



J. G. Rutherford, V. S.
in dec 20, 01

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXVI.

WINNIPEG.

JULY 5, 1901.

MANITOBA.

No. 529

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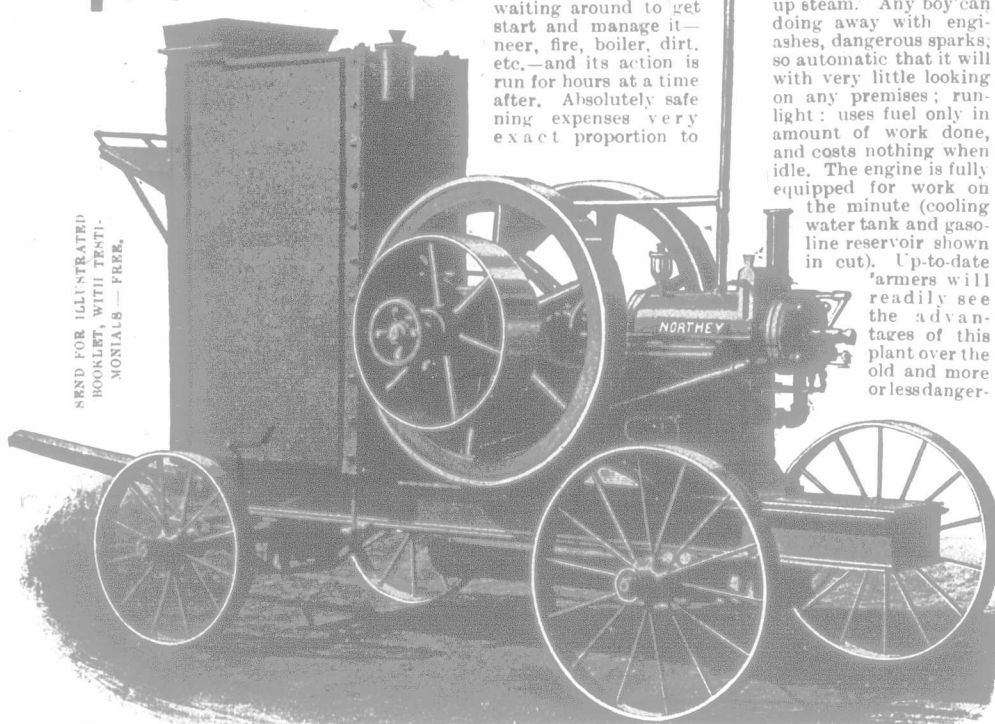
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GOSSIP.

Dr. Jas. Fraser, F. R. C. V. S., the veterinary officer accompanying Lt. Col. Deft on his purchasing tour of army remounts, is a Canadian, from near Woodstock. The Doctor was very

greatly impressed with the strides made by Canadian agriculture in the last twenty years, and states that the farmhouses and buildings, together with the general appearance of the farms, compare very favorably with the best British farms.

THE FARMER'S ADVOCATE

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FOUNDED 1886

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

Vol. XXXVI.

WINNIPEG, MANITOBA, JULY 5, 1901.

No. 529

Hay.

In many sections of the country, especially in the eastern and northern portions of Manitoba, native hay is usually abundant and can be put up in large quantities at comparatively small cost. In many districts hay has been so plentiful that no other fodder is used, and horses—and even cattle—are frequently bedded during the winter in the surplus from the mangers. Plentiful as the supply is, it often happens, either through bad weather or carelessness in the harvesting, that the quality is very inferior—not equal, in fact, to good straw—and stock fed exclusively on hay frequently come out of winter in thin, poor condition.

With the ever-increasing settlement of the country, with the opening up and draining of wild land, the native-hay supply will gradually become more and more limited, and with the saving of it, as with cultivated hay, greater care will need to be exercised in securing the crop in order that the quality may be the best possible. The following extract from an article in an English exchange will at this season be read with profit, as the making of good hay is the same in principle all the world over, only here our conditions are much more favorable:

"To make good hay is not merely to have the stems and the leaves of the various grasses and clovers dried. The first and not the least prominent item is to have the crop cut at the proper time so as to have the largest quantity and best quality of food. The best times are immediately before or after flowering—I prefer the former. If after, it should be whenever the pollen has been shed, for as soon as it is shed ripening begins. It has then reached its maximum growth, and contains the fullest amount of feeding value. It acquires no further sustenance from the soil of any importance, but, through the ripening of the seed, the stem and leaf are deprived of their starch, sugar, etc., by a process of flitting, as it were, from the stem and leaf into the seed. This deprives the forage of all its succulent, nutritious parts, so that hay ripened for seed is of much less value for feeding than when cut green. However, as different grasses ripen at different periods, in a mixture of seeds or a natural meadow it is hard to know when to begin, but it is better to take it too early than too late. Among the general class of farmers, the time of cutting depends pretty much on how the farm work generally is forward, and the state of the weather. It would recompense some of them if they would make more strenuous efforts not to let their crops get overripe. Rather let them cut to the green side, and their recompense will not only be better hay, but a much better aftermath.

"The work required before the hay is safely stacked or in the shed will depend pretty much on the nature of the stuff, and also the nature of the weather. Therefore, it would be needless for anyone to lay down hard-and-fast rules. All efforts, in whatever manner, are put forward with the sole intent of having the fodder so dried as to prevent heating. But it so happens that much more is spoiled by overdrying and overweathered than by overheating. If hay has been much dried by actual sunshine it becomes hard and wiry, and of a brownish color, as there is no moisture left to cause the small amount of fermentation that is necessary in good fodder. This is the sort of fodder we hear our city contractors talk about when they tell us of the grand, hard, dry fodder that sticks to the horse's ribs. They had better see further. If hay has to lie in wet weather after being mown it loses much or all of its soluble matter, such as sugar and the soluble albuminoids, etc., by their being washed away, especially if the crop is spread or tossed up much: whereas, if it is in heaps, and a long spell of wet weather comes, what is known as alcoholic fermentation sets in, and again drinks up the sugar.

The fragrance of the sample of good hay is due to a volatile organic principle, which is also dissolved by alcohol by the aid of warm rain water. The green coloring is also removed by alcohol, and through oxidation becomes quite yellow if the swath lies too long. Thus, weathered hay has lost both the valuable food elements, the fragrance and the color.

"Opinions differ as to whether hay slightly heated or fermented is benefited thereby. Localities differ. For instance, in Glasgow they want the hard, dry stuff; in London, the hay which has undergone a slight fermenting process is what is wanted. Over-heating, however, will bring about the same effect as weathering, and is detrimental as food for stock. The action brought about by a slight sweat in the stack is the changing of the starch into sugar. This process goes on after it is mown, if the weather be not wet, until all the individual cells are completely dried up. Hence the avidity with which cattle will eat hay that is half dried. When the fodder is completely dried the cells are killed by desiccation, and the action ceases. For this reason over-dried hay is an error, as the process of making starch into sugar should go on after the hay has been brought into the yard, a gentle heat being produced, but not overdone. It improves both the flavor and the digestibility of the product. The farmer must therefore see that he does not have his hay too dry, but leave some life in the little cells, so that they may go on with their good work which I have already pointed out. It must also be dry enough to avert overheating and prevent oxidation going past the sugar stage and thus wasting the fodder. To carry out this properly, only experience can give the true idea."

The Summer Institutes.

The agricultural departments of the Northwest Territories and Manitoba have secured speakers for a course of lectures this month. In the Territories, the Dominion authority on bugs, weeds and grasshoppers, Dr. Jas. Fletcher, will hold forth; while Superintendent McKay, of the Indian Head Experimental Farm, will have pointers for the farmers regarding soil cultivation, cereal culture, gardening, and other topics both interesting and profitable to the members of the farming profession. In the universities and in the learned professions we hear of summer courses, and the farmer needs such courses just as much as his theological brother. The laborious work of seeding will be over, and the association with his fellows and the speakers will polish him up and tend to give him renewed vigor and enthusiasm for his life-work in agriculture. The chance to get a new weed recognized and its treatment explained and understood should not be missed. Difficulties met with on the farm may be overcome as a result of the discussion arising at the Institute, so go, one and all, prepared to take part, not only as listeners, but as contributors to the discussions. Our advertising columns contain the places and dates for meetings arranged for in the Territories. The Department has striven hard to push on the car of agricultural progress. You who are to benefit, put your shoulder to the wheel! The list of speakers for Manitoba was published in our last issue. Some of the speakers are newcomers, and will doubtless have new subjects, or new ways of presenting old ones to their audiences. Profs. Harcourt and Reynolds, of the O. A. C., Guelph, have both done good work there; the former especially with the gluten of wheat and alfalfa, the latter with soil physics. Miss Maddock should be especially acceptable to the womenkind, as she has a fund of information not always on tap here. The other speakers are well-known gentlemen, and not without honor in their own country. Dates and places of meeting are in our Gossip columns.

Hints on the Summer Care of Work Horses.

The various experiment stations have done comparatively nothing with the feeding of horses. The marked difference existing between the digestive apparatus of the horse and cow call for differences in feeding. The horse's stomach is small compared with that of the other domesticated animals, therefore smaller quantities of food must be offered, which should be concentrated. Bulky food is not as suitable for equines as for bovines. During the hot days, water should be offered frequently and in moderate quantities. That from deep wells is often ice cold, and should not be allowed *ad lib.* if the horse is sweating. If, however, the chill is off, little harm will result from allowing a horse all he will drink. *Water before feeding, always.* If the time allowed at noon is only an hour, don't seek to overload your horse's stomach with hay; leave the hay for the night feed. When resting for a few minutes in the field, and there is any breeze, turn the horses so that they will face it. After removing the harness at night, go over their bodies with a damp sponge; it will cool them quickly and remove the sweat and dirt incidental to field work. Collars must fit properly, or scalded shoulders, sore necks, choking, etc., will result, with the inevitable loss of valuable time. Be careful in the use of new hay, or you will notice a big increase in the urine of your horses, and a rapid loss of flesh, all symptoms of what is often termed diabetes. Horses with the forelock unclipped will be less liable to sunstroke. Clipping the forelock is a fashion which has gone from the city to the country, and is one that cannot be too severely condemned. Looking at it from the material standpoint alone, the removal of the forelock cannot be excused. A horse so mistreated deteriorates \$10 to \$15 on the big horse markets when intended for export. Sponging the eyes, nostrils and anus with cold water every night after the work is done will also be found to be beneficial, being refreshing to the horse. The Saturday night bran mash is just as important in summer as in winter, unless the horses are grassed every night. In very hot weather it might be advisable to take two hours at noon and work later at night; such a proceeding would be better for man and horseflesh. Regularity in watering and feeding are indispensable.

Farm Siftings.

Years ago, 'tis said that farm laborers would organize and go at night and destroy the machinery of the advanced farmer of those days. Their reasons for so doing were, as we see now, no reasons at all. The laborer of fifty years ago thought that the introduction of farm machinery would destroy his chances of making a living. To day, while farm machinery has increased a hundredfold, farm laborers have decreased in nearly the same proportion.

We sometimes hear the expression that a certain person has a yellow streak—another name for a bad streak. Such a streak sometimes shows in a man's farming, and the yellow streak shows quite plainly in the mustard or peppergrass infested fallow.

During the leisure time between seeding and haying, would it not be well to give the horse a coat of paint? The wagon would not be spoiled either if it got a dose of red lead and oil.

Are plowing matches nowadays competitions among farmers, or efforts at advertising by the implement men? The prizes seem all right, anyhow.

When in a city, recently, I was noticing the erection of a new business block. The onlookers were more numerous than the workers, and yet farm laborers are scarce!

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

TWO DISTINCT PUBLICATIONS—EASTERN AND WESTERN.

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

City people are leaving town and are pitching their tents on the greensward. Why not the farmer? Take a tent and the family and go and camp near the Brandon Experimental Farm? Don't be afraid to stay a week; there is plenty to amuse and instruct one at the Farm.

The rains came opportunely, and now the entire farm has been sown—even to the land intended for summer-fallow. There will likely be a heavy dockage for weed seeds, as a result, when the crop reaches the elevator next fall. The fanning mill and the farm boiler will come in very handy then as money-savers.

Your agricultural society is probably holding a summer fair this month. Encourage your boys and girls to show something at the fair, and let them keep their winnings.

Sometimes the following excuse is given for being without a garden at the farm: "Oh, the hens scratch up the seeds." Why not confine the hens, then? A few yards of wire meshing and a dozen posts will make a good yard for them, and the garden can be a success.

Has the wife a washing machine? If not, why not? The muscles of the farmer would not be hurt by a little practice at the crank, and the work would be lightened at the house. Too many of the farmers' wives looked dragged out, while the farmer looks quite fresh and rugged. Houses are hot places to work in these days, especially as fruit-canning, cooking and ironing have to be attended to.

A townsman let a remark drop a day or two ago which I have since wondered if it is true. He said that the farmers of Manitoba were just ripe to be plucked by the man with the flintlam game, such as the hedge-fence, patent rights, etc., etc.

EXCERPT PRIMOS.

The Tuberculin Crusade and the Cattle Breeders.

[FROM OUR ONTARIO AND EASTERN EDITION.]

It is to be feared that a very large number of our cattle-owners have not yet realized the real significance of the tuberculin-test crusade. Its dangers have not been fully discerned. The original conception seems to have been that by its use animals with tubercles in their bodies could be entirely eliminated from the country. An elaborate treatise on this subject issued from an American experiment station a while ago disclosed the nature of the design, in the writer's mind, to be the enforcement of tuberculin testing on every farm, and the quarantining of cattle showing a rise in temperature. In a recent annual report, Dr. D. McEachran, head of the Canadian Live Stock Inspection Department, asserts that "with a moderate expenditure to enable us to at once get rid of all those showing symptoms and so presumably infective, fattening the others and quarantining them for life, this disease can be completely eradicated." Cannot the farmer and stockman perceive the true character of the system which a little clique of officials would fasten upon them for the benefit of themselves and the manufacturers of tuberculin? How would the breeder and farmer relish the prospect of supporting a lot of salaried officials whose duty would be to periodically give their cattle hypodermic injections, or, as one writer graphically puts it, "pump poison into them?" Even supposing there were no risks of abortion in pregnant animals, or other subsequent injurious effects, it would be very much cheaper and better for the country to simply pension off these officials at once. For the general farmer and dairyman the system is optional now, but how long will it remain so? The evident, logical design is

TO MAKE IT GENERAL AND COMPULSORY.

as it is upon the breeders who desire to import or to export pure-bred animals to the United States. Grades and scrubs go there without a test! But when an enterprising American comes along wanting first-class cattle, and who does not want them tested, he cannot get them without a dose.

A MISLEADING TEST.

As a scientific test, what reliance is to be placed upon a tuberculin injection? The Dublin experiments showed that it both condemned the innocent and let off the guilty, the extent of error amounting to 17½ per cent. Even Nocard, of France, does not claim that reacting animals are always tuberculous. The investigations conducted by the Royal Agricultural Society of England showed error to the extent of 17.64 per cent. It is not contended that an injection of tuberculin, which is a fluid lymph prepared from the tubercle bacillus itself, passing through the animal system will not by its effects on the tissues or cells cause the temperature of the animal to rise; in other words, occasion what is called a "reaction." It is said that a tubercle the size of a millet seed anywhere in the system would occasion that effect, but should that condemn the animal? Speaking of human tubercles, Prof. Wm. Osler, of the Johns Hopkins University, one of the most eminent medical practitioners and pathologists in the world to-day, states that "a very large proportion of all persons at the age of forty have, somewhere in their bodies, tuberculous lesions. This was discovered by large numbers of post-mortem examinations of persons dying of other ailments or accidents, or probably of old age. The variation of animal temperatures under ordinary conditions, and without any injection of tuberculin, is remarkable. Our attention has been called to a very careful test made with a Canadian stable full of cattle, of which from five to ten per cent. of their number gave a reaction, without any injections, of from two to three degrees, and all evidently in perfect health and on regular feed. And yet the veterinary branch of the Dominion Department of Agriculture presumes to condemn and throw upon the hands of the breeder animals whose temperature rises two degrees or more under the tuberculin test during the 48-hour period! And this, too, in the name of science! One cannot wonder that indignant breeders look upon this as

A COMBINATION OF HUMBUG AND OUTRAGE.

As every well-informed stockman knows, there are many reasons that will cause a sudden rise in animal temperature, such as indigestion, slight cold, or anything causing a feverish condition. Floyd S. Barlow, of Cornell University, whose letter we republish elsewhere, states that "after the tuberculin has been injected into a cow, some change in the regular current of her life may take place: for example, a rise in the temperature of the air,

exertion on the part of the animal, privation of water at the usual time, retention of milk at the usual milking period, coming in heat; in fact, anything that tends to excite the animal may cause a rise of temperature above the normal." What an easy matter it is, then, for officials who are looking for reactions, and whose occupation, like Othello's, would be gone without them, to secure an occasional rise in temperature with perfectly healthy animals. With all these chances against him, and stringent orders, with heavy penalties, requiring quarantining from the rest of the herd for the remainder of its life, or else slaughter of every animal that reacts, how long can any breeder continue a trade in breeding stock with the States without getting loaded up with valuable but condemned cattle? The Government could hardly have devised a more

VICIOUS MOVE AGAINST THE INTERESTS OF THE BREEDERS

of Canada. It will prevent new men from going into breeding improved cattle, and tend to stop those who have started increasing their pure-bred herds. Not only so, but it has come to our hearing that in some way or other those who are manipulating the Washington end of the tuberculin-test business are becoming posted as to the results of the testing of some of our zealous inspectors, so that if they need any excuse to shut out Canadian cattle absolutely, they can soon get it. Within their own borders the test is not allowed to worry the U.S. breeders, but for the sake of this fad the Canadian authorities are being used as a cat's-paw. Thus far, the tuberculin policy of the Canadian Government has done little but damage. The contention that it is imposed as a protection to our breeders is an insult to their intelligence.

A word with regard to the compulsory quarantining on the farm for life of reacting animals. A gentleman who has had an extended experience with the tuberculin test, stated at the Ottawa conference on tuberculosis, in February last, as a result of his investigation, that he did not agree as to the necessity of isolating reacting animals; also stating that his reacting cattle had not failed or become emaciated; in fact, they seemed just as sleek and good conditioned as the others. Four years ago a herd of 29 Jersey cattle were tested by a veterinarian, acting for the Dominion Department of Agriculture, and 16 reacted. They are all alive and well yet, and no better looking herd is to be seen, and not under quarantine, either. Dominion officers report 1,200 reactions, chiefly in suspected dairy herds, during three years past, but, so far as we can learn, the quarantining of them has been in name only. Why, then, impose it upon breeders?

The test system is on a par with the costly 90-day quarantine imposed on breeding cattle imported from Britain,

THE ABOMINABLE CONDITION

of which some time ago was exposed in our issue of May 1st last, one breeder reporting that his animals had got both foul in the foot and vermin while confined there. The idea is to prevent cattle disease from getting into Canada, and yet animals, after spending three months there, were tramped down and out the identical lane through which fresh arrivals had come in!

What, then, is to be done with this useless and injurious tuberculin-test system? We are of opinion that so long as the Canadian Government maintains it against Britain and the United States, just so long will the States be enabled to keep it up against Canada. There is no doubt that Hon. John Dryden hit the nail squarely on the head when he wrote the FARMER'S ADVOCATE, on February 1st last, that the original adoption of the test was a blunder, and the sensible and proper course for the Dominion Government, that first imposed the regulation, should be

AT ONCE TO REMOVE IT.

That is what Hon. Mr. Fisher should do now, and, fortunately, it can be done without reference to Washington. That was the stand taken at the big cattle-breeders' meeting in Guelph at the last winter show, on the motion of Mr. Arthur Johnston, seconded by Mr. Alex. Smith. At a subsequent meeting, in February, the breeders were assured, on behalf of the Government, that relief would be speedily forthcoming, so they refrained from going in a body to Ottawa. How has the promise been kept? The staff of regular departmental officers to be testing has been increased in Canada, with Dr. Butterfield appointed for Great Britain, and there is a more stringent enforcement of regulations than ever for bread, and they are getting a stone-

The Duty of the Patron of the Cheese Factory.

The patron of the cheese factory owes a duty to himself and to the other patrons in that he should strive to send his milk to the factory in the best possible condition for the manufacture of the best quality of cheese. It is in the individual interest to do so. The competition is now so keen in the markets of the world—and every one catering to the wants of the public is trying to do his best in placing the best article in the best possible condition on the market—that, as a matter of necessity, the careless and incompetent must go to the wall. No matter how clever or competent or painstaking our cheesemakers may be, unless the milk is given to them in the best condition they simply cannot manufacture the best quality of cheese.

The cows should have free access at all times to running spring or good well water and salt. They should have an abundance of succulent, nourishing food, whether it be ensilage, natural grass, clover pasture, mangolds and hay, chop or bran, or whatever may be in season.

We milk in the stable, and believe it to be the best place and saves time. The stable should be kept clean and well littered with straw or chaff. The cows should be milked regularly by the same persons, at, as near as possible, the same time night and morning. The cows should be handled very gently and always stripped clean.

The milk stand should be placed in a convenient place, away from all bad odors and where a current of pure air will pass if there is a draft. We strain the evening's milk through an aerator, which spreads the milk in small jets, thereby letting off a great amount of the animal heat, and the milk should be stirred until all the animal heat has been taken out. It is a good plan to place the can in a tub of cold water, but the milk should be stirred at the same time, as cooling without stirring does not produce good results. Some use a pail with a perforated bottom and a solid bale, like a sprinkler can. This is pressed down in the can of milk and raised up quickly and held up over the can until the milk has run out through the small holes. If the atmosphere is pure, this does very well, but if there are any bad odors in the air, the milk has great assimilative powers and will be apt to take up any bad germs that may be floating about.

When setting milk for butter, we desire the cream to rise to the top, but in keeping milk for the purpose of making cheese, the object should be to retain the cream incorporated with the milk as it comes from the cow, and prevent it from rising to the top, as the cream that is separated from the milk is apt to run off in the whey. The milk should be cooled to 65 degrees.

There are various devices for stirring milk, one of the latest being an arrangement of clock work which when wound up will keep stirring the milk nearly all night if wished. This will pay better where the milk is paid for by the result of the Babcock test + 2 p. c., and would be a great labor-saver, especially in haying and harvest. The morning's milk should be put into a separate can, and should not be mixed with the evening's milk.

Furious driving of milk wagons to the factory should not be tolerated, and no honest man will adulterate his milk with water or remove cream.

Where whey is returned to patrons in milk cans, it should at once be emptied out into a swill barrel at or near the piggery, where the cans should be washed with lukewarm water, then carried out to the milk stand and thoroughly scalded with hot water, then rinsed with cold water and set out in the sun and wind.

When going to milk, it is a good plan to empty a pail of cold water from the well into the can and leave it in until the milking is done, then empty out before you put the aerator bowl on the can.

Oxford Co., Ont.

D. LAWRENCE.

Tuberculin Test Temperatures.

A young cattle-breeder enquires: "I would be obliged if you would state, through the FARMER'S ADVOCATE, how the rise in temperature is determined condemning an animal under the tuberculin test?"

[The latest directions sent out to inspectors of that department require five temperatures, three hours apart, to be taken before the tuberculin is injected into the animal, and six afterwards. The highest of the former is compared with the highest of the latter, and if a rise in temperature is shown of two degrees or more, the unhappy animal is condemned. The whole performance is forty-eight hours in duration.]

Harvest Help Wanted.

In view of the probable scarcity of harvest hands, those requiring extra help should send in requisitions at once to the local Department of Agriculture for the number of hands wanted.

The Use of Pasteurized Milk.

At the recent meeting of the British Dairy Farmers' Association, at Glasgow, Scotland, Mr. Jas. Stirling, of the Glasgow Dairy Co., read an interesting paper on the pasteurization of milk for sale and manufacturing, followed by Mr. F. J. Lloyd, F. C. S., consulting chemist of the Association, who said no matter what care they took, undoubtedly milk was not so pure which came direct from the cow, and was delivered to the consumer, as milk which had passed through the process described by Mr. Stirling. The questions to be determined were whether pasteurization paid, and whether it made milk less digestible? When milk was heated to the pasteurizing temperature the albumen was coagulated, and the infant could not digest the solidified albumen. A change also took place in the mineral matter. Undoubtedly milk which had been heated was less digestible than milk which had not been heated. The fine matter removed from the milk in the cleaning process described by Mr. Stirling was the indigestible material which was generally left in pasteurized milk. Mr. Stirling demurred; what came away was only impurities, and was not coagulated albumen. Mr. Lloyd, however, held that that was the effect of pasteurizing milk. The demand for pasteurized and separated milk was, in his opinion, an erroneous one, and had been brought about by the faddists in the medical profession, who wanted to make out that the milk supply was the cause of the spread of tuberculous disease and infant diarrhea. Tuberculous bacilli were sometimes present in milk, but not very often; still, it was the duty of farmers to guard against it and do their best to prevent its occasional presence. The large cause of diarrhea in children was that the milk was kept in the houses under unsanitary conditions, and was not often given to

Favorable Rates to the Calgary Fair.

The directors of the Calgary Exhibition, which, as noticed elsewhere, is to be held on July 10th to 13th, have made very satisfactory arrangements with the Canadian Pacific Railway Co. re the shipment of pure-bred stock to the Exhibition, the railway company having agreed, in the case of pure-bred horses, sheep and swine shipped to the Exhibition in carloads and sold, to reduce the inwards freight charges to half the regular tariff rates. Of course, the regular arrangement regarding certificate of registration of the animals will be enforced. In the event of none of the animals being sold, and all returned to original owner at original shipping point, then the regular refund of 60 per cent. of the inwards freight charges will be made. This favorable arrangement should certainly be a great inducement to breeders desiring to exhibit at Calgary with the expectation of selling stock.

Cleanliness in Handling Milk.

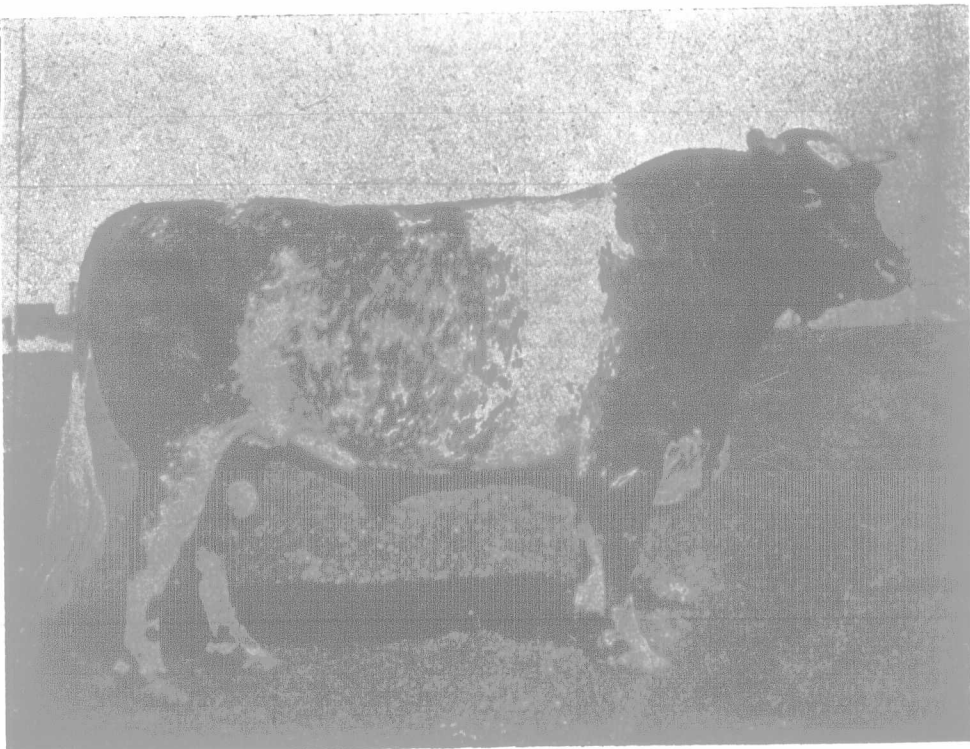
It is said to be a fact by those who are conversant with the average dairy farmer's practice, especially those who send milk to cheese factories, that quite a high percentage of them do not strain the milk at all. They know it will be strained before it goes into the vat, and claim to consider that is straining enough. These same patrons, as a rule, are not careful to wipe off the sides and udders of the cows; they may even wash their teats with the cow's own milk, and think it harmless to milk with dirty hands. These are the causes of many bad flavors in cheese, and, so far as they exist, go to injure our trade in the motherland.

Though the straining of milk, either in the cow shed after it is drawn from the udder, or in the

dairy after it reaches that department, may be of some service in ridding it of any large particles of dirt or other matter which it may contain, it is of but little use in preventing the entry of the tiny dust grains, which, after all, constitute the great bulk of the filth which dirty milk contains. The effect of straining, so far as these minute dirt particles are concerned, was well shown in an experiment recently carried out at one of the American agricultural stations. In this experiment it was found that though the straining of milk left it cleaner so far as the larger particles of dirt were concerned, it proved of but very little advantage in excluding the bacteria which, as is well known, are chiefly conveyed through the medium of dirt. It was found that about 60 per cent. of the dirt from the manure and the air was soluble in water, and that no amount of straining would prove of any service in depriving the milk of this soluble material. With the object of testing to what extent dust and bacteria found their way into milk, trials were made with milking into covered pails with apertures only six inches in width at the top, and into others with from two to three times that extent of opening in the pail. With the six-inch opening it was found that the number of germs present in a certain quantity of milk was 2,300, whereas in the milk drawn into the ordinary pail with the wide top, the number of bacteria present worked out to over 43,000. The advantage of using the narrow-mouthed pail with the object of excluding the bacteria in this case was well shown by the fact that whereas the milk drawn into the narrow-mouthed vessel did not go sour until after being kept 64 hours, that milked into the open pail—and subsequently found to contain 43,000 odd bacteria—went sour in 47 hours. The experiment, therefore, afforded an excellent illustration of the great advantage of keeping the milk clean, and of having the surroundings of the stables or of other departments in which the animals are kept as free from dirt as possible.

Supplementing Skim Milk for Calves.

In these days of cream separators and thorough skimming, it behooves us to be on to the most economical way of enriching skim milk for calves. The *Farmer's Gazette* states that a grain mixture which was used with much success at the Munster Dairy School as a substitute for the butter-fat abstracted from milk in the process of separation consisted of 1/2 lb. to 1 lb. daily of a combination of equal parts of linseed meal, bran, and oatmeal. A commencement was made with these by giving the calves 1/2 lb. of the mixture, and then the allowance was gradually increased as the age of the animals advanced until when five to six weeks of age they were given from 1 lb. to 1 1/2 lbs., according to size and other conditions. It is better, however, to allow the calves to eat the mixture dry, so that it will be well masticated, than to mix it with the milk; otherwise, it will tend to be carried past the first and even the second stomach before digestion begins.



INSPECTOR 72715.

Shorthorn bull, winner of first prize and championship at Bath and West of England Show, 1901. OWNED BY MR. G. HARRISON, DARLINGTON, ENGLAND.

the children until it was becoming sour. It would be a godsend if these people could be induced to use pasteurized milk, but they were, he was afraid, the very class that would make least use of it.

Blyth Farmers' Institute.

This flourishing Institute held a technical session, June 21st, on the farm of Tully Elder. The plowing competition was keen and excited considerable interest. A full report appears elsewhere of the awards and work of the plowmen. The inner man was looked after ably by the ladies, whose work was just as high-class as any of the plowmen. Among the visitors was Hugh McKellar, Chief Clerk, Dept. of Agriculture, who gave an interesting *nature-study* address on the grasshopper. The habits of this pest, their methods of reproduction, the recognition of the sexes, together with the best methods of destruction, were enlarged upon by the speaker. The interest manifested was considerable. R. G. O'Malley, Provincial Weed Inspector, remarked on the great prevalence of peppergrass, and stated the causes for that prevalence. He suggested, as a means of getting rid of it, to plow well under, cultivate frequently during the summer, and then give a light plowing in the fall. Competitors were at the plowing match from Portage, Oak Lake, and Alexander. A wrinkle noticed in use by one of the plowmen was a small skimmer set a little distance in front of the rolling colter, which had the effect of cutting the weeds just below the ground. On the same plow was a piece of stiff wire, fastened to the plow beam at right angles, extending the width of the furrow (it might, perhaps, be useful as a gauge), which also helped turn the weeds down and rendered the use of a chain for that purpose unnecessary.

Large Farms and Their Management.

THE PRAIRIE HOME STOCK FARM.

The live stock on this farm is well known by all fair-goers as winners in the show-ring. The methods followed for bringing such animals to a high state of show-yard bloom are probably not as well known. The estate comprises over 2,000 acres, and is the property of the Hon. Thos. Greenway, ex-Minister of Agriculture, whose ambition to be not only the farmer premier of the Province, but also the premier farmer of Manitoba, has been pretty well accomplished. In such an undertaking the management demands foresight, a thorough knowledge of live stock and farm practice, such attributes being found in the person of that show-yard veteran, Jas. Yule; comment on the live stock is reserved for the Gossip column. Twelve hundred acres of land is broken and in crop, 300 being in wheat, four hundred in oats, 200 in barley, and ten in peas, besides other crops. A feature of the farm is the attention given to tame grasses. While the greater part of the farm is new land, there were some of the older portions whose crop yields were very disappointing. Under a liberal dressing of manure, most of which is applied during the winter, the yield was greatly increased, and spots showing any alkali tendency became quite productive. A rotation somewhat as follows is worked out: two crops of wheat, one of oats, one of barley, seed down, taking practically five years for its fulfilment. Grass will gradually dispossess the summer-fallow, which this year amounts to 100 acres. The method of seeding down is unique. Brome grass and timothy are used, with barley as the nurse crop. Two pounds of Brome (the manager will increase it to four or five pounds) is mixed with the barley and sown, the timothy, five pounds to the acre, being put through the grass-seeding attachment. During our visit we saw a field sown in this manner, the yield of which promises to be enormous.

As native pastures (when once fenced) are only a poor excuse at the best, that land at present in the native grass will be broken and disked, and then seeded down by the method already described. Four-horse teams are used on the plows and seeders, three-horse teams on the binders and roller. Eleven men are employed during the summer. The year men get from \$200 to \$300 a year with board, the summer men, \$20 to \$22 a month. Page wire fencing is largely used on the farm. The weeder is not in favor on the farm.

The pure-breds kept are Shorthorns and Ayrshires in cattle, Berkshires and Yorkshires in pigs. A few registered mares and two Clydesdale stallions make up the stud. A trial was made in wintering the brood sows around the stacks, as recommended by some pigmen. This procedure is not, however, thought very highly of by the manager. The poultry end of the establishment is not neglected, a flock of Barred Rocks of considerable merit being built up. Some tree-planting is done, more with the view of ornamenting the homestead than of providing wind-breaks. Windmill power is used to a considerable extent at the farmstead. Four binders are used to cut the crop. The live stock numbers about 170 head of cattle, 110 pigs, 100 sheep, and 36 horses. Recognizing the value of skilled help, Dr. R. D. Scurfield has been engaged as veterinarian to the establishment.

The summer-fallow is plowed shallow about the end of June, and is ridged up later on in the season. The farm employees get up at 4.45 a.m., and breakfast at 6 a.m. Dinner is called at noon, one hour being allowed for the midday meal; 6.30 p.m. is the supper hour. Teamsters work ten hours a day in the field. The stockmen necessarily have longer hours, their charges calling for constant attention, the working period often running up to sixteen hours a day.

Report of Agricultural Department, N.-W. T.

The report of C. W. Peterson, Deputy-Commissioner of Agriculture, N.-W. T., has been received. This report contains a lot of information of value to the settler or the person intending to settle in that territory. Noxious weeds come in for considerable attention at the hands of T. N. Willing, Chief Inspector. The importance of this line of work cannot be overestimated, as unless weed eradication is looked carefully after at the start, a large amount of money and energy will need to be expended to get rid of the weeds. The agricultural societies are reported as flourishing, mention also being made of the furnishing of judges by the department—a very good move of up-to-date character. Dairying comes in for some attention, and the effect of the farm separator commented upon, it being shown the amount of cream increased, while the amount of milk supplied fell. The cattle industry is reported to be in a flourishing condition; witness the high prices paid for stockers. Details regarding the shipment of pure-bred bulls to the N.-W. T. under Government auspices is also given. Sheep are not increasing in numbers, although the clip was better than that of the previous season. A table of comparative prices for hogs at Edmonton and Winnipeg is given, which could be improved by a little different arrangement of the columns of figures, by putting the live quotations of each place side by side. The army remount question is exhaustively treated. Wolf destruction, brands, estrays, vital statistics, all go to make up an interesting volume recording the agricultural progress of the N.-W. T.

Anthrax and Blackleg.

One of the relics showing bacteriological development is the use of the term, symptomatic anthrax. Such a term, like many others misapplied in the dawn of scientific research, is unfortunate in its use, and would be better abandoned altogether. The germ name of the casual agent of blackleg is *bacillus sarcophysematos bovis*. Blackleg-infested carcasses are harmless to man; anthrax are dangerous.

Harold Sorby, of the Pasteur Institute, Chicago, has the following to say regarding the two diseases:

"Prior to the discovery in 1880 by Pasteur of a vaccine virus which would protect stock against anthrax, this disease and that known as blackleg were believed to be one and the same complaint. The fact, however, that anthrax vaccine virus in no case conferred immunity against blackleg led to scientific investigation, which demonstrated beyond a doubt that anthrax and blackleg were distinct and separate diseases. It was but a few months following Pasteur's discovery of anthrax vaccine that three eminent French scientists, Arloing, Cornevin, and Thomas, working conjointly, discovered the vaccine now so universally known as Pasteur blackleg vaccine, which affords almost perfect immunity against blackleg. The Pasteur method of live-stock vaccination and the original French vaccines were introduced into North America in the fall of 1895, since which date the practice of preventive vaccination has steadily gained popularity, the success of the same being unquestioned. But inasmuch as vaccination with Pasteur anthrax vaccine only protects against anthrax, and the vaccination with Pasteur blackleg vaccine only protects against blackleg, it is a matter of great importance for the stock-raiser to know whether anthrax or blackleg is the disease affecting his stock. The physical symptoms of anthrax and blackleg are in some respects similar, so mistakes in certain cases might occur, and the vaccine for one disease be employed to prevent attacks from the other, and the consequent lack of beneficial results might cause the stockman to lose confidence in preventive vaccination, and result in further losses at some future time. There are certain differences between these diseases which are plainly marked, a brief statement of which will probably be of interest to stock-owners. From the fact that the general symptoms of anthrax and blackleg are perhaps common to each disease, and also occur in the case of other diseases, it is not necessary to make note of all the ante-mortem symptoms, but only to call particular attention to such symptoms as are characteristic of each complaint, briefly stating the character of each disease, but laying particular stress on the post-mortem appearances, as it is on these that the chief reliance must be placed. Anthrax, also known as charbon, carbuncular fever and braxy, is one of the most dangerous and infectious diseases of animals, due to the invasion of the tissues by a spore-bearing micro-organism, termed the bacillus of anthrax. Almost all forms of animal life are susceptible to anthrax; it occurs in nearly all parts of the world, and is responsible for large losses among cattle, horses, mules, sheep and goats. Blackleg, also called symptomatic anthrax and quarter evil, is also due to germ infection; the germ of blackleg, however, is entirely different in form and character to the anthrax bacillus. The disease also is strictly an affection of cattle, usually attacking calves or young cattle under eighteen months of age. In rare instances, sheep and goats have been known to contract blackleg; other species of animals, however, such as horses and mules, are not susceptible to blackleg infection. In anthrax, when swellings occur they do not contain pus, nor do they crepitate (have a crackling sound) on passing the hand over them. In blackleg, swellings or tumors are always present; these may be situated either in the fore or hind quarter. They are insensitive to the touch and always crepitate on passing the hand over them. In anthrax, the discharges from the natural openings are streaked with blood. This is not the case in blackleg.

"*Post-mortem of Anthrax Carcass.*—On cutting through the skin, liquid, bloody effusions will be noticeable. The blood is black in color, does not clot or coagulate and remains black on exposure to the air. The linings of the chest and abdominal cavities are dotted with red spots, these being particularly noticeable on the capsules of the kidneys, liver and heart. The muscle tissue readily separates, that of the heart is soft and flabby. The heart is filled with black liquid blood, as also are the large veins leading from it. The most marked changes are noted in the spleen. This organ is swollen from three to five times its normal size, the capsule covering it is loosened and distended with blood, the pulp is soft, semi-liquid in character and dark red in color. The lungs are congested and filled with a watery serum. The carcass becomes cold very slowly.

"*Post-mortem of Blackleg Carcass.*—The skin covering the swellings is mortified; on cutting into the tumor the tissue immediately under the skin is saturated with blood and serum, and swollen by foul-smelling gases, which give the tissues a frothy appearance. The muscles of the affected part are black or dirty brown, streaked with yellow bands of fibrous tissue. They break easily and crepitate on being cut into. By pressing the tissues, turbid blood mixed with bad-smelling gas oozes out. The blood coagulates, and outside of the parts affected by the tumor the muscles appear normal. The

spleen is not affected, appearing to be in normal condition.

"*Marked Differences.*—1. In anthrax the spleen is always enlarged and its contents disintegrated. In blackleg the spleen is not affected in any manner. 2. In anthrax the blood is black, tarry and liquid, does not coagulate or change its color on being exposed to the air. In blackleg, the blood, excepting in the vicinity of the tumor, is normal in color, coagulates and oxidizes (turns red) on exposure to the air. 3. In anthrax, the swellings, when they do occur, do not crepitate or crackle on pressure. In blackleg swellings, this symptom is invariably present. 4. Then, again, anthrax, when it occurs, is seldom confined to one species of animal, but generally attacks horses, mules, cattle, sheep and goats, indiscriminately. Blackleg is usually confined to young cattle, never affects horses or mules, and very rarely sheep and goats."

"Never in any case should a post-mortem be held on an anthrax victim. The risk to the operator is too great.—Ed. F. A.]

Agriculture in the Rural Schools.

In Manitoba, the attempt to teach agriculture in the rural schools has been anything but a success, for reasons which it is not necessary to mention at this time. The Illinois people have tackled the question, and have decided to call upon the school teachers to help stem the tide of emigration of farmer boys to the cities. In some parts of the State it is said that the attendance has fallen off at the country schools in a startling manner, almost threatening their extinction. With the idea of lessening the outgo, an effort will be made to raise the standards of such schools. To provide a practical course of instruction, of real value to boys on farms, the pupils in the rural schools will be asked to answer such questions as the following:

What kind of cattle, horses and sheep are kept in your township? Where, on horses, does a spavin grow? What does knee-sprung mean? What farm, garden and orchard plants will produce only from seeds? Tell what is a day's work at the following: Plowing, cultivating corn, cutting wheat with binders, shocking corn, threshing? How much grain was marketed last year, and how much fed, on your farm? What did the family use, and what was it worth at market price? Describe all the uses of cattle, hogs and sheep, and tell which is the most useful to man, and why? What fruits and vegetables are grown in glass houses for market?

When the boys on the farms run their eyes down such a list of questions, how many can answer every one of them? In case of failure does it appear to be true that the farm is a dull and uninteresting place? If farmers' sons are unable to reply to the questions correctly, what about the city boys, who have an idea that farm life is slow and country people lacking in means of development and progress?

Besides these questions, the schoolboys of the rural districts of Illinois will be asked to set out strawberry plants and observe their growth, and make a collection of leaves from the trees of the neighborhood. They will be asked to write a complete description of some breed of live stock; make a close study of an ear of corn; cut a lemon cross-wise and make drawings of all its parts; plat and write a history of the farm; draw a ground plan of the barn; tell what the farm yields; make a collection of all the seeds and grain grown in the vicinity; examine carefully and identify all the weeds; watch for the first buds and birds, and keep a record of the appearance of each; plant, in pots, lemon and orange seeds, coffee and various nuts, and see if they will grow.

All this course of investigation is to be divided into months, so as not to give the scholars too much to do at once. It is safe to say that some eyes will be opened on the Illinois farms when the boys and girls get to work. Reading, writing, geography and arithmetic will not fall into a slumberous condition with this lively course alongside to quicken the mind.

This will give a practical test as to whether faults in the system of education are responsible for the exodus of the boys from the farms. It would be a fine plan for the farm lads, and the city lads as well, in other States, to try this system of questions on themselves to see how much they really know about important things which are sometimes passed over carelessly.

Summer and Fall Fair Dates.

Edmonton Summer Fair.....	July 1 to 3
Wetaskiwin.....	July 8 and 9
Yorkton.....	July 10 and 11
Calgary.....	July 10 to 13
Glenboro.....	July 16 and 17
Macleod.....	July 17 and 18
Wawanesa.....	July 18
Cypress River.....	July 18
Carberry.....	July 18 and 19
Virden.....	July 18 and 19
Minnedosa.....	July 19
Portage la Prairie.....	July 23 to 25
Brandon.....	July 23 to 25
Carman.....	July 24 and 25
Winnipeg Industrial.....	July 29 to Aug. 2
Wolsley.....	Aug. 5 and 6
Oak River.....	Aug. 6
Neepawa.....	Aug. 6 and 7
Hamiota.....	Aug. 7
Qu'Appelle.....	Aug. 7 and 8
Souris.....	Aug. 7 and 8
Central Assiniboia.....	Aug. 7 and 8
Moosomin.....	Aug. 9
Leominster.....	Aug. 9
Regina.....	Aug. 13 and 14
Emerson.....	Sept. 26 and 27
Hartney.....	Oct. 2
Killamney.....	Oct. 9 and 10

Oak Lake Plowing Match.

The Hood farm, 1 mile north of Oak Lake, was the scene of an extensive jousting between the knights of the plow, June 18. Variety was given to the proceedings by addresses on seasonal agricultural topics by Reeve Chisholm, T. R. Todd, and the Provincial Weed Inspector. Satisfactory work was done, the rewards being made as follows:

Class 1, men's 14-inch walking plow, open—1st, Wm. Croy, Brandon, 83 points; 2nd, Jas. Sutherland, Brandon, 82 points; 3rd, Wm. Turner, Carroll, 81 points; 4th, F. W. Chappel, 48 points.

Class 2, men's 14-inch walking plow, open only to those who had never won a first prize in the Province—1st, E. Allan, 76 points; 2nd, Wm. Guild, 74 points; 3rd, W. A. Crowley, 63 points; 4th, James Gillespie, 50 points.

Class 3, men's 16-inch walking plow, open—1st, Thos. Hill, 74 points; 2nd, John Scott, 70 points.

Class 4, men's 16-inch plow, open to those who had never previously won a prize—1st, W. Reid, 67 points; 2nd, F. Lee, 64 points; 3rd, E. Folton, 63 points; 4th, R. Gilroy, 55 points.

Class 5, gang plow, open—1st, John Goodwin; 74 points; 2nd, Allan Ross, 68 points; 3rd, James Smith, 67 points; 4th, L. Nelles, 66 points; 5th, R. Joynt, 62 points.

Class 6, 14-inch walking plow, open to young men under 20 years of age—1st, Leslie Wisner, 67 points; 2nd, Willie Spiers, 58 points.

Class 7, 14-inch walking plow, open to youths under 16—1st, John Holt, 84 points; 2nd, E. Tomlinson, 70 points; 3rd, W. Jamieson, 64 points.

Special, for best-plowed ridge, for young men under 20—1st, John Holt.

Special, for oldest plowman—1st, Jas. Gillespie.

Several of the contestants are former winners at Provincial and local matches. Holt, the boy winner, is one of the newest importations, and was a winner in competition in Simcoe, Ontario.

Farmers' Excursions.

The soulless nature of corporations has been so eternally harped upon by the press, the politician, and the individual, that it becomes a pleasure to show, to use an old adage, "that the devil is not as black as he is painted." The Canadian Pacific Railway have instituted a series of excursions to the Experimental Farm at Brandon, because they are confident that such an outing will broaden the visitor's mind, and, in the case of the farmer, make him a more skilful, and therefore larger, producer. That the railroad company is animated by the best of intentions is evident from the fare to be charged, which is a low one. We can cite additional facts to prove our point, such as the free distribution of stud males (a move of which we did not approve), the cheap rates given on pure-breds, an advantage much envied by our brother stockmen to the south. Every consideration has been shown by the railroad in the transportation of exhibits to fairs, and in the prize lists of our big fairs, so that we may take it as assured that the company is as much interested as anyone in building up the country. Whereas in Ontario the initiative in starting excursions to the O. A. C., Guelph, was taken by the Institutes, here the matter is being pushed by the wide-awake officials of the C. P. R. None of us may see eye to eye with every move made by the management of the company, but, at any rate, let us give credit where credit is due, and render unto Caesar the things that are Caesar's. The inauguration of farmers' excursions, which the ADVOCATE has persistently preached for years, will render our people better acquainted with the important work going on at the Brandon Farm. While the reports of the Farm are interesting reading, and deserve more thorough study than they get, yet seeing is believing, and we are of the opinion that the excursions will become more popular as time goes on.

Plowing and Plows.

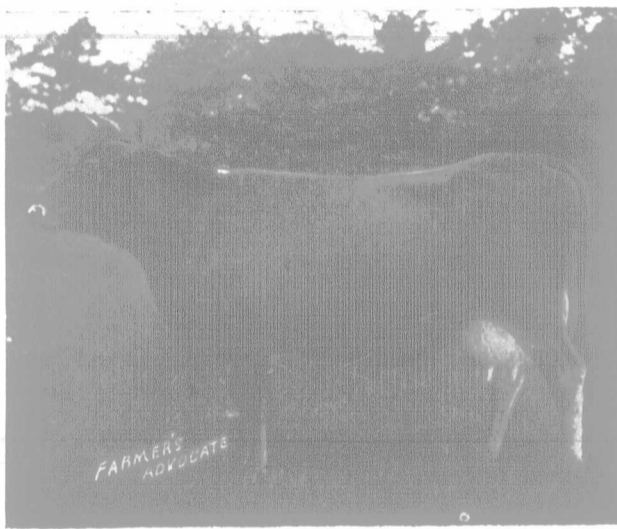
Care of the Plow.—All practical men know how essential it is that the polished portions of the plow—the landside, the moldboard and share—should be kept perfectly bright, thereby lessening the draft and the tendency to clog up. Whenever a plow is laid by, its bright surfaces should be cleaned, wiped dry, and coated with some thick mineral lubricant, such as is used for journal bearings, and by this means prevent rusting. Plows do not differ from other machinery. They all tend to wear out if used at all. The share becomes dull and too short, consequently the plow tends to run on its point. It becomes more difficult to hold, the draft also becomes heavier, and an inferior class of work is done. It is sometimes necessary to change the form of the share to suit a harder or mellower soil. When the ground is hard the wing of the share needs to be set down, and the point also. When, however, the land is wet and mellow, the wing and point will need to be set up more, or it will draw too deeply into the ground.

A useful attachment to the plow is the jointer (a miniature plow), or skimmer, as we have heard it termed. When a large amount of material is to be turned under, such as long stubble, coarse manure, or long weeds, this attachment will be found a great aid to the performance of good work. The use of the drag chain, one end attached to the plow beam, the other end behind the moldboard, will be found to be useful in getting the weeds thoroughly covered.

The Farm Well.

How often we hear that a certain farm is an extra good stock farm, either because of running water or an inexhaustible well. In many places the location of the buildings depends on the location of the water supply. There are certain essential features of a good well: (1) Ample capacity to supply pure, clear, cold water; (2) a location which renders it not likely to be contaminated by seepage from surface impurities; (3) a casing or curbing which is verminproof at the top, and, if possible, waterproof in its upper ten or twenty feet. The capacity of a well should, if possible, be much greater than the probable demands which will be put upon it; it should not be possible to pump the well dry with an ordinary pump.

With the ordinary domestic pump about thirty strokes are made per minute, enabling one to fill a pail of twenty to twenty-four pounds; at this rate about seven and a half gallons would be pumped every three minutes. A good well should be able to keep this rate up for several hours. As the domestic animals require for every 1,000 pounds weight about a cubic foot (7.5 gallons) a day, the stock-carrying capacity of a farm can be gauged to some extent by the water supply. Generally speaking, the greater the depth the greater the capacity of the well, provided the water-bearing strata has been touched. From experiments made, an increase in the diameter of a well has little effect on its capacity, therefore in most wells little is gained by making them larger in diameter than would be necessary to allow space for the pump. As before mentioned, an important feature of every well, where the water is intended for domestic or stock use, is a sufficient depth to prevent the quick entrance of water from the surface, and to maintain a constant low temperature. The depth should usually exceed twenty feet (for reasons which we shall state later), and even when water is found nearer the surface than this, it is better, if the water-bearing strata will permit, to go thirty feet, and place the pump so as to draw from the



JERSEY HEIFER, GUL BAHAR 147713.
Calved Nov. 7th, 1899. Daughter of Primrose Park's Prude, now in Pan-American Dairy Test.
OWNED BY W. J. CRAIG. (SEE GOSSIP, PAGE 418.)

bottom where the water is the coolest and freshest. Before ground water becomes fit to drink it needs to go through a depth of soil, practically filtering, and time to bring about changes in it by which it becomes free of organic matter. In the analyses of well waters its fitness for potable purposes depends mainly on the absence of organic matter. The temperature of well water becomes of considerable importance on those farms where well water is used for the deep-setting milk or cream cans. The geologists and soil physicists tell us that the zone of the lowest ground temperature is generally from twenty to seventy feet below the surface, and between these depths the coldest waters are procured. Above twenty feet the waters will be colder in winter and warmer in summer, while below the extreme depth (seventy feet) the water generally becomes warmer from the internal heat of the earth.

The well curbing is of importance, because if properly put in and of good material vermin will be totally excluded. An authority on such matters recommends a six-inch lap-weld steam pipe; if galvanized, all the better. A curbing of cement tile (somewhat similar to what is recommended for road culverts by Ontario Road Commissioner Campbell), or glazed sewer tile, with the joints set in cement, ranks next in utility to the metal (steel) piping. If the well is to be curbed with brick or stone, the upper ten feet should be laid in cement and plastered on the back to keep out the surface water and vermin. At the top of the well the curbing should be carried up fifteen or eighteen inches above the surrounding surface, the earth being graded up to it so as to secure perfect and quick removal of the surface water.

"Why do ducks put their heads in the water? For divers reasons. Why do they take them out? For sundry reasons. Why do they put them in again? To liquidate their little bills. Why do they take them out again? To make a run on the banks."—Exchange.

Col. Dent's Horse-Purchasing Tour.

So far as Manitoba is concerned, she has not benefited a particle by the Colonel's tour, the fault resting with our own people. Lt.-Col. Dent states that the Horse Breeders' Association was notified six weeks previous to the time of his visit, yet, so far as we can learn, no move had been made to get people to bring out likely horses. The impression given the British officer was bad, and the efforts of the late president of the H. B. A. were nullified by the apathy shown. In striking contrast with the apathy shown in Manitoba is the energy exhibited by the Territorial Horse Breeders' Association, which has persistently hammered at the remount question, for which, as we learn at the time of writing, they are undoubtedly reaping their reward. (We learn that Lt.-Col. Dent has purchased away up into the hundreds of horses from our ranchmen.) If the Manitoba Horse Breeders' Association is to attain to a state of usefulness at least sufficient to justify its existence, more energy will need to be enthused into it. With a grant of \$200 annually, surely the Association could afford to do some rustling with a view to getting some horses to come under the ken of the Remount Officer at such places as Brandon, Portage la Prairie, and Winnipeg. At the present time, what advertising is done is done by private parties. We understand that Col. Dent will stop off at the places mentioned if a reasonable number of horses are gathered together there. The June 5th issue of the ADVOCATE will give any person an idea of the kind of horses required, and a few hints as to how to fit them for inspection. The inspecting officer of the Manitoba Mounted Volunteers, Lt.-Col. Evans, is of the opinion, judging from the horses brought to the camps, that quite a number of suitable horses could be procured in Manitoba. As is well known, the opinion of such an authority as Col. Evans carries considerable weight, and will tend to dismiss the contention of some, that no horses suitable for army purposes are to be found in Manitoba. From amongst the get of the numerous Coach, Standard-bred and Thoroughbred sires that have stood in Manitoba, there doubtless could be many picked out suitable for Col. Dent's purpose. We recapitulate a description of the types required: Infantry, 14.2 to 15.1; cavalry, from 15.1 to 15.2; artillery, 15.1 to 15.3. The ages eligible are 5 to 9 years, although well-matured 4-year-olds have also been taken. The prices vary all the way from \$85 to \$120. *Horsemen, don't neglect this opportunity!*

Food Rations for Bacon Pigs.

The production of the bacon hog has been a very profitable undertaking to the farmer of late, in spite of the fact that "soft pork" is sometimes a result of his work. Many people differ as to their methods of feeding. An Irish contemporary comes out as follows on the feeding of bacon hogs:

"When being finished for the market, bacon pigs should be fed principally upon crushed grain or meals of various kinds. As the finishing stage is being reached, the allowance of soft foods should be restricted and the proportion of grain gradually increased. A few potatoes may be given with advantage, but the quantity of these must not be so large as during the earlier stages of feeding. Of all single foods, perhaps that best adapted for bacon production is barley meal, though even better results may be obtained from a combination of this and other grains than by its free use by itself. A capital combination of grain foods for use where the best quality of bacon is aimed at consists of three parts barley meal, two parts crushed oats and two parts corn, with perhaps a pinch of pea or bean meal thrown in. Made into a mash either with water or separated milk, this mixture will be found a first-rate bacon-producing food. Though this makes an ideal ration, it does not follow that it is one that can always be most advantageously employed. Where the feeder grows potatoes and oats on his own farm, and is located within reasonable distance, he will find it very difficult to make as much money with any combination of purchased foods as he can realize by a judicious mixture of cooked potatoes, crushed oats and separated milk. Both as regards the quantity and quality of the bacon produced, our experience is that this combination is very difficult to improve upon."

Horticultural Convention.

The Western Horticultural Society will take advantage of the presence of so many representative men from all parts of the Province, by holding a convention during the Winnipeg Industrial Exhibition. There will probably be many members of the Society in the city at that time who have not been able to attend the winter conventions of the Society, and the occasion seems opportune for such a gathering. The convention will meet on the Exhibition grounds, on the 1st August, at 1 o'clock p.m. The session will be short, so as not to interfere with the other events of the day.

Short speeches will be given by Professor S. B. Green, of the Minnesota State Agricultural College; Superintendents Bedford and McKay, of the Brandon and Indian Head Experimental Farms; Professor Baird, President of the Society; Hugh McKellar, of the Department of Agriculture, and others. All interested in gardening or fruit growing should plan their visit to the Industrial so as to include this convention. Programmes may be secured by writing to the Secretary of the Western Horticultural Society, M. Bartlett, Department of Agriculture, Winnipeg.

Free Transportation of Exhibits to Winnipeg Exhibition.

The Canadian Pacific Railway and the other local railroads have always been most generous in their treatment of the transportation of exhibits to the leading fairs in the West. Realizing the importance of the Winnipeg Industrial as a means of developing and advertising the resources of the country, what has practically amounted to free transportation of all exhibits to and from the Exhibition has for several years been in force. This year, however, the railroad company considered that the limit had been reached and a change must be made, so a rate of 40 per cent. of one-way fare was fixed. The Winnipeg Industrial, however, with the usual enterprise of its management, decided, in view of the shortage of ready money in the country consequent upon last season's crop failure, to assume the transportation charges on all exhibits to their great summer fair. The details of the arrangement will be similar to previous years, the exhibitor paying one-way fare to the exhibition, 60 per cent. of which the railway companies refund when the exhibits are reshipped without change to original shipping point, and the Winnipeg Industrial will pay the other 40 per cent., thus making free transportation for the exhibitor. The boon will certainly be appreciated, especially by livestock exhibitors. The exact wording of the resolution passed by the Exhibition Board is as follows:

"That the Association undertake the payment of the inward freight charges on exhibits from the last shipping point, provided that such exhibits are returned to the original shipping point immediately after the fair without ownership changing hands. The committee, in recommending this, wish it to be distinctly understood that it is not to be a precedent, but that it is being done this year owing to the partial failure of last year's crop, and the consequent shortage of money amongst exhibitors."

Work is progressing satisfactorily at the exhibition grounds, and preparations are being made for a very large entry in nearly every department. Horsemen will be pleased to learn that improvements have been made in the ventilation of the boxes for stallions and brood mares. Three of the old cow barns with the elevated passages down the center are being remodeled on the plan of the modern barn. This change has long been desired by the exhibitors, and it is only to be regretted that all the five stables could not have been altered this year.

The new building for the buttermaking competition has been completed, and promises to answer the purpose nicely. There should be a good big competition among the young men and women in this department.

A very handsomely-gotten-up programme of attractions has been printed, and will be mailed to all applicants. It is profusely illustrated, not only with the leading features of the attractions, but with views of the City of Winnipeg. The letter-press contains a most succinct history of the birth and development of the City of Winnipeg.

The Care of the Stud Bull.

It is an old saying that the bull is half the herd, and yet, judging by the care often given that animal, we should assume that his value must have decreased in the eyes of his owner. For the scrub bull we make no plea, except that he should be steered at the earliest possible moment. It may be assumed that the care given should be with a view to keep the bull up to the top notch as a calf-getter. Two extremes need to be avoided, viz., keeping a bull in a dark cell, or turning a young bull loose with a large herd of females. In the first case he may become vicious; in the second, exhaustion of the bull's sexual powers ensues, and the calf crop becomes a partial or complete failure.

The food rations given to the bulls kept for service at the Ontario Agricultural College consists of chaffed hay, with about fifteen pounds of roots and from four to six pounds of meal per day, according to the size of the animals and the amount of service performed by them. The meal mixture consists of about four parts of ground oats to one part of bran. The amount of hay is restricted to about fifteen pounds per day, as it is found that some of the old bulls would eat more of it than is good for them if allowed all they will take. This method of feeding has been employed for several years at the College, and has been found to give very good results, the bulls kept upon it being active and reasonably sure, and carrying a sufficiency of flesh for breeding animals. In all cases, single, or, at the most, two services only should be allowed a cow during the same heat; more than that are wasteful of the bull's energies, and serve no good purpose. A strong staff for leading the bull is essential, and may tend to prevent accidents.

Summer-fallowing.

I have been interested in recent articles in the *ADVOCATE* on summer-fallowing. For my part, I have found the following plan to give satisfaction. Our soil is mostly light sandy loam, rich in nitrogen. I plow deeply, as early in season as possible. After two weeks cultivate with a Massey-Harris cultivator as deep as the land was plowed, then surface cultivate as much and as often as the growth of weeds requires. This treatment destroys weeds, airs the soil, and produces a solid, compact bed, so necessary for the growth of wheat.

East Assa.

W. H. BALL.

Canning and Preserving Time.

The realization by the young woman of to-day that the various branches of housework require the use of the brains, making such work scientific, will do much to remove the chafing at the home life and the longing for the counter, the factory or the desk. In the canning of fruit, success depends on a knowledge of chemistry and fungi, a statement which will be found to be backed up by the assertions of America's greatest woman authority on domestic science, Mrs. Rorer:

The term canning refers to vegetables and fruits sterilized and hermetically sealed in tin cans, glass jars or bottles. The word preserving refers to fruits put in a thick syrup made from sugar and water, and kept in ordinary tumblers or jars.

Fruits are much more easily canned than vegetables. There are constantly floating about us in the air a great variety of wild yeast plants, together with the bacteria. If a single plant or the bud of a plant alights in a favorable place, as on the under side of the lid or at the edge of the jar before the lid is fastened down, it is quite sufficient to cause fermentation in a can of corn or peas or in any materials containing sugar. The generic name of the yeast plant is *saccharomyces*, which really means a plant living on sugar or needing sugar for its proper development. For this reason, fruits canned with sugar are much more liable to fermentation than those simply canned in water.

ALL PRESERVING POWDERS ARE INJURIOUS.

To be successful with both fruits and vegetables, surgical or absolute cleanliness must be observed. This does not mean simply washing and wiping the cans; it means to have them absolutely sterile, sufficiently heated to kill anything that may fall into or upon them from the air. To be still more explicit: If the vegetables have been cooked in the jars, and you have neglected to adjust the rubbers previous to cooking, and you put on the rubbers after taking the jars from the boiler or sterilizer, there may be, perhaps, millions of microscopic plants on one rubber; and in a few days the whole can will be filled with fermentation. Washing or wiping the rubber would in no way prevent it; it must be heated sufficiently to kill any germs that are fastened to it. New rubbers are necessary each year.

Another word of caution will, perhaps, be wise. All preserving powders, no matter under what name they are sold, are more or less injurious to digestion. Common sense teaches that a material that will prevent the life of a plant, or kill a plant, and prevent all fermentation, will naturally also prevent perfect digestion. These preparations are not wholesome. Better do without canned vegetables in the winter than to risk one's health.

FRUITS AND VEGETABLES MUST BE FRESH.

The process of canning different fruits varies but little. Select perfectly sound and fresh fruits, and they may be canned with or without sugar. Sugar takes no part whatever in their preservation, and frequently causes fermentation. All fruits should be lightly cooked, that they may retain their natural flavor. It is wise to fill the jars to overflowing. As the liquid cools, it will condense, leaving a space at the top of the jar.

Wash the jars, rubbers and tops; adjust the rubbers on the jars. Throw the tops into cold water, and bring slowly to boiling point, and allow them to stand in this boiling water until you are ready to use them. They must be thoroughly covered with water. Twirl the jars also in boiling water. Be sure that you plunge the whole jar down, filling it entirely, or it will crack. Look over the fruit very carefully, wash, put into the jars, adjust the rubbers, stand the jars in a wash-boiler, the bottom of which has been protected with a rack or strips of wood. Surround the jars partly with cold water, put on the lids loosely, but do not fasten them down. Cover the boiler, and bring to boiling point. Boil the small fruits ten minutes after they begin to boil. You may now fill two jars from a third, to allow for the condensation.

KEEP PRESERVES AND JELLIES IN A DARK PLACE.

Lift the jars one at a time and fasten the tops. Wipe each jar off immediately and stand it in a cool place over night. Next morning, if you have screw tops, give each one an extra turn; if not, they will be sufficiently fastened. Wipe them off and put them in a cool, dark closet for keeping. It is a question whether or not light affects fruits. Personal experience has proven to me that it does not make much difference whether fruit is kept in the light or the dark. I have kept quantities of fruit in the sunlight all summer, and have had them in perfect condition next year. I have, however, noticed that the flavor is not so true after they have been standing in the sun. For this reason I recommend the dark.

Large fruits, such as peaches and pears, should be packed in the jars, the jars filled with cold water, the rubbers adjusted, the jars placed in the boiler with the same amount of water as before, and the lids placed loosely on top, the boiler covered, and the cooking continued for 15 minutes after the water has reached the boiling point.

WHERE SUGAR IS USED IN CANNING.

Where sugar is used at the time of canning, and the materials are cooked in a porcelain-lined kettle, the following rules should be closely observed: The jars must be washed, plunged into scalding water and rolled around quickly; the lids put into cold water, brought to boiling point and kept there; the

rubbers adjusted; the jars filled one at a time and fastened. Each jar should be placed, to prevent breakage, on a folded damp towel in a plate or pie dish. A wide-mouthed funnel will facilitate matters very much. The jars should be filled to overflowing, and the tops fastened down. There is no advantage whatever in having a press of any sort in the top of the jar. It is not necessary that the fruit should be under the liquor. Fruits that will mould outside of the liquor in a jar are not sterile, are unwholesome, and have been carelessly canned.

CURRENTS AND RASPBERRIES.

To each full quart of large red raspberries allow half a pint of currant juice and half a pound of sugar. Put the berries into a porcelain-lined kettle—a layer of berries and a layer of sugar; pour over the currant juice. Bring the fruit slowly to boiling point, skim, and fill into the cans.

PLUMS.

The following recipe will answer for Gages and all sorts of plums. Where sugar is used, allow half a pound to every pound of plums. Wash the plums; stick them carefully with a large pin, to prevent the skin from cracking; weigh. Put a layer of sugar and a layer of plums into a porcelain-lined kettle, having not more than four layers of plums. Let them stand for an hour or two on the table, then put them over a moderate fire; bring very slowly to boiling point, skim, and fill into the jars as directed. There is always a great deal of surplus juice in canning plums and small fruits, and this may be put aside to boil down for jelly.

CANNING OF VEGETABLES.

All vegetables are better when cooked in the jars; in fact, I doubt if anyone can cook corn or peas in a kettle and put them into jars and have them keep. See that the jars are washed thoroughly, the rubbers adjusted, the lids put into cold water and brought to boiling point. Corn must be freshly gathered, cut from the cob as soon as possible, packed into the jars, the rubbers adjusted, the tops put on loosely. Stand the jars in a wash-boiler, the bottom of which has been protected with a rack or strips of wood. Surround them partly with cold water, cover the boiler, bring to boiling point, and boil continuously for four hours. Lift one jar at a time, and fasten on the top at once.

PEAS.

Select very young peas, before the starch is developed. Shell them, pack them in the jars, fill the jars with cold water, adjust the rubbers, put on the tops loosely; surround them with cold water, bring to boiling point, and boil for three hours after they begin to boil.

Young Lima beans, string beans, beets, small turnips and carrots may be canned in precisely the same way, allowing three hours for the young Lima beans, and an hour and a half for each of the other vegetables.

ASPARAGUS.

Wash the asparagus, throw it into boiling water, and boil rapidly for ten minutes. Put it into the jars heads up. Fill the jars with cold water, adjust the rubbers, and cook for one hour and a half. Fasten as directed in the directions for canning fruit.

TO CAN TOMATOES WHOLE FOR SALAD.

Select plump, small, round tomatoes. Scald them by putting them into a wire basket and plunging them down once or twice in boiling water. Remove the skins and put the tomatoes into the jars. Add a teaspoonful of salt; fill the jars with cold water; adjust the rubbers; put the jars in the boiler as directed in preceding recipes; boil for ten minutes after they reach the boiling point.

Tomatoes, being acid, should be peeled, stewed in a porcelain-lined kettle, and filled into the jars through a wide-mouthed funnel, as directed for fruits. Tomatoes are the most easily kept of all vegetables.

TO PRESERVE PEACHES.

pare them and remove the stones. Throw the peaches into cold water, to prevent discoloration. When you have sufficient to cover the bottom of a porcelain-lined kettle, weigh, and to each pound allow two-thirds of a pound of sugar. Put the sugar into the kettle; on top of it the peaches. Stand over a slow fire until they reach the boiling point, then cook gently until they are transparent. Lift them carefully and put them into tumblers or jars. Boil down the syrup, cover over, and seal.

All fruits may be preserved in the same fashion, using from half a pound to one pound of sugar, according to the fruit.

HOW FRUIT JELLIES ARE MADE.

Many fruit juices do not contain sufficient pectose to easily form jelly. In fact, there are only a very few fruits that will make jelly without the use of sugar. There is no reason, however, why jellies should always be made a pound of sugar to a pound of fruit. Quinces and currants, as well as the ordinary crab-apple, cranberry and green grapes, are much better where only half a pound of sugar is allowed to a pint of juice. Blackberries just a little underripe make jelly quickly and easily, allowing half a pint of sugar to each pint of juice. Small fruits, as blackberries, raspberries and currants, may simply be mashed and drained over night. Measure the syrup, bring to boiling point; skim, add the sugar, and boil rapidly until it jellies. This will sometimes take twenty minutes, at other times only a few minutes. There is no "royal road" to jelly-making, and the housewife must learn to test for the jelling point. After the mixture has boiled for

five minutes, take a teaspoonful out and put it into a saucer; stand it to cool; and if, when you scrape it up from the saucer, it sort of wrinkles and forms a jelly, it is ready to put into tumblers. It will sometimes harden and drop as you hold the spoon in the air. When it drops with a short spring it is jelly. If you boil it beyond that point it will "rope" or spin a threadlike syrup, and never again will go back to the jelling point. When jelly is syrupy it has been boiled too long.

APPLE JELLY.

Quarter and core the apples. Do not pare them. Put them into a porcelain-lined kettle; cover with cold water, and bring to boiling point; turn into a jelly-bag, and drain over night. Next morning measure the juice, allowing three-quarters of a pound of sugar to each pint of apple juice. Boil the juice for about ten minutes; add the sugar; boil for ten minutes longer; skim and pour into jelly-glasses.

After tumblers have been filled with jelly, cover them over with an ordinary piece of glass. This will prevent the dust in the air from settling on the jelly. Next morning, after the jelly has cooled, cover the tumblers with tissue paper or ordinary tops, and put at once into a closet. If the jelly seems too thin, cover it with glass and stand it in the sun for a day or two until it thickens.—*Ladies' Home Journal.*

Cream Ripening in Hot Weather.

Churning and the quality of the butter are influenced to a great extent by the ripeness of the cream. In very warm weather in summer a difficulty is often experienced in preventing cream from ripening too rapidly. Where only a small quantity of milk is being dealt with, and where churning takes place only twice a week, it may often be found advisable to hold over the cream a few days before being churned, and when cream is being thus kept over, it is often very difficult in very warm weather to keep it from becoming overripe ere the quantity required for a churning has been gathered. In cases of this kind, a check may be given to the ripening of the cream by the addition of a little salt. Immersing the cream in cold water, and thus lowering its temperature, is, of course, the most natural method to pursue in cases of this kind, but it very often happens that it is not convenient to employ cold water for this purpose, and in such cases the addition of a pinch of salt to the cream may be employed with advantage.

The Plowing Match at Bird's Hill.

In spite of the opposition of the elements, necessitating a change of arrangements, the competition came off on June 13th, under the auspices of the Farmers' Institute of the locality. The attendance was good, the interest evinced keen, and the victuals first-class, so that enjoyment was a feature of the whole proceedings. Messrs. G. Studham and Hector Lord placed the awards, which were as follows:

Veterans (40 years and over)—1, Geo. White, Sunnyside; 2, S. Mizen, Springfield; 3, Wm. Knipe, Springfield.

Men under 40—1, B. Studham, Sunnyside; 2, John Henderson, Springfield; 3, H. Smith, Sunnyside.

Boys under 18—1, F. Patterson, Springfield; 2, John Hodinott, St. Paul's; 3, H. Bushel, St. Paul's.

Gang plows—1, Wm. Gunn, Springfield; 2, D. Henderson, Springfield; 3, John Campbell, Springfield.

Andrew Garvey secured the prize for the best plow team.

The Argentine Embargo Against all Countries.

SIR,—As we have a regular correspondent in Buenos Aires, we are from time to time kept more or less informed as to what is transpiring there in live-stock matters, and recently the party who acts for us there has been trying to induce us to make further shipments of Shorthorn cattle and Shropshire sheep to that country. Though considering the matter, we at the same time were not very much inclined to do so, for the fact that the two former shipments that we made there proved so very disastrous. However, we may say that for the present at least we need not further consider the matter, as we to-day (June 15th) have a letter from Buenos Aires, dated May 10th, in which it is stated that the Government of that country passed a law on the previous day prohibiting the importation of cattle, sheep and swine for a term of six months at least, but our letter further states that this embargo may be extended indefinitely, and the embargo is against all countries, so that we as well as all others are shut out for the time being.

W. C. EDWARDS & Co.

Diarrhea in Foals.

A sick foal is recognized as a very delicate animal to deal with, and when grass is plentiful and the dam is a good milker, attacks of diarrhea are by no means rare. In such cases it is no bad plan to draw off considerable of the dam's milk several times a day, so that the youngster will not become gorged and its digestion put wrong. Even with this and other precautions, cases of diarrhea will occur, and for which the safest dose to give is from 2 to 3 ounces of castor oil administered on an empty stomach, and followed for some days by small doses of dried extract of malt, mixed with a little milk drawn from the dam.

Blyth Plowing Match.

The sixth annual plowing match under the auspices of the Blyth Farmers' Institute took place on June 21st, on Mr. Tully Elder's farm, twelve miles south-east of Brandon. Notwithstanding a furious rain storm the previous evening, which deterred many from a distance from coming, thirty-seven contestants entered the lists, and all classes except the 3-horse 16- or 18-inch walking or riding plow and the boys' class were well represented, and the keenest competition prevailed. Among champions from Alexander, Hamiota, Bagot and Portage la Prairie, John Holt, Thos. Yuill and Wm. Rogers distinguished themselves in their respective classes, the first two winning first and second prizes. The field was admirably suited for the purposes of the match, and the texture and condition of the soil exceptionally favorable to the accomplishment of high-class work, while the cool weather was all that could be desired to favor man and beast in doing their best. From such favorable circumstances, high expectations were entertained that the work would be fully equal to, if not surpass, that of any previous match. But it must be admitted that of the work as a whole these anticipations were hardly realized, although a consensus of opinion would readily class the general work as good. In the various classes a few cases, but more conspicuously in the 14-in. men's and young men's, and 14-in. walking plow, and in the 14-in. gang-plow classes, the work was of very high merit and has hardly been excelled in the past, Jas. Sutherland (2nd at Oak Lake) re-winning the championship and winning sweepstakes by work of eminent merit, with a score of 89, finishing 4th with a 10-in. furrow. Wm. Guild (also 2nd at Oak Lake in class open to competitors who have never won 1st honors), although showing less style and finish than the champion, showed real excellence in all essential points of first-class plowing and came perilously near to first place by a score of 87. At the noon forecast, Sutherland, Stott and Guild were a promising trio for foremost honors. Tory, who largely failed with his crown, was a probable 4th, showing as he did excellent and admirable work in straightness and weed-covering. As the afternoon wore on, each furrow turned sent him forging ahead until his place in the foremost group was no longer doubtful, securing, with a score of 81, third place, a unique case on the field of turning comparative failure into signal triumph, and meriting high commendation. Fourth place was won by John Stott (1st in 16-in. class at Oak Lake), with a score of 80, losing 3rd by only a single point. In the 16-in. class his score would have earned him a tie for first honors, and his invariable capital work a high chance of winning the championship. Wm. Rogers, Bagot, and W. Turner, Carroll, followed, with scores of 79 and 70, respectively, both doing good work. In the 16-in. walking-plow class of six there was the keenest competitive work, W. Croy, Wm. Elder, Russell Tran and Harry Payne all showing very good work, John Bain, with otherwise excellent work, marring his chance for a foremost place by an exceptionally high crown. In the finals, W. Croy (champion at Oak Lake) distanced all others with a score of 80. A rigid and impartial enforcement of weed-pulling rules made a reduction of this score to 77, and the fourth place of honor in the class. Willis Elder and Russell Tran, with 80 of a score, tied for first place, the result ending in Tran getting the 1st and Elder the 2nd place, Harry Payne, with capital work and a score of 79, winning 3rd place; ex-Champion Thos. Hill and John Bain followed, with scores of 76 and 71, respectively, gaining 5th and 6th prize. Of the five competitors in the young men's class, Bain Elder ranked first at noon, Geo. Elder 2nd; the 3rd place lay between Sam. Maher and Allan Tran. The finish gave Tran 3rd place by two points, the first two maintaining their position from start to finish, with scores of 79 and 71, respectively, Bain Elder distinguishing himself for his level and excellent crown and fine finish, winning J. W. Fleming's medal for best crown and finish on the field. Geo. Elder was rather unfortunate with his crown, but in other points upheld his record for capital work. Allan Tran, last year's champion, although pressing closely for 2nd place, failed in doing his best, which was considerably below his excellent work of last year. Sam. Maher has very much improved and will likely be a formidable rival in next year's contest. In the boys' class, John Holt (Alexander), the Simcoe Co. boy champion plow, did admirable work, excelling in straightness and crown, winning a close 1st by a score of 73 points, against a good 2nd by Allan Leslie, with 72; Andrew Charleson was 3rd, with a score of 59, which would have been higher but for his high crown. Of the work as a whole, in the walking plow classes, two prominent characteristics which interfered with the quality of the work was the unusually large number of high crowns and deep, trenchy finishes, a few lacking completeness and effective finish in being turned from instead of against the crown. The most admirable work was done in covering weeds, width of furrow, evenness of top, straightness, in and out at ends, and other points where distinct excellence was attained.

Coming to the work of the gang plows, the crowns excelled in levelness, but otherwise were not remarkable for any special excellence either in straightness or artistic formation. There have been finer finishes, too, but, taking the work all in all, it has rarely been equalled, and the splendid work done by ex-Champion James Ross, Wawanesa;

Thos. Yuill, Portage-la Prairie; Young Johnston, of Chater, and L. Nelles, North Brandon, commanded the warmest admiration of the interested spectators, one capable and enthusiastic admirer expressing his conviction as to the foremost "that it beat the world." Up till noon the struggle for first place lay between the Wawanesa and the Portage champions; in most points they were about equal. Young Johnston (2nd in last year's match in 12-in. class) was in the arena with a more successful crown than either, while he was their equal in weed-covering and straightness, and promised to be a formidable disputant for first honors. The progress of the contest was watched with the keenest interest, and in the final rounds he became the popular favorite, receiving the hearty cheers of his admirers as he made a capital finish with a 14 in. furrow and the highest score ever made in that class, as the champion and winner of the Massey-Harris splendid prize, \$40 gang plow, and the Nation & Shewan championship \$15 cup. He merits hearty congratulations. Thos. Yuill won 2nd place, with 86 of a score, doing excellent work. Jas. Ross, who did some of his best work, failed for 2nd place by one half point, Nelles following close with admirable work, with 82 points. D. Foster secured 5th prize, with 82 points. The excellent work done in this class is destined to be of a high educational value in working out the admittedly difficult problem of successful agriculture. The other prizemen who took part in this class were Allen E. Ross (Hamiota), Melville Roddick (Brandon Hills), W. I. Elder (Routhwaite) and Geo. Whiting (Wawanesa). The work in the 3-horse 12-inch gangs was in most points inferior to that done by the 14-in. gangs. This was particularly noticeable in effective weed-covering, which perhaps was never so trying and difficult before, the growth of peppergrass taxing the skill and ingenuity of the plowers to the utmost in all classes. W. E. Lawson (Hayfield), and Frank Elder did the best work in this class, their scores being 76 and 73, respectively; W. Aitchison (Methven) taking 3rd and Fred Wells (Alexander) 4th place, Johnston McPherson (Brandon Hills) making a creditable first start with a score of 54. John Mayhew (Wawanesa) did capital work with the Canton Diamond sulky, scoring 79 points, not equalling, however, his almost perfect work of last year.

As the first match conducted under the revised score-card, with wise and necessary rules for the fair and impartial conduct and successful development of the work, the management deserve unstinted praise for the gratifying and encouraging success which has crowned their efforts.

Numerous city friends and supporters of the match were present, evincing their interest in the work done, while from a distance, Mr. Verity (the plow manufacturer, Ontario), Hugh McKellar, R. H. O'Malley, Dr. Hopkins (of the FARMER'S ADVOCATE, Winnipeg), Dolmage & R. W. Currie (Souris), D. Watson & Merritt (managers Massey-Harris Co.), G. H. Smith (Inglis), Nelson & Smith (Brandon), and others, were keenly interested spectators.

Hugh McKellar, R. H. O. Miller, and Dr. Hopkins, of the ADVOCATE, Winnipeg, delivered interesting and instructive addresses at the close, after which the numerous and splendid prizes were distributed to the winners.

Allan E. Ross, Melville Roddick, Thos. Yuill, Jas. Ross, H. M. Johnston, D. Foster, L. Nelles, Will Elder, George Whiting, Johnston McPherson, Fred. Wells, John Torry, John C. Noble, W. Rogers, John Stott, James Sutherland, W. Turner, George Boles, W. Guild, W. E. Lawson, W. Aitchison, Frank Elder, Tom Hill, W. I. Elder, John Bain, Russell Tran, Harry Payne, W. Croy, John Mayhew, Geo. Elder, Bain Elder, Harry Graham, Allan Tran, Sam. Maher, Allan Leslie, John Holt and Andrew Charlson were the competitors in the match. For prizewinners and scores, see Gossip, page 473.

Care of Working Horses.

The education of a colt should begin from the first day of its life. It should be caught and held by placing one arm in front and one behind him. Never strike a colt or do anything to cause it to fear you. Show him your power over him, and he will soon become obedient. When teaching him to lead, put a strap around him in front of the hind legs, and fasten a rope to this, passing the rope through the halter ring. Then lead him up to you and pat him. When the colt grows up and becomes accustomed to being led, place him with an older horse and teach him to drive. He should be hitched to an old cart or something which makes a slight noise, and then he will not be afraid when hitched to a wagon or machinery. When he has reached three years of age he can be relied upon to do a good day's work. He should be worked moderately at first.

One important thing in working horses is to have a perfect-fitting harness. Not one farmer in a dozen has such harness for his horses. Use leather collars, and always buy one that fits when drawn up to the last hole, so that it can be let out as the neck grows. Always wet a new collar before using it, and then when it becomes dry it will keep the right shape. Have a collar for each horse, and see that every horse has its own collar. If collars are dampened occasionally they are easier to the horse. Cloth pads are not good, as they absorb the perspiration, and are not easily cleaned. Thick pads should not be used, as they spread the collars and throw the draft further from the shoulders. If these methods are used, people, as well as the horses, would have much easier times.

J. R. B.

Tuberculin Test -- Sources of Fallacy.

On page eight of the *Jersey Advocate and Dairyman* for May 22, 1901, is an account of a tuberculin test made on a herd of seventy-six Jerseys. In writing of this test, the owner of the herd said: "Of the whole number, only three reacted, and they were the thriftiest and healthiest looking cows in my herd. Not one of these showed any symptoms of disease of any kind--no cough. One had a calf two months old; the other two were due to calve in two months."

Now, tuberculin consists of the concentrated, sterilized liquids in which the bacillus tuberculosis has been grown. It consists of *chemical poisons* which the bacillus secretes or manufactures. Having no living germ, it cannot increase its own substance, nor can it cause tuberculosis in a healthy system, as it is soon thrown out of the body through the kidneys; yet, none the less, it is the immediate agent through which all the destructive work of tuberculosis is carried on.

The explanation of the reaction under tuberculin may be very simply stated. The dose is made so small that it will not affect a healthy cow under ordinary conditions. In the slightly diseased cow the system contains a certain amount of tuberculin produced by the bacillus, but to this the system has become accustomed, and it causes no very appreciable fever. But when, in addition to this, the small amount of tuberculin used for the test is introduced into the body of this cow, the increased dose acts on tubercles and nerve centers alike, and a fever sets in. A rise in temperature of 2 degrees, 2½ degrees or more, results in from eight to twenty hours.

There may be other reasons why the bodily temperature of a cow should rise at the time tuberculin is administered aside from the tuberculin itself. In the case of the test mentioned in this article, the veterinarian who first tested the herd should have inquired into the immediate history of the cows which "reacted," and tested them again after an interval of about a month.

The proximity to calving was undoubtedly the cause of the rise in temperature in the case of the two cows which had not yet calved, while various conditions might have been the cause in the other animal.

During the time allowed for febrile reaction to set in after tuberculin has been injected in a cow, some changes in the regular current of life may take place; for example, a rise of the temperature of the air, exertion on the part of the animal, privation of water at the usual time, retention of milk at the regular milking period, coming in heat, and, in short, anything that tends to excite the animal. Any of these conditions may cause a rise of temperature above the normal in any given animal. From this we can gather, in conclusion, that a cow cannot always be condemned the first time that she reacts. If, however, tuberculosis is known to exist in the herd, and a cow reacts, we have more ground for suspicion.

In making a test, each cow's temperature should be taken three times before tuberculin is injected, and the average of the three times taken as normal for her. And no disturbing conditions should occur just before or during the test that might cause a rise of temperature.—*Floyd S. Barlow, in Jersey Advocate and Dairyman; Cornell University.*

Averting the Tragedy of the Washtub.

Dissatisfied with the outlook at home, and attracted by the glamor of the city, the country girl is drifting from the farm. In many cases it may be a life blunder, but still she goes. On the mothers and daughters who remain behind the burden grows heavier. Domestic service has fallen into disfavor. In both country and city efficient domestic help is becoming more difficult to obtain. Electricity and schools of domestic science may yet solve the problem, but what is to be done meanwhile? Labor-saving machinery has not come to the rescue of the household, as it has in the barn and on the field. In the city, wash-day has been long regarded as an unmitigated nuisance, if not a weekly tragedy of domestic peace. But the wash-woman, like the archæopteryx, will soon be an extinct species, and the place that once knew her will soon know her no more for ever. The steam laundry is coming to the rescue. First, it gathered in the "boiled shirt" and a few collars and cuffs, but now it appropriates all and sundry, and the householder has nothing to do but pay the little bill, which he thinks he more than saves in doctor bills and in the lessened "wear and tear" of nerves and of the whole internal domestic economy. The young man of the farm and the village, a few years ago found out that he could not wear his mother's ironing any more, so he sent it to the town laundry. Now big bundles and hampers of soiled linen come in to the steam laundries by train and stage from all parts of the country. A Wisconsin legislator suggests a co-operative laundry at every crossroad in the State to do the farmers' washing, just as the creamery or factory makes up his cheese and butter. Why not? We would not probably require so many in Canada to keep us clean, but every good-sized village or town might have its laundry that would do the washing and ironing of the district and be a paying institution. It would be a boon to the farmer's wife and give the village a new industry. The work would be more economically done, and we commend the idea to those in search of new fields for enterprise. The individual who solves this problem satisfactorily will be a benefactor to the race, and his name will be revered by womankind when Carnegie and Scotch universities are forgotten.

Prof. Reynolds' Ventilation Plan Discussed.

A correspondent writes: "It seems to me that the ventilation pipes suggested in Prof. Reynolds' very excellent article in your last issue are very large, and as there will be a horse-fork car underneath the ridge, through center of barn, the fresh-air inlet pipes would have to be at the ends. The foul-air outlet pipes could not be put behind the door next the wall in rear of passage behind cattle, as suggested in plan (page 372), for the reason that the large door hinges close to the wall. Prof. Reynolds' plan provides for the foul-air pipe there by the end wall jutting in about a foot. A pipe could extend up by end wall near rear of cattle, starting say from just above the gutter. The plan does not state how high above the roof the foul-air outlet pipe should extend. Understand it runs straight up from floor through the roof. Would it not be more economical to bring the fresh air in underground by running a pipe a short distance out from the building, and placing a cowl there instead of on the roof? This barn runs north and south. Would a cowl be needed on each end to make the system effective?"

In reference to the foregoing, Prof. Reynolds writes as follows:

First.—As regards the size and location of the pipes, I do not think that the pipes are too large for the number of cattle to be stabled. As to location, it is of no consequence just at what point through the barn, or even outside the barn, the inlet pipes are carried down. It is requisite only that the cowl be sufficiently elevated above surrounding objects to catch the force of the wind in whatever direction it may be blowing.

Secondly.—As regards the outlet pipes, it is not indispensable for them to be carried to the floor in every case. If they open from the ceiling, their purpose will be served with perhaps an occasional danger of too low temperatures in the stable. Nor need they be just at the points where I have indicated in the plan. So long as the air after being admitted to the stable is compelled to circulate through the stable space before being carried off, its purpose is served.

Thirdly.—The outlet pipe need not go much above the roof at the point through which it passes. So long as it is carried through the roof sufficiently to allow free passage of air and for a weather cap to be placed over the end of the pipe, it is sufficient. With the cowl for the inlet, the circulation of air is kept up by the force of the wind, and all that is required for the outlet is a simple opening. So far as the stable itself is concerned, it would be sufficient if the foul air were allowed to escape in the barn, but that might be injurious to hay, straw or grain stored in the barn; and, therefore, it is better to carry the foul air quite outside by a straight pipe, or by a pipe bending from the barn floor to the outside and turning up again after passing through the outside wall.

Fourthly.—The principal places where I have seen this plan of ventilation in use are at Mr. Massey's farm at East Toronto, and Mr. Tillson's at Tilsonburg. I know of one or two places that introduced the same system on a smaller scale last year; and I visited one of these two or three weeks ago, and found it to be working very satisfactorily. This system was placed in a hogpen. The address is J. P. Maunder, Little Britain, Ont. The use of the cowl is becoming quite common in connection with sub-earth ducts for cheese factories, and the method of the distribution of the air is, I believe, after the system of Mr. Usher.

Fifthly.—As to bringing the air underground a short distance, this would be an advantage, since the air would be warmed in winter and cooled in summer in passing through the ground; but I do not see how it would be more economical, since you have just as great a length of vertical pipe from the cowl down, and the additional cost of the ground tile.

Sixthly.—I think that one large cowl at the end of this barn could be made sufficient. The dimensions that I stated in my last letter are not too great for satisfactory ventilation at all times. It must not be forgotten that provision is to be made for calm days, when the movement of air will be very slow, and that on cold, windy days the shut-offs may be used to check the inflow of air. While the dimensions I have stated are, I think, none too large, yet a somewhat smaller inlet pipe will be found to serve the purpose with more or less satisfaction. Those who are putting in the ventilation system must be guided by their own judgment and by local circumstances, such as the elevation of the site and the amount of cost they feel inclined to bear in this connection. A comparatively small pipe under the system that I have outlined will be found very much superior to no ventilation at all or to another system without the cowl.

Very truly yours,

J. B. REYNOLDS,

Ontario Agricultural College.

The spring crops and hay in most parts of the Province of Ontario are very promising for a good yield, frequent rains having supplied ample moisture. Fall wheat in some sections suffered from cold, dry winds in May, and in some parts the Hessian fly has damaged that crop considerably, while in others the prospect is very satisfactory. The only feature that mars the beauty of farm crops is the alarming spread in some districts of such weeds as charlock and ox-eye daisy.

Week's Work in Pan-American Dairy.

CONDENSED REPORT FOR THE WEEK ENDING JUNE 12TH.

BREED.	Milk.	Fat Content.	Butter 85% fat (Estimated).	Cost of Feed.	Profit.
	lbs.	%	lbs.	\$	\$
Jerseys.					
Gipsy.....	262.50	4.00	12.35	\$1.19	\$1.90
Primrose.....	179.90	5.50	11.64	.91	2.00
Queen May.....	243.20	4.50	12.88	1.20	2.02
Rexina.....	246.80	3.70	10.74	1.19	1.50
Mossy.....	247.60	3.80	11.07	1.20	1.57
Ayrshires.					
Kirsty Wallace.....	240.80	3.70	10.48	.91	1.71
Lady Flora.....	313.70	3.10	11.44	1.18	1.68
Alice 2nd.....	321.14	3.45	13.04	1.18	2.08
Betsy 1st.....	303.30	3.45	12.31	1.18	1.90
Pearl of Woodside.....	295.80	3.60	12.53	1.18	1.95
Holsteins.					
Meg.....	340.30	3.00	12.01	1.25	1.75
Tidy.....	344.00	3.10	12.54	1.25	1.80
Inka Mercedes.....	354.30	2.60	10.84	1.20	1.51
Hulda.....	344.20	2.95	11.94	1.20	1.79
Beauty.....	353.80	3.20	13.32	1.21	2.12
Guernseys.					
Vega.....	231.00	4.10	11.14	1.28	1.51
Cassiopeia.....	286.60	3.90	13.15	1.28	2.01
Mary Marshall.....	260.30	4.80	14.70	1.27	2.41
Madora Fern.....	216.20	3.95	10.05	1.10	1.41
Procris.....	292.20	3.90	13.41	1.22	2.13
Shorthorns.					
14th Princess of Thule.....	274.40	3.60	11.62	1.25	1.66
Daisy D.....	273.20	3.00	9.64	1.25	1.16
Miss Molly 24556.....	298.80	3.45	12.13	1.25	1.78
Queen Bess 21786.....	292.30	3.20	11.00	1.25	1.50
Rose 3rd 113205.....	316.40	3.00	11.17	1.25	1.54
French-Canadians.					
Liena Flory.....	246.40	3.90	11.31	1.03	1.80
Rouen.....	223.20	4.20	11.03	1.03	1.73
Denise.....	254.50	3.65	10.93	1.03	1.70
Luna.....	234.80	3.40	9.39	1.03	1.32
La Bouchette.....	171.30	3.35	6.75	.87	.82

HERD RECORD FOR WEEK ENDING JUNE 18TH.

BREED.	Milk.	Fat.	Butter 85% fat.	Total cost of Feed.	Net profit.	Highest and Lowest test.
	lbs.	lbs.	lbs.	\$	\$	
Shorthorn.....	1142.	48.36	56.84	\$6.24	\$7.98	3.75 2.9
Holstein.....	1685.4	52.41	61.67	6.07	9.35	3.2 3.2
Ayrshire.....	1476.8	53.33	62.75	5.68	10.02	4.15 3.2
Jersey.....	1088.9	48.99	57.66	5.18	9.24	5.4 4.
Guernsey.....	1187.1	51.21	60.26	5.41	9.66	5. 4.
French-Canadian.....	1108.6	43.05	50.57	5.07	7.60	4.35 3.7

A Tribute to the Cow.

At the opening of the great Wornall-Robbins Shorthorn sale, held at Kansas City on March 5th, 1901, Col. Woods, the auctioneer, paid the following beautiful tribute to the cow:

"Grand and noble brute; of all God's animal gifts to man, she is the greatest. To her we owe the most. Examine into all the different ramifications and channels of our commerce into which she enters, and note the result should she be blotted out. A Sunday stillness would then pervade the great stock-yard industries of our large cities, and grass would grow in the streets. Seventy-five per cent. of the great freight trains that plow the continent from ocean to ocean would sidetrack, for there would be nothing for them to do. Fully 50 per cent. of the laborers of America would draw no pay on Saturday night, and our tables would be bare of the greatest luxuries with which they are loaded. The great western plains that she has made to blossom (financially) like the rose, would revert to the Indian, from whence they came, and millions of prosperous homes would be destroyed.

"None other like the cow; there is not a thing in her make-up, from nose to tail, but what is utilized for the use of man. We use her horns to comb our hair; her hair keeps the plaster on our walls; her skin is on all our feet and our horses' backs; her hoofs are made into glue; her tail makes soup; she gives our milk, our cream, our cheese, our butter, and her flesh is the great meat of all nations. Her blood is used to make our sugar white, and her bones when ground make the greatest fertilizer, and even her paunch she herself has put through the first chemical process for the manufacture of the best white board paper, and it has been discovered that that paper is the most lasting material for the manufacture of false teeth. No other animal works for man both day and night; by day she gathers the food, and when we are asleep at night, she brings it back to re-chew and manufacture into all the things of which I speak. She has gone with the man from Plymouth Rock to the setting sun; it was her sons that broke the first sod in the settler's clearing; it was her sons that drew the prairie schooner for the sturdy pioneers, as inch by inch they fought to prove that: 'Westward the star of empire takes its way,' and the old cow grazed along behind; and when the day's march was done she came and gave the milk to fill the mother's breast to feed the suckling babe that was, perchance, to become the future ruler of his country.

"Who says that what we are we do not owe to man's best friend, the cow? Treat her kindly, gently, for without her, words fail me to describe the condition of the human race in this country."

Dairy.

12TH.

Cost of Feed.	Profit.
\$1.19	\$1.90
.91	2.00
1.20	2.02
1.19	1.50
1.20	1.57
.91	1.71
1.18	1.68
1.18	2.08
1.18	1.90
1.18	1.95
1.25	1.75
1.25	1.80
1.20	1.51
1.20	1.79
1.21	2.12
1.28	1.51
1.28	2.01
1.27	2.41
1.10	1.41
1.22	2.13
1.25	1.66
1.25	1.16
1.25	1.78
1.25	1.50
1.25	1.54
1.03	1.80
1.03	1.73
1.03	1.70
1.03	1.32
.87	.82
Net profit.	Highest and Lowest test.
7.98	3.75
9.35	2.9
0.02	3.2
9.24	4.15
9.66	3.2
7.60	5.4
	4.
	4.35
	3.7

A Summer Trip Among Farmers.

[FROM OUR ONTARIO AND EASTERN EDITION.]

A holiday trip through fertile farming districts in Central Ontario in the leafy month of June in such a sappy season as the present is an inspiration to an agricultural editor, keeping him in touch with at least a portion of his wide constituency, and revealing the needs and the progress of his patrons in their interesting occupation. Leaving London, east bound, and passing through portions of the Counties of Middlesex and Oxford, one is impressed with the general prevalence of pasture lands and comparatively large herds of dairy cattle, while the numerous big barns with basement stables, and the thrifty appearance of the farm homesteads generally throughout these the pioneer cheese-factory and creamery districts of Canada, indicate that the owners as a rule have done well by devoting attention to the milk business and pork production as a source of revenue. Tarrying for a night at Huntingford, the noted beef and grain growing farm and home of Mr. William Donaldson, of South Zorra, near the pretty town of Woodstock, to be christened a city on this Dominion Day, we find ourselves for the first time viewing the gold-medal prizewinning farm in a group of six western counties of Ontario, and second only in a provincial sweepstakes competition. Here is a 400-acre farm of strong land, well underdrained, kept scrupulously clean and neat, growing great crops of grain, clover, roots and corn, with thickly-set permanent pastures, closely resembling those of Old England, on which typical Shorthorns and Shropshires thrive. The wide avenue approaching the homestead, the roomy and parklike appearance of the grounds surrounding the dwelling, embowered in trees of Nature's planting, the extensive and substantial character of the buildings, and the general appearance of thrift, strongly remind one of an Old Country steading, while the hospitality of Huntingford is proverbial and hearty.

A run through the fruit-growing section known as the Niagara district, extending from Hamilton to St. Catharines, and "The Falls," the traveler finds himself in what seems a veritable paradise, in which all manner of fruits grow in profusion on extensive plantations, the fruit farms varying in size from ten to ten times ten acres, thrifty looking, and generally well cultivated and kept. Well organized, working harmoniously together for the common weal, and jealous of the good name gained for the quality of their fruits, the orchardists of the district register progress from year to year, and are gradually gaining ground for their products in home and foreign markets, while the homes of the people are models of comfort and good taste. On June 19th we found ourselves on the fine stock farm of Mr. Hudson Usher, at Queenston Heights, historic ground where the monument to General Brock rears its head high above the surrounding scene. Lunching under the maples, preparatory to the dispersal sale by auction of the late partnership herd of Shorthorn cattle to make room for a better class, the view of the fruit-growing valleys, the hills beyond, and the Niagara River winding its way between tree-clad banks, is charming and impressive. Hard by, here are the extensive cement works of Isaac Usher, with a capacity of some 400 barrels per day, and the beautiful residence of the proprietor, the walls of which, as well as of the farm stables, are built of cement concrete and promise to be as lasting as the hills.

A day at East Toronto, at Dentonia Park, the summer home and stock and dairy farm of Mr. W. E. H. Massey, with the Jersey cattle breeders in their annual meeting, held under the shade trees on the lawn at Dentonia, was a pleasant experience. Here the Canadian Jersey Cattle Club was organized, and launched on a brand-new constitution, after the members had partaken of a sumptuous luncheon topped with luscious strawberries and rich Jersey cream, generously provided by the hospitable host, who kindly showed the company over the well-kept 200-acre farm, with its broad fields of corn and clover, ample equipment of stabling, complete dairy outfit, extensive poultry-breeding plant, and trout ponds, a busy business man's hobby, and last, but not least, the fine herds of prizewinning Jerseys, Guernseys and Ayrshires, which are of the highest type of their breeds, and have recently been reinforced by the arrival of superior sires imported from the homes of these breeds.

A stay over Sunday in the prosperous town of Oshawa found us in the rich agricultural riding of South Ontario, and, by appointment, an hour or two on Monday was spent at Maple Shade, the fine 400-acre farm and home of the Hon. John Dryden, Minister of Agriculture for Ontario. Here is good practical farming without frills, the buildings plain and unpretentious, but the fields broad, clean, tile-drained, well fenced, and bearing crops every one of which will score one hundred per cent. on a high standard, as will also the bulk of the typical animals composing the blue-blooded herd of Shorthorns and flock of Shropshires, headed by high-class sires which are kept not in pampered show condition, but in the best of breeding form, with ample exercise as an essential in treatment and balanced rations constantly observed in the feeding formula.

A run up Yonge street, north of Toronto some sixteen miles, on the Metropolitan electric road, lands us at the gate of Springbrook, the noted stock

farm of Messrs. J. & W. Russell, Richmond Hill, the home of prizewinning Shorthorns galore at national and international exhibitions, where matrons, the mothers of champions, are found passing a peaceful old age in vernal pastures, surrounded by promising offspring of various ages, the red, white and roan in glorious profusion bedecking the fields, while in cool, roomy boxes at the barns the show cattle luxuriate in preparation for coming competitions in the arena of the show-yard in case the owners conclude to make a public display again, but every day is show day at Springbrook, and the show is worth going a long way to see, as it is the proud product of at least a quarter of a century of patient, yet persistent breeding on independent and intelligent lines, with constitution, substance and quality combined as the motto and the aim, while the record tells the tale of success.

On to Aurora, on the electric cars, a distance of 14 miles further, and the visitor is let down at the farm gate of the Sheriff Hutton of Canada, where the only William Linton maintains a select little herd of imported Shorthorns, rich in the blood of Royal winners of former days, in the herd of his illustrious father, on the Yorkshire Sheriff Hutton Farm, supplemented by recent importations from the famous Ardferd Abbey herd of the late Mr. Talbot-Crosbie, of Ardferd, Ireland. For story and reminiscence, an evening with Linton is only equalled by the perusal of the Arabian Nights entertainment. Two miles further on we come to the beautiful and well-conducted 200-acre farm and summer home of Postmaster-General Mulock, where great crops are grown and large lots of export cattle fattened. Tarrying for a night with our old-time friend, Mr. Thomas Teasdale, at Thornhill station, one of the most successful of Canadian breeders of Berkshires, and one of the safest judges of stock in the Dominion, as well as an excellent farmer, a pleasant time was spent in the discussion of stock and farming problems and in reminiscences akin to those of the old soldier who shoulders his crutch and tells how fields were won.

Whole Grain for Calf Feeding.

The popular view regarding the preparation of calf food, apart from milk and coarse fodder, is that it should be finely ground, and many prefer to boil it. We have frequently heard of good calves being raised having no other grain except whole oats. The calves commence to eat the oats when quite young, and owing to their rough nature they are well masticated in the end, and therefore properly digested. It now comes out that whole corn is a suitable calf grain, quite surpassing corn chop in results in calf feeding.

In the fall of 1900, the Kansas Experiment Station purchased twenty head of young calves, composed mostly of Shorthorn and Hereford grades. On November 28, these calves were divided into two lots, as nearly equal as possible, the average weight being 127 pounds. Both lots were fed and treated alike, with the exception that one received its grain as shelled corn and the other as corn chop. All the calves were fed mixed hay (red clover, orchard grass and English blue grass). Each lot was given all the milk, grain and hay the calves would eat without scouring. Salt was accessible at all times. For nine days previous to the division into lots, the grain for all the calves consisted of a mixture of shelled corn and corn chop. It was noticed that the calves would begin to eat the shelled corn when three to four weeks old, and in a few cases when two to three weeks old. At the commencement of the experiment, each lot was consuming ten pounds of grain daily. As the experiment advanced, it was found that the corn-chop calves could not eat as much grain as the shelled-corn calves without causing considerable trouble from scours. This accounts for the difference of 325 pounds in the grain consumed by the two lots.

Shelled-corn lot.—For nineteen weeks under experiment, these ten calves consumed 18,561 pounds of skim milk, 2,611 pounds of shelled corn, and 7,088 pounds of hay. The total gain during the experiment was 2,322 pounds, or 1.74 pounds daily per head. Valuing skim milk at 15 cents per 100 pounds, grain at 50 cents per 100 pounds, and hay at \$4 per ton, the feed cost of raising these calves amounts to \$55.06, or \$5.50 per head. The cost for each 100 pounds of gain is as follows: Skim milk, \$1.20; grain, 56c.; roughness, 61c.; total, \$2.37.

Corn-chop lot.—The ten calves consumed 18,096 pounds of skim milk, 2,286 pounds of corn chop, 7,088 pounds of hay. The gain of this lot was 2,123 pounds, or 1.59 pounds daily per head. At prices given above, the feed cost amounts to \$53.60, or \$5.36 per head. The cost of each 100 pounds of gain is as follows: Skim milk, \$1.31; grain, 54c.; roughness, 67c.; total, \$2.52. If we raise the cost of grain five cents per 100 pounds (about three cents per bushel) to pay for the grinding, the grain cost per 100 pounds of gain would be increased to 59c., and the total to \$2.57.

Comparing the two lots, we find those on shelled corn made the best gains by 190 pounds, and at a cost of 20 cents less per 100 pounds of gain. Since calves relish shelled corn and will begin eating it when three or four weeks old, and make better and cheaper gains on it, and are less subject to scours than on corn chop, there is certainly no object in going to the expense of grinding the corn. This experiment shows that it is possible to raise good thrifty calves that will gain 1.75 pounds daily per head on feeds produced entirely from the farm, and in a form that requires no preparation of the feed, outside of harvesting, except the shelling of the corn.

The Guelph Experimental Farm.

June is always a busy month at the O. A. College Farm. On the 21st inst., some 2,000 excursionists, hailing from Bruce and Dufferin, visited the institution. This is above the average day's visitors, but on the 15th this number was exceeded by 500 people. On other days during the month the numbers ran from 800 to 1,800, so that the month's visitors reached probably 25,000 people, including many heads of farms and families and their sons and daughters. On the 21st inst. a member of our staff spent the day on the Farm. Most of the officers and many attendants were in their departments, devoting their time to answering questions and imparting information. The huge undertaking of feeding the multitude was quickly accomplished, and without confusion, in the gymnasium building, where some 800 could sit down at once on benches running lengthwise of the hall. When all the seats were filled, President Mills called for 34 young men from amongst the excursionists to act as waiters. The lunch, composed of warm tea, ham sandwiches, soda biscuits, buns, and cheese, proved acceptable, substantial, and was much relished. At the close of the lunch, Dr. Mills devoted a few minutes to giving information and advice as how to best employ the afternoon, informing the visitors where to go for special information re weeds, insects, etc. Referring to the prevalence of weeds, he estimated that very many farms had depreciated quite \$15 per acre because of weed infestation. To get rid of them, the advice was to throw off your coat and go at them. It is well to become informed as to the nature and habits of the particular weeds we wish to destroy, but while many are spending time studying the best ways to eradicate them, the weeds are growing and getting farther and farther ahead. "Go at them," said Dr. Mills "and do not relax effort until they are destroyed." Even the best land cannot grow two crops profitably at once. Dr. Mills waded into those farmers who will not spend a cent to give their sons who are to remain on the farm an education, while they spend lavishly on the boys who are leaving the farm to enter the professions. The result of such is to push the business of farming down below all others, even to the very bottom of illiteracy.

THE EXPERIMENTAL FIELD

of 44 acres has particular interest for visitors, as here are hundreds of neat, uniform plots of grains, roots, corn, grasses and clovers, growing side by side for comparison in varieties, dates of seeding, thickness, etc. A day spent in this field with Mr. Zavitz (who, by the way, is now in Europe) or one of his staff has valuable lessons for any farmer who will take an interest in what he sees and hears.

THE DAIRY.

At stated hours, illustrated lectures were given the excursionists, in the largest dairy class-rooms, by Miss Rose and Prof. Dean, on buttermaking, care of dairy stock, etc. In front of the audience, on the large blackboard, was written a recipe for keeping flies off cows, as follows: For 25 cows, 1 gallon of fish, seal or tanner's oil, 4 ounces crude carbolic acid, and 1 pint of coal oil, well mixed and applied to all parts of the cow, except the udder, with a cloth or brush. The addresses delivered were listened to by both men and women with rapt attention, and we are much mistaken if some farmers' wives do not, as a result, change their methods of making butter; and thus the good work of education goes on.

In the line of investigation, Prof. Dean is experimenting with cheese-curing in varying degrees of light and temperature. He has one room well lighted and another totally dark. Curds from the same vat are divided, part of the cheese going into the light and part into the dark room. Both rooms are kept at the same temperature and humidity. It is expected the cheese will be cured by the middle of July, when they will be scored. Repeated trials in curing cheese in different temperatures above 50 degrees, Fahr., decided that about 65 degrees gave better results than any other, both in less shrinkage and higher quality. Curing at any warm temperature (above 50 degrees) fails to produce a uniform ripeness and flavor, and so last year Prof. Babcock, that illustrious dairy scientist, discovered that curing cheese in a temperature near the freezing point gave most desirable and uniform flavors. To this end, Prof. Dean, in the dairy department; Prof. Harrison, in the bacteriological laboratory, and Prof. Harcourt, in the chemical laboratory, are conducting tests with a view to ascertaining the actual cause and effect of low-temperature curing. The cold room stands at about 38 degrees, and in it are placed cheese direct from the press, those one week old, two weeks old and three weeks old all taken from the same vat of curd. In the meantime the cheese is held at 65 degrees, and a fifth cheese from the same vat as those placed in the cold room is being cured at 65 degrees. It is expected the cold-curing will require seven or eight months, and when it is completed, the scoring will be compared with that of the cheese cured at 65 degrees. Prof. Harrison will investigate the bacterial development, and Prof. Harcourt the

chemical, as the curing advances, so that considerable light upon cheese-curing may be looked for during 1901 from Guelph Experiment Station.

THE POULTRY DEPARTMENT.

During the excursions, Mr. Graham, B. S. A., in charge of the poultry department, is kept very busy answering questions, as no end of people seem to have trouble with their poultry, and they come to him for information. He is asked about breeds, feeds, breeding, and all the rest of it, and he invariably gets a good audience when he commences to talk. He advised setting hens on the ground, making the nests of tansy, which will drive away lice. If this cannot be secured, a dozen camphor moth-balls will have the same desirable effect and do no harm. Mr. Graham has several hundred chicks under his charge, and he knows practically all about them all. The value of unlimited range for young chickens was clearly demonstrated in litters of the same age, some of which were confined to a few rods, along with other hens and broods, and others allowed free range in a clover patch. These latter consumed less food given them, and were much more stocky and vigorous. Mr. Graham is raising all his chicks to be used for breeding with hens, instead of with brooders, regardless of whether they were hatched by hens or incubators. While they may not grow quite as rapidly at first, they develop constitution and vigor. Those raised by brooders will be used for fattening.

Referring to the matter of poor hatches generally complained of, Mr. Graham got in January 50 per cent. hatches, 35 per cent. in February, 15 in March, and 10 until the middle of April, while by May 1st 75 per cent. of the incubator eggs produced living chicks. The low hatch during the winter months are considered to be due to lack of exercise and fresh air, incident to unavoidable close housing. An effort will be made to correct this next winter by compelling the hens to scratch over more straw for their feed, and by introducing more fresh air by means of a sub-earth duct opening beneath the stove, so as not to reduce the temperature unduly.

The farm and stock under Prof. Day all give evidence of judicious management. The crops are all particularly promising, and all the stock, except the sheep, are thrifty. It seems impossible to have sheep do well on this farm owing to the presence of tapeworm, which seem to have all conditions at hand for their favorable development. The most striking individual in the bull stable at the present time is a remarkably fine Shorthorn, imported in dam last year by H. Cargill & Son from Wm. Duthie. He is a beautiful roan, not large, but his quality is superb. He is by Bapton Conqueror (73981), and out of Sittyton Amaranth 4th, a cow closely related to Field Marshal and Abbotsburn. Prof. Day is having a modern system of ventilation put in the main cattle barn. It is practically the same as that recently described in the FARMER'S ADVOCATE by Prof. Reynolds, who has made a thorough study of ventilation, and is now gathering information and working out cold storage. In conversation with him we learned it is his opinion that mechanical refrigeration is the only feasible one for a district storage, such as, at least, every town should have.

Selecting the Fittest.

Here is a short and true Canadian story worth more than many a three-volume novel. "Up in the Gatineau Valley there lived a man named Meldrum. He had several daughters, and they went into the fields and picked out the big early heads of wheat from large, vigorous plants. The seed from these, Meldrum clean thoroughly and sowed again. He thus got exceptionally good plants with large heads and fine wheat. With this wheat he took the gold medal at the Paris Exhibition, and for years afterwards Meldrum wheat sold at fine prices for seed." Bettering the moral, Sir W. C. Macdonald, of Montreal, at the instance of Professor Robertson, has given \$10,000 (£2,000) as prizes for young people on Canadian farms who produce from seed-plots of a quarter of an acre the finest ears of wheat and oats yearly, and the best produce in three years. In this way 700 young men and women in the Provinces of the Dominion are studying scientific farming by "selection of the fittest." The worthy Yorkshireman, a good farmer, too, who said oracularly fifty years ago that "steam was in its infancy, but agriculture had reached perfection," was a little premature, perhaps! We may learn something yet even from our own Colonies.—London (England) Telegraph.

When Does Colostrum Become Normal Milk?

A question continually asked by people owning cows is cited below:

How long should the milk produced by freshly-calved cows be kept by itself before being added to that of the other cows in the herd? As a rule, such milk is regarded as fit for consumption on the third day after the cow has calved, and in nine cases out of ten this rule will be found to work satisfactorily, though in exceptional cases the milk has been found to retain considerable quantities of the albumen which constitutes the colostrum until four or five days have elapsed after calving. Cases of the latter kind are, however, exceptional. After the sixth milking, the milk usually becomes sufficiently normal in its composition as to warrant its addition to the produce of the other cows kept in the herd.

On Board a Canadian Cattle Ship.

(SPECIAL CORRESPONDENCE.)

The question of the inferiority of the Canadian export cattle to those shipped from the United States is one that is so vital to our country's interests that I may be excused if I send you a few notes on the cattle on board the steamer Lake Ontario, on which I crossed to Liverpool from Montreal, as this shipment is a fairly average one of all the Ontario cattle that will be exported during the year. Of course, there may be found an occasionally better lot, but this boat load fairly represents the general run.

There are exactly 414 head of cattle on board, ranging from pretty fair to indifferent. Of these, about 180 are distillery-fed cattle from Gooderham & Worts' stables. A large proportion—nearly one-fourth—are bulls, mostly old, of more or less Shorthorn blood, but there are some Ayrshires and Holsteins and a sprinkling of Aberdeen-Angus. A few of the cattle are white in color, and, as these are thin and rough, they show to the worst advantage. There are some large bullocks of a rough class and some old cows. The best stock between decks are those shipped by Jno. Dunn, Toronto. A number of these are young and show better quality, but are too thin for profitable sale. The larger proportion of the cattle are not dehorned.

A fact that strikes the observer at once is the lack of quality, and, even where quality is better than the general average, the lack of finish. And this, remember, even though a large proportion of these animals are contract-fed. The loss to Canadian farmers in raising and disposing of such inferior and unfinished animals as these must be something enormous in the course of one year alone. When will our farmers recognize the fact that they must breed stock of better quality; and, also, that to get the most out of them, they must finish them before disposing of them? One can easily understand why the uniformly-graded car lots of well-bred cattle from Chicago fetch respectable prices, while our shippers so often lose money, when one sees the uneven lot of steers, bulls and old cows in this ship lot. An English gentleman on board, talking of the comparative merits of English and Canadian beef, asked me whether it was possible to get as good beef in Canada as in England, as he had been unable to do so, and with shame I had to confess that the general run of our beef was far inferior to that of the Old Country.

Of course, everyone knows that in Canada we labor under certain disadvantages from which breeders in Great Britain are free. We have our hot, dry summers, with their plagues of flies; our winters are long, and the cattle have to be kept in the stables for a lengthy period, and, in most places, we lack the rich, juicy pastures for which England is celebrated. But these disadvantages can be largely overcome by forethought, by the growth of fodder crops, silage, and careful attention to our stock, and we can raise and send to Great Britain just as good cattle as our American cousins. But, remember, that to get the best stock we must breed to the best sires obtainable, and, having got them, we must feed to keep them until they are ripe for market.

In conclusion, I must give a word of praise to the Lake Ontario, which justly has the reputation of being one of the steadiest boats which crosses the Atlantic. I have certainly found her so, and the cattle on board have rested easily and done well.

G. DE W. GREEN.

Seasonable Poultry Notes.

BY FARMER'S WIFE.

Growing chickens cannot be induced to eat too much. Push them along so that they will attain full growth before cold weather sets in. The pullets of early hatchings, if well fed and housed in a sheltered place, will begin laying in November. Separate the young roosters from the pullets, if it is possible, and feed them extra, so that they may be well grown and fleshed when the time comes to sell them. They should be kept hungry, yet have sufficient to eat. I find a good plan is to give them enough to only partially satisfy their appetite in the morning and never enough during the day, so that they will hunt around for food. The exercise will do them good. But for the evening meal they should have enough of good grain to fill their crops, so they can go to roost comfortably. Late-hatched chicks should receive the very best of care and be pushed along as rapidly as possible. It is easy to do this now when the weather is warm.

A fat hen is not a good layer. Do not feed corn more than once a day to laying hens. Bran, if well cooked or scalded, makes a good feed for poultry. Corn may be used as a part of the ration, but meat in the food will show its effects in the egg basket.

For gapes, dip a feather in turpentine and insert it in the windpipe.

Whenever possible, let the poultry have the run of freshly-plowed fields. Ground oyster shells and sharp grit are better than dosing for weak fowls.

A sick fowl rarely cares to eat, but will drink. Hence, the best way to give medicine is in the water.

Sour food is the worst thing a chicken can be given to eat. It makes a heavy draft on the strength of the little fowls to dispose of it.

Bear in mind, readers, that chicks are addicted to the natural habit of drinking when they have access to water. Keep them supplied with a dish full of water, into which drop a few old nails occasionally. This, I find, will furnish iron in about the correct quantity.

Turkey Raising.

HATCHING, FEEDING AND CARING FOR THE YOUNG TREATMENT FOR LICE.

BY "OLD MAID."

My experience in raising turkeys has been a very successful one, extending over quite a number of years. I think the time when I first became the proud possessor of a turkey all my own will never fade from my memory. A kind neighbor gave me a young turkey when I was quite a little girl, and from the time her hired man appeared with it under his arm I have been a turkey-raiser. Purchasing three more hens and a gobbler, I managed to raise quite a large flock the first year. I breed from only fine, healthy stock, saving my best for that purpose, and do not breed from the same stock long. I change my gobbler every year, and select hens from my own stock, as they are less inclined to wander away than strangers. The hen dearly loves a secluded spot for her nest. When she sits I put shelter over her, that can be closed at night and opened every morning, to keep the wild "varmints" from her and let her sit, providing she has chosen a reasonable place for the purpose. If moving is attempted, they are very "set," and will sometimes abandon a nest if moved, or so neglect the eggs if shut in that they fail to hatch. Sometimes there are one or two very early layers in the flock, too early to really care to set them, as early turkeys are not desirable, as the early rains and dampness are destructive. In this case I break these hens up and let them lay again, putting the surplus eggs under chicken hens. When I come to set them, I prefer not to make mothers of the latter, as their habit is so different the little ones will not thrive with them after they begin to need a wider range. The lice of hens accumulate quickly and prove more fatal than their own and harder to get rid of, so I put little ones hatched by hens with turkey mothers.

Sometimes the wings of little turkeys grow faster than their bodies, the quills stick out longer than the tail feathers: at the same time, many dwindle, get thin and die. Unless the one in charge understands these symptoms, the loss may be great without the cause being suspected. Catch the little ones and carefully turn back the feathers which cover the root of the quills on the wing, and in between the quills will usually be found lice, which are sapping the life away. The surest remedy for turkey lice is one part kerosene to three parts oil. Any oil which runs freely and will not get gummy on the feathers is good. Put it in a slender-necked machine-oil can, and let a little out along the roots of the feathers of each wing affected. The kerosene needs the oil, as alone it blisters the tender flesh and causes unnecessary suffering. Night is a good time to apply, just as they are put in the coop. Be careful not to get on too much, as that sticks the feathers down. Go over the flock a second time to make sure of a second crop: a large flock can be gone over very quickly.

After the patient mother has completed her time (from 28 to 30 days), I teach her to come to the house every day for food, and then comes the time for caring for the little creatures which are to be tended and kept growing into lordly young gobblers and meek plump hens to grace some festal board later on. I keep my eye on a hen which I know to be hatching, but never allow her to be disturbed to remove the little ones. If kept quiet she will seldom kill any, and will call them out of the nest herself.

The mother needs a refreshing dust bath often, as she has not left the nest while hatching. She is not confined, but the little ones are very unsteady on their legs. I make a triangle of boards nailed together, which need not be very high or very large, yet large enough for the mother to get in with her brood when she chooses. The little ones doze and enjoy the sun, while the hen dusts herself and picks grass and gravel at pleasure.

The cheapest and most healthful food for little turkeys is curd made like cottage cheese, unseasoned. They are very fond of it and thrive upon it, with the insects of all kinds which they get. Stale bread soaked in sweet skimmed milk is good for newly-hatched poults. Milk is good for turkeys of all ages, but for young ones do not let it stand and get warm and sour. It is unnecessary to make egg bread, custard cakes and expensive foods; they are too rich and produce diarrhea, and must be guarded against. Make the food sweet and wholesome, as variety is not necessary, but do not give grease or meat of any kind.

In wheat localities, whole wheat boiled makes the best food for young turkeys and for fattening. Don't fuss with a healthy flock, but if there is a tendency to diarrhea, pepper (black or red) mixed in the food is a good remedy. As a tonic, put a small lump of copperas in the drinking water occasionally. Many lose small turkeys by keeping them too closely confined. Turkeys must have range in order to become strong and thrive. I have large coops for each mother, but, unless necessary, they are not shut up after the dew is off the grass, excepting rainy days. They run in an orchard, and the little bodies grow broad and the legs get the stocky look of thrifty little turkeys; when a little older, they stay very contentedly in my meadow nearly all day.

A turkey hates to go in her coop at night unless it has been moved during the day. If it is changed every day, she soon regards it as a safe place to keep her little family over night, and should it rain in the night, change it so it will be clean for the day. Filth is a deadly foe to a young turkey in confinement. I have always kept my coops on the ground. An experienced raiser, who has tried floors, prefers

the ground, as it is more natural and healthful. I think it is a good plan to keep a box skunk-trap set at night near the coops.

When the turkeys get large enough to fly over a stone wall they will wander farther away and there is danger from hawks. I keep track of their whereabouts as well as I can, which takes me outdoors no more than is necessary for good health. I have had them so wild that they caused me considerable trouble; it was caused by introducing strange hens.

The curd diet is excellent while it lasts, but much is required as they grow larger. While they are small, a little goes a great way, even feeding five times a day. I prefer whole buckwheat to any food when my supply of curd runs short. It is healthy, and prevents diarrhea. The finest turkeys I ever raised were fed almost exclusively on fresh curd and buckwheat. Cracked corn, wheat and buckwheat is good food when they have grown larger.

As soon as they show a desire to roost, I encourage them, providing it gives promise of fair weather in which to make the new departure. I accordingly introduce them to the turkey tree—a large maple—in which generations of turkeys have roosted before them, providing a narrow board with cleats to climb up. They are up and off in the morning before I am around. They do not care to wait for their breakfast, preferring grasshoppers and crickets to anything I might offer. They generally return at 10 or 11 a. m. to rest and refresh themselves with cool buttermilk, sweet skim milk or whatever I have for them. I make it a point to offer them something to encourage them to come home.

It is well always to feed when shutting them up at night, which should be at 5 p. m. when small, as after that time they get so sleepy it is slow work. This teaches them to expect supper, and they will soon come of their own accord. When large, the supper need not be a very hearty one, as they don't need it if there are plenty of bugs, but, just for the principle of the thing, to get them home, it is best to offer a reward. When feeding buckwheat for the first time, they rush around expecting the familiar food of curd, and receiving only buckwheat, a universal cry of "quit" will be set up all along the line, and it is only after careful examination and thoughtful observation of the fact that the mother is eating that they can be induced to touch the stuff of which they are afterwards always so fond. After the flock goes to roost they are usually very little trouble until marketing.

Improving Rural Homes.

House builders and home builders are two very different things. Some houses we get inside of and call them homes. That we first sit down and study what we wish and need and like, and then build to those needs, is the common-sense plan. Then no two houses can be alike, but each one will be specially suited to the folk inside and the landscape outside. There are two things to consider in building: (1) Ourselves and what we personally need; what our individuality is and what a home can do for us; (2) what the building site is capable of—all it can afford or furnish to feed our souls and make our lives pleasant. All this we are entitled to get out of house building.

I remember reading somewhere, "It is a solemn thing to build even the outside of a house." And the reason was because you revealed yourself in doing so. A house says always that's the sort of man Mr. Smith is. And reserved, even shy, as some people are, they placard themselves up like circus bills on a barnside for all the world to read. But there is something more done by a house; it creates public sentiment and public character. So it comes about that most people can really do no more good than in building a truly beautiful house—a house that expresses a beautiful lot of ideas, worked into unity in a beautiful life. For instance, you know houses that express welcome and hospitality, and others that are forbidding. You can think of a house that is modest and smiling; and you can think of another that is absurdly bold and conceited. Then at least one half of the modern houses are efforts at mere imitation. They are a jumble of a lot of things, pretty enough in their places, but when out of place they are no more admirable than a lace collar on a dog. House building must become a much more serious matter than it is in the making of a home.

I will compress a handful of hints in brief space. A home ought to be placed on a rise of ground, even if this carry it back further from the street than you would choose otherwise to place it. You should be so situated that every stream runs away from you rather than to you. There is no position for a rural or suburban house worse than where it will catch the street dust. Material for a house, I believe, should be that which is most characteristic of the place where it is built. There is no reason for a building of wood where stone superabounds. Brick is ideal material in some sections. An old inscription on a brick pyramid reads, "Do not undervalue me by comparing me with pyramids of stone. I am better than they, as Jove exceeds the other deities." A broad house is generally advisable; and seldom a tall one—that is, in the country. Our only reason for a high house is to get away from the soil with sleeping rooms. But the air five feet from the ground ought to be as good as that at twenty-five. If we have thorough drainage it will be. Height will be secured by building on a rise. Breadth saves time and strength in climbing. It gives quick access to the whole house. It keeps us near the flowers and grass. It suggests hospitality.

Houses should never be considered apart from their surroundings. Americans do not appreciate blossoming trees in making up home life. It is possible, besides a shrubbery, to arrange our tree-planting so as to have a succession of bloom around our houses for several months. The earliest quite interesting trees are the English elm and the red flowering maple. The former is covered with what looks like a profuse crop of hops. The red maple is a glorious tree in bloom. The shades vary; but some are intense scarlet, others nearly a pure white. The Kentucky coffee tree is extremely interesting for affording a very spicy flower, not very conspicuous and not lasting. The basswood about the first of July is a glory for its beauty and perfume, but it is also a superb bee-feeder. Magnolia Acuminata and the American tulip-tree are entirely hardy and healthy, and very showy.

Lowell and Morse in their accounts of Korea and Japan emphasize the love of those people for the plum and cherry. Cherries we can have in bloom for three weeks, beginning with Early Richmond and ending with Montmorency. Mr. Lowell tells us it is not easy to convey to the Western mind an idea of the mingled love and adoration that the Eastern nations lavish on these flowers. Sonnets innumerable are written in their praise. Indeed, the whole life of these interesting nations is bound up with their blossoming trees. Are we not so far neglecting one side of culture; and the value of trees from an esthetic point of view? "The laziest of mortals are stirred to enthusiasm and travel many miles to get a sight of the cherry trees before the morning's mist has left them." It will pay us well to cultivate blossoming trees for the blossom's sake, not considering the future fruit. Our apple trees I find are actually scorned by landscapists; but for flowers and homefulness they lead all trees. I have been able to select two deep-red flowering in such profusion that they ought to be everywhere.

Hedges and wind-breaks are to my notion next after trees to be considered. We need these for two reasons besides their beauty. The first is because a house to be homeful should be cozy and protected and, to some extent, secluded; and the second is because we can and ought to largely control the variabilities of climate. It is possible to make a difference of two degrees by having evergreen wind-breaks on the north and west. But, better still, we can prevent the extreme effects of frost by breaking the drying winds that sweep over us. This will be felt not only by the trees and general vegetation, but by animal life, and ourselves included. Set it down as a matter of human health to break the harsh winds and prevent them from searching us through and through. I know of places where a delicate person can live with comfort on one side of a street, but on the other cannot endure the climate. The only reason is that on one side the trees have been cut away, and no wind-breaks planted; while the other is hedged in and bowered in with groves. The value of our evergreens is not understood. As formally sheared ornaments, standing before a house, their utility is equal to their beauty; they are monstrous; but allowed to grow with native grace and freedom, where they will take the teeth of the wind, they are our natural protectors.

The chief trouble with flowers about a farmhouse is that, as generally grown, they take too much time in weeding, and in lifting or covering in the fall, and planting out in the spring. It is a mistake for a farmhouse to try such lawns as are seen in cities. Grading, and leveling, and sodding, and a constant run of lawn mowers, is not only expensive, but out of place. Instead, let me suggest to our rural homes to plant a shrubbery. Shrubs, as a rule, cost very little labor; and they do not die out and need replacing. There is no weeding; and they give a profusion of flowers the season through. Yet, as a rule, our country folk work patiently at very poor lawns and very troublesome flower beds; and have very few shrubs. Select a slope from the house most pleasant for walks and seats—not necessarily in front. It will not be too large for a moderate homestead or a farm of twenty acres, if you set off half an acre for this purpose. Do not grade it any further than to remove unnatural knobs and ridges. Clean it of weeds, and leave the natural slopes. If convenient, have a drive or a walk around it. Select shrubs for a succession of bloom—from the Forsythia of April to the witch-hazel of November.—E. P. Powell, N. Y. Independent.

Preparing Poultry for Killing.

The time will soon arrive when the boys will be asked to go to the yard and knock down a young rooster or two for the table. This is the custom on many farms, and may be considered not a bad one after the household has grown tired of pork and other heavy meats. Even this toothsome bit of diet may be much improved on by housing the cockerels on good feed for a couple of weeks, and then fasting them a day or two before killing, and allowing them to hang in the cellar or other cool, clean place for a day or two after killing before being cooked. In preparation for killing, fowls should be fasted for at least 18 or 20 hours. This is more especially necessary where the birds are intended for market and are meant to be kept for some time before passing into the hands of those by whom they will be consumed. Fasting the birds in this manner clears their crops of all food, and thus improves their keeping qualities after being killed. If their crops are not thus emptied the fermentation set up in the undigested food very often leads to injurious results when the dead birds are kept for any length of time.

Seasonable Notes.

BY MORLEY FETTING.

[FROM OUR ONTARIO AND EASTERN EDITION.]

With regard to re-queening each year, as Mr. Dickson recommends in his paper on "The Production of Extracted Honey," which was reviewed in this department last month, there is some difference of opinion. Mr. J. B. Hall believes in keeping some queens four or five years. Mr. S. H. Sibbald voices the writer's experience when he says, "I have always found a larger per cent. of my colonies in good shape that contain a young queen." Occasionally a three-year-old or even a four-year-old queen does good work; but usually when the queen is starting on her third season, the colony builds up very slowly in spring, and does not do nearly so well all summer as those with younger queens. If the bees are to be allowed to rear their own young queens, the best time to remove the old ones is just before the close of the honey flow, that the bees may not swarm when the young queen hatches.

"District Intelligence" from various O. B. K. A. directors located in different parts of the Province shows that bees generally did not winter very well, and some say their neighbors lost heavily. There was considerable spring dwindling and robbing, but the bees were building up nicely when the cold, wet weather in May and early June gave them a setback. At the present time of writing (June 18th) prospects are bright for a good clover flow, but bees are not in extra good condition to take advantage of it. From the present outlook, prices this year should be at least no lower than last, for the markets in both Canada and the United States are practically bare, and bees are by no means plentiful in the country. It should be the aim of every beekeeper to produce a first-class article, and then hold it at a good price.

To keep pollen out of sections, give plenty of room for pollen below. When a swarm is hived on starters, either put in one comb as a pollen catcher and put on sections at once, or do not put on sections for a couple of days, until they have built some comb in the brood chamber. In doing the latter with a large swarm, an empty hive should be placed under the brood chamber during the two days there is no super, else the bees are crowded and become dissatisfied. In any case, a queen excluder should always be used under the super. Some localities are much more troubled with pollen than others.

The best smoker fuel is one that is inexpensive and always at hand, one which does not easily "go out," even if the smoker is set down for a few minutes with the nozzle pointing diagonally towards the ground, and which will burn a long time without refilling, and give a good cloud of smoke at a moment's notice. Partially-decayed wood is very good if thoroughly dry and cut into coarse, broken shavings with a drawing knife. Cedar bark is used by those who have it, and cotton waste smeared with oil from locomotives is also recommended. W. L. Cogshall says he leaves burlap exposed to the weather over winter and it makes excellent smoker fuel the following summer. The most convenient lighter for a smoker is a bicycle oil-can full of coal oil. Put a little fuel in the bottom of the smoker and squirt some coal oil over it. Drop in a lighted match, and as soon as the oil and fuel are ignited put in more fuel, working the bellows the while; replace the nozzle and the smoker is ready. A discarded milk can turned on its side with the bottom slightly elevated makes a dry, fireproof storeroom for the smoker when not in use.

For rapidly removing combs of honey from a hive, the bees may be nearly all driven down out of the super by the use of smoke and a peculiar manipulation of the quilt or cloth which covers the frames. First smoke a little at the entrance, then loosen the cloth at one side, blow in some smoke, and holding the cloth by the loose edge firmly in one hand, flap it up and down on the frames four or five times, blow in more smoke and repeat the flapping. This repeated a few times drives nearly all the bees into the brood chamber, when the combs may be quickly removed, given a quick shake at the entrance and set on the ground behind the hive. The super can be refilled with empties and the hive closed before the bees begin to come up again. By this time, if there is no brood in the combs standing on the ground, the few remaining bees feel lost and defenceless, and may be brushed off almost like flies; but if they stand longer they will probably cluster, and may be savage if more smoke is not used. Some do not bother with these few bees, but allow them to fly home from the windows of the extracting-room.

Ayrshire Men Condemn the Test.

At the annual meeting of the Canadian Ayrshire Breeders' Association, on motion of Hon. Wm. Owen, seconded by Mr. R. Hunter, it was resolved that the cattle-breeding industry of the country is seriously menaced by the tuberculin test as now applied to cattle purchased for importation or sold for export, that it is misleading and of no real value, and should be discontinued.

Care and Treatment of the Horse's Foot.

BY E. L. LOBLEIN, V. S.

My observations with the colt during the first year of its life have forced the conclusion on me that care and treatment during that time have much to do with the conformation of the foot when the colt has matured, and faulty conformation of the foot is responsible for so many causes of lameness, both in the foot, in the limb above it, and also in opposite limbs, that it at once becomes apparent to the ordinary observer that an important factor in locomotion is a well-conformed foot.

The colt's foot when left to itself shows peculiar tendencies to grow in different directions according to the way the weight of the body is brought to bear on the part of the foot covering the ground surface. As an example: If two colts are turned loose in a pasture field, and six months later, if the feet have received no attention, it may be found that one colt's feet may be very long at the toe, giving the horn a slant and curve at the heel, which in after-life will surely, when shod, produce sore or tender heels, and, finally, disease of the alæ or retrossal processes of the os pedis—a condition that more frequently occurs than is commonly believed, far more frequently than the old and almost worn-out diagnosis of navicular disease, which used to be the invariable diagnosis by exclusion; whenever the veterinarian failed to discover any other cause for lameness, it used to be navicular disease, but it pleases me to note that the fashion is dying out. Numerous other conditions arise from this malformation by the long heel and long toe. Very often the ankles are compelled to bear too much strain, as will be observed when viewed from either a physical or mechanical standpoint, as exists in the condition cited, and we all know how frequently ringbones arise in colts from the same existing condition in the foot, and all can be obviated by the use of an ordinary rasp in the hands of an intelligent caretaker by keeping the toes short and distributing the weight evenly over the foot, while in after-life, with proper shoeing, the foot is likely to grow in the directions and at the angles it has been induced to grow in early life.

In the other colt the opposite condition may be seen, and that is for the toe to become worn and broken off and the heel to grow disproportionately high and steep, which also has its bad effects on the foot in after-life. If the horn grows too perpendicular there becomes an uneven pressure on the os pedis and surrounding tissues, and the natural angles of the phalanges are destroyed, and consequent imperfect articulation ensues. This is a frequent source of lameness, as evidenced by periostitis of bones adjacent to articulations. All this can be obviated by maintaining the proper angles by the use of rasp on ground surface of foot, producing the tendency to grow a normal shaped foot.

When the time comes for our colts to be shod, more care than ever should be exercised. My views are in on way radical or original on this point, as they are largely an endorsement of the views set forth by others who long claim to be authority on this subject. One point I want to emphasize as important, and that is that the shoes be light and never thick at the heels; at least, the dressing of the foot and fittings of the shoe should be such as to allow the frog to come in contact with the ground all the time, as the colt's foot is sure to suffer as soon as the frog is removed from the ground.

One of the most important faculties for us to cultivate is true sight, and by constant application with the use of calipers and rule we will in time attain that proficiency in this one thing that will be of great use and assist us in diagnosing lameness. Most of us could recall the amusing incidents of our errors in discovering the source of lameness. Take, for instance, many road horses; just the slightest bruise on the metacarpal bones will produce periostitis and consequent lameness, and all traceable to an uneven foot, destroying the natural perpendicular or straight line of the limb during locomotion, bringing the leg in the way of the foot, not the foot in the way of the leg, as when one foot is perfectly level and the other uneven it is the leg resting on the uneven foot that is injured, showing that it got in the way of the foot being moved in its natural straight way. Ask for proof. Shoe the foot level, the offence stops, and lameness—if injury is not too severe—soon passes away.

We have rambled on beyond the shoeing of a colt's feet, and come to the time when he goes to work, gets fed strong and driven hard, and there is every tendency to produce congestion of blood vessels of the foot from so many causes. Our great object is to obviate or minimize the several factors that predispose the foot to become congested, and here, again, I say maintain your frog pressure, and when that bears its due share of weight and concussion brought to bear while in motion, either rapid or slow, the other parts will not be compelled to bear an undue portion of weight and concussion. Here, when the frog is not sufficiently developed, the well-adjusted bar-shoe is of inestimable benefit.

I dare say that most of us have noticed that when the grain was taken from a horse and he was turned to pasture the feet lose brittleness and grow tough and strong. This is not due entirely to the moisture obtained from the wet grass and damp ground, but is partially due to the healthy condition of the stomach and absence of inflammation in the feet.

To go into all the causes would take too long, for the subject is an inexhaustible one, but heredity must not be overlooked. Heredity influences the general conformation, strength, size, and vascu-

larity. The old adage that "like begets like" is very true in this case. So it is not surprising to see the offspring of a sire or dam who has bad feet showing a predisposition to the same condition. Nevertheless, I think it wrong to look on hereditary influences as inevitable. Take the young offspring and employ every means to obviate and overcome the tendency to follow in its parents' footsteps. I think the expression applicable here. The result will be a strong and comparatively healthy foot, and the offspring of that animal will probably be much improved, in comparison to its foreparents, showing that heredity even in this can be successfully combated if proper means are employed.

Of the artificial appliances, we all know many to be beneficial, but there is one of the latest that I deprecate the necessity for using, and that is pads on soles and frog. I have failed to find where they have been used any length of time that they have not produced a dry rot of sole and frog, and in most cases the frog never regains its previous healthy state. Asphalt pavements seem to render this inevitable in some cities. Aside from this, it is doubtful if they are ever of any permanent benefit. The use of hoof ointment, I think, is a dirty humbug. Water properly applied is of more permanent benefit than any other application that I have been lucky enough to meet with.—*Journal of Veterinary Archives.*

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the *Farmer's Advocate* are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest or which appear to be asked out of mere curiosity.

3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

RHEUMATISM.

A valuable mare is troubled sometimes with something in her hind legs, sometimes one, sometimes both. Seems to lose power of them, and will stop, hold it out sideways, or sometimes hold it up. The leg seems to be painful. Has been affected for two months. We first thought it was her stifle, but tried everything that we knew and what the neighbors could tell us. The mare is no better, although well and hearty in every other respect, and in good order. She has done no work since she was taken sick. Runs out daytimes, and is put in the stable at night. Seems worse in damp weather. She gets no grain now, but was fed about four quarts three times a day all winter, barley and oats.

Roseisle, Man. SUBSCRIBER.
[From the symptoms you submit, your mare has an attack of rheumatism. Would advise giving her one dram of salol in some feed (bran mash will do) morning and night. In addition, give two tablespoonfuls of Fowler's solution (to be procured at a drug store) once daily for two weeks.]

OVARIAN TROUBLE.

Could you please inform me, through your valuable paper, what would be wrong with my heifer? She is three years old, and lost her calf in February. Cause unknown; first calf. She was due to calve in April. Feed on straw and oat sheaf that did not ripen, but was frosted. Is in good condition, and comes in season every few days since, but does not get in calf. I bred her to my own bull three or four times, but she does not appear to get with calf. Is there anything I could do for her?
Glenboro, Man. HUGH FOSTER.

[Would advise that you endeavor to fatten her as soon as possible, as the symptoms submitted indicate disease of the ovaries. The treatment would be expensive, and as the results are not likely to be favorable, it would be more economical to beef her. You might consult your local veterinarian, and get him to make an examination. Aborters are often hard to get with calf afterwards.]

WIND SUCKER—IMPACTION OF THE COLON.

1. I have a cow which sucks wind when she is tied in the stable. She will hold her head down and breathe hard, as if in pain. Don't seem to hurt her, but is very disagreeable to listen to. Please advise?

2. I have a mare which takes spells of impaction of the colon. It is very difficult to give her medicine when she is sick. She has taken it as often on the grass as in the stable. She is fed on hay and oats, with a little boiled flaxseed, twice a day. What is best to be done to ward off the attacks?
A RECENT SUBSCRIBER.

[1. A wind-sucking cow is very rare. It is a vice, not a disease, although it predisposes to indigestion. A strap buckled tightly around the throat just behind the angles of the lower jaw will prevent it. If the habit is confirmed it is very hard to cure, and she will in all probability practice it unless the strap is kept on.

2. Repeated attacks of impaction of the colon, or indigestion in any form, are due to weakness of the digestive organs. I am of the opinion that your mare suffers from ordinary spasmodic colic, rather than impaction of the colon, as she would not be likely to recover from repeated attacks of that trouble. Prevention consists in careful feeding. Feed easily-digested food of good quality, and in small quantities. Feed four times daily instead of three, and give less at a time. Tone the digestive glands by feeding a little ginger once daily in her food. Commence with a teaspoonful each night, and, as she becomes accustomed to the taste, grad-

ually increase the dose until she will eat a table-spoonful, then feed her this quantity regularly.]

FATAL RESULT OF HERNIA FOLLOWING CASTRATION.

I got a veterinary doctor to castrate my colt about two weeks ago. He did the job under the chain process at five o'clock Wednesday evening, and the next day at 2 o'clock the colt was dead, after suffering terribly. He was the finest year-old colt ever seen here. He weighed 1,075 lbs., was fat and very active; sired by a pure-bred Percheron. In five minutes after the operation his intestines came out. He threw him and put them in one where the testicles had been, and then sewed him up. What did he do to him, and what should he have done? He said the colt was perfectly healthy, that he was not ruptured in any way, but he strained himself. I do not believe that, but I believe he tore the inner lining some way, as he did not half tie the colt, for he, the colt, could draw each leg through the rope about a foot, and all the time he was turning the screw the colt was floundering around. Before he did the job I wanted to get two men to help us, but he said he did not want anybody at all, he could do it alone. I firmly believe he killed my colt. Can I come on him for damage? If you can, I wish you would answer these questions through the *ADVOCATE*. I was offered one hundred dollars for my colt from the owner of the sire; he wanted him for a breeder.

2. Is a fat bull as sure to get calves as a thin one; both running in the pasture?
G. FAWCETT.

[In order to understand or appreciate the above sequel to castration, it is necessary to have some knowledge of the anatomy of the parts. Leading from the scrotum into the pelvic cavity is an opening. The opening from the scrotum is called the external inguinal ring, then there is a short passage called the inguinal canal, and the internal opening is called the internal inguinal ring. There are, of course, a right and left canal and ring, one for each testicle. In foetal life (that is, before birth) these rings are large, and the testicles pass through them from the pelvic cavity into the scrotum; then, under normal conditions, the rings contract, nothing but the spermatic cord being contained therein. In rare cases the openings are so small that the testicles cannot pass through, and consequently do not reach the scrotum. This condition constitutes what is generally called a ridgeling. In some cases the contraction of the rings is not sufficient to prevent a portion of the intestine passing through into the scrotum. This constitutes scrotal hernia or rupture. In many cases of this kind hernia is not always present, the intestine being sometimes drawn up into the cavity, and at other times it is in the scrotum. It is the duty of a veterinarian, before castrating, to examine for hernia, and if it be present, to either postpone the operation or operate by what is called the covered operation, but in cases where the intestine is retracted, for the time being, into the cavity, no person can suspect the presence of occasional hernia. It is probable this was the condition in your colt, or it is possible that in the violent muscular exertion experienced in being cast, or in regaining his feet, he enlarged one of the rings, and thereby made it possible for the intestine to pass through. The operator cannot be held responsible for accidents of this kind. The ecraseur, or chain process, is one of the most approved methods of operation. When the intestine appeared, the operator did right in casting him and returning the viscera. It should have been returned through the rings mentioned into the pelvic cavity, and means adopted to prevent its re protrusion. It is probable that was done, and that you are mistaken in saying that it was merely returned to the scrotum. Hernia following castration is an unfortunate accident, not usually due to carelessness or ignorance on the part of the operator, and frequently fatal in its results. When operations are performed by professional men, if ordinary care and skill be exercised the operator is not liable if results be fatal; but if you can prove carelessness or gross ignorance on the part of the operator, you should be able to recover.

2. Excessively fat bulls are not as potent as those in moderate flesh. This applies to all males.]

WEAK FOAL.

My mare's foal was weak and could not stand alone, but would suck when lifted up. I cut navel string about 9 in. long, but on second day it started to bleed, and died in a few hours. The mare was in good condition, but not too fat. I have another mare to foal next month. Will you kindly give me a remedy if the next foal is like this one, and would you breed to the same horse again?
P. H. M.

[When the navel cord of a colt is not ruptured, a strong, coarse string should be tied tightly around it, about an inch from the abdomen, and the cord cut about an inch below the string. The string is left on until it sloughs off. The parts should be dressed 4 or 5 times daily with 1 part corrosive sublimate to 1,000 parts water. It is good practice to dress the parts with this solution in all cases until the opening heals, as it prevents joint ill. If colt be too weak to stand, it must be helped and held up to nurse every hour or two until it gains strength. See that the meconium (the contents of the bowels when born) is passed. Do not give purgatives, but give injections of warm water with a little soap, and insert your (well oiled) finger and remove what you can. As soon as the feces passed are yellow in color, you will know that the meconium has all been passed. If the foal does not gain strength after nursing a few times, it will require a great deal of attention both day and night.]

Ingle Nook Chats.

MY DEAR GUESTS,—

I have been playing "guest" myself, lately, and spent a few days in the city very pleasantly indeed, but returned to the dear old country home more than ever imbued with a sense of the numerous blessings we enjoy. It is true the city affords some advantages of which we would gladly avail ourselves. Opportunities of higher education, of hearing fine music and able lectures, of seeing rare works of art, are among the things that at first glance we appear to lack in country life. After some consideration, however, we must admit that many of these luxuries are within reach of almost all who desire to use them; in some cases their substitutes are above par. Our educational system has become so perfected that each, unless through negligence, may receive a good education—a foundation whereupon he may at leisure build a more pretentious structure—and high schools are plentiful enough to give ample scope for further advancement. Just here I might state that many of the most interesting conversationalists and well-read persons have never attended a high school, but have become so by their own efforts.

We may not hear great singers like Patti and Albani—such treats are beyond many who live in cities, being reserved for the rich—but in the country all may listen morn, noon and night to music such as seldom gladdens the ears of city people, the joyous warbling of the merry song-birds as they carol and trill for the sheer delight of living. All the greatest lectures appear in our newspapers, and frequently in pamphlet form, and may be ours for a trifle.

As to works of art, either in painting or sculpture, how far are they, even when most perfect, from equalling the animate objects all about us! What floral painting could justly depict the beauty of a field of

Clover and cowslip cups,
Like rival seas,
Meeting and parting as the
young spring breeze
Runs giddy races, playing
seek and hide.

Or a quiet woodland carpeted with ferns and shy violets? Oh no, let the city folks rave enthusiastically over their imitations, the real objects are good enough for plain country people. I cannot help a feeling of sorrow when I see a fine city square with its smooth-shaven lawn and prim flower-beds, with the inevitable placards, "Keep off the grass"; and little, hungry-eyed children walking demurely along the gravelled paths, when all the while they long to scamper over the inviting green and fill their hands with the forbidden fruits of the flower-beds. How they would revel in our simple lanes, where golden buttercups, snowy daisies, saucy black-eyed-susans and the sweet pink and white clover grows in wild profusion, smiling up into our faces and pleading to be gathered and petted!

And yet the average city resident has unbounded commiseration for just such poor benighted "hay-seeds" as you and I, my friends. One lady spoke to me of the narrowness of country life. Narrowness! When we have the broad blue dome of heaven in its changeable glory, and such wondrous vistas of field and woodland ever before our eyes, and they are hemmed in between high walls (what avails it that they be of brown stone?), with burning pavements and glaring glass. To foolishly imagine that the feeble works of finite man can approach the sublimity of God's own beautiful creation! Their sky can be gazed at only through a network of wires, and an unbroken view of a sunset is the privilege of the few. If, then, environment unconsciously leaves its impress upon all, where does the narrowness come in? I wonder if the speaker knows what it is to be able to say with the poet—

"My heart leaps up when I behold
A rainbow in the sky!"

Surely she cannot have found "tongues in trees, books in the running brooks, sermons in stones, and good in everything." And even were it true that (let me quote the speaker) "most country people have not an idea apart from their cows and buttermaking," are they not as well employed as their more literary (?) friends whose stock-in-trade is too often the latest scandal, the dresses worn at the last fashionable function, or the merits of some recent frivolous novel of muskroom popularity?

OUR COMPETITION.

Contest X. had but few competitors. However, the prizes have been awarded to the following: "Nancy," Ilderton, Ont.;

A. L. McDiarmid, Ormond, Ont., and Verne Rowell, Bryanston, Ont. In June 20th issue I announced a Memory Gem Contest, and I hope the result will prove an emphatic refutation of the calumny that we of the country have no ideas apart from our necessary duties. See last issue for particulars, and everybody send in a list.

"Morag"—I believe the answer to your query is twenty-two or twenty-three. Is that any better than at Sherbrooke?

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

Summer.

Oh! summer-time, of lovely flowers,
And gentle gales, of scented bowers—
Sweet perfume lingers everywhere!
In blossoms sweet, of fruits so fair;
The meadows, where the new-mown hay
Scents the air all through the day.

The sky, with clouds of azure blue,
Each day brings us beauties new.
Lovely river floating by,
Bears the breeze of summer night.
Birds of beauty, singing free,
Carol songs in joy and glee.

Lambs are skipping o'er the grass—
Pretty, playful as they pass.
The animals seek the shady dell,
And drink the water from the well.
Children, playful, dancing by,
Pick the flowers and berries nigh.

Insects, flies, and buzzing bee—
Lovely butterflies we see.
We shall seek the pleasant shade,
And praise our God, who all hath made.
Scents of summer, oh! so fair,
What shall now with it compare!

H. S. PICKETT.

adopt a national flower as a badge, in the flag bearing the "Fleur-de-lis," which has figured on many a well-fought field, and made a war-cry of chivalry—

"Now, by the lips of those you love, fair gentlemen of France,
Charge for the golden lilies now—Upon them with the lance!"

The four emblems of the United Kingdom all appear to be entitled to claim a respectable antiquity. The splendor of the blossom of the rose might well commend that flower to the good graces of that bold and haughty nation which has taken the lion as its emblem in the animal nature, but the special monarch who first introduced the emblem I do not know. After the historic quarrel in the Temple gardens between Richard Plantagenet, representative of the House of York, and the Earl of Somerset, representative of the House of Lancaster, the rose seems to have become a favorite badge with the royal houses. It was during that quarrel they adopted the white and red roses as their respective badges, which sent "a thousand souls to death and deadly night." Years after, the two were blended into the "Tudor rose," without a thorn, which shed only fragrance and blessing upon devastated England.

The thistle appears to have been adopted as a symbol of "Caledonia stern and wild" at a very early period of the middle ages. One dark night a band of Danish sea-rovers were marching to assail the encampment of a band of patriotic Scots, who were in arms to defend their native land. The invaders were close to the spot where the Scots were slumbering, when one of the barefooted Danes stepped on a thistle and set up a howl of agony. The Scots awoke and sprang to arms, drove off the Danes, and in gratitude to the thistle made it the national emblem of the "Land o' Lakes," with the appropriate motto of "Nobody injures me unscathed."

The origin of the adoption of the shamrock as the emblem of Ireland is placed in the century when St. Patrick was preaching to the Celts. In order to illustrate from nature the theological doctrine of the Trinity to his pagan hearers, St. Patrick bent down, and, plucking a piece of shamrock, held it up as symbolic of the Almighty "Three in One." If this story be not true, it is at least very prettily imagined.

In Japan, the chrysanthemum is highly esteemed as a symbolic flower, while Mexico has its cactus. Napoleon selected the violet as his favorite flower, and in England, upon each anniversary of the death of Lord Beaconsfield, a primrose blossom is worn by his admirers in his memory. So we find right through the world's history, flowers have held a very important place in romance, story and song. Here we must mention the pine badge of Rodrick Ohn, whom the Highland boatmen greeted with

"Hail to the chief who in triumph advances,
Honor'd and blest be the evergreen pine!"

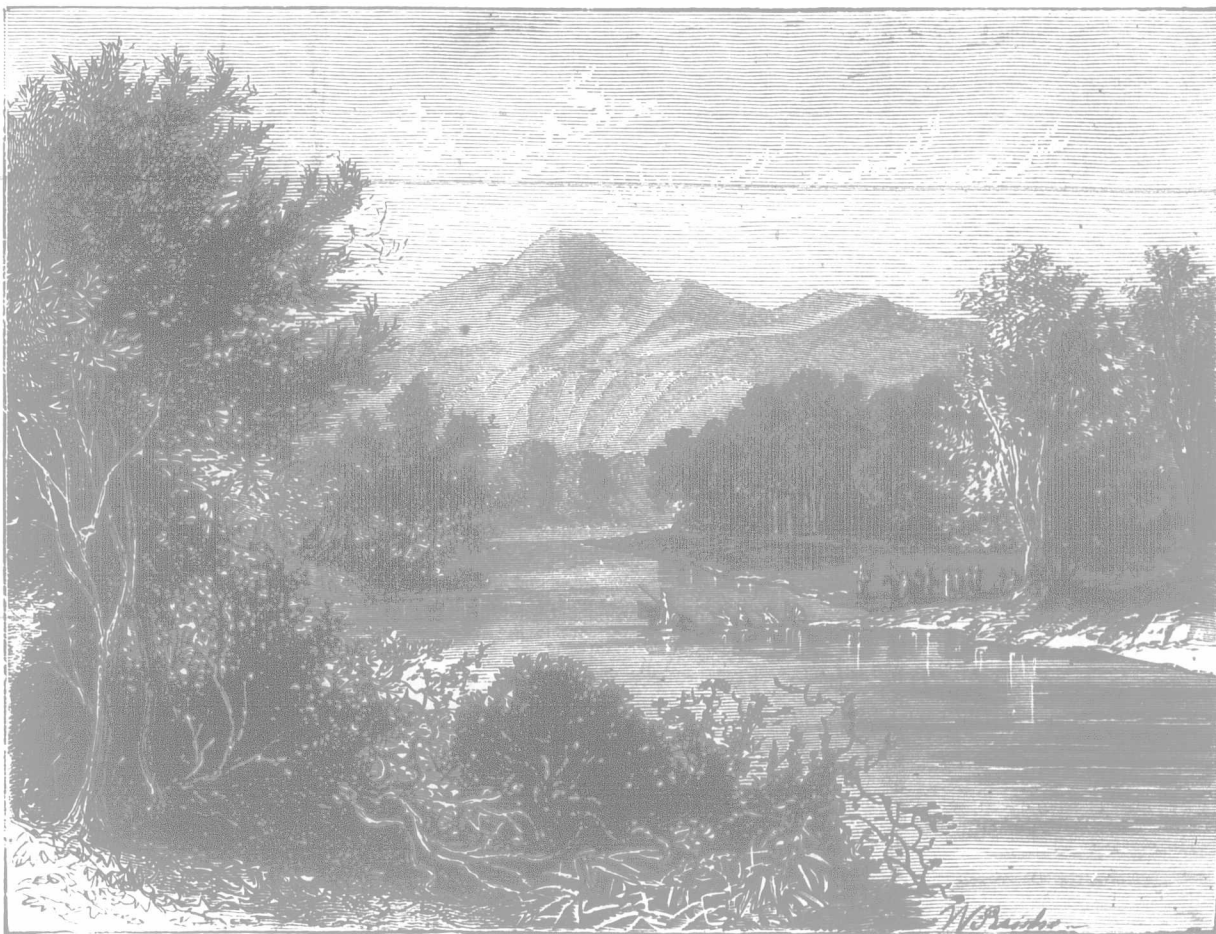
And last, but not least, our own beloved maple leaf, a symbol grand and true.

All over the world and into all ages, she has been wandering this time, has this—
ONE OF THE GIRLS.

The Virtues of Strawberries.

A medical writer says that the strawberry must be classed with the most wholesome production of the vegetable kingdom. It is recorded of Fontenelle that he attributed his longevity to them in consequence of their having regularly cooled a fever which he had every spring, and that he used to say— "If I can but reach the season of strawberries!" Boerhaave looked upon their continual use as one of the principal remedies in cases of obstruction and viscosity, and in putrid disorders. Hoffman furnished instances of obstinate disorders cured by them, even consumption, and Linnæus said that by eating plentifully of them he kept himself free from gout. They are good even for the teeth.

Two strangers were talking on the cars, and one was a portrait painter. After some time, the other inquired the painter's business.
"I am an artist," he replied modestly.
"Ah," said the other, "what do you draw?"
"Faces."
"And I am an artist," continued the other.
"Ah!" exclaimed the painter, with a smile of interest, "and pray, may I ask what do you draw?"
"Teeth," said the other. "I am a dentist." Then the artist got up and left the seat.



SUMMER.

The Symbolism of Flowers.

It is strange what a powerful hold mythical stories and anecdotes of uncertain origin can take upon our minds, while solid history is forgotten. King Alfred's misadventure as a cook we well remember, while few of us can give the actual part played in history by that king. And now, "Bout knee-deep time in June," is not a bad time to run over the myths and stories of the origin of the floral emblems of some of the countries. One of the earliest uses, perhaps, of plants as symbolic of a kingdom was that taken by Athens of the violet and olive—

"The glorious old town,
Of immortal renown,
With the noble Ionian violet-crown";

while Minerva bestowed the gift of the olive tree upon the city of Athens as the greatest boon she could offer. Then we read of the Egyptian lotus, which was dedicated to Isis, and it is evident that the Pharaohs and the people of the Nile Valley held it to be a national emblem, for the sculptors were never weary of producing representations of the grand and massive blossoms. Passing the dark ages, we shall glance at the age of chivalry, where we find the floral language surviving in the badges of heroes. Geoffrey of Anjou, when on a crusade, placed a sprig of broom (*Planta genista*) in his helmet as a token of his lowliness and Christian humility. His descendants adopted the badge, and thus came the family name of the Plantagenets, or wearers of the broom plant. France appears to have been one of the first of European nations to

THE CHILDREN'S CORNER.

Maggie's Ride.

Our darling pet, wee Maggie,
Came down from the city one day—
Shall I tell you, in rhyme,
What a jolly good time
She had with the dogs and old Tray?

For Tray was a fine old donkey,
Sweet tempered and gentle and good;
And Maggie would ride,
With the dogs at her side,
For hours through the fields and the wood.

Aunt Annie was ready to catch her,
If ever she happened to fall;
And sometimes, you see,
Gyp rode on her knee—
Which he didn't enjoy at all.

Poor Maggie cried sadly at parting,
"I want to stay here!" she declared.
But mother said "No,
We really must go!"
So back to the city they fared.

C. D.

Between Ourselves.

Very few papers have come in for our competition about interesting animals. What is the matter? I should think it would be a very easy subject to write about. Even creepy-crawly creatures, like snails, are very surprising when we come to study their habits. I don't want you to experiment on them, though, as some clever men have done, without considering their feelings. One man kept a snail without food for a year and a half. Another put some snails in a closed box, without light or food, and almost without air, and kept them there more than three years. Some of the unfortunate creatures lived through the experiment, but I am sure they didn't enjoy it very much. Snails are wonderfully strong, too.

No wonder they are able to drag their houses after them; for one dragged for ten minutes a stone that weighed sixty-seven times as much as itself. If you could do that you would be able to drag several thousand pounds after you. Multiply your weight by sixty-seven and see if I am not right. A snail goes into his house in the winter and fastens up the entrance with a sort of plaster. How would you like to have nothing to eat for months. Mr. Snail makes up for his long fast when the spring comes, for then he eats like an ogre.

Trapdoor spiders are very interesting, too. They make their houses in the ground, and cover the top with a round lid—just like a trapdoor with a hinge. I once saw one that had been dug up and dried. When the lid was shut down it fitted perfectly. There were no badly-fitting joints, and no one could see that there was a door there. A

man in Australia once found one of these spider houses with a door made of a sixpence. The coin was covered on top with silk thread, and underneath it was coated with mud and silk. It must have been swept out of the tent with rubbish, and then found by the spider, who probably thought it was just the thing he wanted. Was that instinct or common sense, do you think? A house made of silver and silk must have been very grand; but I don't think it would be very comfortable to live in a house made entirely of hairpins, as did a Paris pigeon of which I once read, but they must have made rather a hard bed.

As this has been a chat about animals, perhaps I had better close with a description of some waterproof folk:

"I looked from my window,
And, dancing together,
I spied three queer people
Who love the wet weather.
The turtle, the frog, and the duck all joined hands
To caper so gayly upon the wet sands.

"The turtle was coated
In shell, to defy
The pattering rain-drops,
And keep him quite dry.
The frog in green jacket as gay as could be—
'My coat will shed water—just see it!' said he.

"The duck shook his web feet
And ruffled his feathers;
Cried he, 'Rain won't hurt me!
I'm dressed for all weathers,
And when I can see the clouds frown in the sky,
I oil my gray feathers and keep very dry!"

COUSIN DOROTHY.

A dentist may be a jolly good fellow, but he has a way of looking down in the mouth that is not nice.
A photographer has a way of taking things that would not be tolerated in any other line of business.

Travelling Notes.

I am afraid that I have seemed sadly to neglect my readers in the *ADVOCATE*, not having sent them any notes of travel for some time. The fact is, as my little message of the 22nd of May will already have told them, we two Canadians have been seeing and doing so much for the past two months that we have reached our temporary quarters at night too late and too utterly tired out to write two consecutive lines. The simple enumeration of the places we have visited since the date of my last notes will be our best plea for forgiveness: All galleries, and, of course, the Royal Academy; all sorts of museums and art collections, Hampton Court, Kew Gardens, Richmond on the River, churches, cathedrals, castles, general post office, Royal Mint and Royal Mews, Zoological and Royal Botanic Gardens, Hyde Park, Rotten Row, Madame Tussaud's Wax Works, Tattersall's Stables, the Crystal Palace, Royal Military Exhibition, Grand Opera, etc., etc., etc.

London is certainly the most wonderful city in the whole world, or so it seems to a simple Canadian whose pen cannot half express the impression it leaves upon her mind, and whose powers of description fail her when she desires to share with her friends in Canada the admiration with which she is inspired. Perhaps at first the strongest impression is that of a personal sense of one's own insignificance, one's incompleteness, one's educational shortcomings, one's sense of loss in that in earlier days one let opportunity after opportunity slip by of laying a good foundation for maturer years to build upon when chances of travel should come. Well, my chances have come, and instead of planting my feet, as it were, on familiar ground, on ground which early study had made my own, I feel as one who gropes, and who is glad of a stray twinkle of light here or a flash there to enable me to recognize the

on the Moor's Bank, and noted others evidently on pleasure bent, we wondered what threads they were weaving into the fabric of their lives, and how much the world would be the better or the worse for the glorious opportunities with which happy circumstances had endowed them.

After Oxford, my friend and I found ourselves once more numbered amongst the six millions or more of the inhabitants of England's metropolis, more people than we have all over Canada, from the Atlantic to the Pacific. Like the now famous microbes (the healthy species, of course), no one appeared to "mark us"; we were free to come and go to any part of the vast city, at any hour, or by any means of locomotion. The masses, the crowds, are so quietly disposed, so imperceptibly and wisely restrained, that we might have been walking through the streets of our own dear little Ontario city, so far as our sense of safety was concerned. We soon became familiar with the different modes of transportation, and after sampling every kind, including steam underground, electric underground and overground, automobiles, hansom cabs and 'busses, we are now generally content to sit on the top of a penny bus and take in the scene, in common with the swaying mass of humanity which shares with us the accommodation of that elevated position. A wonderful electric railroad, called the "tuppenny tube," is new since my last visit to London. It is 85 feet below the surface, and runs a distance of six miles through the heart of the city, from the Bank to Shepperd's Bush. You are carried up and down by lifts, and of course this is the fastest way of getting over the distance. It is called "two penny" (four cents), as that is the fare charged whether you go by it only a part or the whole or the way.

The last trip I will record is a run into Kent, where we spent a week pleasantly in Dickens' Land,

Rochester, Gravesend and Cobham. Rochester, a quaint little town, stands almost exactly where it did in the old Pickwickian time of 1827. Few, perhaps, know how much the place is bound up with the great writer and his works. Here is the old castle described by Jingle; Fort Pitt, where Winkle's duel took place; the old Bull Inn, scene of the ball; the Cathedral, Eastgate House, Minor Canon Row, all described in Edwin Drood; the terrace at Chatham, close by, where the Dickens family lived; the Seven Poor Travellers' hostelry; Gadshill, Cobham Hall, with its almshouses, gallery of pictures, Dickens' Chalet, and the old Leather-bottle Inn to which Mr. Tupham retired from the world,—a cluster of memorials of intense interest to all true Bozians.

The whole of England is one great park and flower-garden. The May is out and in full bloom, and so are white

and pink horse-chestnut trees. The weather is perfect, although we are told that the farmers need rain badly, and they probably will have it long before you get my letter. Do not expect us home just yet. I am now at Eastbourne, within sound of the glorious sea, and I hope to get to the Glasgow Exhibition in August. With engagements three deep, I do not know how soon to promise that you shall have another letter from—
MOLLIE.

How Long Do You Sleep?

Natural sleep is something that can't be regulated by any formula. The body takes what it needs, be it much or little, and the necessary amount varies with the individual. In a general way, four hours is the minimum and ten hours the maximum for people in fair health. Either more or less is a pretty sure sign that something is out of gear—usually something in the brain.

Says a physician, "I have two patients who sleep only four hours and keep in tolerably good condition. Both are middle-aged men, and neither of them works very hard. Nature can repair its losses in four hours of unconsciousness. In many other people nearly three times as long is required. The nerve cells work more slowly; why, nobody knows."

"The queerest case that ever came under my personal observation was that of a bookkeeper who used to sleep two or three hours a night through the week, and on Sunday would catch up in a twenty-four hour nap. That is no exaggeration, but an actual fact well known to all his intimates. He seemed to be able to store away nervous energy as a camel stores water. His general health during the twelve or fifteen years I knew him was excellent."



MAGGIE'S RIDE.

Help One Another.

Do whatever you can to help every struggling soul, to add new strength to any staggering cause—the poor sick man that is by you, the poor wronged man whom your influence might vindicate, the poor boy in your shop that you may set with new hope upon the road of life that is beginning already to look dark to him. I cannot tell you what it is. You know your duty. No man ever looked for it and did not find it—*Phillips Brooks.*

Humor, a Sweetener of Life.

Whilst I do not for one moment believe that amongst our readers are to be found many, or, indeed, any of those who are said "to go through life whining," yet there may be some so weighted by life's real cares and responsibilities, or so harrassed by its petty worries, that they positively cannot realize that life has its humorous as well as its sad side. To them I would recommend the cultivation of humor as a sweetener of toil and as a panacea for many a trial. I would assure them, also, that it is a quality which can be cultivated and will reward cultivation. In humor we may find a bright and sunny pathway towards the solution of many of our problems, the magic key to unlock many a treasure-store of wit and wisdom, the "open sesame" to many hearts. Some may be "so resolutely bent upon being serious" that to them no humorous side of any question presents itself. So much the worse for themselves, but so long as they will let the rest of us have our little laugh sometimes, we shall be content to sit at their feet and at least try to temper our wit with their wisdom.

Life has its humorous as well as its serious aspects. Laughter is as human as tears, but whilst the tears may lead to despair, laughter, which is the daughter of hope, is much more likely to cheer the heart and strengthen the hands for the struggle against those ills which have caused the tears. It will win more able volunteers to aid in that struggle than could even the most heartrending cry of the despairing soul. Laughter is akin to tears; pathos is blended with humor. They are as twin sisters and can present a dauntless front when hand is joined to hand in loving grasp to start on errands of mercy or to encounter the foe.

Mr. Edgar Wilson Nye, better known as Bill Nye, writing of a visit he had recently paid to Dean Hole, spoke of him as not being one of those who "think they are pious when they are only bilious." "I have always sort of wondered," wrote Mr. Nye, "why the children of a king should go mourning all their days, and I have often tried to settle in my own mind the question why the clergyman and the man who rides a bicycle should never smile. It seems to me that if I could be as good as many preachers appear to be, I would be radiant with gladness all the time. You have proved to me that a clergyman may have a good time, good health and long life without injury to his piety. It is fully as unjust to put down all clergymen as enemies to humor as it would be to assume that all humorists were destitute of religion. So you see, my dear friend, that the general public has a wrong idea of us both." I honestly believe that there is hardly any situation so hopeless but that, if not an actual remedy, yet an amelioration can be found for it when its humorous side is sought for. Even the dear old lady who had only two teeth in her head found her consolation in her little joke that although she had but two, they were "one top o' t'other, and so she "might have been wuss off." Some of us, too, may recall poor Tom Hood's "Dear me, Fanny, that's a monstrous deal of mustard for a very little meat," when his sorrowing wife, upon whose face he sought to raise a smile, brought the big mustard poultice to lay upon his emaciated chest; flashes of merriment breaking forth even to the last moment of his life, in spite of almost unendurable physical pain and mental anguish. Of Hood's wit we are told "it was always kindly, gracious and sympathetic; never caustic, never coarse, and never tainted with distrust of the goodness of God."

I would submit that I know no factor more helpful in making the rough places smooth in our daily lives than a helpful and healthful sense of humor. It can act as did the bright sunshine in the well-worn old fable of the wind and the sun both trying to make the traveller cast off his cloak. The wind only made him hug it the tighter, whilst the merry sunbeams wooed him to cast it off from very lightness of heart. Where the most solemn protests fail, often a little playful remonstrance will gain the sought-for end; and of this I am convinced, that many a household hurricane has been averted by the comic vein of the offender or offended. Let us advocate on both sides the cheery, happy spirit which can turn a domestic calamity into a joke, and thus make it possible for even a hungry man to go minus a promised dainty without a scowl and without the administering of a scolding to the perhaps equally disappointed wife. Truly, humor between husband and wife is an inestimable boon, and its absence little short of a calamity. Try it, my friends, try it. *H. A. B.*

Ideas, Humorous and Serious.

It is a well-known fact that oil and water will not mix. If this were only true of milk and water how happy we would be.
 Everything goes at a rapid pace these days. Even the dressmakers boldly assert that the colors are fast.
 A slipper used judiciously will often make a dull child smart.
 A man who tries to reform his life on the instalment plan, usually gets behind in his payments.

A Pig in the Fence.

Didst never observe when a pig in the fence Sends forth its most pitiful shout,
 How all of his neighbors betake themselves there,
 To punish him ere he gets out?
 What a hubbub they raise, so that others afar
 May know his condition and hence
 Come running to join them in adding a scar
 To the pig that is fast in the fence.
 Well, swine are not all of the creatures that be,
 Who find themselves sticking between
 The rails of the fence, and who strive to get free
 While the world is still shoving them in;
 Who find that the favor they meet with depends
 Not on words, but on dollars and cents;
 And that 'tis but few who will prove themselves friends
 To the pig that is fast in the fence.

Shuffle-shoon and Amber Locks.

Shuffle-shoon and Amber locks,
 Sit together, building blocks;
 Shuffle-shoon is old and gray,
 Amber locks a little child.
 But together at their play
 Age and youth are reconciled,
 And with sympathetic glee
 Build their castles fair to see.
 "When I grow to be a man"
 (So the wee one's prattle ran)
 "I shall build a castle so—
 With a gateway broad and grand;
 Here a pretty vine will grow,
 There a soldier guard shall stand;
 And the tower shall be so high
 Folks will wonder, by and by!"
 Shuffle-shoon is old and gray;
 Thus I builded long ago;
 Here a gate and there a wall,
 Here a window, there a door,
 Here a steeple, wondrous tall,
 Rising ever more and more!
 But the years have leveled low
 What I builded long ago.
 So they gossip at their play,
 Heedless of the fleeting day;
 One speaks of the long ago,
 Where his dead hopes buried lie;
 One with chubby cheeks aglow,
 Prattleth of the by and by;
 Side by side they build their blocks,
 Shuffle-shoon and Amber locks.
—Eugene Field.

Harmonies in Color.

Black and white.
 Blue and gold.
 Blue and orange.
 Blue and salmon.
 Blue and maize.
 Blue and brown.
 Blue and black.
 Blue, scarlet and lilac.
 Blue, orange and black.
 Blue, brown, crimson and gold.
 Blue, orange, black and white.
 Red and gold.
 Red, gold and black.
 Scarlet and purple.
 Scarlet, black and white.
 Crimson and orange.
 Yellow and purple.
 Green and gold.
 Green, crimson, turquoise and gold.
 Green, orange and red.
 Purple and gold.
 Purple, scarlet and gold.
 Lilac and gold.
 Lilac, scarlet and white or black.
 Lilac, gold, scarlet and white.
 Lilac and black.
 Pink and black.
 Black, with white or yellow and crimson.

Buying Fame.

"The only capital needed to embark in the profession of literature is a bottle of ink and a versatile pen."

She had read the words and pondered over them more deeply than usual, knitting her white brow until the golden curls on her forehead peeked down into her eyes to see what it all meant. Visions of a future spangled with plaudits and bright with fame rose before her.

Yes, she would adopt this fourth profession. Putting on a love of a hat and a dear, dainty little wrap that hugged her close, she started out to purchase the necessary outfit. Reaching the bookstore, she looked out from under her drooping plumes and coquettishly asked for a bottle of the very best ink. When placed on the counter before her it was like an elixir, so many grand possibilities flashed through her head.

"And now I want a pen." On being asked if there was any make she preferred, she hesitated and then said:

"Yes, but I most forget what it is. It's like vermicelli, or varioloid. No, that isn't it. Could it be verdigris or verdancy, now?"

"Really, I don't know," replied the puzzled clerk. "You must be looking for something quite rare."

"Yes, I am; but I've got money to buy it if I only knew what it was."

"By the way," questioned the inspired clerk, "could it be versatile?"

"Yes, that's it. I knew I'd find it. A versatile pen is what I'm looking for."

"I am sorry, miss, but we have none in stock. They are very rare and we have little call for them, as only geniuses use them. You see, the points are all dipped in gray matter and attic salt, and—"

"Gray! Well, then, I don't want one. Gray isn't becoming. I never have it near me." And turning, she walked away, unconscious that she was robbing the world of a literary gem. *Detroit Press Press.*

The Dawn Fairy.

This morning a wonderful white little fairy
 Came glimmering, shimmering up to our lawn,
 While Arthur and Ellen and Lucy and Mary
 Lay still in their beds with the curtains all drawn.
 She rode in a boat on the crest of the waters
 That ripple all day at the foot of the wall;
 O wee bonny baby and dear little daughters,
 To think you were sleeping and missing it all!

The ripples grew bright with a radiant wonder;
 The clouds turned to crimson and gold overhead,
 And round her boat's keel, and above it, and under,
 The sun made a path for the fairy to tread.
 The wind o'er the water came laughing and kissed her;
 The woods waved "Good-by!" when she went from the shore.
 To think you were sleeping, my dearies, and missed her!
 And what if she never should come any more!

Now, Arthur, and Ellen, and Lucy, and Mary—
 (Come close to my knee, and look up in my eyes)—
 If ever you want to be sure of the fairy,
 You must wake when the sunrise is lighting the skies;
 Look out of our window, and over the water,
 And watch where the sun makes a glimmering track,
 And then you will see the bright pathway that brought her,
 And maybe the sails of her boat going back.
Mabel Earle.

Facts that Few People Know.

"Cups that cheer but not inebriate" are first mentioned by Cowper in "The Task." The allusion is to teacups.

"Facts are stubborn things" is an aphorism first used by Le Sage in "Gil Blas." It has since become proverbial.

The expression to "rain cats and dogs," indicating a severe shower, is found in Dean Swift. It is supposed to be of proverbial origin, and much older than his time.

"Fiasco" means a bottle or flask. When the Italian glass-blowers detected flaws in the vase they were blowing, they made an ordinary bottle of the failure, and hence the name.

The phrase "to die in the last ditch" was first used by William, Prince of Orange, who, during the war with France, was asked what he would do in case the troops of Holland were defeated in the field, and who replied: "I will die in the last ditch."

"To put one's foot in it" is a country saying. The milk is drawn from the cows into buckets, and it is an easy matter for a clumsy fellow to put his foot in the bucket while it is standing on the ground.

The most common of all quotations, "Fresh fields and pastures new," comes from Milton's "Lycidas"—or rather in its correct form it does. "Fresh woods and pastures new" is what Milton wrote.

To "pile on agony" is popularly supposed to be an Americanism. It is found, however, in one of the letters of Charlotte Brontë.

"In the same boat," an expression often given by English authorities as an Americanism, really dates back to the first century, when it was used by Clement L, Bishop of Rome, about the year 100, in a letter to the Church of Corinth.

To "face the music" is a metaphor borrowed from the stage, where the player comes to the front and faces the orchestra.

To "take the cake" is an expression which seems to have originated among the colored people of the Southern American States. Cake-walks, or promenades, in which cakes were offered as a reward for grace of demeanor, were formerly common in the Southern States, and are even now known in many localities.

Success Won by Determined Men.

In a recent book, Orison Swett Marden gives the following instances of the power of determination, backed by hard work, to bring success:

"Do you know," asked Balzac's father, "that in literature a man must be either a king or a beggar?" "Very well," replied his son, "I will be a king." After ten years of struggle with hardship and poverty he won success as an author.

"Why do you repair that magistrate's bench with such great care?" asked a bystander of a carpenter who was taking unusual pains.

"Because I wish to make it easy against the time when I come to sit on it myself," replied the other. He did sit on that bench as a magistrate a few years later.

"There is so much power in faith," says Bulwer, "even when faith is applied but to things human and earthly, that let a man but be firmly persuaded that he is born to do some day what at the moment seems impossible, and it is fifty to one but that he does it before he dies."

The author, continuing on the same subject, says: "There is about as much chance of idleness and incapacity winning real success, or a high position in life, as there would be in producing Paradise Lost by shaking up promiscuously the separate words of Webster's dictionary and letting them fall at random on the floor. Fortune smiles on those who roll up their sleeves and put their shoulders to the wheel; upon men who are not afraid of dreary, irksome drudgery, men of nerve and grit who do not turn aside for dirt and detail."

"Circumstances," says Milton, "have rarely favored famous men. They have fought their way to triumph through all sorts of opposing obstacles."

"We have a half-belief," said Emerson, "that the person is possible who can counterpoise all other persons. We believe that there may be a man who is a match for events—one who never found his match against whom other men, being dashed, are broken—one who can give you any odds and still beat you in the race."

THE BIG FOUR

GREAT PREMIUM PICTURE OFFER.

For obtaining new subscribers to the "Farmer's Advocate" at \$1.00 per year.

"Canada's Ideal"—Admitted by judges, breeders and artists to be the most magnificent engraving of high-class modern Shorthorns ever issued in any country. 24 x 36 inches. Twelve animals.

"Canada's Pride"—Nine celebrated draft horses.

"Canada's Glory"—Eleven celebrated light horses.

"Canada's Columbian Victors"—13 celebrated Ayrshire cattle.

Your choice of any one of the above for ONE new subscriber, or all four beautiful pictures for only three new subscribers.

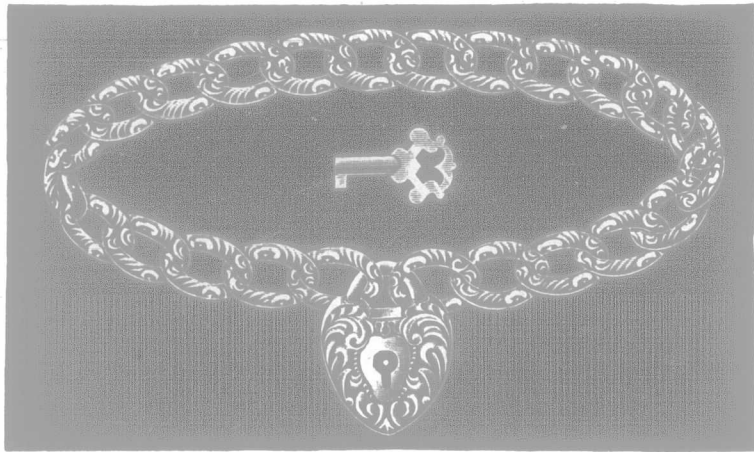
Bagster's ^{NEW} COMPREHENSIVE Teacher's Bible,

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, with SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

Handsome Curb-link Silver Bracelet with Padlock and Key.



For 2 new subscribers. For each additional new subscriber, two Sterling Silver Friendship Hearts.

Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums right away. In every case cash must accompany the new names.

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

STRONZA FARM

Shorthorns: 2 bull calves for sale. Good individuals, and bred in the purple.

D. ALLISON, - ROLAND, MAN.

For Sale: Clydesdales, Shorthorns.

Exceedingly well-bred mares, fillies, one (imp.) two-year-old stallion. Bulls, cows, heifers (all ages) from Caithness. Apply: PURVES THOMPSON, m Pilot Mound, Man.

Clydesdales and Shorthorns.



Young stallions, bulls, and heifers. Herd headed by Best Yet—14371—and Mint-horn—24084—, bulls bred by Hon. John Dryden and H. Cargill & Son. PRICES ON APPLICATION. D. McBeth, Oak Lake, Manitoba

Brandon College. That bustling western city, Brandon, is well and favorably known throughout Canada for her clean streets, solid buildings, first-class agricultural show, and the Experimental Farm. An institution which is rapidly coming to the front and also giving the Wheat City a name as an educational center is the Brandon College, whose advertisement appears in this issue. Theological, academic, commercial and arts courses may be had by the intending student. The healthful situation and modern appointments of a good residential college should make it a very acceptable place to the farmer who is desirous of educating any member of his family. The instruction given is high-class and up-to-date, an assertion borne out by the successes of the

students of this institution. The new building will be opened for work this fall. Farmers attending the Brandon Fair should call on the college authorities and look over the fine building erected for educational purposes. Send to the principal, Rev. Dr. McDiarmid, for a calendar and get particulars of the courses.

Killarney Agricultural Society will probably accept the offer of the C. P. R. to run an excursion to the Experimental Farm, Brandon.

The annual meeting of the Holstein-Friesian Association of America was recently held at Syracuse, N. Y., and was the largest and most enthusiastic meeting ever held, everything in connection with the breed being in first-class shape, and over 100 new members were admitted at this meeting. The Association offers liberal prizes for the best cows that are officially tested during each year, and such as come up to the required standard are entered in its Advanced Registry. Such competing animals are tested for one week at the homes of their owners and under the personal supervision of representatives of the State Experimental Stations. These are all made by the Babcock test, and are certified to by such representative under oath, so that it will be seen they are absolutely reliable. The past year 328 cows were entered, of which four were from the *South Side Herd, White Bear, Minn.*, and three of them won prizes—first and seventh for cows 34 years old, and second for cows 24 years old. One cow, 31 years old, made 18 lbs. 6.8 ozs.; another, 16 lbs. 2.5 ozs.; and one, 24 years old, 16 lbs. 10.8 ozs. of butter in 7 days; and the other cow entered, a 3-year-old, made 13 lbs. 10.2 ozs. of butter in 7 days. South Side Herd is not a large one, but it contains six other cows, besides the above, that have been thus officially tested and have come up to the high standard of the Advanced Registry, and more will be officially tested this year that are sure to get large records.

PLEASE MENTION FARMER'S ADVOCATE.

Our

Farmer's Library

A RECENT bulletin prepared by Prof. J. B. Reynolds, of the Ontario Agricultural College, gives a list of meritorious books on Agriculture, Live Stock, Dairying, and Fruit Growing, from which we have made a selection and added a few others. How to obtain, see below:

SOIL AND CROP.

THE FERTILITY OF THE LAND.—Roberts. 372 pages. \$1.25.

A BOOK ON SILAGE.—Woll. 185 pages. \$1.00.

SOILS AND CROPS.—Morrow & Hunt. \$1.00.

FORAGE CROPS.—Thos. Shaw. \$1.00.

SOILING, ENSILAGE, AND BARN CONSTRUCTION.—F. S. Peer. 247 pages. \$1.00.

LIVE STOCK.

VETERINARY ELEMENTS.—A. G. Hopkins, B. Agr., D. V. M. \$1.50. A practical book for stockmen and agricultural students.

THE STUDY OF BREEDS (CATTLE, SHEEP, AND SWINE).—Prof. Shaw. 400 pages; 60 engravings. \$1.50.

HORSE BREEDING.—Sanders. 422 pages. \$1.50.

LIGHT HORSES—BREEDS AND MANAGEMENT. 226 pages. \$1.00.

HEAVY HORSES—BREEDS AND MANAGEMENT. 219 pages. \$1.00.

CATTLE—BREEDS AND MANAGEMENT. 270 pages. \$1.00.

SHEEP—BREEDS AND MANAGEMENT. 232 pages. \$1.00.

CATTLE BREEDING.—Warfield. 386 pages. \$2.00.

THE DOMESTIC SHEEP.—Stewart. 371 pages. \$1.75.

THE SHEEP.—Rushworth. 496 pages. \$1.50.

PIGS—BREEDS AND MANAGEMENT.—Sanders Spencer. 175 pages. \$1.00.

FEEDS AND FEEDING.—Henry. 600 pages. \$2.00.

PONIES—PAST AND PRESENT. 50 cents.

GENERAL AGRICULTURE.

AGRICULTURE.—C. C. James. 200 pages. 30 cents.

FIRST PRINCIPLES OF AGRICULTURE.—Voorhees. 207 pages. \$1.00.

AGRICULTURE.—Storer. 1,875 pages, in three volumes. \$6.00.

CHEMISTRY OF THE FARM.—Warrington. 183 pages. 90 cents.

FARMYARD MANURE.—Atkeman. 65 pages. 50 cents.

IRRIGATION AND DRAINAGE.—King. 502 pages. \$1.50.

IRRIGATION FOR THE FARM GARDEN AND ORCHARD.—Henry Stewart. \$1.00.

SUCCESSFUL FARMING.—Rennie. 300 pages. \$1.50, postpaid.

DAIRYING.

AMERICAN DAIRYING.—H. B. Gurler. 252 pages. \$1.00.

THE BOOK OF THE DAIRY.—Fleischmann. 330 pages. \$2.75.

MILK AND ITS PRODUCTS.—Wing. 230 pages. \$1.00.

TESTING MILK AND ITS PRODUCTS.—Farrington & Woll. 255 pages. \$1.00.

DAIRYING FOR PROFIT.—Mrs. E. M. Jones. 50 cents.

POULTRY.

ARTIFICIAL INCUBATING AND BROODING.—Cypher. 146 pages. 50 cents.

PRACTICAL POULTRY-KEEPER.—Wright. \$2.00.

APIARY.

THE HONEYBEE.—Langstroth. 521 pages. \$1.50.

FRUIT, FLOWERS, AND VEGETABLES.

VEGETABLE GARDENING.—Green. 224 pages. \$1.25.

FLOWERS AND HOW TO GROW THEM.—Rexford. 175 pages. 50 cents.

THE PRINCIPLES OF FRUIT-GROWING.—Bailey. 514 pages. \$1.25.

BUSH FRUITS.—Card. 537 pages. \$1.50.

HORTICULTURIST'S RULE BOOK.—Bailey. 312 pages. 75 cents.

SPRAYING OF PLANTS.—Lodeman. 399 pages. \$1.00.

THE NURSERY BOOK.—Bailey. 365 pages; 152 illustrations. \$1.00.

AMATEUR FRUIT-GROWING.—Samuel B. Green. 5x7 inches; 131 pages, with numerous fly leaves for notes; bound in cloth, and illustrated. 50 cents.

PLANT AND ANIMAL LIFE

THE STORY OF THE PLANTS.—Grant Allen. 213 pages. 40 cents.

THE STUDY OF ANIMAL LIFE.—J. A. Thomson. 375 pages. \$1.75.

INSECTS INJURIOUS TO FRUITS.—Saunders. 436 pages. \$2.00.

MISCELLANEOUS.

THE HOME PHYSICIAN AND CYCLOPEDIA OF MEDICINE.—By seven eminent physicians, aided by specialists. 1,300 pages; illustrated. Cloth, \$4.75; leather, \$5.75.

HOW TO OBTAIN THESE BOOKS:

We will furnish present subscribers any of the above books for cash or as premiums for obtaining new yearly subscribers to the FARMER'S ADVOCATE at \$1.00 each, according to the following scale:

Books valued at from \$0.30 to \$0.65, for 1 new subscriber.	
“ “ .90 to 1.25, for 2 “	
“ “ 1.50 to 1.75, for 3 “	
“ “ 2.00 to 2.50, for 4 “	
“ “ 2.75 for 5 “	
“ “ 6.00 for 12 “	

We can furnish any of the above books at the regular retail price, which is given opposite the title of the book. By a careful study of the above list, any farmer can choose a select list of books suited to his needs, and for a small outlay in cash, or effort in obtaining new subscribers for the ADVOCATE, secure the nucleus of a useful library.

Cash to accompany names in every case. Subscriptions credited a year in advance from date received.

The WILLIAM WELD CO., Ltd., WINNIPEG, MAN.

ROXEY STOCK FARM, BRANDON, MAN.

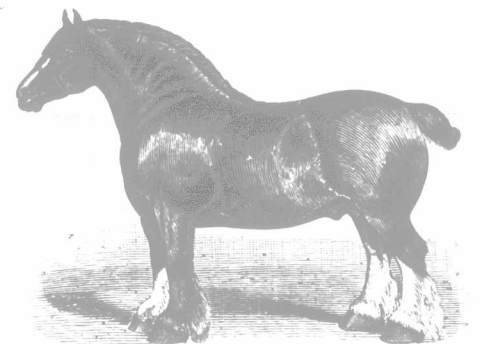
J. A. S. MACMILLAN, IMPORTER AND BREEDER OF PURE-BRED

Clydesdales, Shires, Hackneys STALLIONS & MARES.



Shorthorn Cattle, Shropshire Sheep—Inspection invited. Correspondence solicited. Terms easy. Prices Right. Full particulars on application. Apply P. O. Box 403.

J. E. SMITH



SIR ARTHUR.

Offers for sale three Clydesdale stallions all prize-winners, and fit to head any stud. Two of them imported from Scotland. Three to six years of age. These stallions all of good form. Ample weight, good colors, and choice quality. Were personally selected, and the best that money could buy. In order to make quick sales, will be sold on a very small margin. Intending purchasers of a good useful stallion would consult their own interests to inspect these stallions before buying. Also for sale, fillies and mares all ages. Shorthorn bulls, cows and heifers all ages; sired by Lord Stanley 2nd and Golden Measure (imp.). A useful lot of breeding Shorthorns can be seen at Smithfield. All are kept in breeding trim. Buyers in search of moderate-priced cattle should not fail to see them. Come and see the stock. You will find it just as represented, and prices right.

J. E. SMITH, Telephone 4, Smithfield Ave., P. O. Box 274, BRANDON.

Canadian Pacific Rail'y

Are prepared, with the Opening of Navigation MAY 5th, To offer the Travelling Public

Holiday Rates Via the Great Lakes

Table listing steamers (ALBERTA, ATHABASCA, MANITOBA) and routes (TORONTO, HAMILTON, MONTREAL, NEW YORK, AND ALL POINTS EAST).

For full information apply to W.M. STITT, C. F. McPHERSON, Asst. Gen. Pass. Agent, Gen. Pass. Agent, WINNIPEG. IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Peake, Bros., Yorkton, have bought, at a big figure, the yearling Sittytton Hero 11th from J. I. Davidson & Sons, Balsam, Ont. The bull is a full brother to the bull, Sittytton Hero, recently sold by J. G. Washington, Ninga, for \$1,000.

In this issue the Winnipeg Business College advertisement is changed, and indications are given of the up-to-date character of this institution. A feature of novel interest to our readers, and especially to the pupils and intending pupils of a business college, is a typewriting competition. The management of the Winnipeg Business College is offering valuable prizes to the three fastest operators who will take part in the competition to be held in the college rooms during exhibition week. A competition such as this should tend to develop a higher speed among stenographers. Particulars are given in a neat folder, which should be written for.

The scores and prizes at the Blyth plowing match are as follows: Men's class, eight entries, 14-in. walking plow—1st, Jas. Sutherland, Brandon, 89 points; 2nd, W. Guild, Kennay, 87 points; 3rd, Jno. Torry, Blyth, 81 points; 4th, Jno. Stott, N. W. Brandon, 80 points; 5th, W. Rogers, Bagot, 79 points; 6th, W. Turner, Carroll, 70 points.

Men's class, six entries, 16-in. walking plow—1st, Russell Tran, Beresford, 81 points; 2nd, Wilton Elder, Blyth, 80 points; 3rd, Harry Payne, Wawanesa, 79 points; 4th, Wm. Croy, Brandon, 77 points; 5th, Tom Hill, Brandon, 76 points; 6th, John Bain, Blyth, 71 points.

Young men, five entries—1st, Bain Elder, Blyth, 79 points; 2nd, George Elder, Blyth, 71 points; 3rd, Allan Tran, Beresford, 70 points; 4th, Sam. Maher, Glen Souris, 68 points.

Boys' class, three entries—1st, John Holl, Alexander, 73 points; 2nd, Allan Leslie, Chater, 72 points; 3rd, Andrew Charleson, Blyth, 59 points.

Fourteen-inch gang plows, nine entries—1st, H. M. Johnston, Chater, 84 points; 2nd, Thos. Yuill, Portage la Prairie, 86 points; 3rd, James Yoss, Wawanesa, 85 1/2 points; 4th, L. Nelles, North Brandon, 82 points; 5th, D. Foster, Chater, 79 points; 6th, George Agar and Allan Leslie, 78 points.

Twelve-inch gang plows, five entries—1st, W. E. Lawson, Hayfield, 76 points; 2nd, Frank Elder, Blyth, 73 points; 3rd, Wm. Atchison, Methven, 65 points; 4th, Fred Wells, Alexander, 60 points. Judges, N. Reid and George Hopkins.

Sixteen- or eighteen-inch walking or riding plow, one entry—John Mayhew, Wawanesa, 79 points.

Best groom and harness—1st, Bain Elder, Blyth; 2nd, John Torry, Blyth.

Best plow team—John Stott, N. W. Brandon. Sweepstakes—John Sutherland, Brandon, 1st prize, gold medal, in 14-inch walking-plow class.

PROGRAMME OF AGRICULTURAL SOCIETY AND FARMERS' INSTITUTE MEETINGS IN JULY.

Division No. 1.—Speakers: Miss B. Maddock, Guelph, Ont.; S. J. Thompson, Prov. Veterinarian.

Table listing locations and times for Division No. 1 meetings: Carman, Miami, Nelson, Morden, Manitou, Pilot Mound, Crystal City, Cartwright, Deloraine, Boissevain, Killarney, Melita, Hartney, Souris.

Division No. 2.—R. Harcourt, B.S.A., O.A.C., Guelph, Ont.; R. G. O'Malley, Prov. Noxious Weeds Inspector.

Table listing locations and times for Division No. 2 meetings: Ross, Emerson, Morris, Kildonan, Dugald, Beausejour, Selkirk, Bird's Hill, Meadow Lea, Woodlands, Stonewall, Treherne, Holland, Cypress River, Glenboro.

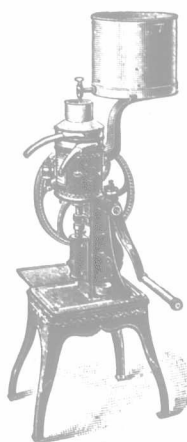
Division No. 3.—D. Drummond, Myrtle, Ont.; C. A. Murray, Dairy Superintendent; A. P. Stevenson, Nelson, Man.

Table listing locations and times for Division No. 3 meetings: Grandview, Dauphin, Gladstone, Neepawa, Portage la Prairie, MacGregor, Austin, Carberry, Pipestone, Wawanesa, Swan Lake, Belmont, Baldur, Blyth.

Division No. 4.—Prof. Reynolds, O. A. C., Guelph, Ont.; F. Lutley, Dairy Instructor.

Table listing locations and times for Division No. 4 meetings: Elkhorn, Virden, Oak Lake, Bradwardine, Oak River, Hamiota, Arrow River, Minnedosa, Russell, Birtle, Shoal Lake, Strathclair, Rapid City.

In the Business to Get the Butter-fat.



That's what the manager of the Canagoharie (N. Y.) Creamery Co. says in explanation to the manufacturer of the separator he has recently thrown out, to replace them with the De Laval, writing:

"We are not inclined to argue the separator question with you. Further correspondence in the matter will not help it any. All that we asked you to do was to make your machine do the work. We paid you good money and got no value in return. We make three tests of every separator run. We are in the business to get the butter-fat, and the machine that does is the machine that we want."

That's the whole separator problem in creamery operation, stripped of all frills and trivialities. The owner or manager who recognizes this impregnable fact, and who makes the tests, and knows how to make them to demonstrate it, is certain to use the De Laval separators, just as every big, prosperous and well-informed creamery is to-day doing.

What is true in respect to the large operator is also true of the individual dairyman.

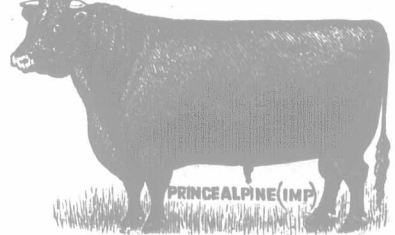
If you don't know why, a De Laval 20th Century Catalogue will help to make the reasons plain to you.

The De Laval Separator Company.

WESTERN CANADIAN OFFICES, STORES AND SHOPS:

248 McDermott Ave., Winnipeg, Manitoba. CHICAGO. NEW YORK. MONTREAL.

W. S. LISTER, MARCHMONT STOCK FARM, MIDDLECHURCH, MAN.

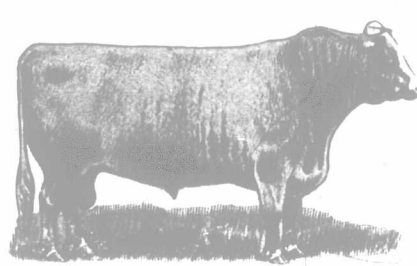


Scotch Shorthorns

80 HEAD TO SELECT FROM.

Offers for sale 12 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Prince Alpine = 28874, at head of herd. Farm seven miles north of Winnipeg. Telephone connection.

PRAIRIE HOME STOCK FARM



CLYDESDALES, SHORTHORNS, SHROPSHIRE, BERKSHIRES and YORKSHIRES.

Shorthorn herd headed by Judge, imp. Jubilee, and Ribbon's Choice. Ayrshires of the best quality; herd headed by Surprise of Burnside. Oak Lodge Mighty 7th and a large number of high-class sows represent the approved bacon type of Yorkshires. The Berkshire boar, Victor (Teasdale), sweepstakes at Brandon and Winnipeg, 1900, and 30 sows of faultless conformation and superior breeding, make up the Berkshire herd. Farm one mile from the station. Visitors welcome. Prices and quality right. THOMAS GREENWAY, PROPRIETOR, Jas. Yule, Manager. Crystal City, Man.

Portage la Prairie Agricultural Society are making quite an addition to their buildings at the Island Park there.

A special department at the Indian Head Experimental Farm is to be started, ten acres being reserved for work in forestry. Geo. Lang, Sr., is to be the forester.

Wm. Bryce, Percy, N.-W. T., has a prolific cow, she having given birth to triplets recently. Twin calves are common this year, so our correspondent states.

Ben Tindall, Neepawa, has purchased that good red Shorthorn bull, King Christopher 22964, by Sir Christopher, an Oxford Duke, from Wm. McDonald, Pilot Mound. This bull should prove of considerable value to the district.

Alex. Stevenson, proprietor of Brookside Farm, Wakopa, Man., has purchased Bracelet's Hero, out of Bracelet 8th, by Sittytton Hero 7th, the sweepstakes Winnipeg Shorthorn bull in 1900, from Thos. Greenway, Crystal City.

J. G. Washington, Ninga, following up his successful venture in the purchase of Sittytton Hero 7th from Prairie Home Stock Farm, has purchased Cumberland, a grandson of Blue Ribbon, a reference to which appears in these columns.

David Clark, Cando, North Dakota, a Shorthorn breeder of note in that State, became enamored of Lorne Campbell, the Cleora bull calf by Sir Colin Campbell (imp.). Lorne Campbell will therefore become a naturalized American citizen.

Jas. Walker, Neepawa, is breeding Yorkshires, some of which are winners at the local fair in strong competition.

Foals are reported by the stallion-owners as coming all right this spring and summer. The hen men report disappointing hatches.

The British Dairy Farmers' Association hint at a trip to Canada next year! They will be welcomed in the West!

W. Cross, of Calgary, took out seventeen carloads of stockers from Portage la Prairie recently.

Favored with access to plenty of water and pasture along the Souris, the Shorthorn herd of A. Titus, Napinka, shows evidences of thrifty condition. At the head of the herd is that well-known red bull, Sittytton Stamp, now ten years old, with a skin showing good handling qualities. The cows are all built on the good-sized, useful order, and include several reds by Windsor, one of whom is a very deep, lengthy cow, a trifle high at the tailhead, but with a good middle and deep through the twist. A roan 2-year-old heifer promises well. The calves coming are good ones, two especially being worthy of notice. They all show the impressiveness of their sire. Mr. Titus was able to show the ADVOCATE representative a volunteer crop of wheat, now in the shot blade, which had stood the winter all right. The proprietor is a lover of the Standard-bred, and has some likely-looking colts on the farm by Flaxmont.

THE WESTERN FARMER'S LIVE STOCK INSURANCE CO.

D. PRITCHARD, PRESIDENT. H. S. PATERSON, SECRETARY, P. O. Box 1382.

The best insurance is when risk is greatest. Claims paid for six months ending June 1st, 1901, \$3,000.00.

Write for particulars. LOCAL AGENTS WANTED.

Valuable Premiums!

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

No subscription must be taken at a less rate than

\$1.00 PER YEAR.

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."

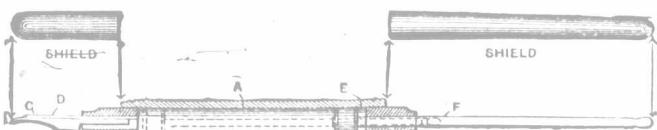
"I have tried every pen of the kind on the market, and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

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.



THE only self-filling and self-cleaning pen manufactured in the world. To fill the pen, put the nib in ink and draw the piston rod up. To clean, put the nib in water and draw the piston rod backwards and forwards a few times.



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



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. Sankey sends the following characteristic letter:
"I have used the Post pen for some time, and have had great satisfaction with its use. It never falls or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

Ira D. Sankey

ADDRESS—

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. 11 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	5
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.

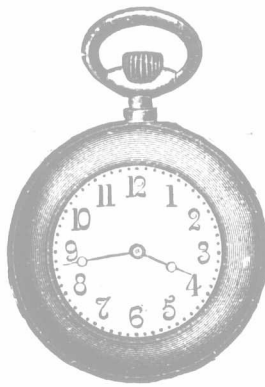
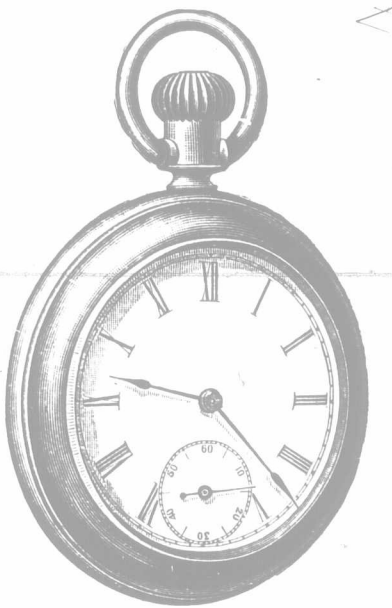
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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

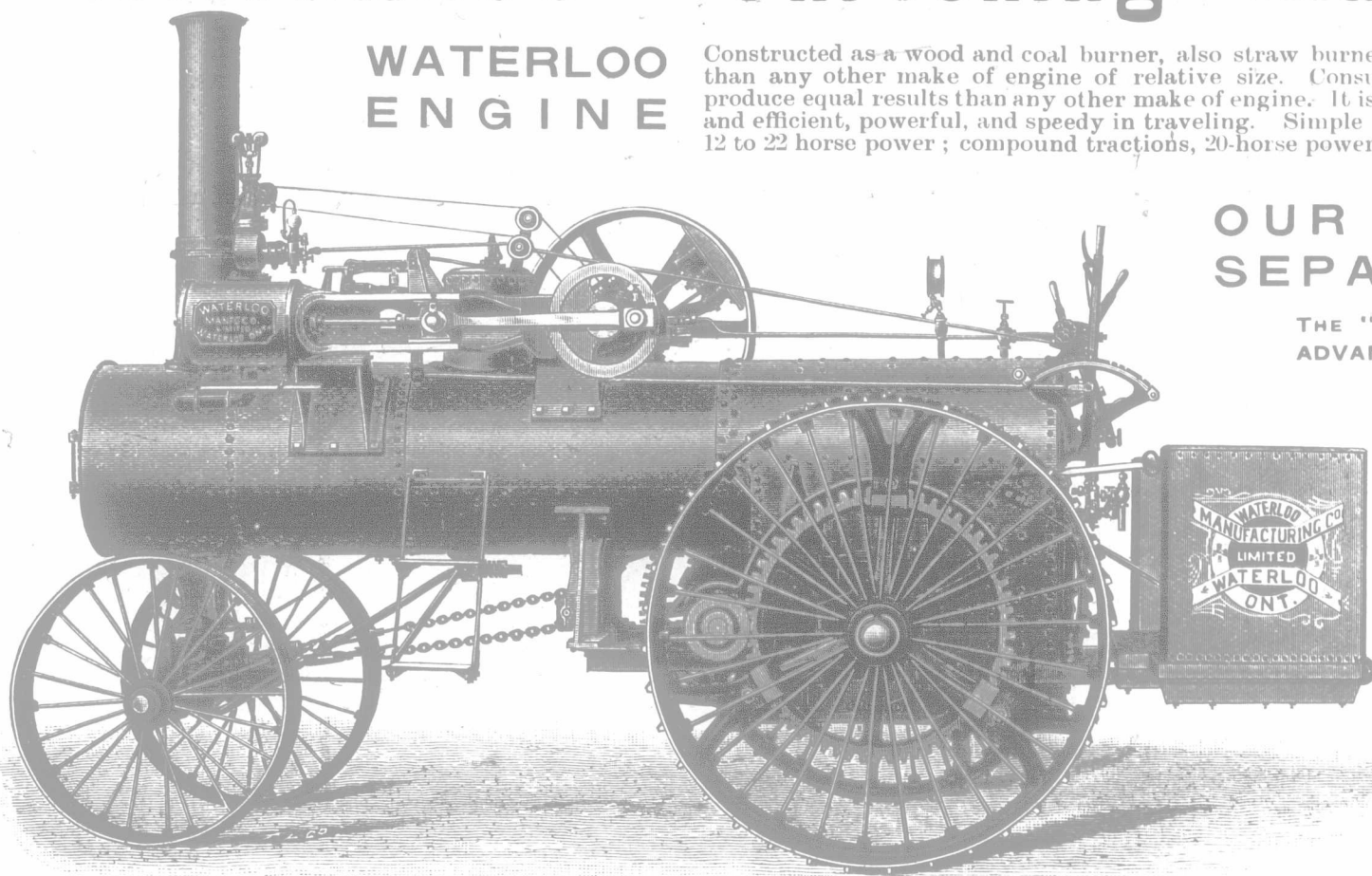
Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted 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.



"WATERLOO" Threshing Machinery.



WATERLOO ENGINE

Constructed as a wood and coal burner, also straw burner. Develops more power than any other make of engine of relative size. Consumes less fuel and water to produce equal results than any other make of engine. It is simple, durable, economical and efficient, powerful, and speedy in traveling. Simple tractions built in sizes from 12 to 22 horse power; compound tractions, 20-horse power.

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THE "CHAMPION" AND ADVANCE CHAMPION

ARE UP-TO-DATE MACHINES.

Perfect threshers and separators, and clean the grain fit for market. We supply all modern conveniences and attachments.

Catalogues mailed to all enquirers.

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WINNIPEG, MAN.

The WATERLOO MFG. CO., Ltd.,
WATERLOO, ONTARIO.

FOR SALE:

Registered "Klondyke" Guernsey Bull

Three years old. Two first prizes in succession at Winnipeg Exhibition. For particulars and price:

P. D. MCARTHUR,
324 PORTAGE AVE., WINNIPEG, MAN.

SPECIAL OFFER OF Clydesdale Stallions, Mares, Fillies

of choice breeding, from the well known Balreggan Stud Farm. The stallions consist of one three-year-old, two two-year-olds, and six yearlings. Show Animals a Specialty. Also a few good Shropshires. Order early. Write for particulars. Address:

JOHN A. TURNER,
Balreggan Stud Farm. MILLARVILLE, ALTA.

GALLOWAYS.

BULLS AND HEIFERS FOR SALE. APPLY TO
T. M. CAMPBELL, St. Jean Baptiste, Manitoba.

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.

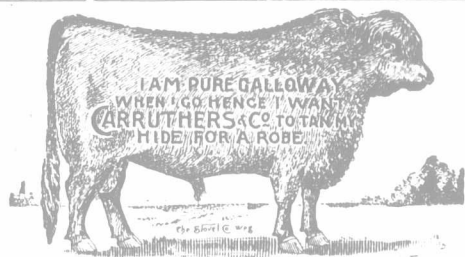
SHORTHORNS FOR SALE

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.

SHORTHORNS FOR SALE

2 young bulls 9 months old, got by Crimson Chief 24657. Several cows and heifers.
ALEX. STEVENSON, "Brookside Farm," Railway Station, Ningsa. Wakopa P. O., Man.

SHORTHORNS, YORKSHIRES AND TAMWORTHS. Stock of all ages and both sexes, at prices according to quality. Write
W. G. STYLES, ROSSER P. O., 12-13-1, WEST, C. P. R.



"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.

Thorndale Shorthorns.

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

JOHN S. ROBSON, Manitou, Man.

D. FRASER & SONS,

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

SHORTHORNS

Gold Medal herd of 1899-1900. Bulls in service are: Noblemen (imp.) and Topsman's Duke. Some good young bulls for sale.
J. G. BARRON, Carberry, Manitoba.

Shorthorns

and YORKSHIRES



Choice heifers by Imp. Knuckle Duster and Lord Lossie 22nd. Boars and prizewinning sows now due to farrow. Order early. White Plymouth Rock cockerels and eggs.

JAS. BRAY, Longburn.

PLEASE MENTION FARMER'S ADVOCATE.



BRANDON COLLEGE.

ACADEMIC DEPARTMENT—

Three years' course leading to matriculation.

COMMERCIAL & STENOGRAPHIC—
Complete business, shorthand and typewriting courses.

ARTS—
General course of first and second years, and special course in mental and moral science of third and fourth years of the University of Manitoba.

THEOLOGY—
Regular courses.

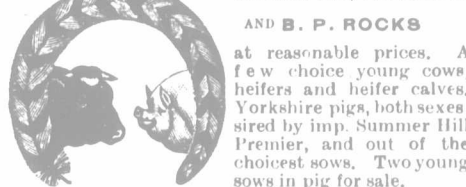
NEW BUILDING—RESIDENCE.

For calendars write the Principal.

Rev. A. P. McDiarmid, D.D., Principal.

FOREST HOME FARM.

SHORTHORNS, YORKSHIRES AND B. P. ROCKS



at reasonable prices. A few choice young cows, heifers and heifer calves, Yorkshire pigs, both sexes, sired by Imp. Summer Hill Premier, and out of the choicest sows. Two young sows in pig for sale.

ANDREW GRAHAM,
CARMAN, C. P. R. POMEROY P. O. MANITOBA.
ROLAND, N. P. R.

SHORTHORNS

Have sold all bulls of serviceable age, but have a few choice females to go yet. Prices right; pedigrees good; cattle typical.

Wm. McDonald, Pilot Mound.

Herefords

The meat-makers, Range favorites and stocker-getters. FOR SALE: bulls of the right age and type. Also Banded Rocks—eggs or chickens.

FRED WEST, DELEAU, MANITOBA.

HEREFORDS.

The range favorites. Good rustlers and feeders. Prizewinners, either male or female, for sale.

JOHN WALLACE, CARTWRIGHT, MAN.

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.

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.

FOOT COMFORT


cures tired, sore, sweating, aching feet, corns, ingrowing nails, etc. Large package, postpaid, 25 cents. Agents wanted. G. A. W. FERGUSON, Lothair, Man.

HILL GROVE SWINE HERD

O. I. C.



Of pure-bred Ohio Improved Chester Swine. Young stock for sale. Six young boars fit for fall service. Call on or address A. E. THOMPSON, Prop., Hannah, N. D.



LIGHTNING HAY PRESSES
 HORSE AND STEAM POWER CATALOG FREE
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THE OLD RELIABLE

Rat Portage Lumber Co.

(Limited).

Do you want Cedar Posts ?

Write Direct :

Ask for Price.

JOHN M. CHISHOLM,

Gladstone and Higgins Sts.

Formerly Manager for Dick, Banning & Co.

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. The older boys remain for a period of one year at the Farm Home at Russell, during which time they receive practical instruction in general farm work before being placed in situations. Boys from eleven to thirteen are placed from the distributing home in Winnipeg. Applications for younger boys should be addressed to the Resident Superintendent, 115 Pacific Avenue, Winnipeg, or P. O. Box 970; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Barnardo, Man.

Northern Pacific Ry.

Round Trip
 Excursion Rates
 To Points South,
 East and West.

Through California Tourist Car Every Wednesday.

Boundary Herd of Poland-Chinas and Model Tamworths.

Forty head, as good as any and better than some is what I am offering. Never had a more uniform lot of pigs to offer the trade. Prices reasonable. Correspondence and inspection invited.

W. L. TRANN, CRYSTAL CITY, MAN.

Yorkshires.

Spring pigs of choice quality. Also two boars fit for service, and sows ready to breed, from large sows. Address—

King Bros., Wawanesa, Man.

TWIN GROVE FARM.

Young Yorkshire pigs, stock boar two years old, and year-old sow. Prices still lower. Also Buff P. Rock cockerels. Write

J. S. LITTLE, Proprietor, Oak Lake, Man.

Chambers' Barred Rocks are winners. The shows prove it. Read the record. Has also Blk. Minorcas, Hamburgs, S. C. B. Leghorns, and S. L. Wyandottes. Eggs, \$2 a setting. See my exhibit at the next Brandon show. Stock bred by me is fit to head any yard. Write for particulars. **THOS. H. CHAMBERS, Brandon.**

MAW'S POULTRY FARM

WINNIPEG, MANITOBA.

I keep acclimatized utility breeds only of the very best, and can supply you eggs guaranteed to arrive in good order. Mammoth Bronze turkeys, Toulouse geese, \$2.00 per setting. Very large, deep-keeled Pekin ducks and English Rouen ducks, \$1.00. English White Leghorns, \$1.00. Large pure White Wyandottes and Laced, great winter layers, great table fowl (they pay to keep), \$2.00. Plymouth Rocks, straight "Hero" strain. They are the ideal fowl. Cockerels, last season, weighed nine pounds. Great egg strain. Great winter layers. Eggs, \$2.00 for 15; \$3.00 for 30. Large illustrated catalogue mailed free. You want to keep poultry for profit? The varieties mentioned in this ad will suit you. **M. MAW, Manager.**

FARMERS' INSTITUTE MEETINGS.

Prof. James Fletcher, Dominion Entomologist and Botanist, accompanied by Mr. Angus MacKay, Superintendent of the Indian Head Experimental Farm, will deliver addresses on agricultural subjects, with special reference to Noxious Weeds, under the auspices of the Department of Agriculture of the Northwest Territories, at the following points and on the undersigned dates:

PLACE.	DATE.	HOUR.
Olds	Monday, July 15	2 p. m.
Imperial	Tuesday, " 16	2 p. m.
Red Deer	Wednesday, " 17	2 p. m.
Strathcona	Friday, " 19	2 p. m.
Clover Bar	Saturday, " 20	2 p. m.
Fort Saskatchewan	" 20	8 p. m.
Leduc	Monday, " 22	2 p. m.
Wetaskiwin	Tuesday, " 23	2 p. m.
Ponoka	Wednesday, " 24	2 p. m.
Lacombe	Thursday, " 25	2 p. m.

Farmers and others interested are invited to attend these meetings, at which enquiries and discussion will be encouraged.

CHAS. W. PETERSON.

DEPUTY COMMISSIONER.

DEPARTMENT OF AGRICULTURE, REGINA, (S.D.S.) 1901.

SUMMER RESORTS, DETROIT LAKES, MINN.

Good fishing, boating, bathing, hotels, etc. Round-trip tickets, \$10, good for 15 days. (Includes three days' hotel accommodation.) Tickets good for 30 days, \$10.80.

For the Epworth League Meeting, San Francisco, July 18th to 31st, 1901, rate of \$50 for the round trip. Date of sale, July 6th to 13th. Choice of routes.

Ocean tickets to all points. Trains arrive and depart from the Canadian Northern depot, Water street, Winnipeg, as follows:

Leaves Winnipeg daily at 1.45 p. m. Arrives at Winnipeg daily at 1.30 p. m.

For further information apply to any Canadian Northern Ticket Agent, or write:

CHAS. S. FEE, G. P. & T. A., St. Paul, Minn.
H. SWINFORD, General Agent, Winnipeg.



U S U S U S U S U S U S U S U S

The Improved U. S. Separator

HAS LED in the past,
 IS LEADING at present,
 WILL LEAD in the future,

because of its

- Clean Skimming
- Easy Running
- One-piece Frame
- Enclosed Gears
- Simplicity
- Durability
- Etc.

Prices range from \$50.00 upward

Write for illustrated catalogues

VT. FARM MACHINE CO., BELLOWS FALLS, VT.

Orders and enquiries for THE U. S. IMPROVED CREAM SEPARATORS from Manitoba and the N. W. T. should be addressed to the General Agent for that part of the Dominion **WM. SCOTT, 206 Pacific Ave., Winnipeg,** dealer in all lines of Dairy Supplies and Farmers' Fresh Separator Dairy Butter.

Another Used Customer: In Fact, We Have None Other.

ROLDENBY, MAN., 11th June, 1901.

Dear Sir, The separator is doing fine. We are extra well pleased with it. My little lad, 10 years old, can run it nicely.

Yours truly, **GEO. McCULLOCH.**



Western Canada's Great Industrial Fair
WINNIPEG, JULY 29-AUG. 1901.

\$35,000.00 IN PRIZES AND ATTRACTIONS

COMPETITION OPEN TO THE WORLD.

For Prize List and other Information

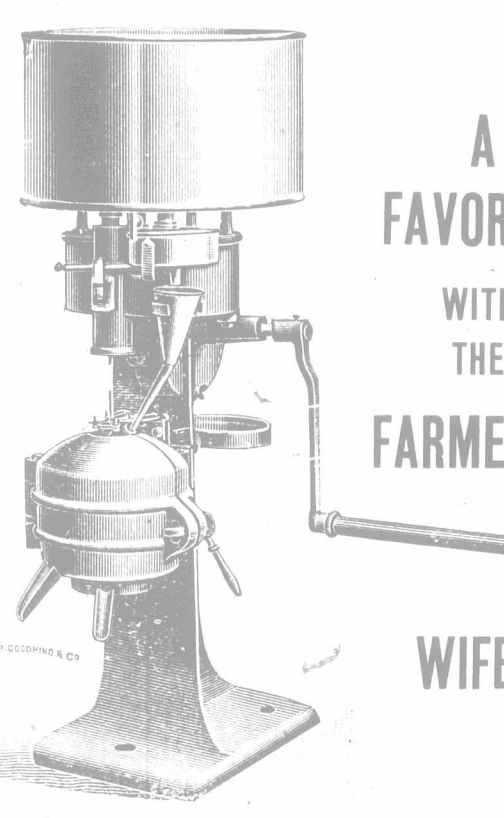
F. W. THOMPSON, President.

- APPLY TO -

F. W. HEUBACH, General Manager.

WINNIPEG,

MANITOBA.



THE
MELOTTE
 CREAM SEPARATOR

Turns SO EASY.

SKIMS SO CLEAN.

A FAVORITE WITH THE FARMER'S WIFE.

A NEW COLORED BOOKLET JUST OUT. SEND FOR ONE.

MELOTTE CREAM SEPARATOR CO., LIMITED,
 COR. KING AND ALEXANDER STS., WINNIPEG, MAN.
 P. O. BOX 604.

BOOK REVIEWS.

Any book reviewed in this department may be ordered through this office, at the price stated.

Carpenter and Joiner's Handbook.—John Wiley & Sons, New York, have published an excellent little cloth-bound volume of 57 pages, illustrated by 43 engravings, written by H. W. Holly, an architect and builder. It contains much practical information for carpenters, in very concise form and easily understood. The chapters on framing hip and valley roofs are very complete, and the rules and tables are useful to mechanics as well as amateurs. Price, 75 cents.

Woll's Handbook.—The second edition of Prof. F. W. Woll's "Handbook for Farmers and Dairymen" has been published by John Wiley & Sons, and much surpasses in the variety and completeness of its contents the original issue, which we commended at the time. In fact, it is the most comprehensive volume of the sort we have seen. It is a concise encyclopedia of useful facts, tables, formulas, receipts, agricultural statistics, besides containing many articles by specialists. Pages 437, price \$1.50.

Modern Dairy Practice.—We are pleased to notice the publication of the third edition of Gösta Grotenfeldt's "Principles of Modern Dairy Practice," translated by Prof. Woll, assisted by Dr. H. L. Russell, of the Wisconsin University. The subject is treated from an up-to-date bacteriological point of view, and made thoroughly applicable to present dairy conditions in America. That a third edition of this standard Scandinavian work should have been so soon called for, is testimony to the intelligence with which dairying is pursued in Canada and the United States. The work is well bound and printed, as are all the publications of John Wiley & Sons. Pages 235, illustrated; price \$2.

A Family Medical Book.—The heads of every country home realize the necessity of having at hand a trustworthy volume to which to refer in the many emergencies which arise from time to time. Sudden illness or accident overtakes some member of the family, and there is no physician within reach. A work of the character named will suggest measures to be taken and remedies to be administered, which, if promptly done, will save life and suffering. More than that: we find that there is great need for more general and thorough knowledge of the structure and functions of the human body, in order to its proper care and the prevention of disease. The foremost of physicians look upon the preservation of the health of the people whom they advise as one of their chief duties. Ignorance is not only the parent of a host of diseases, but it makes men, women and children the prey to quackery, which was never so rampant as at the present time. People with some slight derangement are being frightened into the belief that they are affected with some serious malady, and are fleeced accordingly for nostrums advertised to cure two dozen different complaints. The public would be healthier, happier, and thousands of dollars in pocket if they would only study the contents of such a work as "The Practical Cyclopaedia of Medicine, or Practical Home Physician," to which our attention was recently called, and a copy of which the World Publishing Co., of Guelph, Ont., have sent us for examination. Having done so with care, we are free to say that it is by all odds the best work of this description we have ever seen. It contains no less than 1,300 pages of reading matter, excellent paper and good-sized type being used, with 30 fine full-page colored plates, and a large number of other engravings which shed light upon the text. In plain, intelligible language it gives instructions for the home management of the diseases of men, women and children, describing their history, cause, symptoms, means of prevention, and treatment. There are directions for nursing, and special direction for the treatment of wounds, injuries and poisons, and how to prevent the spread of contagious diseases. There is a complete description of medicinal plants (illustrated), a chapter on the administration of medicines, a list of medicines and doses for adults. The following physicians of eminence, besides a few other specialists, have compiled the work: Henry M. Lyman, A. M., M. D.; Christian Fenger, A. M., M. D.; H. Webster Jones, A. M., M. D.; W. T. Belfield, A. M., M. D.; Wm. B. Atkinson, A. M., M. D.; Buchanan Burr, M. D., and Morris L. King, M. D. They are to be congratulated upon the success of the work, the excellence of which is attested by the fact that we understand some 40,000 copies are already in use in Canada. We have arranged with the publishers that readers of the FARMER'S ADVOCATE may order copies of this large and superb work through this office. There are two styles of binding. One is super English cloth, at \$4.75; and in extra strong leather at \$5.75. We trust many of our readers will avail themselves of the opportunity to add this valuable work to their home libraries.

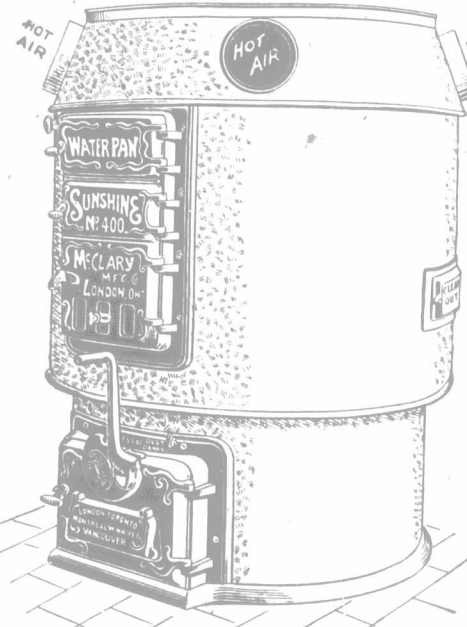
Fitting Sheep for the Show-ring and Market.—We have recently received on our library table a copy of "Fitting Sheep for Show-ring and Market," written by "Shepherd Boy." This work is one of the newest things on high-bred sheep culture, and will be of use to many, especially to the novice whose ambition is to excel in the breeding, feeding and exhibiting of sheep. The book is well illustrated and indexed. The price, \$1.50, for which it can be secured from this office, places it within the reach of any. The work embraces several chapters: Fitting sheep for show, general management of the flock, raising hot-house lambs, common ailments of the flock and how to heal them, forage crops that are especially suitable for sheep, and the slaughtering and dressing sheep and lambs for market. The work is published by the Draper Publishing and Supply Co., Chicago, Ill.

GOSSIP.

In this issue will be noticed the advertisement of D. Allison, Roland, Man., offering two Shorthorn bull calves for sale. The character of the offering may be guessed at from the subjoined notes: Strousa Stamp is by Riverside Stamp, out of Daisy of Strathallan, the first-prize cow at Winnipeg, 1898, whose show record includes such wins as 3rd as calf at Toronto; sweepstakes 3-year-old at London, when she beat the Toronto sweepstakes 3-year-old. The other calf, King Edward, is got by Jubilee (imp.) ("nuff sed"), out of Jane Grey 5th. Parties wanting herd-headers should correspond with Mr. Allison at once, as such plums are ripe for picking and will soon go.

Just about this time of year a visit to the stockmen will give one an idea of the show likely to be made at the fairs, although the finishing touches have yet to be added. A visit to Prairie Home Stock Farm is quite interesting just now, as the herds will, in all probability, be seen at Winnipeg, Toronto, and Buffalo, and should laurels be won at the two latter shows, it will be of considerable value to the smaller breeder to have a line on the type of cattle now in favor in the big show-rings. Horse-breeding is not neglected, a recent importation including such good ones as King of the Clydes (imp.), now in the stud. As his list of honors are numerous, beating such good ones as Cloth of Gold and a Baron's Pride colt, and his stud duties heavy, he will not be shown this summer. A Shire horse, got from Berry & Geizer, Hensall, Ont., by name Hood, is very popular with the farmers. This stout draft horse is a half-brother to Belshazzar, and has the blood of Thumper in his veins. Golden Rule, by Pure Gold, a bay yearling, is a likely colt, with a good shoulder, back and loin, and has plenty of substance. The premier brood mare is Boydston Lass (last year's Winnipeg sweepstakes Clydesdale mare), by Westfield Stamp. She has at foot a colt foal by Royal Reward (10003). Interest centers, however, in the Shorthorns, especially when Jimmy Yule is the cicerone, which he is able to be, notwithstanding the attempt of some Winnipeg medicos to give him smallpox. The quarantine enforced was raised as soon as it was found to be a false alarm. Old Judge was seen in the fields with his harem, and is as active as a kitten. Jubilee (imp.), that good-topped, deep-hammed red bull, whose calves show his ability as a sire, has been sold to F. Mead, Pincher Creek, Alta. A red-and-white yearling, Cumberland by name, a grandson of Blue Ribbon, will be worth watching. He is thick-hammed, deep-flanked both hind and fore, and has the full crops, bulging neck vein and well-covered loin inseparable from the beef ideal. Ribbon's Choice, by Blue Ribbon (17095), was seen to be rounding into form for the fairs. Capt. T. E. Robson, Ilderton, Ont., was the former owner of this stylish red-and-white bull. Ribbon's Choice is good through the heart, and has a good top and under line, a masculine crest and mellow skin. His dam is by Goldfinder's Heir 2nd (imp.). Lavinia's Blossom, a yearling roan, is especially strong in the crops and neck vein, with the flesh carried well down over the ribs. A sweet head and well-developed bosom, together with other good qualities, make up a very attractive picture of Shorthorn femininity. Bright Light, a light roan yearling, is a stylish, well-topped heifer, with the required depth in the twist. Matchless 25th, the full sister of Flatt's Matchless 18th, is very much in evidence. This smooth red 2-year-old is strong in her forelegs, and possesses a full neck vein, deep twist and well-let-down flank. Freida will be remembered as an exhibit at Toronto and Winnipeg. This roan cow needs no description, except to say she is carrying a wealth of flesh. Lena, a first-prize winner at Winnipeg, shows evidences of good milking ability. Matchless, the ancestress of so many good ones, was seen. She is still breeding them. That big-framed cow, Roan Mary, mother of Royal Judge, is still at the business. Clara (imp.), a red 4-year-old with a skin like a glove, level back and well-covered loin, needs only to be seen to be appreciated. Regalia, the first-prize calf, has made up to a fine, shapely heifer. Village Princess, the square-butted roan, first-prize yearling at Winnipeg, sister to Freida, will doubtless be noticed in the ring, as will the five-year-old Red Rose (imp.). Three good heifer calves by Jubilee (imp.) were also seen: two reds and one roan. In bull calves, the Greenway contingent will not be weak. A roan by Sir Colin Campbell, a red by Catliness and a white by Judge will all aid in making the judge think some. The list would be incomplete did we not mention Minnie Bud, the roan winner of the 2-year-old C. P. R. class. A few more are yet to come from the east before the show battalion will be at full strength. It will be headed by Sittytton Hero 7th. In pigs, the representation is as strong as ever, while in sheep the Imp. Cooper ram and a few yearlings may spring a surprise or two in the Shropshire ranks. The service fee for the stallions is in each case \$15 to insure. In Ayr-shires, Surprise of Burnside is still doing duty as the getter of typical dairy stock, being mated with such good cows as Silver Maid, Ayrshire Maggie, Stately Queen, and others.

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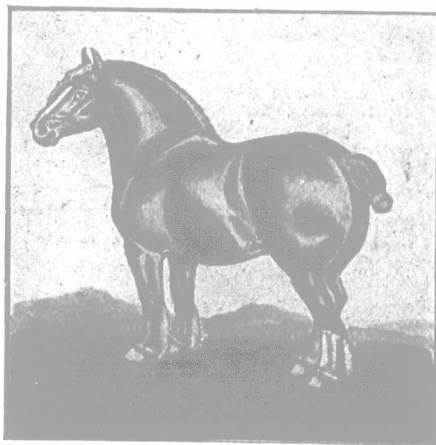
The magnificent LANGTON PERFORMER, the peerless CLIFTON 2nd, and the sensational FANDANGO, all in service for the coming season.

Magnificent young Stallions and Mares for Foundation Stock,

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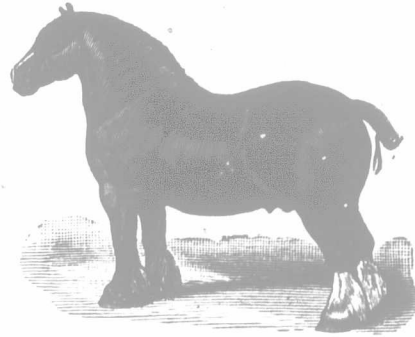
Copprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character. I will make further importations as the times demand. Inspection invited.

Prices consistent with quality.

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GLYDESDALE STALLIONS ALL SOLD.



Our importations are always

WELL-BRED BIG GOOD ONES.

The winner for two years at the Canadian Horse Show, Toronto, was imported by us. Early in July we will sail for Great Britain for a new lot, and will earnestly endeavor to make satisfactory selections of mares and stallions for persons who will inform us just what they want.

DALGETY BROS.,
London, Ontario.

Volume X. of the Canadian Ayr-shire Herd-book has been issued from the office of the Association, Parliament Buildings, Toronto, by the secretary and registrar, Mr. Hy. Wade. The frontispiece is a portrait of Mr. A. Kains, of Byron, Ont., president of the Association for 1900, opposite which appears that of Mr. Wade. It contains a list of officers, owners and members, by-laws, scale of points, prizewinners at the Toronto Industrial (1899), pedigrees (bulls and cows arranged together) from 1838 to 1910, list of transfers and index to animals. It is a well-printed, 539-page volume, with engravings of several noteworthy animals.

Metal Roofing.—So long as wooden shingles can be had some people will use them, because they were brought up that way. That, however, is not a justified reason for doing so when such a roofing can be secured at a reasonable price as that manufactured by the Pedlar People at Oshawa, Ont. It is not only cleaner, neater and more enduring than wooden shingles, but it is fireproof as well. Metal roofing reduces the cost of insurance, because it reduces the risk of fire. Write the Pedlar People for their catalogue, which will astonish you with the beauty of designs in their ceilings, wall decorations, etc.

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Herd headed by the Imported Bulls, **GOLDEN DROP VICTOR** and **PRINCE BOSQUET**.

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FOR SALE.—Bulls: Two 1 year old and one 8 months.
A few heifers of choice breeding and superior quality.
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Imp. Prime Minister at head of herd. Seven young
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Also prizewinning Lin-
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8 Yearling and two-year-old Short-
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PRICES MODERATE.

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Large herd of Scotch and Scotch-topped Short-
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Also a number of home-bred yearling and two-
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Choice quality and best Scotch breeding. Imported
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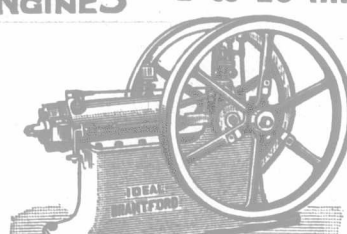
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EGGS FOR HATCHING.

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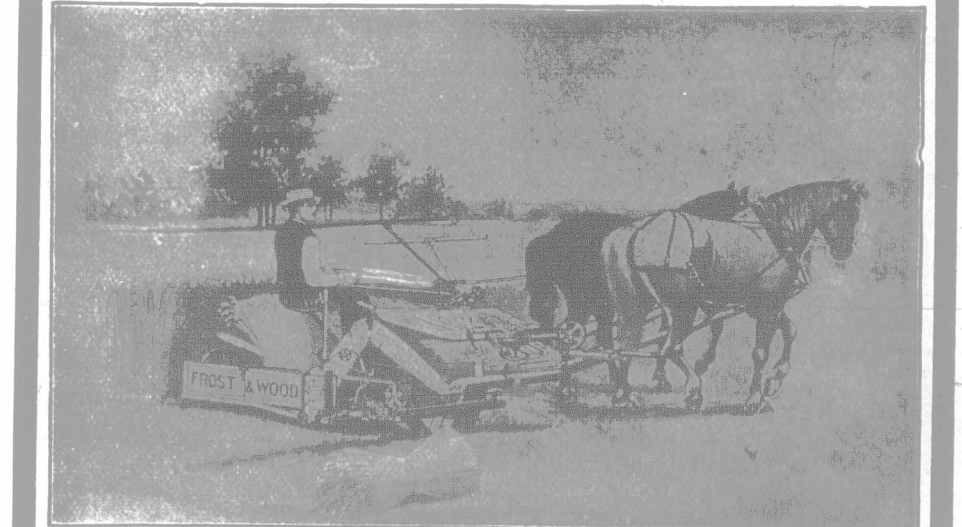


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That in the ten days preceding April 26th we sent out direct from our school **SIXTEEN YOUNG MEN** **FOURTEEN YOUNG WOMEN** into business offices in this city. This work is going on every month in the year—no vacations. You can enter any time and prepare in a short time for a good situation. CATALOGUES FREE. WRITE—

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beats them all: 120 rods 10-bar fence in 10 hrs. Coiled Spring and other fence wire for sale at lowest prices.

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Low, Wide-Tire Iron Wheels FOR WAGONS
MADE TO FIT YOUR AXLES.

EVERY farmer should have a set for drawing hay, grain, corn, etc. Are lighter, stronger, and cheaper than wooden wheels. Write for price list. om

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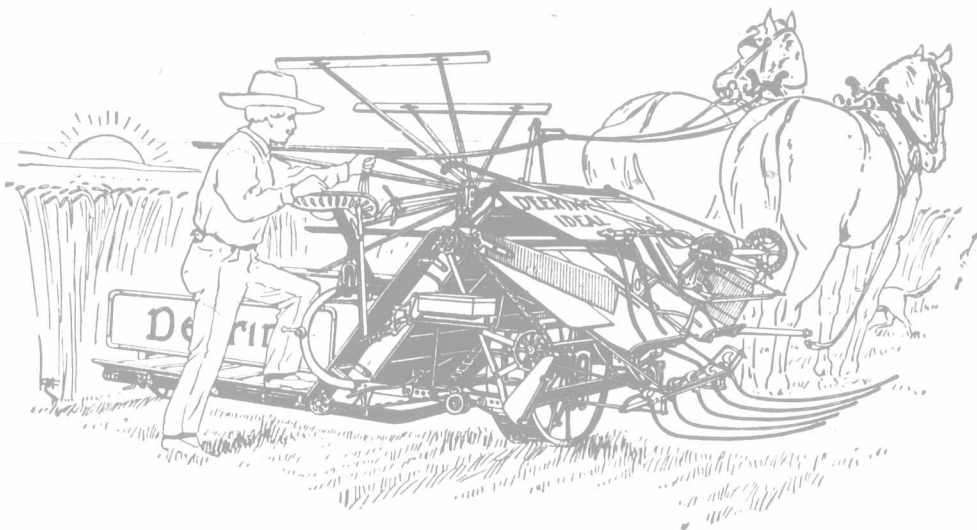
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GOSSIP.

The ADVOCATE had a call from Jas. Yule, Crystal City, recently, when en route to Ontario for more pure bred stock. He informs us that business is good at Prairie Home, and that work is going on well, quarter section having been broken recently. Sales have been made

as follows: To J. G. Washington, Yorkshire sow; to Wm. Edwards, Nigma, 2 Yorkshire sows; to K. McVior, Virden, 2 Yorkshire sows; to Jas. Biddell, M. P. P., Rosebank, a Shropshire ram; to Dr. Hopkins, Neepawa, Roseberry Lass, 286 D. S. B. B., her bull calf at foot being reserved by Mr. Yule.

BELL PIANOS AND ORGANS

BUILT TO LAST A LIFETIME BY THE
LARGEST MAKERS OF PIANOS & ORGANS IN CANADA.

The Bell Organ & Piano Co., Ltd., Guelph, Ont.

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STEEL
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Improvements you will not find on other churns. Do you want the best? Then don't purchase until you see it. Sold by the leading wholesale houses in the Dominion.

CAPACITY.

No.	Capacity	Churns from
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1	10	1 to 5 "
2	15	2 to 7 "
3	20	3 to 9 "
4	26	4 to 12 "
5	30	6 to 14 "
6	40	8 to 20 "

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Quiet Stock is Profitable Stock

The cow that quietly walks to and from pasture; that is kept clean and free from flies, will give more and better milk than one that is constantly disturbed by the attacks of flies. An application of a cooling antiseptic spray with the Spramotor once a week will keep your stock free from flies during the summer, and they will repay you tenfold by better service, increased weight, and better appearance. The Spramotor will whitewash your stables, hen-houses, pig pens; spray your orchards, kill wild mustard, potato beetles. With the Spramotor Cold Water Paint it will paint your barns at one half the cost of ordinary paint. Will disinfect hen roosts and poultry runs. 84 page treatise free.

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