Arthur. The prices at which young bulls by Bismarck (the head of the herd) can be got, offers no excuse for the farmer using scrub bulls. A son of Judge is selling in the herd, some of which were seen at the show, and is showing it in his calves. Royal Sailor, is a very taking cow, of Watt's breeding. Buyers have a chance here to select a large number of thrifty females of the best paying order.

R. S. Preston, of Pilot Mound, informs us that he has disposed of all his Chester Whites, and will not again breed that variety of hogs.

A recent visit to George Hanbury's, whose advertisement of Light Brahmins appears in our columns, showed him to be possessed of birds of more than ordinary merit. A new poultry house was being built, giving opportunity for increasing the stock. The birds were in a healthy, thrifty condition. Farmers desirous of improving the table qualities of their fowl would do well to write Mr. Hanbury for stock or eggs.

A recent visit to the herd of Purves Thompson, Pilot Mound, showed that veteran stockman's cattle to be in good condition. Calfness, of showing fame, is still lord of the harem, and is leaving the impress on his stock of high-class Shorthorn character. This bull is too well-known to need description. White Rosebud, a cow with great heart-girth and spring of ribs, was seen, her four-month-old bull calf having gone to Paulin Bros., Killarney, at a good figure. Two Mysie heifers were seen, recently sold to Mr. Thompson, M. P. P., Melita, who is to be congratulated on his choice. Duchess of Rosedale 9th has a thick, suppy red heifer calf by her side, and her daughter, Duchess of Rosedale 11th, has a cracking red bull. A two-year-old roan heifer by Cavalier (Watt's breeding) is a remarkably taking heifer, that will likely be heard from in the showings. A very good cow, Pilot Mound Leaf, a second-prize winner at Winnipeg, has a low-down, lengthy red heifer calf by her side. Marchioness 10th, a roan, strong in the heart-girth, is of a good beef type. Minnie Bloom, a big white three-year-old, by Hillary, good in the crops and brisket, was also to be admired.

Space will not permit of the enumeration of the Short-horns, which are uniformly good, and we pass to the Clydesdales, which are all in foal, and, what is of importance, are employed earning their keep. A likely looking horse-colt by Imp. Friar, out of Scottish Maid, by Sir Patrick, is sold to go to Mr. Thompson, Melita. Grand Prize, the second-prize two-year-old at Winnipeg, by Grandeur, was seen, a pretty good colt, with strong bone. The recent sales of Short-horns and Clydesdales are depleting the stock fast, so that persons wanting good stock that breed right, at right prices, must not delay their orders. Mr. Thompson is seriously meditating on getting a first-class stallion for his stud, a move which would be of great benefit to the locality.

Dominion Cattle Breeders' Association Annual Meeting.

The annual meeting of the Dominion Cattle Breeders' Association was held at Guelph, Feb. 25th, 1906. The President, Mr. R. Gibson, Delaware, Ont., was in the chair, and in an eloquent address referred to the prosperous condition of the cattle-breeding industry and its immense importance and possibilities. The Secretary-Treasurer's report showed receipts of \$2,578.50, \$2,000 of which is a legislative grant, the balance being made up of membership fees. The expenditure included \$1,463 in prizes and \$500 in directors' expenses and salaries.

Officers elected for the ensuing year: President, R. Gibson, Delaware, Ont.; Vice-President, Arthur Johnston, Greenwood; Secretary-Treasurer, A. P. Westervelt, Toronto.

Vice-Presidents for Provinces: H. Wade, Toronto, Ont.; Hon. Thos. Greenway, Crystal City, Man.; H. D. Smith, Compton, Quebec; Bliss, M. Fawcett, Sackville, N. B.; E. B. Elderkin, Amherst, N. S.; G. H. Hadwen, Duncan's, B. C.; Hon. Thos. Duder, St. John's, Nfld.

Delegates to Exhibition Boards: Toronto—J. A. McGillivray, Uxbridge, and A. P. Westervelt, Toronto; Ottawa—J. G. Clark, Ottawa, and F. W. Hodson, Ottawa; London—R. Gibson, Delaware, and T. E. Robson, M. P. P., Ilderton.

Delegate to Winter Fair Board—G. W. Clemens, St. George; Arthur Johnston, Greenwood; John Bright, Myrtle. Judges recommended for Winter Fair—Robt. Miller, Stouffville; Thomas Crawford, M. P. P., Toronto; J. T. Gibson, Denfield, reserve.

Dominion Swine Breeders' Association.

(Report of annual meeting continued from page 193, March 14 issue.)

Delegates to Provincial Winter Fair.—Prof. Day, Guelph; G. B. Hood, Guelph; Wm. Jones, Mount Elgin.

Judges for Winter Fair.—Thos. Teasdale, Concord (G. B. Hood, Guelph, reserve), on Poland-Chinas, Chester Whites, Duroc Jerseys, and Essex; Wm. Jones, Mount Elgin, on Yorkshires and Tamworths; R. H. Harding, Thorndale, Berkshires and grades; H. B. Jeffs, Bond Head (reserve).

Expert Judges.—The following are the expert judges recommended:

Berkshires—P. W. Boynton, Dollar; A. W. Smith, Maple Lodge; Wm. Jones, Zenda; W. G. Caven, East Toronto; James McKewen, Kertch; John Boyes, Jr., Churchill; Henry Jones, Zenda; H. J. Davis, Woodstock; J. C. Snell, London; Thos. Teasdale, Concord; Geo. Green, Fairview; Robert Vance, Ida; T. A. Cox, Brantford; Jas. Quire, Delaware; Jos. A. Leonard, Streetsville; R. P. Snell, Snellgrove; C. R. Decker, Chesterfield; Charles Young, Brookdale; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; Jos. Barnett, Rockland; E. E. Martin, Canning; H. B. Jeffs, Bond Head; Wm. Linton, Aurora; E. Brien, Ridgetown; G. B. Hood, Guelph; J. E. Brethour, Burford; Alex. Hart, Hempstead; W. A. Shields, Milton.

Yorkshires and Tamworths—Lou Rogers, Weston; Geo. B. Betzner, Copetown; R. J. Kerr, Mimosa; W. R. G. Bowman, Mount Forest; Wm. Jones, Zenda; R. J. Garbutt, Belleville; E. Dool, Hartington; R. H. Harding, Thorndale; N. M. Blain, St. George; A. Dunn, Ingersoll; J. H. Simonton, Chatham; G. North, Marden; A. Elliott, Galt; L. F. Master, Haysville; A. C. Hallman, New Dundee; D. G. Hamner, Burford; John Nichol, Hubrey; J. E. Brethour, Burford; H. Caldwell, Orchard; W. Elliott, Hamilton; C. C. Wilson, Ingersoll; F. C. Esarman, Hamilton; A. Laurie, Wolverton; Wm. Davies, Toronto; Richard Gibson, Delaware; Henry Dedels, Kossuth; G. B. Hood, Guelph; Jos. Featherston, Streetsville; H. E. Sharpe, Ida; A. F. McGill, Hillsburg; J. G. Mair, Howick, Que.; J. M. Hurley, Belleville; Geo. Gier, Grand Valley; James Stephen, Trout River, Que.; R. McLaughlin, Harrison; Jos. Fletcher, Oxford Mills; Robert Nichol, Brussels; A. F. Foreman, Collingwood; J. Y. Ormsby, Woodstock; Jas. Leach, Toronto; Wm. Howe, North Bruce; Chas. Yapp, Brantford; G. E. Day, Guelph; F. Shore, White Oak; H. J. Davis, Woodstock; D. C. Platt, Millgrove; W. R. McDonald, Ridgetown; W. Elliott, Galt; R. G. Martin, Marysville; J. E. Cousins, Harrison; Geo. Green, Fairview; J. W. Calbeck, Augustine Cove; P. E. L.; J. G. Clark, Ottawa; J. C. Smith, Hintonburg; D. Drummond, Myrtle.

Suffolks and Essex—Wm. Jones, Zenda; Geo. Green, Fairview; Thos. Teasdale, Concord; James McGarvin, Chatham; R. H. Harding, Thorndale; Jas. Main, Milton; D. DeCourcy, Bornholm; C. W. Yapp, Brantford; G. B. Hood, Guelph.

Duroc Jerseys—Geo. Green, Fairview; Wm. Jones, Zenda; Thos. Teasdale, Concord; J. E. Brethour, Burford; R. H. Harding, Thorndale; W. M. Smith, Fairfield Plains; Thos. Brooks, Streetsville; W. N. Tape, Bentpath; Geo. Bennett, Charing Cross; H. George, Crampton.

Poland-Chinas—Thos. Teasdale, Concord; Jos. Featherston, Streetsville; J. H. Snarey, Croton; Jas. Main, Milton; Geo. Green, Fairview; W. M. Smith, Scotland; Wm. Jones, Zenda; Henry Jones, Zenda; Oliver Drury, Fargo; C. W. Yapp, Brantford; R. Willis, Glen Meyer; R. H. Harding, Thorndale; Lawrence Tape, Ridgetown.

Chester Whites—E. D. George, Putnam; R. E. Birdsell, Birdsell; Albert Baracky, Bloomington; Wm. Jones, Zenda; J. C. Snell, London; Geo. Green, Fairview; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; G. B. Hood, Guelph; Thos. Teasdale, Concord; Gideon Snyder, Jarvis; Jos. Cairns, Camlachie; Jos. Featherston, Streetsville; Thos. Brooks, Brantford; J. L. Jarvis, Paris; T. A. Cox, Brantford; H. George, Crampton; G. Bennett, Charing Cross; W. Tape, Ridgetown; J. E. Brethour, Burford; J. C. Nichol, Hubrey.

NOTICE.

Rid the Stock of Lice. One of the great troubles that our stockmen have to contend with in stall-feeding, especially towards the spring of the year, is that cattle are so liable to become lousy, the irritation thus caused preventing them from feeding and doing as well as they otherwise would. One of the best things to rid them of all kinds of lice, etc., is Fleming's Sheep Dip, which is now used by a great many of the most successful stockmen in the West. It is manufactured by Fleming & Sons, Brandon, Man., and we would recommend our readers to give it a trial.

IN THE AIR.

The Germs of La Grippe are Conveyed Through the Atmosphere.

No one can escape La Grippe germ, because when an epidemic of the disease is prevailing the air is laden with it.

The reason everyone does not have the disease at the same time is because the persons who are enjoying perfect health are able to successfully resist and throw off the infection, while those who for any reason are not in the best of health fall ready victims.

The first symptoms are those of acute catarrh, resembling a hard cold, and if prompt treatment is applied at this time, it can easily be broken up. One of the best remedies at this stage is Stuart's Catarrh Tablets, sold by druggists every where, and if taken freely, say one tablet every hour or two for two or three days, the danger of pneumonia and serious complications will be averted.

The Rev. L. E. Palmer, Baptist clergyman, of Cereso, Mich., makes a statement of interest to all catarrh and grip sufferers. He says: "Stuart's Catarrh Tablets have certainly been a blessing to me. I have used them freely this fall and winter, and have found them a safeguard against La Grippe and catarrhal troubles, from which I had suffered for years. I feel that I can freely and conscientiously recommend them."

Persons who suffer from catarrh of the head and throat are very susceptible to La Grippe, and such will find a pleasant, convenient and safe remedy in this new catarrh cure.

Stuart's Catarrh Tablets are composed entirely of harmless antiseptics, and may be used as freely as necessary, as they contain no cocaine, opiate or poisonous drug of any kind.—Adv't.—on

All Fertilizers

for truck gardens and early market crops should contain from 3% to 10% of

Nitrate of Soda

if the object is to develop the earliest and best yields. Its effects are instantaneous, as all the nitrogenous content is immediately available for producing rapid growth. A postal request will procure you free pamphlets and list of dealers in Nitrate of Soda, if addressed to John A. Myers, 12-R John St., New York City



HEED THAT LUMP

Trade Mark. If it is Lump Jaw, the animal is doomed, and your pastures are endangered, unless you promptly use

FLEMING'S LUMP JAW CURE.

You can use it with certainty of prompt results. It doesn't fail once in 300 cases, and when it does you get your money back. Price \$2, or three bottles for \$5. One bottle cures one to three cases. At druggists or sent by mail.

Gowanstown, Ont. May 19th, 1899. Dear Sirs.—We are very glad to say that Fleming's Lump Jaw Cure is worth having on a farm, and I think every farmer should keep it on hand. One of our cows had the Lump Jaw, and it was only seven days from the time we put it on until the lump was gone. It's the best in Canada today. Yours truly, HOWARD COATES.

Valuable but free. You will appreciate the information given in our new illustrated pamphlet. Free to readers of this paper. Write for it to-day.

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

NO SPAVINS

The worst possible Spavin can be cured in 45 minutes. Curbs, Splints and Ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write to-day. Ask for Pamphlet No. 1.

FLEMING BROS., 58 Bay St., Toronto, Ont.

Shire Horses.

The subscribers offer for sale a number of choice-bred

BROOD MARES, FILLIES AND STALLIONS.

Distance about four miles from either Welland or Fenwick. Will meet parties wishing to inspect the stock at either of these places.

Morris, Stone & Wellington FONTHILL P. O., ONT.

CHOICE AYRSHIRE BULLS.

OFFER: 2 bulls, 12 months old; 2 bulls, 8 months old; and 3 bulls, from 3 to 5 months. All off imported and heavy milking stock.

W. W. BALLANTYNE,
STRATFORD, ONT.
Neidpath Farm, adjoining town, on main line G. T. R.

EVERY FARMER

SHOULD TRADE WITH THE

Farmers' Co-operative Store.

SEND THEM YOUR

BUTTER, EGGS, POULTRY, WOOL, HIDES, ETC., IN EXCHANGE FOR GENERAL SUPPLIES.

The People's Wholesale Supply Co., 144-146 KING ST., EAST, Toronto.

R. Y. MANNING, Manager. Send your address at once for their Illustrated Catalogue.

LATELY IMPORTED A FRESH LOT OF

CLYDESDALE STALLIONS.

Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character.

I will make further importations as the times demand. Inspection invited. Prices consistent with quality.

ROBERT GRAHAM,

Stouffville Station, G. T. R., and telegraph office. RINGWOOD P. O., ONT.

Hillhurst Shorthorns.

Three Collynie-bred Bulls in service: Scottish Hero, by Scottish Archer; Joy of Morning, by Pride of Morning; Scottish Beau, by Silver Plate.

SPECIAL OFFER:

Three young bulls (registered), red, roan and white, 12 to 11 months old, bred from Cumberland, Gloucestershire and Canadian dairy strains, at farmers' prices and for farmers' purposes, to produce big-framed, deep-milking cows, and early-maturing beef steers. Write at once for prices and particulars.

Hackney Stallion, Rattling Shot 351 A. H. S. B., 6 years, 16 hands, 1,300 lbs., dark roan, black points, broken to harness, grand actor, and successful sire of promising carriage horses, mostly bays. Dam imported. 15-mile-an-hour roadster. Come and see him, or write for low price and particulars.

M. H. COCHRANE,

G.T.R., 117 miles east of Montreal. HILLHURST STATION, COMPTON CO., P. Q.

W. G. Pettit & Son, FREEMAN, ONT.

IMPORTERS AND BREEDERS OF Scotch Shorthorns and Shropshire Sheep.

- OFFER FOR SALE: 12 Imported bulls, 12 mos. to 2 yrs. old. 5 " " 9 to 12 mos. old. 20 " " cows, 3 to 6 yrs. old. 15 " " heifers, 2 yrs. old. 5 " " 1 yr. old. 6 Home-bred bulls, 9 to 18 mos. old. 20 " " heifers, 1, 2, and 3 yrs.

Our imported bulls are now getting in good shape. All our heifers of suitable age are bred to Pure Gold (Imp.), by Cyprus, and Scotland's Pride (Imp.), a Cruickshank Clipper, by Star of Morning. Catalogues on application. All our imp. cattle were registered in the American Herd Book before the \$100.00 fee for recording was put on.

Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.



T. DOUGLAS & SONS, STRATHROY, ONT. BREEDERS OF..

Scotch Shorthorns 100 HEAD TO SELECT FROM.

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

J. & W. B. Watt, SALEM, ONT., BREEDERS OF

Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.

Our SHORTHORN herd was founded over 30 years ago, and contains such titles as the Village Buds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as Barmpton Hero 324, Young Abbotsburn 6236, Challenge 2933, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Sittytton Chief 17060, Royal Sailor (imp.) 18959, Royal George 28513, Clipper King 16293 and Judge 23419, all of which have been first-prize winners wherever shown. Royal Victor 34681 and Royal Wonder 34682, by Royal Sailor (imp.), and out of English Lady and Mildred dams, now head the herd, assisted by Roan Cloud 31317, by Lord Gloster 28865, and out of Melody 21992, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and G. P. R., 15 miles north of Guelph.

Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION OF 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices. Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

English Stock Notes.

Mr. J. E. Casswell, of Loughton, Folkingham, Flock No. 16, Lincoln Flockbook, reports that he is having first-class luck with his lambing flock. Up to the date of writing there had been born sixty twins out of two hundred ewes lambing. The lambs are of grand type and quality, being healthy, strong and vigorous, mainly owing to the fact that the ewe flock is properly seen after and fed. It will be of interest to note that the twin lambs at birth weigh from 300 lbs. per pair, and that single lambs range from 18 to 15 lbs. per head. In addition to the noted old stud rams bred in previous years, whose produce has been so well appreciated, notably at the last Lincoln sale and also in the Argentine, where twenty-five yearling rams averaged last September \$270 each, the best fourteen making an average of \$315, were Loughton Pride 5727, Loughton Ringleader, Vol. 10, and Loughton Why Not, Vol. X.

MR. HENRY DUBDING'S FLOCK.

Rigby Grove is a name and flock of Lincolns too well known to need any lengthy introduction, for was it not from this source that the two rams which made \$3,000 each were produced. Indeed, it was not these undefeated champions only, but scores of others, who in every country and clime where Lincoln sheep are known have earned the victor's crown. In a recent note, Mr. Dudding says that his flock is in fine shape. The ewes (a grand lot these are) are very healthy, and every indication points to a successful season in the lambing pens. In reference to the yearling sheep there, we know from personal knowledge they are fully equal to their predecessors in years gone by, and we feel very sure when the test comes, in the show and sale rings this year, that Rigby sheep will, as in former years, take first rank.

SHIRE HORSE SALES.

In January and February, Shire horse sales this year have not been quite so numerous, but those that have taken place have been of great importance. The first of the series was a joint sale held by Messrs. A. H. Clark & F. W. Griffin, which took place at Portland Farm, Lincolnshire, on February 7th. For the twenty-five head contributed by the former, an average of \$610 was paid; top price \$725, to Mr. P. L. Mills. Ten three-year-old fillies averaged \$571; top price \$1,050, to Mr. A. Henderson, M. P. Another made \$735 and two others \$750. Six two-year-old fillies averaged \$360; top price \$575, and five yearling fillies averaged \$437.50; top price \$775. The latter breeder also sold twenty-five yearlings: six four-year-old mares, average \$737.50; top price \$1,530, to Lord Iveagh. Another made \$1,050, to Mr. A. Henderson, M. P.; another \$650, and another \$500. Five three-year-old fillies averaged \$605; two made \$850, the top price of this age, one going to Mr. P. A. Muntz, M. P. Eight two-year-old fillies, \$720; top price \$1,530, to Sir W. Cook. Other high prices were: \$1,250, \$575 and \$325. Six yearling fillies averaged \$330; top price \$400. Mr. Topham's draft sale took place on the 8th, at Thornby, Peterboro, with equally satisfactory results. A dozen brood mares averaged \$385, the best price being \$1,250 for one purchased by P. A. Muntz, M. P. Other high prices were: \$1,050, \$875, \$870 and \$500. Six four-year-old mares averaged \$612.50, Mr. Jackson giving \$1,550 for one, the highest price. Five three-year-old mares averaged \$447.50, \$775 being the best price of this age. Six two-year-old fillies averaged \$385, \$885 being the top price. Five yearling fillies averaged \$290, \$475 being top price; whilst \$370 was the top price for six yearling colts, which averaged \$188.

On February 13th, Sir J. Blundell Maple held his first draft sale of Shires. There were forty-six of the different ages sold at an average of \$885. Fourteen brood mares averaged \$1,057.50, Grand Duchess making \$2,700. Six three-year-old fillies averaged \$840, Saxon Talent, who made \$2,050, being the highest price. Four two-year-old fillies averaged \$1,325, Kathleen making \$2,750, the top price of her age and also making \$2,750, the top price of her age and also making \$1,100. There were fourteen yearlings, the top price for this age being \$2,600 for Childwick Touno, the purchaser being Lord Verulam. Others made \$900, \$875, \$870 and \$750, etc. Lord Wantage, who farms no less than 1,600 acres at Wantage, in Berkshire, where he maintains a large stud of Shire horses, held a sale of geldings only on the 12th of February last. These horses consisted of five, six and seven year old geldings, which had been used in the ordinary occupations of the farm since they were colts, all being of the Shire breed. The object in view was to practically demonstrate that there was a lucrative demand for this class of horse—the heavy dray and lorry horse. The result fully justified his Lordship's anticipations, for the whole of the fifty-one geldings offered made an average of \$410 per head, the range of values being \$225 down to \$265.

NOTICES.

The Commercialist is the title of a new publication from Scranton, Pa. It is issued by the Colliery Engineer Company, the proprietors of the International Correspondence Schools.

Seranton Schools Graduate.—David Thomas, a contractor and civil engineer at Wilkesbarre, Pa., who recently completed two iron bridges at that place, is a graduate of the International Correspondence Schools, Scranton, Pa.

A Hard Proposition. A piece of stumpy land is trying on the man and on the team which tries to work it, but more than that, it is extremely expensive, for a stump takes up a whole lot of ground, which yields no return to the farmer. Do not waste your land; get the stumps out. With the modern appliances such as are manufactured by the Milne Mfg. Co., of Monmouth, Ill., it is an easy matter to clear a piece of stumpy ground. Their Hawkeye Stump Puller or their I. X. L. Grubber will do the work to perfection, and with great ease and rapidity. The Milne catalogue is full of information on the subject of clearing land. Mention this paper in writing them.

Removed Ringbone.

Oil Springs, Ont., Apr. 1, 1900. I purchased a bottle of your GOMBAULT'S CAUSTIC BALSAM to remove a ringbone from a valuable driver. I have removed it in fine shape. No lameness or enlargement of any account. JOHN McCARTER.

IN SOME CASES

A Single Package of the Pyramid Pile Cure is Sufficient to Cure.

This may seem a broad statement when it is remembered that few diseases are so obstinate to really cure as piles, some physicians going so far as to say that a painful surgical operation is the only permanent cure, but the many and remarkable cures made by the Pyramid Pile Cure in the past few years have proven that surgical operations are no longer necessary, and that it is by far the safest and most reliable remedy yet discovered for this common and often dangerous trouble.

The harmless acids and healing oils contained in the Pyramid Pile Cure cause the blood vessels to contract to a natural condition, and the little tumors are absorbed and the cure is made without pain, inconvenience or detention from business.

Dr. Williams, a prominent official surgeon, says: "It is the duty of every surgeon to avoid an operation if possible to cure in any other way, and, after many trials with the Pyramid Pile Cure, I unhesitatingly recommend it in preference to an operation."

Mr. Phil Owens, of St. Omaha, writes that after suffering two years from an aggravated case of itching and protruding piles, he was cured by a single 50-cent package of the Pyramid Pile Cure, purchased from a local druggist. He says: "I fully expected the trouble would return, but am happy to say for the past year and a half I have been entirely free from the disease, and I cannot speak too warmly in favor of the Pyramid Pile Cure."

A bill clerk in one of the large wholesale houses of St. Louis says: "My occupation as billing clerk was so confining and sedentary that it finally brought on an aggravated attack of rectal trouble, which my physician diagnosed as itching and protruding piles, and recommended a salve which he prepared and which gave me some relief for a few hours after using, and then the trouble would come back as bad as ever. One of the other clerks advised me to try the Pyramid Pile Cure, and I now feel like thanking him every day for recommending it, as a single 50-cent package cured me, and I have had no trace of piles since—something over six months."

Hundreds of pile sufferers, who had almost decided to undergo the pain and danger of an operation, have been astonished to find that the Pyramid Pile Cure, which can be purchased at any drug store, was far safer, better and more effective than an operation could possibly be.—Adv't.

OAKLAWN FARM

AS ALWAYS, VASTLY IN THE LEAD. PERCHERONS, FRENCH COACHERS, SHIRES.

ON HAND, HOME-BRED AND IMPORTED 270 STALLIONS, 235 MARES.

The greatest collection of stallions ever brought together. Our two large, recent importations for this year included the Principal Prize Winners at the WORLD'S EXPOSITION, PARIS, and at the Government Shows at Amiens and Mortagne, and the Tops, first choice, purchased from the leading studs of France and England. The superiority of the Oaklawn Percherons was also shown at the

INTERNATIONAL LIVE-STOCK EXPOSITION

at Chicago, December, 1900, pronounced by press and public the greatest live stock exhibition ever seen, where Oaklawn's Exhibit was awarded Three 1st Prizes, three 2d Prizes, three 3d Prizes, two 4th Prizes and two 5th Prizes in the three stallion classes; Championship, stallion, any age; Championship, mare, any age; 1st and 2d Prizes for collections; \$100 Gold Medal, best group, five stallions; \$100 Gold Medal, best group, three mares. Catalogue on application. Prices reasonable.

DUNHAM, FLETCHER & COLEMAN, WAYNE, DU PAGE CO., ILLINOIS.

A QUICK, SHARP CUT hurts much less than a brute, crush or tear. DEHORNING Done with the KEYSTONE KNIFE. Is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush brains or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying. Owned and Manufactured by R. H. MCKENNA, V.S., Pictou, Ont. THE LARK A. C. BROSIUS' PATENT.

R. MITCHELL & SON, Burlington Jct. Station, Nelson, Ontario, Breeders and importers of

SCOTCH SHORTHORNS.

Offer for sale: 12 Canadian-bred females. 11 Imported females. 4 Imported bulls. 7 Canadian-bred bulls.

Frost & Wood Machinery. The Frost & Wood Co., at Smith's Falls, Ont., have gone steadily forward for many years. Great additions of space and machinery have been made to their already extensive plant, and still they are crowded with orders. This combination of progressive movements is the result of the increasing popularity of their machines. Their roller and ball-bearing harvesting machinery cannot be surpassed in lightness of draft, ease of operating and character of work done. Their catalogue for 1901 is a beautiful production of the printer's art. It explains the Frost & Wood machines, and shows by illustrations the assembled and separate parts. Their mowers, plows, cultivators, and roller-bearing disk harrows are choice machines, in keeping with their binders. See their advertisement in this issue.

TROUT CREEK HERD OF SHORTHORNS.

Since our Chicago sale we have imported sixty-two head, including some Royal winners; they were pronounced in Scotland superior to past importations. We try to import the best, believing that this is one of the ways to assist in improving the breed on this side of the water. Being thoroughly convinced, also, that a bull of the right sort is even more than half the herd, we have decided to keep the following choice ones:

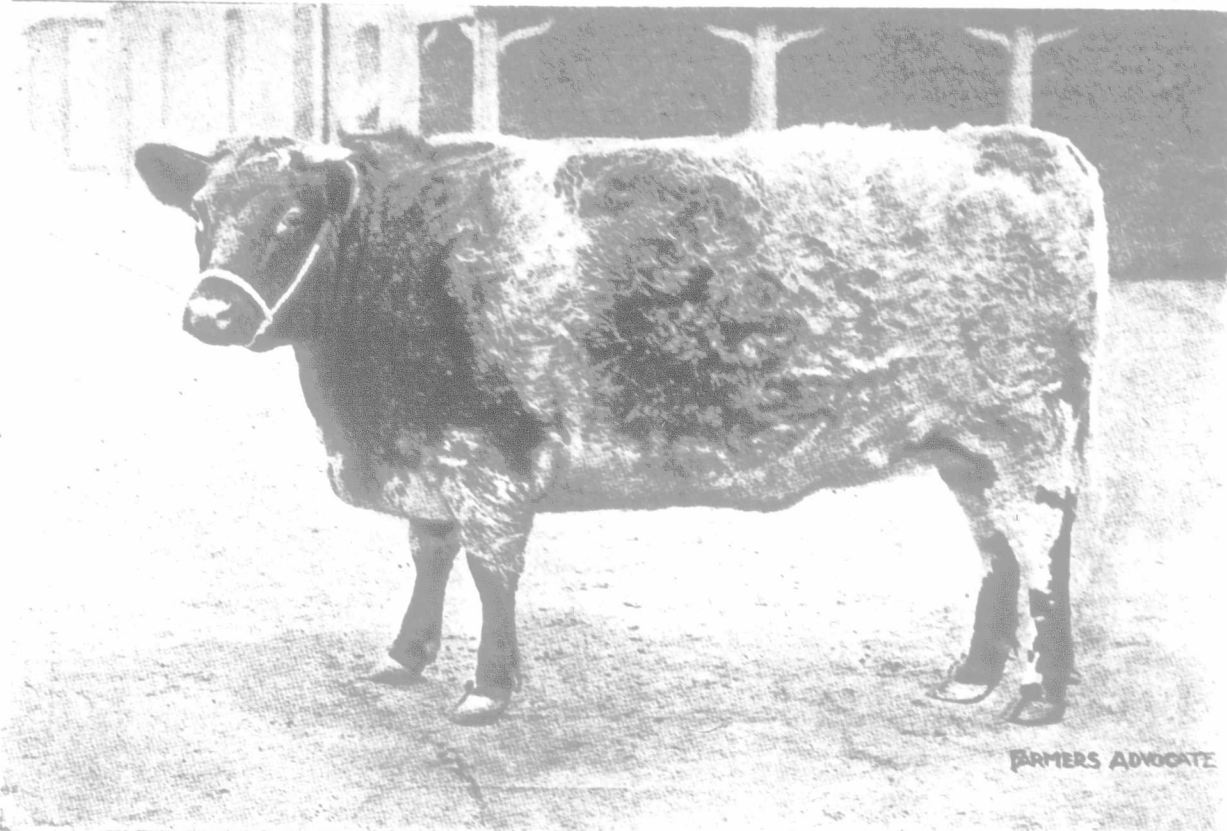
Imp. Lord Banff.

Bred by A. Watson; of the Campbell Bessie family.

Imp. Consul.

Bred by J. D. Fletcher; of the Campbell Claret family. Consul was awarded first at Edinburgh, first and champion at Provincial Union, first and champion at Creiff, and second at the Highland. His sire, Watchword, bred by Wm. Duthie, was first at the Highland in 1895 and 1896, and got by Scottish Archer, Watchfire, by Watchword, was first at the Highland, 1897. Consul is the highest-priced bull imported to Canada.

Hamilton is a city of over 50,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway—branch lines.



CICELY.

Bred by Her Majesty the Queen; undefeated in her class and many times champion; imported by W. D. Flatt.

Imp. Silver Mist.

Bred by Wm. Duthie; of the famous Missie family. He had many friends for first choice at Messrs. Marr and Duthie's sale, Mr. Beck, representing the Prince of Wales, made next to last bid.

Imp. Wanderer's Last.

Bred by W. S. Marr; also of the Missie family. Is the last calf got by that renowned Cruickshank bull, Wanderer. Mr. Marr considers this youngster very promising.

We keep in our herd a choice lot of both imported and Canadian cattle, of both sexes, from which to make selections. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.

W. D. FLATT,

378 Hess St. South.

HAMILTON, ONT.

Jas. Smith, Manager.



FARMERS ADVOCATE

IMP. FASHION'S FAVORITE.

FOR SALE:

Three imp. Yearling Bulls; Seven imp. in-dam Bull Calves.

Bred by Messrs. Duthie and Marr, from females imported by us, and sired by the best bulls in Scotland. All are excellently bred and first class individuals.

We also offer any reasonable number of females, either in calf or with calves at foot; all ages.

Herd headed by the imported bulls, Golden Drop Victor and Prince Bosquet.

Also the Standard-bred Trotting Stallion,
PAVON (30760) A. T. R.

CATALOGUE FREE.

It interests you and so

H. CARGILL & SON, CARGILL, ONT., CAN.

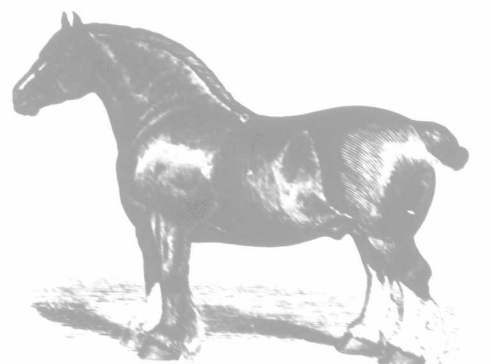
FOR SALE Three Beautifully-bred Clydesdale Stallions

Royal Erskine (imp.) [2529] (10431)

Brown; foaled May 3, 1896. Bred by Chas. Smith, Jr., Incheorsie, Huntly, Scotland.

Dam Roseabella (1292)	Sire Prince of Erskine (964)	Breeder of Sire, W. S. Park
2 Rose of Incheorsie (1825)	Lord Montrose (793)	J. McMillan
3 Susie of Incheorsie (782)	Johnny (414)	Wm. Kater
	Black Samson (64)	A. K. Letch

ROYAL ERSKINE is a grand young horse, and won Second at both Toronto and London in 1899 against strong competition, when in very thin condition, being just off the ship. PRINCE OF ERSKINE (964), by Prince of Albion, dam Halton Beauty (682), by the great Barnley (222). LORD MONTROSE (793), by Knight Errant (483), dam Lady Jane (642), by Model Prince (122). JOHNNY (414), alias Nonsuch, alias Young Emperor, alias Rantin Johnny, was a prize winner at the Highland Society's Show at Glasgow in 1873.



Balmedie Cameron Highlander (imp.) [2562] [Vol. 21, p. 134 S.]

IMPORTED IN 1889 BY H. CARGILL & SON, CARGILL, ONT.

Dark bay, white star on face, hind feet and ankles white; foaled April 7, 1885. Bred by W. H. Lumsden, of Balmedie, Scotland.

Dam Balmedie Doris (1341)	Sire Royalist (621)	Breeder of Sire, Jas. Lockhart
2 Lady Dorothy (868)	Balmedie Prince (244)	J. Cranston
3 Maggie of Kirminnoch (827)	Barnley (222)	Sir W. Stirling Maxwell
4 Joan of Kirminnoch (826)	Strathclyde (135)	J. McIsaac
	Young Conqueror (82)	Jas. Smith
	Cairn Tom (417)	Mr. Cosgrave

BALMEDIÉ DOUGLAS won the following prizes, only times shown: 1886, Second Prize as a three-year-old at Royal Northern, Aberdeen, 1887, Second Prize as a yearling at Royal Northern, Aberdeen. 1888, Second Prize as a mare with foal at foot, at Royal Northern, Aberdeen. LADY DOUGLAS won the following prizes, and was one of the best mares left by that famous stallion, Barnley (222): 1891, Glasgow Show, Fourth Prize. Royal Northern, Aberdeen, First and Special for best mare in yard. 1892, Royal Northern, Aberdeen, First with foal at foot. Highland and Agricultural Show at Inverness, First Prize. 1893, Highland and Agricultural Show at Edinburgh, Silver Medal. 1894, Highland and Agricultural Show at Aberdeen, Third Prize. 1895, Farnham Show, First Prize and Special for best female. 1896, Inverurie Show, First Prize and Special for best female. ROYALIST (621), sire Barnley (222), dam Princess (626), by Prince of Wales (522), is one of the Champion Clydesdale Stallions of the day, both in the show yard and at the stud, his progeny having taken First Prizes at the Highland and Agricultural Society, Royal English, and other leading shows. ROYALIST, as a one-year-old colt, gained Third Prize at Kilmarnock, First Prize and Cup at Royal Northern Summer Show, Aberdeen, and Third Prize at Highland Society's Show at Perth. In 1888, as a two-year-old colt, he gained First and Challenge Cup at Inverurie Show, First Prize and Cup at Royal Northern Summer Show, Aberdeen. In 1889, as a three-year-old stallion, he gained First Prize at Royal Northern Summer Show, Aberdeen, and Second Prize at Highland Society's Show at Melrose, and in 1893, when seven years old, he gained First Prize and Challenge Cup as champion male at the Jubilee Show of the Royal Northern Society, Aberdeen. BALMEDIÉ PRINCE (644), by Prince of Wales (522).

Royal Carruchan (imp.) [2561] [Vol. 21, p. 172, S.]

IMPORTED IN 1889 BY H. CARGILL & SON, CARGILL, ONT.

Bay, strip on face, off face and hind feet white; foaled May 3, 1885. Bred by David Walker, Coullie, Uday, Aberdeenshire, Scotland.

Dam Jess of Coullie (134)	Sire Prince of Carruchan (814)	Breeder of Sire, J. McCaughey
2 Balfarg Jess (290)	Mount Royal (582)	D. Mitchell
3 Bunt of Kingsdale (218)	Corsair (419)	Sir W. Stirling Maxwell
4 Jess and (58)	Scotsman (769)	J. Meikle
5 Methy (58)	Stirling Tom (45)	R. Moubray
	Sir Colin Campbell (28)	E. Logan
	Strathclyde Champion (30)	J. Barrie

ROYAL CARRUCHAN, by Prince of Wales, was First at Highland Agricultural Society Show at Dundee, as a two-year-old. First and Champion at the Glasgow Show, as a three-year-old, at Stirling. First as a yearling at the Highland Society Show at Edinburgh, also winner of the Crawford Cup. He won the following prizes: 1888, First at Perth, 1889, First at Perth, 1890, First and Champion for best entire, any age, Royal Northern, Aberdeen. First and Highland Society Medal for best entire, any age, Tarriff. First and Challenge Cup for best animal, male or female, any age, Royal Northern, Aberdeen. 1891, Highland and Agricultural Society Show at Inverness, First Prize. 1892, Highland and Agricultural Society Show at Edinburgh, First Prize. 1893, Highland and Agricultural Society Show at Aberdeen, First Prize. 1894, Highland and Agricultural Society Show at Aberdeen, Second Prize. 1895, Highland and Agricultural Society Show at Aberdeen, First Prize. 1896, Highland and Agricultural Society Show at Aberdeen, First Prize. 1897, Highland and Agricultural Society Show at Aberdeen, First Prize. 1898, Highland and Agricultural Society Show at Aberdeen, First Prize. 1899, Highland and Agricultural Society Show at Aberdeen, First Prize. 1900, Highland and Agricultural Society Show at Aberdeen, First Prize. 1901, Highland and Agricultural Society Show at Aberdeen, First Prize. 1902, Highland and Agricultural Society Show at Aberdeen, First Prize. 1903, Highland and Agricultural Society Show at 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—om JAS. TOLTON, WALKERTON, ONT.

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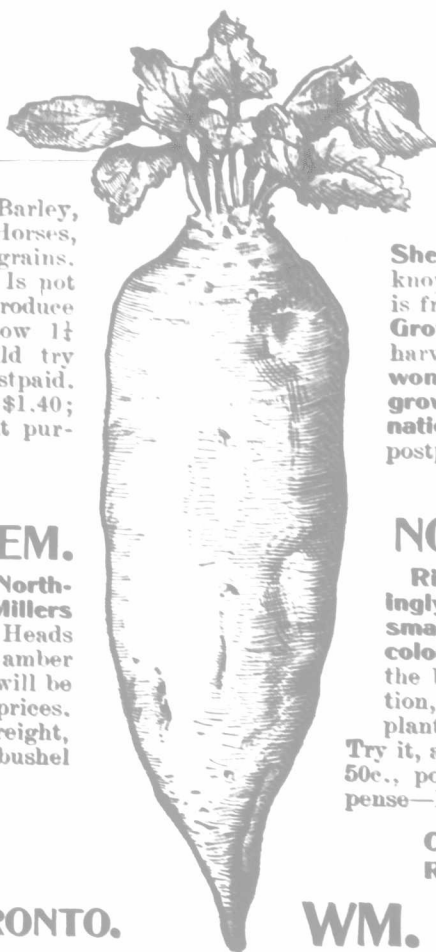
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6 Shorthorn Bulls 6

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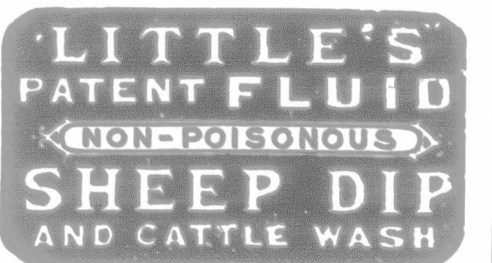
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Non-Poisonous Fluid Dip

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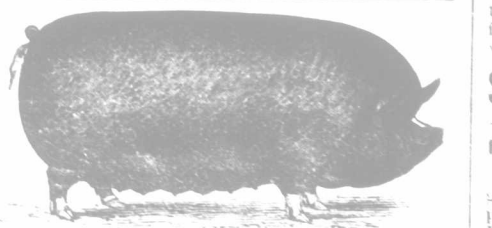
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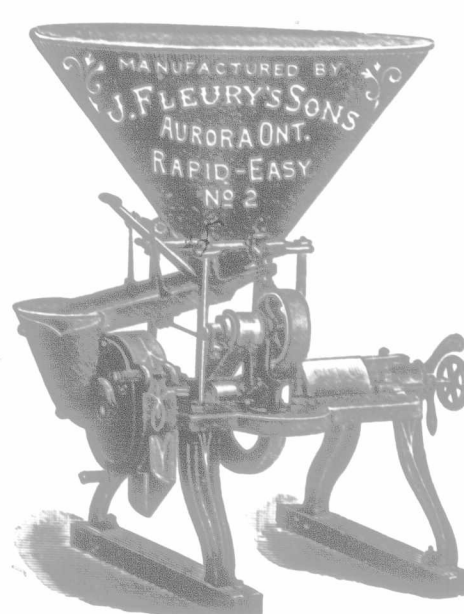
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TAYLOR, Ont., Feb. 22nd, 1901. I am well satisfied with the No. 2 R. E. Grinder in every respect. I use a 13-foot Woodstock Mill, and can grind from 15 to 20 bushels per hour. It runs very easy, and I would highly recommend to anyone wishing to buy a grinder.

SARFIELD, Ont., Jan. 20th, 1901. The R. E. Grinder I purchased from you in December last has proved an entire success, and I am greatly pleased with it. I use a two-horse mill, grinding about 12 bushels per hour. With horse I grind 6 bushels per hour, without giving much attention.

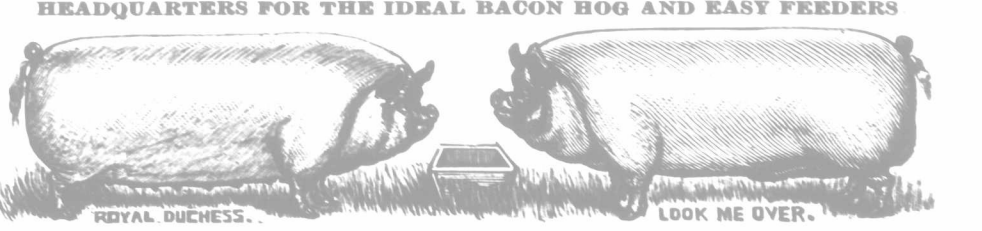
EDS GROVE, Ont., Jan. 21st, 1901. I am pleased with the R. E. Grinder I purchased from your agent, Mr. N. C. Royce. It runs very light, and does its work fast and well. We ground a ton of mixed barley, peas and oats in 40 minutes with a 14-h.p. engine, using 60 pounds of steam, and ground it fine. I think it is the best grinder on the market to-day.

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D. C. Flatt & Son, Millgrove, Ont.

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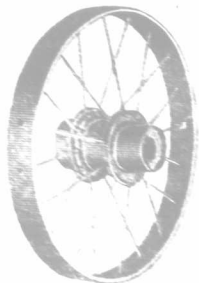
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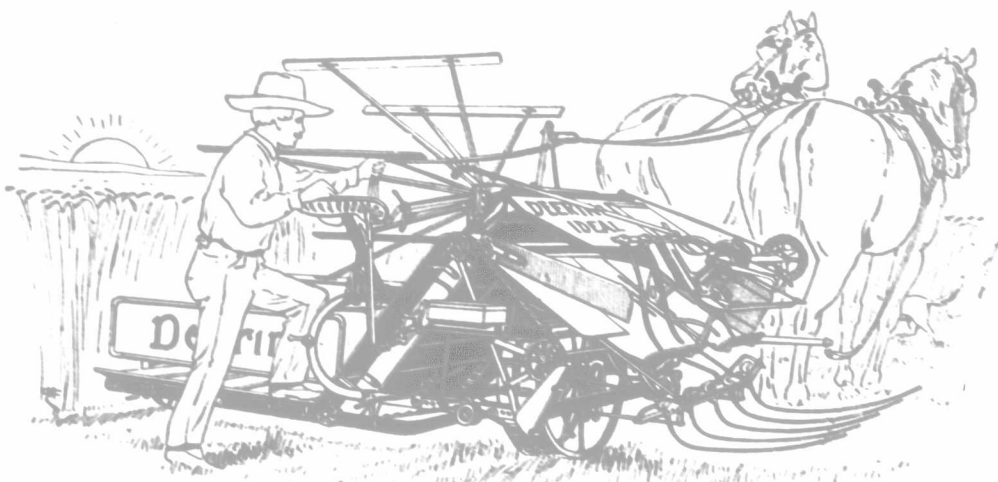
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