

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED FOUNDED 1866

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

VOL. XXXVII. WINNIPEG, MAN. APRIL 21, 1902. LONDON, ONT. No. 548

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AND HOME MAGAZINE

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

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VOL. XXXVII.

WINNIPEG, MAN., AND LONDON, ONT., APRIL 21, 1902.

No. 548

Arbor Day May 9th.

Arbor Day, both in Manitoba and the Territories, will be observed this year on Friday, May 9th. Whether the farmer can observe this day that is annually set apart for the encouragement of tree-planting, must depend, to a considerable extent, upon the season. Provided the seeding is well under way and conditions favorable, there can be no valid reason why the spirit of Arbor Day observance should not be carried out, if not in the planting of trees, at least in the preparing of land for planting a year later. The intention of Arbor Day is frequently misinterpreted in the schools. It is not intended merely for a holiday, and it should be observed in some way to practically benefit the school grounds, if not by the planting of trees, at least in some preparatory work looking forward to the permanent improvement of the school grounds, and there is much need.

The Produce of Canada.

"Grown in Canada," or "Made in Canada," are fast becoming names to conjure with. "Made in Britain," or "Made in Germany," have passed into commercial proverbs, and it is indeed high time that Canadians were coming to have some conceit of themselves, of the unequalled natural resources of the Dominion, and of the capabilities of its people as agriculturists and manufacturers. A reasonable amount of self-appreciation and self-confidence will be found to be a source of very great strength to States, as well as individuals. Let our people not be everlastingly looking abroad instead of recognizing and developing merit at home. Canada tardily waited till the world discovered the genius of its brilliant galaxy of authors before appreciating them. We are not advocating any petty, parish exclusiveness, which would soon tend to dwarf the national life and industry, but a wholesome, common-sense regard for our own productions and achievements. Every school in the land, from Rat Portage to the Rockies, should be a nursery of this sort of patriotism. If we do not teach our sons and daughters to believe in our country and its great future, how can we expect others to do so. We need a decidedly stronger Canadian national sentiment. Other things being equal, it is only fair and reasonable that the Canadian should support Canadian enterprises where Canadian labor is employed, and where our raw material and food products are consumed. Excellent tweeds and other fabrics made in Canadian woolen mills, we are told, are sold in our cities as "English" or "Scotch"; but in Britain, Canadian beves and cheese were for years used as profitable substitutes for the British article. Nowadays, however, we find a change coming over the spirit of their dreams. Canadian live stock, products and manufactures are becoming properly appreciated in Britain. Intrinsic merit, backed up by our hearty spirit of Imperial devotion, has at last begun to quicken the inertia of the Englishman, and everywhere in their cities and towns we find emporiums for the "Canada" brand. Everywhere, and always, we must see to it that that brand stands for an honest and a high-grade article. There is no reason under the sun why Canadian products and manufactures should not be as good as any others, and the better we make them, the more we show our appreciation for them at home, the more rapidly will our foreign trade expand and improve, and the better able will our products be to meet the strenuous competition of

The Cost of the Manitoba Dairy Department.

DO RESULTS JUSTIFY THE EXPENSE?

A letter from Prof. H. H. Dean, in another column, descriptive of the work, attendance and cost of the dairy department of the Ontario Agricultural College, will furnish food for thought to our readers, especially those who are taxpayers, when they compare the cost of the dairy department of Manitoba with the one of which Prof. Dean has control.

The "Advocate," in taking this matter up, knows no party, but claims the right to criticize the expenditures, both amounts and methods, in the department of our Provincial Government, whose aim should be to benefit, educationally and otherwise, that great constituency to which an agricultural paper must cater, namely, the farming community.

When taking up the question of the reorganization of Farmers' Institutes, the "Advocate" suggested the sending out of travelling dairies, and the abolition of the Dairy School, until such time as an agricultural college was started, when a properly-equipped dairy department should be established. That our contention is correct, no one who will look into the matter impartially and thoroughly will deny. The amount of money devoted to dairying in this Province is out of all proportion to the importance of that industry when compared with the lack of attention given to other more important branches of agriculture.

It may be urged that the Dairy Association has endorsed the school. Such endorsement is valueless, as it is prompted, if not made entirely, by interested parties. To illustrate more clearly the exorbitant cost of the Manitoba Dairy Department, we submit the figures below: in one column the amounts in the grants by the Provincial Department of Agriculture for dairying; in the other the cost of the dairy school at the Ontario Agricultural College each year:

Year.	Estimates— Dairying Manitoba.	Cost of Dairy School.
1898	\$6,000.00	\$3,126.54
1899	5,000.00	3,352.23
1900	6,652.00	2,858.24
1901	8,500.00	3,963.03
1902	8,500.00

Prof. Dean states further that the average yearly net cost of running the experimental dairy department is an additional \$1,500 to \$2,500.

The Ontario people get value for their money, as is at once seen from the work done, the influence of which is worldwide. In marked contrast is that of the Manitoba dairy department, which runs a dairy school for three months, turning out about half a dozen certificated students each year, inspecting the factories and creameries, and in addition doing some judging at local fairs, besides lecturing at Farmers' Institutes.

The work of other dairy schools might be cited; that of Wisconsin, at Madison, will serve, however, as the work done there is the admiration of the dairy world. The dairy department of the Wisconsin school costs on an average \$12,000 a year, has 130 students in the regular dairy course, 20 pupils in the summer dairy school, 182 students from the short course class in agriculture (who get instruction in farm dairying), conducts a creamery all the year around, employs 15 instructors, carries on experiments, and has given

to the world those great achievements—the Babcock test, the Farrington alkaline test, the Wisconsin curd test, bacteriological content of milk, and the curing of cheese at low temperatures. What a vast difference in the returns for the money expended in dairying in Manitoba and Wisconsin!

As the gathered-cream system is more generally in vogue in this Province than elsewhere on the continent, familiarity with the oil test becomes essential to the creamery operator. The superintendent and butter instructor at the Manitoba school claim to be better posted on the oil test than are teachers at other dairy schools. That the outside dairy world is in such utter darkness is awful to contemplate. What are such men as Dean, Farrington, McKay, Decker, and the great Babcock, doing, when such ignorance (!) is rife in their dairy schools.

One of the strongest reasons advanced for a travelling dairy is that instruction could be given closer to the farmer's home on the care of milk from the time it is drawn until creamed, and the care of the cream, in which lack of knowledge or neglect is said by creamerymen to be their constant and greatest trouble. If travelling dairies are sent out, only qualified men should be in charge, graduates of a first-class dairy school.

A significant fact that may be mentioned in comparing the dairy statistics of Manitoba and the Territories, where Prof. Robertson employs only graduates of up-to-date dairy schools, is that the butter from the latter Province brought for the season, on the average, a little over a cent a pound higher than did the Manitoba product.

The Sower Goes Forth to Sow.

The conditions prevailing in the West, the necessity of cropping a comparatively large acreage in order to make full use of necessary implements, the short season in which the work must be done for best results, and the scarcity and high price of farm labor, call for a deal of hustling from the man who wishes to be successful. While the man who has earned the reputation of being a hustler is in most cases the successful man on account of his hustling, there is very great danger of getting too much of a "hustle on." The feverish haste which takes possession of some men as spring work comes on, frequently runs away with their discretion. Some men, in their haste to lead or keep up with the procession, push work forward before the land is ready, to the detriment of the land and the resultant crop. Seeding done too early, especially in cold, heavy soils, is risky, and tends very much to encourage weed growth. Land plowed when wet is very liable to bake and require more afterwork and time put on it to get it into condition than had it been left to get into proper shape before plowing. When seeding is done on wet land, it leaves it liable to run together, and thus encourages the evaporation of moisture from the land. Every man should carefully consider the conditions of his own farm and the character of his own soil, and, instead of simply following the crowd, use his best judgment in all departments of spring work.

With horses hardened up for the spring work, machinery in good shape, seed selected, cleaned, and sown preventives ready for use, and with an outline of the whole spring campaign clearly in mind, the farmer should be in readiness to do his part, ever bearing in mind that, so long as the summer and harvest are not yet past, the time and harvest shall be his.

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THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN MANITOBA
AND N.-W. T.

PUBLISHED SEMI-MONTHLY BY
THE WILLIAM WELD COMPANY (LIMITED).

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1. THE FARMER'S ADVOCATE is published on the fifth and twentieth of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
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THE WILLIAM WELD COMPANY (LIMITED),
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Fair Boards, Encourage the Breeder!

In these times of good prices for live stock at auction and private treaty, it is worthy of note that at the fairs there is almost a total lack of recognition of the work of the breeder.

The breeding of high-class live stock is an art—yes, even a science—and calls for the exercise of brain power to a greater degree than any other line of work in agriculture. As the permanence of the live-stock industry depends altogether on the ability of the breeder to produce what the markets demand, it is only fitting that that person should be encouraged, especially by our fair boards. Students of live-stock lore recognize the work done by Cruickshank, Bates, Booth, Duthie and others for the Shorthorn breed; by Watson, McCombie and others for the Aberdeen-Angus; by Tudge and others for the whitefaces; in fact, the roll of fame in the Old World stock-breeding circles is growing.

The need to-day in Canada is for more breeders of live stock, and when we say breeders we use the word in the fullest sense of the term. Dealers we have, men who deserve credit for their enterprise and what they have done for the pure breeds of live stock this side of the water, but the fact remains that the work and name of the breeder will endure long after that of the dealer is forgotten.

Our large fair associations could well afford to take the matter into consideration, and in their prize-list classes give added money or some tangible form of recognition to the exhibitor if he is also the breeder of a winning animal. The multiplication of sections or special classes at some of our fairs, with a view to helping the small breeder, has failed to accomplish the desired end, and we submit that fewer sections, with a greater number of prizes, be substituted; added money, say an addition of 10 or 20 per cent. of the prizes offered, being given to the exhibitor, who is also the breeder of the winning animal or animals. By this method, time would be saved in the judging ring, the value of a prize would, in the eyes of the public, be greatly increased, and the interest of the public maintained in the ring competitions, thus more strongly focussing the attention of fair visitors on the live stock. That done, the educational work of the fair will be to a great degree accomplished and improved live stock popularized.

Start Slowly and Avoid Delays.

The great thing for the farmer to consider at seeding time is his motive power in the form of horseflesh. He needs to have plenty of it and that of the right kind. Possessing all these things, it is absolutely necessary that proper care be taken of the horses at the opening of the season. Many owners begin to get their horses into shape, to use the common term, as seeding time approaches, and in doing so feed grain heavily, and if a storm should delay the work, either at the start or soon after, many horses, especially the easy keepers, are apt to go down, and, in many cases, out, with the disease technically known as azoturia, and often termed "spinal disease (paralysis)" by the farmer. The best preventive is to slack up on the feed in case of storm which may mean cessation of work for a week, and use plenty of bran and a tablespoonful of saltpetre or two tablespoonfuls of Glauber salts once or twice a week during the time laid off work. When again working, stop all drugging, unless under your veterinarian's directions. "Whip," in the April 5th issue, has given a good many suggestions to our readers which may well be carried out. A very useful and paying thing, especially during a hot spell, is to take out a barrel with some water for the horses to the field, and give them the opportunity to drink during the forenoon or afternoon. The shoulders should receive special attention. An occasional bathing with salt and water will be beneficial. Some horsemen use tannic acid, 1 dram to the quart of water, for that purpose. When first hitching, care should be taken that the principles of draft are observed in the way of the relative positions of the hames, tugs, and point of attachment to the implement used. The machinery needs to be thoroughly oiled before using, especially if new; plenty of oil should be used, and all parts should be seen to be in place. When implements are not working right, the draft is much increased.

Bran Should be a Staple Food.

One of the tendencies shown nowadays by the man wishing to be progressive is the being on the lookout for new grains and forage crops that will promise larger yields than the old standard varieties. While this ambition is a laudable one, and is ably assisted by the various experiment stations, the feeder and farmer in the enthusiasm over new feeds is apt to overlook some of the older kinds that cannot be surpassed.

Bran is a feed too often overlooked and underestimated, especially by Western people, and it is unfortunate that such is the case. If it were feasible, it would be of great benefit to Western agriculture if all the bran produced from wheat grown in the West were fed in the West, instead of being shipped east. No feed of the grains is more valuable for the growth of bone and muscle in young stock or for the production of milk, and yet many seem to consider it as little better than sawdust. Bran is not only valuable as a nutrient, but as a corrective and laxative for animals, and is a most valuable adjunct fed along with other grain. In the feeding of horses, bran added to oats in the proportion of one quart of the former to three of the latter will be found very useful and profitable. For young live stock, colts, calves, lambs, etc., bran is an essential to profitable raising, and should be bought by the ton, in place of by the sack. The stocker can be wintered better by the addition of bran to the straw ration than it can be without, and the touch of that animal will be much improved by this addition to its diet.

The practical man knows the feeding value of bran, and is backed up in that opinion by the feeding tests and analyses of the animal husbandman and agricultural chemist. Henry says that "the inner surface of the bran flakes is made of the aleurone layer of the wheat grain, which is very rich in protein, and in addition carries some starch." Bran contains, also, mineral matter, and when mixed with another grain will prevent stock stalling, because, as they will do on a single grain ration.

By allowing the feed to be dipped out of the corncrib, instead of being at home, we are particularly liable to waste on the farm, and it is a fact which is well known to all who have observed it. It is well known that the feed is more likely to be wasted when it is dipped out than when it is taken out of the crib, and it is a fact more generally known that the feed is more likely to be wasted when it is dipped out than when it is taken out of the crib.

Judging a Horse's Age by His Teeth.

Dentition in the horse is more regular than in other animals. Still, it is liable to variations; and while deviations from certain rules are not common, we must recognize the fact that they occur, and even in a young horse the age cannot always be positively determined by the appearance of his teeth. In order that a person may become tolerably expert in judging the age of horses, it is necessary for him to pay particular attention to the appearances of the mouth at different ages. He should carefully examine the teeth of animals whose age he knows, and observe the general and special appearances and compare mouths of different ages. He must also note the differences that frequently exist in mouths of the same age; for while, as already stated, dentition is tolerably regular, it is not at all uncommon to observe several months' difference in dentition, especially in horses under five years. The student must not depend upon charts or lectures—he must have actual experience, and be able to recognize in the actual mouth what he has read, or been taught to expect. Some people profess to be able to tell definitely a horse's age until he is thirty or over, but experience teaches us that such is not possible, and that the most expert can only arrive at an approximate idea after the animal is well up in the teens, and to a certain extent it is guesswork after nine years. After that age the differences looked for year after year become harder to distinguish, and are not as regularly present as in younger animals. Still, the changes appear with sufficient regularity to enable a person who has given the subject considerable study to avoid grave mistakes.

The horse has two sets of teeth, viz., the temporary or milk teeth and the permanent or horse teeth. The temporary teeth differ from the permanent in being much whiter in color, much more constricted at the neck, and smoother from side to side, there being an absence of that depression or furrow noticed extending the whole length of the visible tooth in the permanent. The adult male animal has 40 teeth, classified as follows: 12 incisors, 4 canine or bridle teeth, and 24 molars. The female, with rare exceptions, has only 36, the canine teeth usually being absent. The incisors number six in each jaw; the pair in the center is called the central; the pair, one on each side of these, is called the lateral; and the pair, one on each side of these, is called the corner teeth. In male animals the canine teeth are seen in the interdental space (the space between the corner incisor and the first molar in each row); a small space exists between the corner and canine teeth. The molars are arranged in four rows, one on each side of each jaw, and are numbered 1st, 2nd, 3rd, 4th, 5th and 6th from before backwards. At birth the colt sometimes has four temporary incisors, the central pair in each jaw, but usually these do not appear for about 14 days, the laterals at about 9 weeks, and the corners at about 9 months. He always has 12 molars at birth, Nos. 1, 2 and 3 in each row, and he never gets any more temporary molars. At one year old the first permanent molar (which is No. 4) should be well up and in wear. At two years the second (No. 5) should be present. At three years Nos. 1 and 2 (temporary) should be shed and replaced by permanent ones, which should be well up; and at four years, No. 3 (temporary) should be shed and replaced by a permanent one, and No. 6 should be seen well up and in wear. Hence, at four years old a colt should have a full set of permanent molars, and until this age is reached the appearance of these teeth will aid in determining age when any doubt exists. After about nine months old, at which time he has a full mouth of temporary incisors, no change takes place in these teeth, except that they become larger and the wearing surface gradually wears down and the hollows become less marked, until he reaches about 2½ years; between this age and three years the central temporary teeth are shed and replaced by permanent ones; between 3½ and 4 years the laterals are shed and replaced by permanent ones; and between 4½ and 5 years the corner teeth are shed and replaced by permanent ones, and the canine teeth appear in males. Hence, a horse should have a full mouth at five years.

The permanent incisors are wide from side to side and shallow from before backwards, and the external surface of each presents a groove running the whole length of the tooth, the bearing surface shows a thin rim of a hard white substance called enamel, outside; internal to this is a portion of a darker substance called dentine, internal to which is a second ring of enamel, and within this is a hollow which shows a substance which becomes dark and is known as the mark. At six years the marks should be worn out of the central lower incisors and the bearing surface of the teeth almost level. At seven years the marks have disappeared in the laterals; and at eight years in the corners. At nine years the table or wearing surface of all the lower incisors should be level and ready, if a side view be taken, with the teeth shut, a hollow will be noticed near the outer edge of the upper corner incisors, forming

a sort of hook. At ten years the marks are supposed to have disappeared from the central upper incisors; at eleven from the laterals; and at twelve from the corners. It must be remembered that while this is the rule, the changes taking place in the upper teeth are not as regular as in the lower. After eight years the general shape of the teeth gradually changes; they become longer, deeper from before backwards, and narrower from side to side; the table surfaces first assume a rather round form and afterwards become somewhat triangular. In some cases, after the teens are past, the teeth become shorter, but this is not by any means constant. My experience has taught me that, while set rules may be laid down as to the appearances of the teeth at certain ages until 35 years or older, no definite dependence can be placed upon these rules; the condition of the teeth in advanced age will depend to a considerable extent upon the quality of the teeth (some are harder than others, as anybody who is in the habit of dressing teeth can testify) and upon the nature of the food upon which the animal has subsisted. Below will be seen a few cuts representing the appearances the teeth should present at certain ages.



Fig. 1.—Lower jaw at 2½ to 3 years.

The central temporary incisors have been shed and replaced by a permanent pair, which should be up full and in wear at three years and sometimes are at 2½.



Fig. 2.—Lower jaw at 3½ to 4 years.

The lateral temporary incisors have been shed and replaced by a permanent pair, which should be well up and in wear at four years, and sometimes are at 3½. The central pair show a little wear on the outer edge.

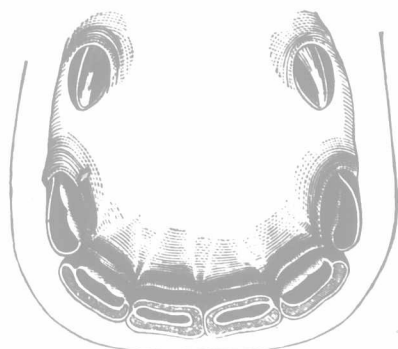


Fig. 3.—Lower jaw at 4½ to 5 years.

The corner temporary incisors have been shed and replaced by a permanent pair, which should be up full and in wear at five years, and sometimes are at 4½. The centrals show wear at both edges, and the outer edges of the laterals have begun to wear. In male animals the canine teeth have appeared, and at five should be fairly well grown. It is quite rare to notice these in females, but occasionally we see them either full-sized or rudimentary. Therefore, it will be seen that at five years a horse has a full mouth of permanent teeth.



Fig. 4.—Lower jaw at 6 years.

The marks have disappeared from the centrals, the laterals are showing wear, and the inner edges of the corners are even with the outer.

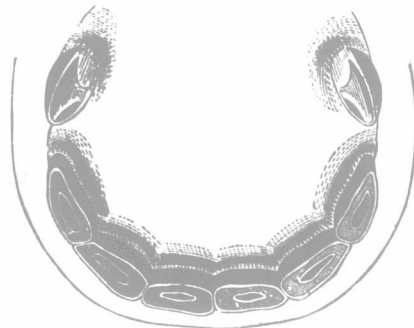


Fig. 5.—Lower jaw at 7 years.

The marks have disappeared from the laterals, the corners are showing wear, and both edges are worn to a smooth surface.



Fig. 6.—Lower jaw at 8 years.

The marks have disappeared from the corner teeth, and all the teeth are evenly in wear.

At nine years the lower incisors are all well worn down, with almost flat surfaces, there being little cavity left.

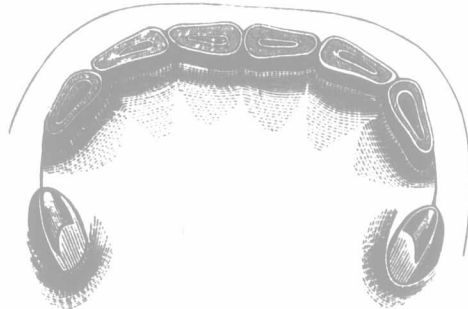


Fig. 7.—Upper jaw at 10 years.

The mark is almost gone out of the centrals, is still quite visible in the laterals, and clearly defined in the corners.

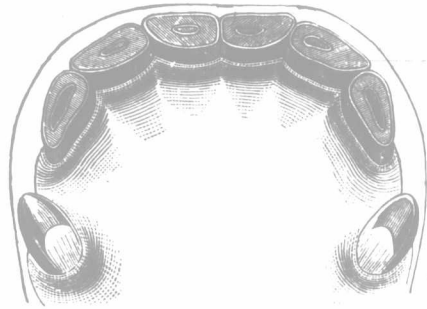


Fig. 8.—Upper jaw at 11 years.

The marks have disappeared from the laterals, but are still visible in the corners.

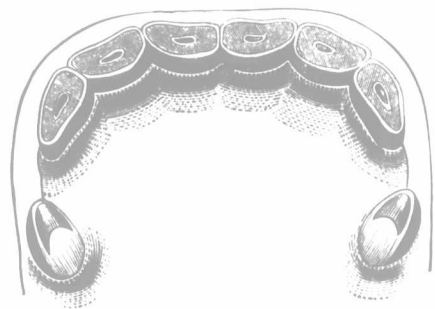


Fig. 9.—Upper jaw at 12 years.

The marks have disappeared from the corners, and the table surfaces of all are in wear.

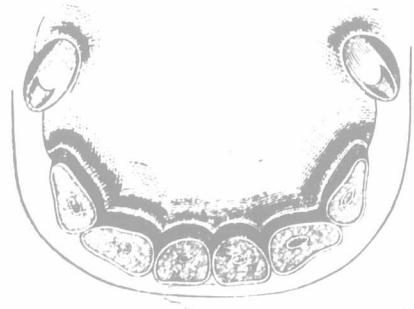


Fig. 10.—Lower jaw at 13 years.

The table surfaces of the central pair are nearly round, those of the laterals becoming so, and those of the corners gaining in thickness compared to width.



Fig. 11.—Lower jaw at 14 years.

The table surfaces of the laterals are almost round, and those of the corners becoming so.

At 15 years the surfaces of the corner lower incisors have become round, at 16 those of the central upper incisors, at 17 the lateral, and at 18 the corner. In the meantime the surfaces of the lower teeth have been gradually assuming a triangular form, and at about 20 those of the upper jaw gradually take on the same shape. At about 15 the points of the canine teeth begin to wear flat, and this gradually continues.



Fig. 12.—Lower jaw at 26 years.

The lower incisors are all somewhat triangular, and twice the depth from before backwards as from side to side. The canines have become quite flat on top.



Fig. 13.—Upper jaw at 29 years.

All the teeth are somewhat triangular, and twice as thick as they are broad. The canines are quite flat on top.

While these figures show what we expect to see, as already stated, they are not reliable after the animal has reached 12 years; and the age, after that, must be judged by the general appearance of the mouth and head, and it requires a great deal of observation and experience to acquire a reasonable degree of skill. "WHIP."

Improved Sires for Improved Stock.

If there is one thing more than another which pedigree breeding has taught, it is the value of using a good sire. It takes a long time before this lesson can be universally appreciated. There are some breeders whom nothing but adversity will teach; others are willing to profit by the experience of the many, and are ready to adopt the lessons which can be obviously deduced. It is a pity that in these times of enlightenment and advanced ideas the simplest of all lessons cannot be absorbed by small breeders. It is with the small breeder that the future lies, and the sooner he adapts himself to a more successful policy the better will it be for himself and for the breed which he favors. It is not enough to have a well-bred sire. That certainly is a primary consideration, for, as every breeder knows, there is nothing more perplexing in breeding than the frequency with which atavism occurs. It is satisfactory to note, however, that when characteristics have become more fixed by years of registered breeding, breeders are more and more coming to regard it as essential that the trumpeted merits of good back breeding should be displayed in the animal itself. The old principle that like produces like is truer now than it was fifty years ago, because of the increased prepotency of inbred stock. Nothing condemns the policy of a breeder more effectively than the use of an indifferent horse on good mares, or, for that matter, a moderate bull on better cows. As a rule, the farmer is not deficient in useful breeding mares or roomy cows, but it would form painful reading to learn how often he had misused his trust by the use of an indifferent sire. It is a very safe rule to patronize a sire better than the females. There is everything to gain and nothing to lose. The initial cost is a mere bagatelle, compared with the difference in price of the progeny. It is a misfortune that many farmers expect too much of their mares or their cows. This, at all events, seems a reasonable deduction from their policy when they use very indifferent sires. The point we wish to accentuate is that it pays to use a good sire. It is short-sighted policy to expect too much of the dams—Farmer and Stockbreeder.

Beef Cattle in Manitoba.

I do not wish this to be considered a further reply to Mr. Collyer, but as the subject is now before your readers, it may be well to give a few more ideas on our cattle trade, reviewing what Shorthorns have done for us in Manitoba in the past, and touching upon future prospects.

I am confident that the day for expansion in cattle-raising has come to Manitoba and the Territories, and whatever can be said to guide farmers in starting right is timely. For the past ten years I have compiled agricultural statistics for the Provincial Department of Agriculture in Manitoba, and have taken special notice of our cattle trade. For years that part of the Province tributary to the M. & N. W. Ry. has had noted returns from the sale of fat cattle for export. Stock was of a superior class, and farmers giving attention to raising cattle were prosperous. The basis of this prosperity was well known to be from the infusion of pure blood stock, and the most noted of which was the Binscarth Shorthorn herd. Although the dispersion of this herd took place in 1891, farmers in that district still attribute their success in stock-raising to the influence and stamp of this fine herd. Coming down the line to Westbourne, we here find another noted stock farm of Shorthorns, owned by Walter Lynch. This gentleman is credited, and very justly so, as the pioneer and veteran Shorthorn breeder of Manitoba. A man of rare discretion and ripe experience, who has at all times spoken in favor of and encouraged the breeding of Shorthorns, and, most important of all, considering the question at issue, he has made a success of his enterprise. The influence of Mr. Lynch's herd has extended not only for miles in his immediate vicinity, but to all parts of the Province.

Again, in the early '80's, Messrs. D. & R. Reesor imported many Shorthorns from their old home (Markham district, in Ontario) to their stock farm near Silver Springs, in the municipality of Louise, Southern Manitoba. Their importations were readily purchased by farmers in the district. The progeny of this stock forms the basis of the stock now in that district. Then, we had individual farmers in the Manitou district, such as R. D. Foley, J. S. Robson, D. D. Campbell, and the Waldron ranch, who imported Shorthorns in '81 and '82. Other farmers in the Pilot Mound district were so impressed with the desirability of at least having a pure-bred sire at the head of their herds that their farms were never without a pure-bred Shorthorn bull, and nearly all of them owned a few pure-bred females. Among these may be mentioned Wm. Butchart, and Purves Thompson, Pilot Mound; Jas. Laidlaw, Clearwater; and Geo. Mutch, Crystal City. All these were Shorthorn advocates, and it was in this district that our present oft-times called "cattle kings," Messrs. Gordon and Ironside, first started in the cattle business. Mr. Gordon from Pilot Mound, and Mr. Ironside from Manitou. To-day this section of country takes second place to none in the Province for export of fat cattle, and all bred after the ideal Shorthorn type.

Of the early '80 breeders, a few have not yet been mentioned. Kenneth McKenzie, of Burnside; Peter Robb, Robt. Scott and John R. Hamilton, all of Neepawa; Greig Bros., of Otterburne; John I. Rutledge, of Pomeroy; Thos. Sharpe, of Wakopa; John Renton, of Deloraine, all favored the Shorthorns. Within the past fifteen years we have many Shorthorn breeders who have gained reputations as such. These are to-day so well known in the Province, through their exhibits at our fairs, that it is not necessary to name them. Over a dozen have from six to ten head; another dozen from ten to twenty; half a dozen from twenty to fifty; and half a dozen from fifty to one hundred or over. Some of these herds are equal in number and quality to any herds in the Dominion or in America.

The export trade of fat cattle from the Province, first developed by Messrs. Gordon and Ironside, directed the attention of farmers to the demands of this trade. Farmers were not slow to learn which was better for them to raise, a scrub four-year-old, fat, which brought \$25, or a well-bred Shorthorn grade steer, three-year-old, which brought \$40 to \$50.

The improvement of our beef cattle in Manitoba has chiefly been made by the introduction of Shorthorn blood, and in all cases with success and profit. We have now some fine herds of Herefords and a few Polled Angus and Galloways. In the future I shall give a few short notes on these herds.

To-day our beef-type importations from Ontario, either Ontario-bred or imported from the Old Country by Ontario breeders, are almost exclusively Shorthorns.

I can readily discern from past experience, from the development of our cattle trade, and, best of all, from the general feeling that pervades our farming community, that more attention must be given to stock-raising and cultivation of grasses in order to preserve the fertility of our soil—that our cattle industry is only on the threshold, as it were, of its wide domain. As the market is becoming more and more discriminating, and beef cattle of the best quality only

command highest prices, farmers can make no mistake in purchasing the best of the beef breeds to be secured, in order to grade up their present herds, and, as I have already stated in a former article, the Shorthorn is the ideal type.
Winnipeg. HUGH McKELLAR.

Early Gardening.

I presume most of those who intend growing garden stuff have by this time procured their seeds, and are ready so far for their work. No doubt a good many are going to make hotbeds, wherein they will raise their plants for the garden, also a row of lettuce, cress and radishes for use long before they will be ready if the seed is planted in the open ground. Do not forget, while you are about it, to put in some flower seeds. If you have no special place for a flower plot, just stick one here and there among the vegetables. You have no idea how much better it will make them grow. You will visit your garden much more frequently, and every time you are there you will see weeds that spoil the effect of the flowers, consequently they must be eradicated, and so your vegetables will reap the benefit. Apropos of this subject, let me tell you a plan of mine. Perhaps I should not claim it, as from the best of authorities we learn that there is nothing new under the sun.

If you are not making a hotbed, or if your hotbed is not large enough for all you wish to start early, and particularly if you wish to raise plants which will not stand transplanting in the usual manner, try it: Select some medium-sized turnips from the cellar, or from some other person's cellar, cut off the root end, so they will stand alone, then cut off the top down to about the largest part of the turnip, and scoop out the inside to about half an inch or so next the rind; then get a shallow box, about the depth of the turnips, fill the turnips and the spaces between them with sandy soil, and plant your seeds. Put those in the turnips which will least readily bear handling, and the hardier seeds between them.

You can plant more seeds than you expect plants to grow in the room you have at first, then, when the young plants have their first leaves well grown, prepare more turnips and separate some into these.

When the plants are large enough, and the weather is propitious, all you require to do is to lift turnips with a plant or two in them, and set them in the soil, packing the earth well around the turnip and covering it over with soil. The turnip will rot, and not only not hinder the growth of the plant, but supply moisture and plant food also.

Before the seeds sprout, you must be careful to sprinkle the soil frequently with warm water, but not soak the soil, or the seeds will decay. Do not let them dry out at any time before they are ready to set out in the garden. Tomato plants are especially good raised in this manner, as they can be left till quite large before setting out.

By the way, I have better success with onions by planting the seed in the fall on clean rich soil. Plant them thickly and thin out for early use. I am by no means a professional gardener, but have generally lots more red and other currants and small fruit than we can use, and my asparagus is always ready before the middle of May.

My flowers last year were a pleasure, and were abundant. My lilac bushes were loaded with bloom, and I am only a—

Cottonwood, Assa. "FARMER'S WIFE."

A Breeder's Kick.

To the Editor "Farmer's Advocate":

In your issue of March 20th, you have an article entitled "A Plea for Fair Play," which is very much needed at present. I notice in the press that a carload of grade brood sows and pure-bred boars is being sent up West from Ontario. The railway company is carrying them free of charge, the Dominion Live Stock Commissioner collecting them in Ontario free of expense to the purchasers. These sows and boars will be sold by auction to the farmers in the Northwest. They will have the chance of buying them at very nearly cost price. Is this not a fine way of competing against the Manitoba and local Territorial breeders? When we want any stock from Ontario we have to pay heavy carriage charges from the east. I thought that after the free distribution of stock by the C. P. R. Co., we would not again have such unfair competition, but it seems it is to be a regular performance. Of course, the Ontario breeders will not object to it. They are getting the patronage, and we breeders out West can look on. I think that it is about time this sort of distribution of stock was done away with. How would the Ontario breeders like it if we would be able to send stock free of charge and spoil their trade?

These sows sold in the West will do more harm than good. The farmers will use the young grade-bred for breeding, and the result will be a lot of mongrel stock. I hope that all breeders in this Province and the Northwest will unite and stop this sort of competition.

A MANITOBA BREEDER.

Lumpy Jaw and Cattle Distemper.

Up to the present time, Canada seems to have been free from a disease described as cattle distemper by Dr. N. S. Mayo, the veterinarian to the Kansas Experiment Station. The efforts in the following sentences of Dr. Mayo seem to be to make clear to the lay mind the difference between the two diseases:

In cattle distemper the swelling comes on suddenly, and always in the region of the throat, and appears to be more contagious than true "lumpy jaw." True "lumpy jaw" comes on slowly and usually attacks the region of the face or jaws, and the lump or tumor appears to have grown fast to the bone in most cases. Cattle distemper attacks young animals most frequently, but may attack cattle of any age. The first symptoms of cattle distemper usually noticed is a swelling of the throat, especially the glands in this region. This swelling appears quite suddenly, often within 24 hours, and is usually severe. This is preceded by a slight discharge from the eyes and nose, and is associated with a slight fever, the temperature of the animal rising two or three degrees. As the disease progresses, the swellings increase in size, and an abscess containing a rather thick, yellow pus or "matter" forms. Sometimes two or three of these abscesses will form about the throat, on the side of the head or along the jaw. These swellings do not affect the bone, but occur in the loose tissue and glands. If left alone the abscesses break and discharge puss, but do not heal readily, often remaining open and running for some time.

Treatment.—The disease appears to be contagious, but so far experiments do not show in what way. It is not highly contagious. Affected animals should be isolated from the healthy and not allowed to eat or drink from a common receptacle. In the early stages, if the swelling is thoroughly rubbed twice daily with a stimulating liniment, it will usually "scatter" the swelling so no abscesses will form. A liniment composed of equal parts of turpentine and kerosene oil is good. If two ounces of gum camphor is dissolved in half a pint of turpentine and an equal amount of kerosene added, the liniment is improved. This should be rubbed on twice daily until the skin begins to get sore. After pus has formed the abscess should be opened freely, washed out with warm water and a strong solution of blue vitriol (sulphate of copper), a tablespoonful dissolved in one-half pint of water. This can be injected once daily for two or three days. Pure tincture of iodine is also good. In some cases, putting a small lump of blue vitriol in the cavity works well. If the abscess is not opened early, there is a tendency for other abscesses to form.

Nearly all cases recover in a few weeks. Where they do not heal, the cavity can be swabbed out with "butter of antimony" once, and then the blue vitriol solution used.—N. S. Mayo, Veterinarian, Kansas Experiment Station.

As quite a large number of cattle are being brought in by settlers from the Western States, where it seems to be prevalent, having been made the subject of a State bulletin, the disease above described may make its appearance in Western Canada, and from the symptoms we submit, will, we hope, be quickly recognized. The quick recognition of contagious disease in bovines and other live stock is in the interest of the public health.

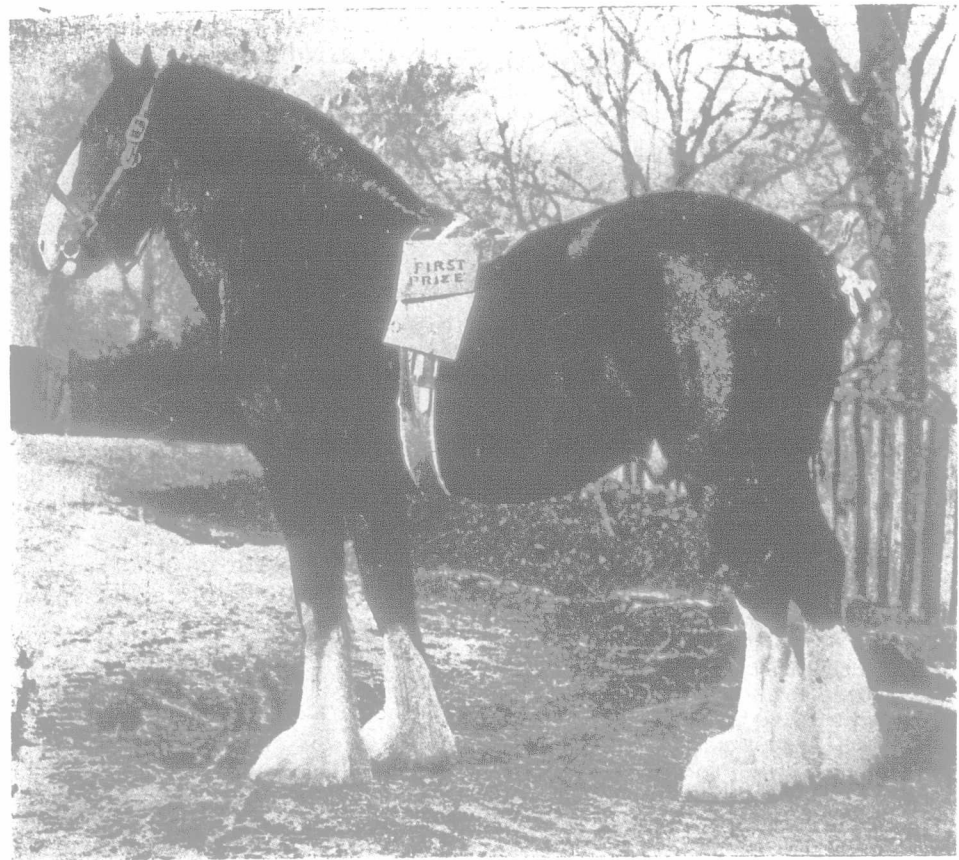
Periods of Incubation or Latency of Disease.

An outbreak of a contagious disease generally gives rise to investigation as to the source of the contagion. The length of time known that it takes for a disease to develop and exhibit itself in any animal will aid materially in tracing the disease to its source. The periods, as known, are as follows: Anthrax, $\frac{1}{2}$ to 1 day; dog distemper, 7 to 21 days; glanders and farcy, 7 to 42 days; rabies (hydrophobia), 10 days to months; tuberculosis, 11 to 60 days, or longer. As usually understood, the period of incubation refers to the time elapsing between the entrance of the germ or other causal agent and the development of the symptoms of the disease in question.

Oleomargarine Ingredients.

Many of our readers have doubtless been curious to know of what materials oleomargarine is made from. The following list will afford the required information, which is taken from the B. A. I. report just issued. The quantities are given in percentages: Neutral lard, 34.27; oleo oil, 26.82; cottonseed oil, 4.67; sesame, .53; coloring matter, .16; sugar, .12; glycerine, .01; stearin, .07; glucose, .02; milk, 15.57; salt, 7.12; butter oil, 4.76; butter, 1.72; cream, 3.86.

Oleo oil is another name for animal fat; the other terms explain themselves, sesame being a tree growing in the Southern U. S.



HIAWATHA 10067 AT TEN YEARS OLD.

Winner of championship and Cawdor challenge cup for 1902, and for four years in succession at the Glasgow Stallion Show.

Our Scottish Letter.

Farmers in this country have not learned, as in Canada, the advantages of combination. There is, however, a sensible improvement in the direction of adopting the system, and all-around farmers are combining for the furtherance of their own interests. The Essex farmers, who are largely Scots from Ayrshire, have been the leaders in this movement, and their work has been attended with the best results. At first their motive was to counteract the combination of the London milk-dealers, who practically made their own price and paid the producers just what they pleased. In this the farmers largely succeeded. By insuring their members on the mutual-bonus system against loss should they be offered a lower price than the standard fixed by the combination, they were enabled to refuse to sell, and anyone who failed on this ground to make a market had his milk taken by his neighbors, or if he churned, the combination indemnified him for his loss. Similar institutions have sprung up over England, and now all are embraced in one federation. The parent society in Essex has meanwhile extended its business, and undertakes to do with much else that is of mutual interest beyond the price of milk. Through its agency farmers are buying their manures and feeding-stuffs. Guarantees are obtained from the merchants, and the goods are subjected to efficient tests. In this way better value is obtained for the money expended.

In Scotland several institutions of like nature have been founded. The dairy farmers of the West of Scotland are endeavoring to combine on the Essex plan, and so far good results have followed. The chief difficulty in getting such institutions into effective working order is the spirit of individualism and the determination of each one to fight his own battle. This is commendable, but it does not seem desirable that too much stress should be put upon it as a reason for combining for mutual defence. The farmer needs protection as much as any other business man, and this should come to him mainly through his neighbors, whose interests as producers are identical with his own. The West of Scotland Federation has not succeeded in convincing every farmer that he should join, but it has certainly secured a much greater degree of support than at one time could have been thought possible. The taking of samples of milk for analysis is one of the most practical ways in which these organizations can help the individual. When he knows by the best attainable means what the quality of his milk is, he can face the opposition with some good hope of success. Some of the branches are discussing questions of such vital interest to dairy farmers as the treatment to which cows near the calving are subjected. By the way, an extremely interesting lecture on this subject was lately delivered in East Kilbride by Mr. Begg, a local veterinary surgeon. The subject was handled in a practical way. Some of the points can hardly be appreciated where the auction-mart system does not prevail. Here cows within a few days of calving are bought by dealers as a speculation. They pass from hand to hand, and are taken to one auction mart after another so long as they are uncalved, provided a profit can be made on them, and when at length they pass to a permanent abode, they reach it in a condition easily understood but pitiable to a degree. Some-

times the poor animal enters her new quarters with the pangs of labor already on her. She may survive these, and perhaps generally delivers her calf, but in many cases she becomes feverish and dies. The rough usage of the previous fortnight or ten days was in all likelihood the main cause of the disaster, and much cruelty is inflicted and capital lost by this wasteful process.

The decision of the Supreme Court, that milk-blended butter is not technically adulterated, and may be sold as butter with impunity, has rather astonished the public. Milk-blended butter is cheap butter washed or churned anew in milk, thereby greatly increasing its content of moisture and leaving a substantial profit to the blender. The decision was based on the fact that in the label covering the butter a full disclosure was made of its constituents, and that, therefore, no one was deceived if he used his eyes. Simultaneously with this decision, a departmental committee has reported to the Board of Agriculture that genuine butter should not contain more than 16 per cent. of moisture, but if the seller makes a disclosure of the fact that any butter he sells contains more than this, he shall not be liable to prosecution. Butter, in other words, is declared to be genuine up to 16 per cent. of moisture, but beyond that point moisture indicates that the goods have been tampered with. Still, the seller is at liberty to sell these goods under the genuine name provided he informs the buyer that they contain what proves them not to be genuine. This funny recommendation has excited a good deal of comment, and, indeed, of consternation.

Shorthorns have been the scoring breed at the sales this spring. Curiously enough, the best price for a Shorthorn was got for a Beaufort bull at Birmingham. The anomalies of the auction system were never more strikingly displayed than in this transaction. The bull was bred by Lord Lovat at Beaufort Castle in Inverness-shire, was taken past all the Scotch sales to Birmingham, in the English midlands, and there was purchased by Mr. W. S. Marr, Uppermill, Aberdeenshire, for 335 gs. Lord Lovat sent four bulls to this Birmingham sale, and they made an average of £271 11s. each. The Beaufort cattle have scored splendidly of late years. Their success is due to a bull named Royal Star, bred by Mr. Reid, Cromleybank, sold to Mr. Duthie and by him to Lord Lovat. He was sired by Belvidere, of the Sittyton Butterfly tribe, and his dam a Marr Roan Lady. The second best average at Birmingham was made by a breeder from the other extremity of the British Isles—Mr. Hosken, Hayle, Cornwall. He sold five at £134 8s., which ought to be good enough business. A notable Shorthorn bull has recently been destroyed in Mr. Duthie's famous champion, Pride of Morning. This great sire was champion at the H. & A. S. Show at Aberdeen in 1894. He was not the most prolific of sires, or he may have been sparingly used, as the number of bull calves by him at any of the Collynie sales was never very high. What they lacked in quantity, they made up in quality. No sire of recent years left so many bulls which as calves sold for phenomenal prices. One went at 150 gs., another at 350 gs., and others at 200 gs. and 105 gs. More than once the highest-priced bull calf of the season has been got by Pride of Morning. When opened, the old bull was "sound as

a bell." In another connection, a notable Shorthorn-man has passed away. I refer to Mr. Cadwallader J. Bates, of Langley Castle, Northumberland. This gentleman was grand-nephew of Thomas Bates, of Kirkley-ington, and author of that admirably-written book, "Thomas Bates and the Kirkleyington Herd." As a storehouse of information regarding what used to be the greatest of all the Shorthorn tribes, this book holds a unique place. Mr. Bates was more of an antiquarian than a farmer, and, indeed, took high rank in that respect. He had, however, stock-raising ambitions, one of them being the restoration of Bates cattle to their position of supremacy. It seems a somewhat idle ambition, and not worth realizing even if attained.

English breeders of Aberdeen-Angus cattle have a society of their own, its principal object being the holding of a spring sale of young bulls and heifers at Birmingham. The second of these sales recently took place, and a good average was secured. The leading herd in the south seems to be that of Mr. Bridges, Horley, Sussex. He led both for bulls and heifers, and deserved his average. The ranks of Scottish breeders of these cattle have been thinned by the untimely death of Mr. Hugh Wilson, Milton of Noth, a man well under 40 years, and universally respected as a painstaking, solid judge of black cattle. He frequently acted in that capacity at the leading shows.

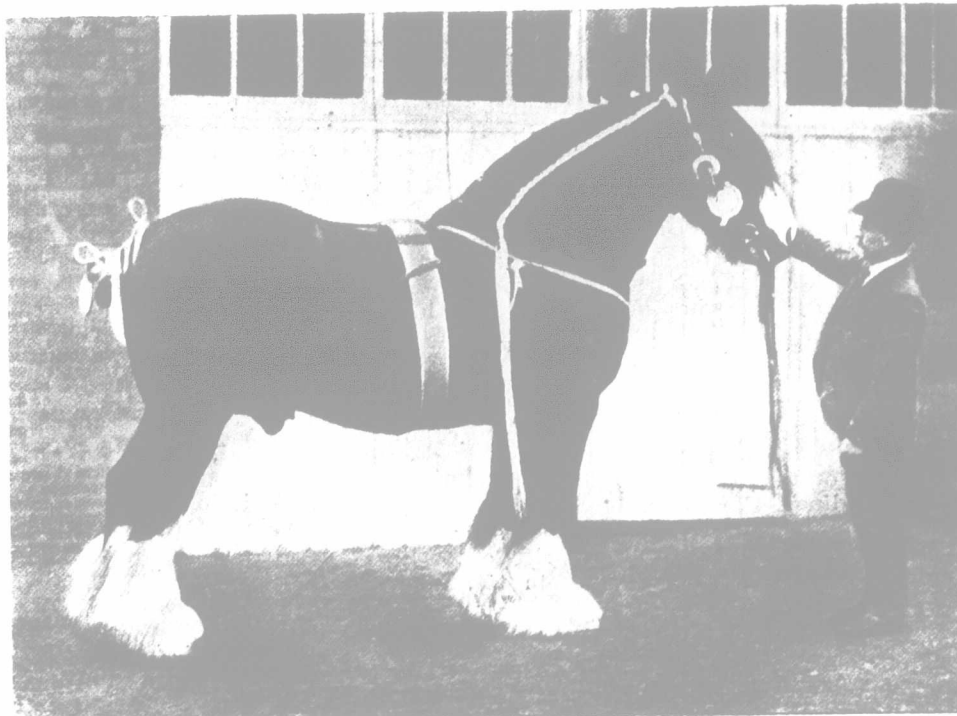
Galloway breeders got a very sharp lesson at their bull sale at Castle-Douglas. About three times as many bulls were presented as were wanted, with the result that there was a decided slump in the market. There was, however, as usual, room at the top, and Messrs. Biggar & Sons cleared the way with a fine lot of eight, for which they got the substantial average of £31 19s. 11d. Mr. Brown, Stepford, Dumfries, improved on this, but with half as many animals, making £33 19s. 10d. The averages after these tapered down very low, and trade generally was completely demoralized. Galloways are grand cattle, but you can easily have too much of a good thing.

Horse movements are not numerous. The non-arrival on your side of the Allan liner "Huronian" is giving rise to serious misgivings. When the vessel left here she seemed light. She carried several good Clydesdale stallions, and also their owners. Let us hope she may be reported safe in a very few days. General shows begin next week, and until the end of August the country will have one of these events on an average every day.

"SCOTLAND YET."

Swamp Fever to be Investigated.

The "Advocate" called the attention of the late Chief Veterinarian of the Dominion to the pressing need for investigation of this Western horse scourge last January, and we are pleased to note that Dr. Rutherford, the new incumbent of the office, has evidenced his desire to grapple with the problem and use all means in his power to find out the cause of the disease. Under his supervision, Drs. Bell and Torrance will continue their investigations, which were started some time ago under Provincial Government auspices, but which had to be given up owing to lack of the necessary funds with which to prosecute scientific investigation.



STROXTON TOM.

Winner of first prize for stallion ten years old and upwards, the championship, challenge cup, and gold medal as best stallion any age at the Shire Horse Show, London, Eng., 1902.

Market Classes of Horses.

Nowadays the producer studies the markets, and thereby stands a greater chance to make money out of his work. A mass of useful information has been collected on the above subject by Geo. M. Rommel, B. Agr. (Iowa), Expert in Animal Husbandry at Washington, D. C., and has been issued in the form of an attractive bulletin. As the information is reliable, being got "right on the ground," the following excerpts will undoubtedly be of interest to our readers:

WHAT CONSTITUTES A MARKET CLASS?

By a market class we mean the demand that exists for a horse of certain characteristics definitely specified. We find the requirement that certain work shall be done in certain ways. This requires a horse of certain size, conformation, style and action, and becomes more exacting as time goes on and the demand for such a horse increases. For this reason it is readily seen, that classes on the market at one time may be cut off by reason of a change in the kind of work to be done or a change in the method of doing it; such, for instance, as the substitution of electricity for horses as a motive power for street railways. On the other hand, we have an illustration of the creation of new classes in the opening up of the English demand for the omnibus horse. The increasing demand for hunters for both the local and export trade and the brisk trade in polo ponies are also instances of such conditions. The kind of work and the manner in which it is to be done, therefore, develop the buyer's demands, and thus create the market class.

WHEN WILL A HORSE SELL WELL?

The question naturally arises, When will a horse sell well? An animal will be in good demand when he meets the qualifications of a market class; the more clearly he does so, the greater demand there will be for him and the higher will be his selling price; and a horse that goes into a class because his breeder was successful in breeding him for that class is much more likely to sell profitably than one that drops into a class as the result of an accident in breeding, handling or fitting for the market. A breeder must determine for himself whether he can produce such a horse and dispose of him at a profit; that he will find a good demand for animals of the right type is certain. The individuality of the horse himself, then, will indicate his class.

AGE.

Mature and well-broken horses are always the best sellers. A year or two spent in waiting for a horse to develop, and educating him, means an expenditure of time and money on the part of the purchaser which is, as a rule, undesirable, unless the horse is bought specifically for the purpose of fitting him for the finished market. The ideal age is five years, buyers usually purchasing animals ranging from five to eight. The classes vary somewhat in this respect. A horse intended for draft purposes may be marketed somewhat sooner than a harness horse or saddler.

BREEDING AND SEX.

The breed to which a horse belongs has very little influence on his selling price. All that is required is that he be a good individual of his class. A good horse always sells. Geldings are preferred somewhat generally to mares.

COLOR.

Color does not figure so strongly as many would lead us to believe. Almost any color, with excellence to back it, will sell well, except white, flea-bitten grey, "mealy" bay, or any other color that might be termed "washed out." Among drafters, no special color seems to have a preference; with harness horses and saddlers, bays, browns and chestnuts have first preference, but grays and blacks sell readily if "good." Well-matched teams, both in harness and draft classes, usually bring higher prices than if sold singly.

CONDITION.

Condition is very often overlooked. It is absolutely essential that a horse be in good condition (well fed) to bring what he is really worth. This is particularly true of animals of the draft type. Whether it increases the animal's real value as a worker, it is not necessary to consider. The market demands high condition, and pays those men well who cater to it. The great lack of condition is shown by the fact that many horses are sent in for sale only to be reshipped to the country for further feeding. Condition is almost as essential as fat on a steer, and its absence cuts from 25 to 50 per cent. from the selling price of a horse. The requirements of the market in this line are well worthy of notice.

DISPOSITION AND INTELLIGENCE.

Every class calls for an animal of intelligence and good disposition, willing to pull at a good rate or set a fast pace on the driveway, and capable and cool-headed in an emergency. The use of horses on crowded streets, often among a large number of pedestrians, makes the latter particularly essential. The need of these quali-

cations is more important in some classes than in others.

SOUNDNESS.

The most important requirement of a market horse is "serviceable" soundness; that is, he must have no chronic disease that will unfit him for work of a general nature. He must be sound in wind and in limb, able to do a reasonable amount of work without undue fatigue or premature breakdowns. The majority of the horses sold from a great market go to the city trade, and are compelled to do their work on hard, unyielding pavements, pulling heavy loads, or developing speed that is an even greater strain on the feet and legs. The average period of usefulness on city streets of a horse that was sound at the start is more than five years, and it is manifestly evident that this time will be materially decreased if he begins this work in an unsound condition. Broken wind, sidebones, unsound hocks, and all the various other ills that a horse is heir to, should be strenuously guarded against, as they greatly diminish his value.

Territorial Farmers' Institutes.

During the latter end of March, the Institutes along the line of the Prince Albert branch received attention from the Territorial Department of Agriculture. Geo. Lang, Forester, Department of the Interior; T. G. Raynor, B. S. A., of Prof. Robertson's staff, Ottawa; and A. G. Hopkins, B. Agr., associate editor "Farmer's Advocate," were the speakers, taking up the Territorial Hail Insurance Ordinance and tree-planting scheme of the Department of the Interior, pork production, points of a beef animal, and farm bacteriology, respectively. Meetings were held at Cottonwood, Lumsden, Saskatoon, Rosthern, St. Louis, Red Deer Hill, Colleton, and Prince Albert. The meetings were all fairly well attended, discussion being practically nil owing to lack of time. A great amount of interest was shown in Forester Geo. Lang's subject and the samples of wood-growth for the season of 1901. One of the profitable as well as interesting things elicited was the number of trees suited to western conditions, the wood of which would be valuable to the farmer. The ash, Manitoba elm and rock elm all do well, and were recommended by the speaker on forestry. Mr. Lang gave his experience with the Manitoba plum, which has done well at Indian Head when grown from pits: vigorous trees were seen growing in a Mr. Boylan's garden, at Red Deer Hill, a few miles south of Prince Albert. The question of nursery stock was also debated, and the people warned against eastern-grown nursery stock, even the so-called ironclad varieties, which will not stand the western climate. In the discussion on the hail ordinance, the question as to the time up to which insurance could be effected came up; also, what steps could be taken to collect the extra assessment, if any be made. The barring out of the Territories of the hail insurance companies by the Government did not seem to meet with the approval of the meetings. Mr. Raynor's talk on pork production was replete with pithy remarks and practical suggestions. The advantage of good blood in the sires and the breeding of bacon types was insisted upon, the Tamworths and Yorkshires being recommended, the latter breed particularly so; among other things, the planting of some green crop, such as peas and oats, tares and oats. Rape was recommended in order to grow pigs cheaply, it being stated by the lecturer that in Ontario, by the use of green food as an adjunct to the grain, pork could be produced at a cost of three cents a pound. Milk was lauded as a feed, especially for growing pigs. It was shown, however, that heavy use of this food resulted in a waste, the greatest gains being obtained from a moderate quantity of milk. Pointers on the care of the sow during farrowing and at other times were much appreciated by the audiences. The beef-cattle question, by Dr. Hopkins, was productive of discussion. Pure-bred and grade versus the scrub, the valuable points in a feeding or breeding animal, were brought out, and the beef type clearly outlined, charts being used to illustrate the subject. The favorable arrangement with the railroad company renders it easy for a farmer or company of farmers to get in a pure-bred bull at a cost of \$5 for transportation, it being pointed out by the lecturer that any excuse for the use of the scrub was thus done away with. The avoidance of the use of dairy-bred sires was strongly insisted upon, and the unfortunate results which would follow were depicted if the breeders of grade cattle strayed away from the straight and narrow path of breeding for beef. The questions of pedigree, color and handling were discussed, and considerable information was elicited. The Territorial Department of Agriculture is evidently alive and doing all in its power to help the farmer. The Deputy-Commissioner has at present under construction a form of prize list for the various fairs, which will seek to make those annual affairs more educational than heretofore. The Grain Growers' Association will hereafter be thoroughly divorced from the agricultural societies, which is a good thing.

The Work of the Forestry Department in Manitoba.

The following extract is taken from A. P. Stevenson's report to the Forestry Department of his work in Manitoba for 1901:

"Thirty-six parties were furnished with trees, and three were refused on account of the soil not being in a fit state for trees. In all, 23,800 were planted in Manitoba during last spring under the co-operative scheme of the Forestry Branch. The varieties planted consisted largely of the ash-leaved maple, cottonwood, elm and green ash. Recent inspection of the greater number of these plantations shows the following results: Percentage of trees planted now alive—Maple (seedlings), 85 per cent.; cottonwood (cuttings), 40 per cent.; elm (seedlings), 50 per cent.; green ash (seedlings), 65 per cent.; care of trees fairly good; growth this season extra good. The poor showing made by the cottonwood arises from their rather unhealthy state when received from the nursery. These trees were imported in the spring. I would suggest that in future importations be made in the fall, should it be necessary to import.

"With reference to the work as a whole, and the general view taken of it by our people, I note that the scheme is universally looked upon with the greatest favor. The people throughout all sections of the Province approve and heartily endorse it, and only regret it was not brought into existence sooner. One thing noticeable among our people is their growing anxiety for trees. New houses and new barns are being built in all parts of the Province, to replace those first put up, and trees are wanted to shelter and adorn these permanent buildings; hence the demand for your agent to advise regarding the varieties to grow, the proper cultivation and the laying out of the grounds for trees around these new buildings on farms where not a single tree was ever planted. It is noticed that in a good many cases the advice as to laying out and proper management of wind-breaks is as much appreciated as the giving of the plant material. Where planting has already been done, the mistake has been made in the majority of cases of planting too close to the buildings. It is difficult sometimes to convince parties of the future dimensions of the trees, and the advantage of having the trees at a proper distance in order to avoid deep snowdrifts around the buildings in winter. Advice given on this point is never lost sight of.

"As to the future of the scheme, it will without doubt grow to large dimensions as it becomes better known. Even at the present time but a hazy idea of the scheme prevails with the majority of our prairie farmers. There are already (Sept. 17, 1901) 423 names on the list of applicants, and the number is increasing daily. In a short time it will tax all the powers of the Forestry Branch to meet the demands upon it."

THE ONTARIO MAPLE NOT SUITABLE FOR GENERAL PLANTING.

Norman M. Ross, Assistant Superintendent of Forestry, in his report of the work of the Department in the West for 1901, recommends the Ontario maple as hardy in Manitoba as far West as Brandon. While there are a few odd specimens of the Ontario soft maple (*Acer saccharinum*) that have grown in favored spots in Manitoba, it is not by any means a safe tree to recommend for general planting.

On a Texas Ranch.

Jno. A. Craig, in writing of the Laureles ranch, near Corpus Christi, Texas, notes some things of interest to the Western cattleman, and has placed the following pregnant sentence on record: "In conformity with general belief, no bull can compete with the Shorthorn for the first cross on native ranch cattle, then a Hereford on these for constitution and grazing qualities; and Captain Tod goes one step farther and uses a Polled Durham to remove the horns. The result: cattle with the size and form of the Shorthorn, constitution of the Hereford, and hornless heads of the 'humbies,' which practically means that Shorthorn blood is indispensable on the ranch, a fact which no posted person will controvert. Among other things noticed was that Standard-bred stallions were used, on account of their intelligence, to get cow ponies. Steers from this ranch were much in evidence in the carload lots of yearlings and two-year-olds at the Chicago International, where they brought \$7 per cwt. The fencing is of 6x6 cypress and mountain cedar, tarred below the ground line, and has been up 35 years and is yet in good condition, with six strands of smooth, galvanized No. 5 wire run through the posts, which are twenty-four feet apart.

Cold Storage as an Investment.

While primarily we do not live to eat, we must eat to live; and a country gains its highest dignity in production where it cannot only feed its own population, but export all its surplus produce, at reasonably remunerative prices, to feed other nations. This is the justifiably proud position of Canada to-day. Less than a decade ago the Province of Nova Scotia paid annually \$100,000 to Ontario for butter and cheese; to-day, Nova Scotia does not import any cheese, and only a small quantity of butter during the winter, when the dairies are not working up to their full capacity. The dairymen of the Maritime Provinces are not only supplying their own markets, but are taking a share in the great foreign markets, as Ontario and Quebec have long been doing. The latest report of the Dominion Minister of Agriculture demonstrates that during the past six years Canada has exported \$332,036,319 worth of such farm produce as wheat, flour, oats, oatmeal, peas, cattle, cheese, butter, pork, bacon, hams, and eggs. We give the value of each product in 1896 and in 1901:

	1896.	1901.
Wheat.....	\$ 5,771,521	\$ 6,871,939
Flour.....	718,433	4,015,226
Oats.....	273,861	2,490,521
Oatmeal.....	364,655	467,807
Peas.....	1,299,491	2,674,712
Cattle.....	7,082,542	9,064,562
Cheese.....	13,956,574	20,690,951
Butter.....	1,052,089	3,295,663
Pork, bacon, hams.....	4,446,884	11,829,820
Eggs.....	807,086	1,691,640

Farmers in this Dominion have now the tide of prosperity with them, and even the South African war, by its constant demands for food and forage, has contributed to expansion, for up to a recent date the Imperial War Office had expended on this account over seven millions of dollars through our Department of Agriculture, and this is exclusive of horses which have been bought direct by an Imperial officer, and does not include wagons or saddlery.

Improved cold storage on ocean liners has increased the export of butter from the port of Montreal alone during the past three years by upwards of one hundred per cent. in quantity, with an increase in profit, owing to the superiority of the quality of the product now landed in Britain as compared with that under the older and less perfect cold-storage system, and before the improved creamery system became general.

Too much emphasis cannot be laid upon the necessity for owners of creameries to provide cold-storage accommodation at them, to protect the butter in cold storage from the day after it is made; and the Minister of Agriculture has induced the Government to grant a bonus of \$50 per creamery for every creamery at which the owner will provide and keep in use a refrigerator room according to plans and regulations which will be forwarded on application to the Department. This system of bonusing, commenced in 1897, has been taken advantage of by the owners of about 500 creameries; and, to the owners or lessees of creameries who have not hitherto obtained the bonus of \$50, the Government will grant a bonus of that amount per creamery, if and when its owner provides and keeps in use a refrigerator room according to the plans and regulations during the current year, and the further bonuses of \$25 each for 1903 and 1904, if and when the refrigerator room has been kept in use according to the regulations during these two seasons. Thus the owner of a creamery who provides the necessary refrigerator room and keeps it in use during the three years may receive altogether a bonus of \$100.

The cold-storage system has done much to expand Canadian commerce in food products. By preventing losses by deterioration in quality, it has increased the profits of the dealers and augmented the wealth of the country. Cold storage in every phase has been tried and found effective. As at first the volume of trade might not have been sufficient to induce business men to put up cold-storage warehouses for the accommodation of products intended for export, a grant was offered by the Government to those who would provide cold-storage buildings at central points, such grant being in the nature of a guarantee that the earnings from the cold-storage business at these points would yield at least five per cent. on the cost of buildings and plant. Obviously, the rates to be charged were to be satisfactory to the Department of Agriculture, and the grants were not to be called upon except to make up any deficiency between the net earnings and the sum of five per cent. on the cost as mentioned. Advantage was taken of this offer at Quebec only. That capital put into cold-storage warehouses will prove a sound remunerative financial investment is not now open to doubt, for this system has passed far beyond the experimental stage, and without the realm of probable failure. In Great Britain, private enterprise has not been wanting in providing cold-storage warehouses for at least the last seven years, and substantial dividends have been declared upon working results. Here in Can-

ada, with the greater need and the lesser working cost, such warehouses ought to form an attractive source for capital investment.

The By-products Give the Profit.

One of the reasons given for lower prices on the Canadian cattle marts than obtain on the U. S. cattle markets is that the packers on the American side of the line are enabled to use everything about the slaughtered animal; with them the word offal, in the strict sense of the term, becomes obsolete. The late P. D. Armour, Jr., contributed a paper to a breeders' meeting, some time ago, in which he states that a 1,200-pound steer, live weight, will yield from 650 to 700 pounds of dressed beef. In the earlier history of the packing business most of the difference was lost, even the disposal of much of it being a source of actual cost to the packer. The blood was allowed to run into the river, but the heads, feet, tankage and other refuse generally had to be hauled out on the prairie and buried in trenches.

The horns of a slaughtered steer are cut off close to the head, and the pith is removed and sent to the glue pot, while the horns themselves are dried, sorted into various grades, and shipped to the manufacturer. After being pressed into flat plates, they are manufactured into combs, buttons and ornaments of many kinds. The tips of the horns are made into mouthpieces for pipes, and the scraps are utilized by florists as fertilizers.

The bones are used in many ways. The knuckles are removed from the feet and shanks of the animals, and, after boiling and cleaning, are used in the manufacture of knife handles, tooth brushes, buttons, and various articles in which ivory and bone are used. The hard bone is susceptible of a very fine polish and can hardly be distinguished from ivory. The scraps are used by manufacturers of bicycles and screws, for case-hardening steel; and are also used for poultry food.

From the blood the albumen is extracted by a chemical process and used for the fixing of colors in calico printing, and also in the finishing of leathers. The residue of the blood goes into the fertilizers. A new use for the first blood drawn from the animal is a food for live stock, for which purpose it is in the form of a dry powder.

The white hoofs are shipped to Japan and Europe, to be made into buttons and ornaments of many kinds. Glues, gelatins, isinglass, etc., are manufactured from that portion of the hide not used for leather, and from sinews, cattle heads, cattle feet, calves' feet, etc. Tallow and grease are made into various grades of soap. Glycerin, a part of the fat that will not saponify, is recovered from the soap kettle and made into crude glycerin, dynamite glycerin, and chemically pure glycerin.

The hair is manufactured into felt, the cheaper grades of which are used for the insulation of refrigerator cars and ice boxes, and for undercarpets, etc. The better grades are used in the manufacture of horse blankets, saddlery, felt boots, hats, etc. The tails of the cattle are used for manufacturing curled hair, in combination with horse hair, which is imported largely from Russia and South America. The hides are tanned, as is well known, and made into leather.

One of the most valuable products of the steer is oleo oil, which is pressed from the fat. It is chemically butter-fat. Much of it is shipped to Europe, where it enters into the manufacture of margarine, and is also used in the States in the manufacture of oleomargarine and butterine.

All the portions of the animal that may not be utilized for food or for commercial manufacture, find their way back to the farm in the form of fertilizer. Pieces of meat, bones, etc., not available for food, are boiled under high pressure to extract the grease and glue, and the residue is dried and enters into the composition of fertilizer.

Dr. Rutherford Appreciated.

At the recent annual meeting of the Veterinary Association of Manitoba, Dr. J. G. Rutherford, the newly-appointed Chief Veterinary Inspector of Canada, was unanimously elected an honorary associate. The following resolution was also carried without a dissenting voice:

Resolved, that this Association rejoices in the elevation of one of its members to the most important post in the Dominion open to the veterinary profession—that of Chief Veterinary Inspector to the Dept. of Agriculture, and wishes to place on record its appreciation of Dr. Rutherford's work, as the founder of this Association and one of its most active members, and hereby tenders him its heartiest congratulations and wishes him the greatest possible success in his new sphere.

The Cost of an Efficient Dairy School.

To the Editor "Farmer's Advocate":

The amount of money which it costs to run the Dairy School each year, including salaries, is as follows:

In 1898—Salaries and wages.....	\$1,809 71
Total expenditure.....	3,126 54
In 1899—Salaries and wages.....	1,698 30
Total expenditure.....	3,352 23
In 1900—Salaries and wages.....	1,798 30
Total expenditure.....	2,858 21
In 1901—Salaries and wages.....	1,605 00
Total expenditure.....	3,903 03

These figures I have taken from the public accounts for the years 1898, 1899, 1900 and 1901. As I do not happen to have a copy of the public accounts for 1899, I have taken this from the annual College Report.

The average net cost for running the dairy department is from \$1,500 to \$2,500 yearly. Full particulars of this will be found in the public accounts and the annual reports of the college.

The number of students who took up cheese-factory and creamery work for the past four years (1898 to 1901, inclusive) have been 408, or an average of about 100 students yearly. This does not include the college students who also take dairy work. Those taking up farm-dairy work, from the regular college first-year students, average about 100 each year. The second-year men at the college and those who specialize in dairying in their third and fourth years number between 50 and 60. These take up cheese-factory and creamery work, so that our practical instruction and lectures at the dairy school average from 250 to 260 each year.

We carry on experimental work from the 1st of April until the end of November, although our chief experimental work is done from the 1st of April until the 1st of October, as we find it difficult to conduct very much experimental work in the dairy after the 1st of October, as the regular college students then commence work. The lines of work which we take up relate to methods of feeding and caring for dairy cows; best methods of rearing dairy calves; best methods of caring for milk for cheese factories and creameries; experiments relating to cheesemaking and butter-making. Among those relating to cheesemaking which we have carried on during the past few years, I might mention the following: Methods of paying cheese-factory patrons, as illustrated in actual experimental work; the curing of cheese at different temperatures, and this past year we have made a specialty of experiments in curing cheese in cold storage, partly as a result of which the Dominion Government is about to establish experimental curing stations in cold storage on a commercial scale.

In regard to buttermaking, our experiments have been on the effects of pasteurization of milk at different temperatures, a full report of which you will find in Bulletin No. 117, recently published; methods of making cultures in order to get a proper flavor in the butter; different methods of creaming milk; and various other lines of work, which you will find in detail in our college reports. (Sgd.) H. H. DEAN.

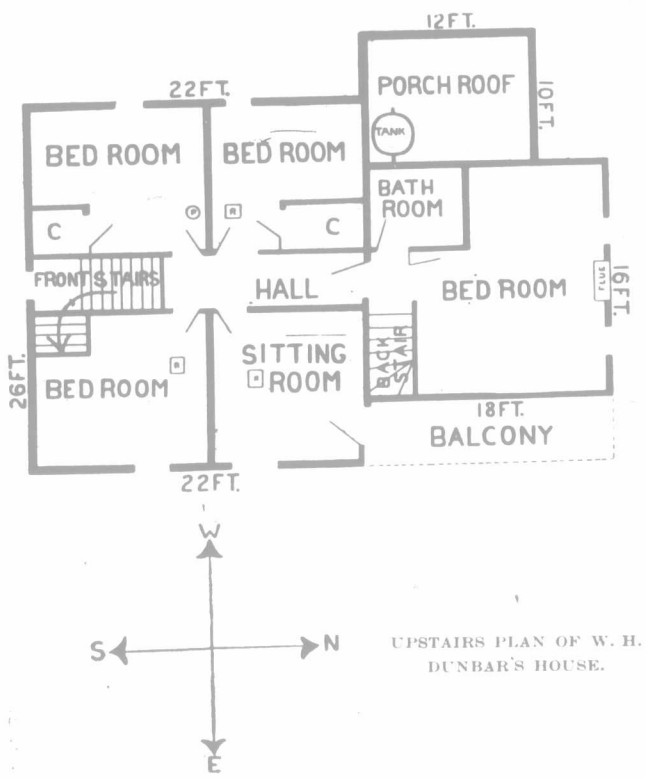
O. A. C., Guelph, Ont.

Style of Windows and Ventilation for Basement Stables.

To the Editor "Farmer's Advocate":

I built, last season, a barn 44 x 84, with basement wall 8 to 10 feet high, with 16 windows, 2 lights in each sash, 14 x 20 lengthwise, up and down, hanging on hinges at top, with hooks and staples to fasten up out of the way of stock. I think this style will give best satisfaction, as they do not swell like those hung on pivot in center. As to ventilation, I would say good height of wall or ceiling and plenty of light and ventilation are the three important points in building a basement barn. With low walls or ceiling, it is hard to get proper ventilation. My system of ventilation is 2-inch tile, one foot long, at top of wall, all around sides and ends, opposite on either side and end, which will admit plenty of fresh air and carry off all foul air, and for the above-sized barn I would use 20 of these tile; have only 15 in wall. Could not get in any more on account of bridging both sides of driveway, but can say this system has given perfect satisfaction, and at the same time is very cheap. One would be surprised in putting his hand over those holes to see what amount of fresh air is continually passing through, and not cold enough on the coldest days to be uncomfortable. Have not had to close them this winter to keep out frost, and no smell or foul odor was noticeable.

Yours truly, A SUBSCRIBER.



Ills of Hedge Fences.

A valued American contemporary has the following to say regarding the disadvantages of hedge fences, the results of observations gleaned from the costly experience of the southern farmer, who underwent the skinning process at the hands of hedge-fence companies years ago. The "Advocate" was the first Western agricultural paper to warn the farmer against buying a hedge fence at a price far above its value, paying therefor by a lien note, which was practically a mortgage on the man's farm.

Ten or fifteen years ago there was a general craze that went over the country for the hedge fence, and a good many farmers in many localities were taken with the idea, and put out shoots that were to eventually develop into the great panacea of the fence question.

The first great difficulty with the hedge fence is the fact that it is expensive to plant and grow, requiring a secondary fence to protect it and also to turn stock.

Another trouble is the length of time that the owner must delay before he can hope to secure any returns from the hedge. The fence must grow and gradually develop into its form, and this requires time.

A third trouble comes when it is considered that the hedge does not make itself, but must be guided and shaped by the hand of a skilled pruner. This means regular attention every year, or the hedgerow will become a greater nuisance than it is worth.

A similar trouble is that the attention required never ceases, but must be given regularly in the shape of replacing and trimming just as long as the fence exists. Branches are continually growing that must be cut back to keep the row within bounds. Shoots are sure to die out, that must be replaced or there will be openings through which stock will readily pass.

As a matter of fact, we have seen very few, if any, fences of this sort but what had holes somewhere all the time that needed patching, so that frequently barbed wires were stretched either through the hedge for the shoots to form themselves about, or else wires were stretched by the side of the hedgerow. In either case the conditions were the same, and the owner was practically at the expense of two fences instead of one.

We have seen a good many so-called hedge fences, but very few that were really so in fact, and we venture that these had actually cost more in time and money than the ordinary farmer can afford to put into them.

Ordinarily the hedge is set out and given some attention for the first year or two, and then it gradually falls back into an uncared-for, neglected hedgerow that is unsightly, spoils a rod or two of good land, and continues to get worse every year that it is allowed to stand.

We venture that a hedge fence requires more space than almost any other kind, even with good care, and if neglected will demand more room than any two or three fences ought to occupy.

When the farmer tires of one of these fences he awakens to the fact that he has one of the greatest jobs on his hands when it comes to removing it that he ever tackled. The entire growth must be literally grubbed out, root and branch.

We are of the impression that the hedge fence has had its day, and almost invariably so with the man who has had a little experience with it. As far as we are able to judge, we find very few hedge fences being put out at present, and save in possible cases where one desires a dense hedgerow to serve as both wind-break and fence, we believe there will continue to be fewer as the years pass.

Is it Wise for a Farmer to Borrow Money for Improvements?

In the business world when a man sees a chance where a hundred or five hundred dollars invested will return not only the principal, but a good return on the investment, he does not hesitate to borrow the necessary sum if he does not happen to have money of his own at hand. If the person is a shrewd business man, he may be successful in ninety-nine cases out of a hundred. Is it wise for the farmer to emulate the business man in this respect and borrow money with which to make improvements that may seem to promise good return? This is a fair question, and one that very vitally concerns a great multitude of farmers, because, as a class, they have not a great amount of ready money, and so if improvements are to be made, either the money must be borrowed or they must be the result of very slow growth. There are two reasons why it is unwise to go into debt for improvements: One is that from the nature of things a farmer cannot see as can the man of business just how successful the venture is likely to be. It is more of a lottery for the farmer to borrow money to enlarge his stock-breeding operations, to build new stables, etc., etc., than for the trained business man who sees a prospective rise in certain values. (? Ed. F. A.) The farmer has to deal with the uncertain conditions of the season, with drouth and heavy rains, snowstorms on his stooks and stacks, with the

do as much good as an improvement made with borrowed money. Many men have handicapped themselves by building fine stables on borrowed money when the old ones could, by a little effort, have been made comfortable. A little improvement all along the line each year will accomplish great results in time.

For the average farmer with a family dependent upon him, the gradual emancipation from hard conditions is far the safer plan.
Cameron Municipality. JNO. AIKENHEAD.

Show and Sale of Pure-bred Stock at Calgary.

Under the auspices of the Territorial Pure-bred Live Stock Associations, a show and sale will be held at Calgary, May 14 to 17. In addition to the show and sale programme, the Associations will hold their annual meetings, at which I refs. Robertson and Day, Dr. Mills and Dominion Live Stock Commissioner Hodson are expected to speak. The convivial nature of the conventions will be exemplified by a dinner. Prizes will be offered for stallions and bulls, competition being limited to stock owned by Territorial breeders, the entries for the sales being on the same conditions. For the sale and exhibition, a live-stock pavilion, with seats for onlookers, at a cost of \$1,500, is being built by the Calgary authorities, so that the sale will be held, rain or shine, in Victoria Park, the location of the annual summer show. Entries for the sale or show should be sent to Managing-Director C. W. Peterson, Regina, Assa.

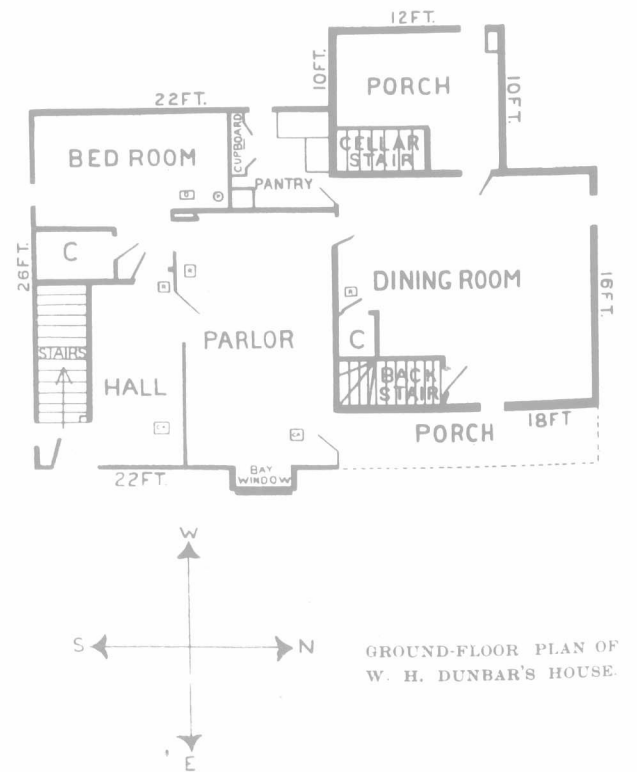
A Comfortable Farmhouse.

I enclose the ground and upstairs floor plans of my house. One of my boys drew the plans. The cellar wall is built of cement, lime, gravel and broken stone, one part of cement being used to four parts of lime. The wall is faced with a thin coat of cement and sand. The cellar floor is four inches thick, cement and gravel. The wall is built wide enough to allow for brick veneering the house when necessary. The house has three ply of lumber outside, one ply sheeting, one of shi lap and siding with two-ply paper. The first two ply are nailed to the window jambs, the latter being made of two-inch stuff, checked out for the sheeting and for the plaster, which makes an air-tight job. The house is heated with a wood furnace made by the Brandon Machine Works, which takes in cord-wood, stick lengths.



THE COMFORTABLE FARM HOME OF W. H. DUNBAR, BRANDON HILLS, MAN.

Brandon Hills, Man. W. H. DUNBAR.



Care of Cream on the Farm.

The care of the cream on the farm is getting to be a matter of supreme importance in our butter industry, on account of the number of "cream-gathering" creameries which are springing up all over our Province. A few years ago the tendency was strongly in favor of "separator" creameries, but the advent of the hand separator on the farm is gradually changing the aspect of the whole business, and whether for good or for evil, remains to be seen. The butter which has been made from "separator" creameries has undoubtedly built up the reputation of our butter abroad, and if that reputation is not sustained we are going to suffer heavily in consequence. That first-class butter can be made from "gathered" cream has been abundantly proven, and especially in the U. S., where large quantities of butter is made from "gathered" cream. Evidence is not wanting, however, to show that the average grade of "gathered" cream butter is not equal to that from the "separator" creameries, and we have to face this fact and apply a remedy if at all possible. Hauling the milk to the creamery to have the cream taken out and then hauling the skim milk back again to the farm is an expensive and, apparently, unbusinesslike method of handling the milk. The hand separator is undoubtedly the proper method of taking the cream from the milk and then hauling the cream only to the creamery, but the loose and careless methods of caring for the cream after it is separated is causing serious trouble in many creameries; whereas, the cream from the hand separator should reach the creamery in the pink of condition if properly cared for. All cream, whether from the hand separator or "gravity" method, should be kept in cold water, and if iced water all the better. Cream from the hand separator should never be mixed with a previous lot until it is cooled down, and to do this properly it should be placed in cold water by itself until the next milking. The can should then be thoroughly washed and scalded, ready for the next lot. "Deep-setting" cream is always, or should always be, cold when it is taken from the milk and it should be kept as cold as possible by placing the cream can in ice water. "Shallow-pan" cream should never be accepted at a creamery, because the milk is always too much exposed to taints and odors. The cream is liable to be tough and clotted, and it is almost impossible to get it to the creamery in a sweet condition. As a rule, the flavor of "gathered" cream butter is taken completely out of the hands of the buttermaker, because the cream is usually sour before it reaches the creamery. There is no excuse for this state of things if the equipments for handling the cream on the farm are what they should be. These are of the simplest kind and consist only of a tank of some sort to hold water and ice and a good cream can with a tight-fitting cover.

The great trouble is that we have so many persons who will not go to a dollar's expense to provide the crudest of appliances for the dairy, and they are the class of people who are keeping down the grade of butter, both creamery and dairy.

"Gathered" cream is collected not less than three times per week during the summer, and every patron should have the necessary apparatus to keep his cream sweet for that length of time, and until we can do that our "gathered" cream butter is going to suffer in quality.

There is a partial remedy in collecting the cream every day, but this adds to the expense. We may, however, have to come to this, and by using the hand separator exclusively we should then have ideal conditions, which ought to give us the finest of butter and which is giving the finest grade in sections where it is in vogue in the United States. Many people do not take proper care of their separators, which, in many cases, are covered with a stinking mess of milk and cream both inside and out.

Such people ought to be ashamed to use a valuable piece of machinery in such a manner, and especially a machine that has anything to do with milk. Anyone who is careless with their separator will be careless in the whole operation of getting and handling their cream, and they not only suffer in pocket themselves but they lower the product of their neighbors who take better care of their milk and cream.

Nothing but clean, bright tinware should be used in connection with the cream. A can with the tin worn off in spots is fatal to the good flavor of cream and should never be used. Stir the cream thoroughly when two lots are mixed together. J. STONEHOUSE.

Of the eighty-one students who attended the Western Dairy School, Strathroy, this winter, twenty-five wrote on the examinations held at the close of the term.

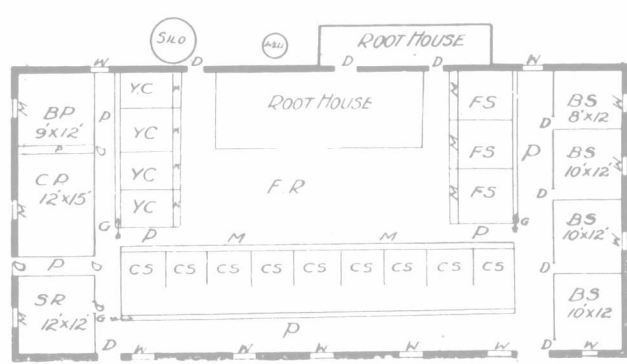
Dairying in British Columbia.

I beg to submit statement of business done in our creamery, "Eden Bank," in 1901. Our creamery is run on a combination of whole-milk and cream-gathering systems. Number of patrons, 70 in summer and about 40 during winter months. There were delivered at the creamery during the year, 114,168 lbs. of butter-fat, from which were made 130,180 lbs. butter. There has been credited to the patrons \$28,037, an increase of \$3,852.58 over the previous year. A comparative statement of the past five years shows a steady increase in the output and a yearly decrease in the cost of making, as follows:

Table with 5 columns: Year, Lbs. butter, Cash to patrons, Cost of making, Average price per lb. of butter. Rows for years 1897, 1898, 1899, 1900, 1901.

The trade account for the year ending Dec. 31, 1901, shows a net profit of \$2,033.53, being a marked proof of the progress of the company. Of this amount \$50 was donated to the managing director, \$210 was reserved for repairs and renewals, \$57.50 for insurance, \$574.57 was placed against bad debts (owing to the assignment of a commission house), and the balance, \$1,141.52, was returned to the patrons supplying cream or milk during the year. A large portion of our output was sold in the Coast cities, and during the year we have succeeded in opening up a very good trade in the Yukon, and also in the Kootenays. Our butter is all put up in one-pound prints, and that which goes to the Yukon is shipped in tin cans, which will hold 50 lbs. in prints, and filled with brine before being soldered. Our experience with this kind of package has been very satisfactory. T. A. F. WIANCKS, Creamery Operator.

N. Westminster District, B. C.



CATTLE-STABLE BASEMENT IN BARN OF MR. JOHN ANDERSON, SIMCOE CO., ONT. B. P., bull pen; B. S., box stall; C. P., calf pen; C. S., cow stall; Y. C., young cattle; F. S., fattening stall; P., passage; M., manger; W., window; D., door; G., gutter; S. R., separator room; F. R., feed room. Size of building, 40x86 ft.

The Introduction of New Varieties of Farm Plants.

The work of experiment stations and agricultural colleges is generally appreciated far below its real value, because immediate results cannot be seen. The introduction of new varieties of forage crops, fruits, grains and vegetables are, however, something tangible that any farmer may see and understand. The work done along this line by some stations will justify their maintenance for all time to come, if they did nothing more than what is already accomplished. A forage crop recently introduced, that promises to be of great value to the western farmer, is the Turkistan alfalfa. At the present time, no seed of it can be obtained, the available supply being used by the experiment stations. One of the greatest handicaps at the present time under which western agriculture labors is the absence of a legume, a nitrogen-gathering plant that will fill the same place in our agriculture that the red clover does to the eastern farmer. It is hoped that Turkistan alfalfa will fill the bill, as it has proved to be more resistant to drought, to winter cold and to alkali than the ordinary alfalfa (Lucerne), and it also grows and makes a crop with less water. The Dept. of Agriculture at Washington, and the Nebraska, Oregon and South Dakota stations report favorably of this plant. The Missouri Experiment Station lauds a radish, the "everlasting," obtained from Japan, as one of the best and sweetest grown, and states that as a garden radish it does not become strong and woody, but remains crisp and tender all summer. As fall approaches, it develops a thick, fleshy growth at the crown, which cattle and sheep eat with avidity, and it may become valuable as a forage plant.

Rural Education.

To the Editor "Farmer's Advocate":

Your recent articles on the above subject have no doubt interested many of your readers, at least they have been of great interest to me and have set me thinking, with the result that I have concluded to make a few suggestions about the subject. Some of your readers, I have no doubt, will be inclined, like "Resident," in your issue of 20th March, to place the responsibility for the admitted inefficiency of our present system on the indifference and cupidity of our rural parents. But, having had considerable experience of the working of our present system, I would like to suggest some of the causes for our backwardness in educational matters in comparison with our urban cousins, with the hope that they may shed a little light on the subject and assist ever so little in the solution of what is to my mind a very grave problem. It is an unfortunate fact that our agricultural or rural interests suffer much on account of the failure of the farmer to impress public opinion in any way. An enlightened knowledge of the necessities of our rural schools should have suggested at the beginning that a system suited to our cities, with their teeming population, might be quite the reverse when applied to our country districts, where the conditions are altogether different. How is it that, considering the representative nature of our advisory board, there is no proper representation from our rural schools, through our boards of trustees or otherwise? Surely, an intelligent farmer or two, and there must be a few in the Province, who understand the conditions and needs of our population and the difficulties to be surmounted before we can hope to even approach the excellency which has been attained in the towns and cities, would be of some use to our educational authorities.

In the early days of settlement, very large districts were organized, partly on account of the need of getting sufficient children within their bounds and partly because the burden of taxation was thus made lighter. Soon the outskirts of the district became settled, and children from 3 to 5 miles distant from their school were growing up in ignorance, or at least without a chance to attend a school. As time went on, increased settlement forced readjustment of districts, moving of schoolhouses and the building of new ones, with, of course, much agitation, dissatisfaction, and, in some cases, bitterness of feeling and the inevitable display of the selfishness of majorities. Our experience here differs from that of "Resident," as our schools are nearer than they were and are getting nearer every year, until now we have districts embracing an area of only eight to twelve sections of land, where formerly they averaged from twenty to thirty-six. Of course, we have some of the larger ones yet, but the readjustment goes bravely on, giving more trouble annually to our municipal councils than any other matter over which they have control. While our districts are arranged so that children are over two miles from the school (the districts must be small where some of them are not), changes in settlement, which always are taking place, will force readjustment of boundaries until they are small enough to enable all the children to attend as regularly as possible, for the majority of our parents are not so negligent of the educational interests of their children as some would have us believe.

How much better it would have been if our townships, at the beginning, had been subdivided into say six or four school districts, with the power of organizing when there were sufficient children of school age. This would have saved the expense and trouble as well as all the bitterness resulting from this everlasting readjustment, and, to my mind at least, would have given a greater number of children in our Province an education during the past twenty-five years than the present go-as-you-please arrangement, and would have been much more equitable as well.

In addition to the evils caused by the children being in many cases too far from the school, such as irregular or non-attendance, which, as has been pointed out, time, to a certain extent, is remedying, might be mentioned: (1) poor equipment; (2) difficulties of classification, and (3) inefficiency of teachers, many of whom are young and inexperienced, others simply making use of the profession on account of the opportunity it offers, because of the few hours of work weekly and proportionately good pay, to enable them to get into some other profession. These latter seem to think that their duty is fulfilled by putting in the few hours daily in the school, and then they devote their chief energies to studies in law, medicine or divinity, as the case may be.

Having outlined at least some of the main causes for the present inefficiency of our rural schools, and not wishing to take up too much of your valuable space, I will defer for the present some remarks I intended making on the proposed "centralization" of our schools as a remedy.

Red River Valley. PRO BONO PUBLICO

Use of Good Sires.

Never was the need for nor the encouragement to improvement of the beef and dairy cattle of the country and of our live stock generally greater than at present. The only available means of securing the best prices in the markets that are open to us is by producing the best quality, and this in live stock can only be done by means of the use of pure-bred males in grading up the general stock of the country to a higher standard and by liberal and judicious feeding, combined with good breeding to secure early maturity, which means quick returns. The produce of a good pure-bred bull will readily sell for two to five dollars a head more as calves or yearling stockers with ordinary treatment than the offspring of a scrub or grade bull at the same age and with similar care, while with better treatment of both, the difference in value will be greater, and the better-bred cattle will bring from \$15 to \$20 a head more as finished heaves and be ready for market a year earlier than the ill-bred class.

The reports of sales of fancy cattle at high prices are perhaps liable to discourage the average farmer from thinking of securing a pure-bred bull, but a little enquiry will satisfy him that one that will suit his purpose well may, even in these good times for the breeders, be had for a very reasonable price; in many cases, indeed, for less than it has cost to raise him, when it is considered that he has probably consumed the whole milk of a cow for one season, and been liberally fed otherwise. We do not advise buying the lowest-priced bull, even a pure-bred, for use in a herd of grade cows, believing that it pays well in the long run to use the best one can afford, but good, useful bulls can be bought for one hundred dollars, and even less, that will greatly improve the character of a grade herd and rapidly increase the value of the young stock. We know for a fact that there are hundreds of excellent young bulls in the hands of breeders, both of beef and dairy breeds, throughout the country that can be bought well worth the money to the average farmer, and we are quite sure that many farmers are standing in their own light by using inferior sires and squandering money by feeding good food to ill-bred beasts, which give but a poor return for what they consume. Those who have not the means or the accommodation for keeping a bull have little excuse for breeding to scrub sires, since in nearly every district the services of pure-bred bulls may be had for a moderate fee, and it will pay well to drive one's cows a few miles rather than to put up with inferior stuff. In some districts the stock of cattle has been greatly improved by the use of pure-bred sires brought in by the agricultural societies, using a part of their funds for this purpose, the members having the benefit of their services for a moderate fee. In other cases, neighbors have agreed to patronize bulls brought in by one of themselves, each pledging a certain number of cows at a stated fee. The syndicate system has in some cases worked quite satisfactorily, a number of farmers joining in the purchase of a sire to be kept by one of themselves, and standing the animal at a price for service that with good management may readily repay his cost while improving the stock of the district. This system is perhaps better adapted to the handling of stallions, but could also very well be used for the introduction of good bulls. Private ownership is, however, more satisfactory as a rule, and with the use of good judgment in making selections, satisfactory sires can be secured on reasonable terms, and since it is largely a waste of time and money to feed inferior stock, the sooner a start is made in the line of improvement the better. It takes time to grow a horse or a steer to maturity, and the sooner advantage is taken of the use of good blood the sooner will the best returns be secured.

Fertilizer in Onion Growing.

A Geneva (N. Y.) Experiment Station bulletin deals with a problem of particular interest to onion-growers, but also one which again enforces the lesson needed by many farmers, of economy in the purchase and use of commercial fertilizers. The experiments of four years, when different quantities of high-grade commercial fertilizer were used, show that 500 pounds per acre was the most profitable amount to apply. With good prices assured for onions, larger quantities of fertilizers might be used, but, considering all factors, the onion-grower "runs great risk of diminished profits when he uses 1,500 and 2,000 pounds of commercial manure per acre." In case of one set of tests on rich soil, it was found that even the smallest amount of fertilizer was unprofitable.

Castor Oil for Ringworm.

I received my premium knife all right, some time ago, with thanks. I find it useful, as it is strong and handy, as well as an ornament. Here is a sure cure for ringworm. Pure castor oil applied just three times, every other day, with finger tips.

JOS. LANKTREE.

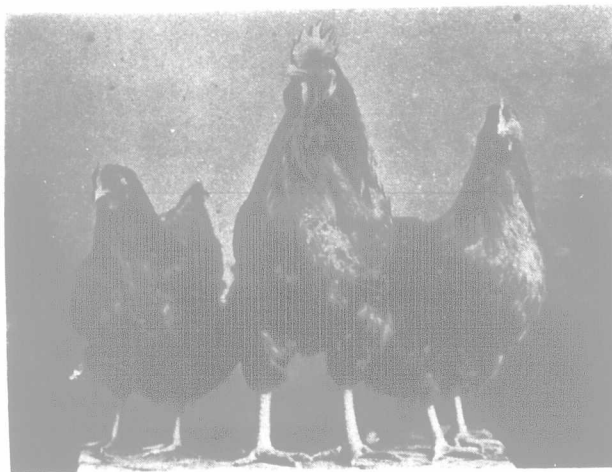
The Buff Orpington as a General Utility Fowl.

To the Editor "Farmer's Advocate":

Sir,—The Buff Orpington fowl, though of comparatively recent introduction, has attained a position in the English show-pens which would indicate that it is likely to continue to be a general favorite as an all-round utility bird. It possesses a combination of the desirable characteristics of three distinct English breeds.

The object of William Cook, of Orpington House, England, who is the originator of the breed, was to produce a distinct type or strain of birds that would combine the good qualities of some of the breeds that are well known to be good egg producers and table fowls. In this he was most successful, as to-day the Buff Orpington is held to be the best general-purpose bird in England. They are especially suited to the requirements of the English market, and as a money-earning breed they lead all others.

Being connected with a company that has from time to time been forwarding poultry to the English market, I have had occasion to communicate with some of the leading dealers in dressed poultry in Great Britain, and have noted that special mention has frequently been made of the merits of this breed. They find the greatest demand for a white-fleshed bird having white legs and which will weigh from three to four pounds dressed when five months old. The color of the flesh or legs will frequently make a difference of one or two cents per pound. Such points do not generally appeal to Canadian poultry-raisers, but if we intend to continue to build up a trade in high-class dressed poultry with John Bull, we must place before him just what suits his eyes, while constantly remembering that, however much he may love us, pure sentiment will not induce him to violate his stomach. Our attention has repeat-



BUFF ORPINGTONS.

Sample of lot imported by J. W. Clark, Onondaga, Ont., from one of the best flocks in England; costing \$50 per trio.

edly been called to the ideal type of bird for the export trade. We have been supplying too great a mixture, and unless we can succeed in improving our stock, with a view to curtail those vexatious variations and supply what the English market demands, we cannot expect to get the highest prices.

During the last three months I have visited the poultry departments at the Ontario Agricultural College, Guelph, and at the Central Experimental Farm, Ottawa, and found that the Buff Orpingtons were making an excellent record as winter layers. W. R. Graham, Superintendent Poultry Department, Guelph, had a pen which were all laying on 15th January. An April pullet usually commences to lay in October or November, and with proper care will continue to produce eggs throughout the winter and spring.

[Note.—The writer of this letter, Mr. Clark, encloses quotations from Liverpool and London (Eng.) dealers, who state that they prefer the Buff Orpingtons to any other breeds as market birds. Canadian dealers recommend them. From what we have seen of them, they are likely to prove a valuable addition to our list of excellent general-purpose fowls.—Editor.]

They are exceptionally hardy. During the past winter I have imported four crates of birds from England. They landed in the early part of March in the very best of condition. After being confined in the crates for 17 days and crossing the Atlantic in the roughest part of the year, they were healthy and bright, a number of the pullets were laying, and they have never required nursing a single day since they landed.

Their general characteristics may be summed up as follows: They are hardy, quite domestic in habit, mature early, are excellent egg producers, their body is of the proper size and conformation, they have a fine-grained flesh, and they are well suited to our Canadian climate.

J. W. CLARK.

Successful Poultry Raising.

"HOW I DID IT."

BY MRS. YULL.

Having been very successful in raising poultry last year, and especially so in hatching and raising early chickens, I thought I would send you an article on "How I did it," for the benefit of such of your readers as it may interest.

Our henhouse is 20 feet long by 8½ wide, with double-brick walls plastered inside, and cement floor. The windows, which are 3x5 feet, are two feet from floor, two of them facing south, and one east. The ceiling is two-ply inch lumber. The roosts are round poles hung from ceiling, and are one foot from floor in front and two at the back. The droppings are scraped up each morning, and the floor sprinkled with wood ashes. The dust bath is composed of one ounce sulphur to every eight pails of road dust.

I feed in a V-shaped trough. The drinking fountain is a four-gallon covered tin can, with a strip 3x6 inches cut out of the side about 6 inches from the bottom. Our fowl are all Barred Plymouth Rocks. The best results we had in hatching were from eggs laid by pullets eight months old, fed on a little grain morning and noon, and in the evening a mash made as follows: Two handfuls of broken eggshells, 2½ lbs. cut clover, scalded with one quart of water, let steam for half an hour and mixed with bran and a little salt. Their supply of meat is prepared at butchering time. All the refuse meat is boiled until quite tender, then mixed with one part bran, two parts oats, one part barley, ground fine, and a little salt. Fill this mixture into small barrels or nail kegs, then set out to freeze. When frozen solid break two or three staves out of the barrel and roll it into the henhouse. As it thaws the hens will get all the meat they require. We also feed a little ground bone every day.

Seeing a number of articles in the papers on feeding poultry for egg production in winter, I tried a change of feed, but did not have so good results.

I filled my first incubator on the 14th of January, and had 86 live chicks out of 110 eggs. These chicks were left in incubator for 12 hours. In preparing brooder, I put about one inch of sand on the bottom, heat it to 90 degrees, then put the chickens in and let them remain 12 hours without food. For the first feed mix a hard-boiled egg, ground fine, shell and all, with quarter of a pound stale bread crumbs, put a clean paper over part of sand in brooder, then sprinkle two tablespoonfuls of this food on paper, and repeat in two hours; when the paper becomes solid, replace with a clean one. Continue this food for the first three days, being careful not to feed too much.

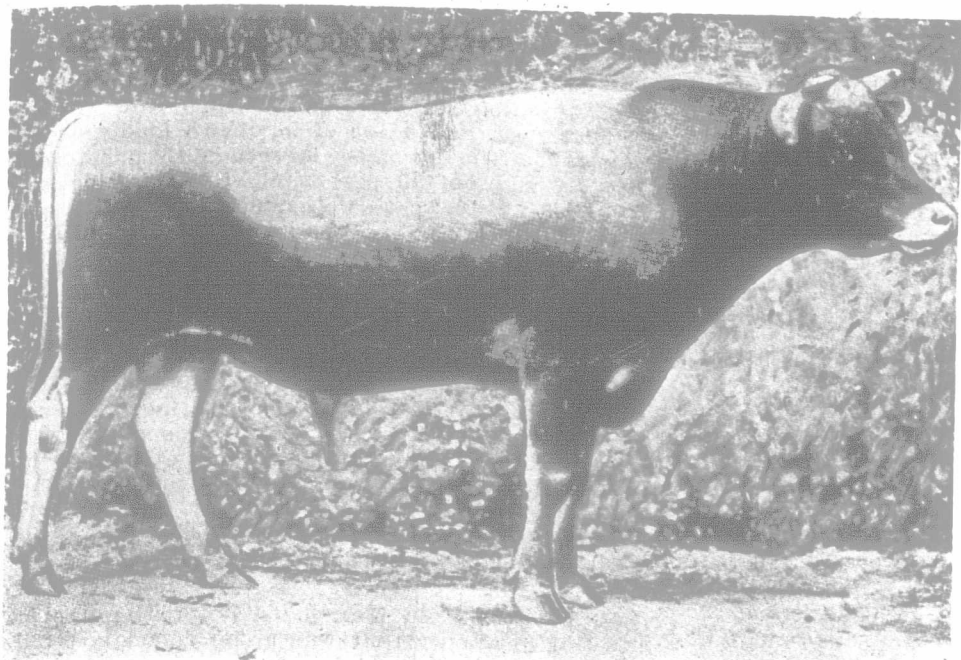
On the fourth day about a teaspoonful of ground meat may be fed. Also a little pin-headed oatmeal, mixed with small seeds, such as millet, still continuing the hard-boiled egg and bread, although a little oatmeal may be mixed with these. When about two weeks old split a small mangel, scrape a little out of the middle, mix with corn meal, replace, and feed. The mangel serves as a trough, and learns them to eat it. Give them a fresh one every day; by this time the chicks are ready to leave the brooder for food. Scatter a little wheat and seeds on henhouse floor. Boiled potatoes mixed with fine-ground oats and corn meal slightly dampened with skim milk may now be fed for breakfast. About ten o'clock give them ground cabbage, carrots, mangels or onions, mixed with fine-ground oats, corn meal or shorts. If possible, change this portion of their diet every day. When they are about three months old I feed them wheat for supper; at four months whole oats. While in the brooder give all the clean cold water they will drink, in saucers, with a teacup turned mouth down in each saucer. Do not give them any milk for two weeks. We raised all our February and March chickens in this way.

I disposed of very few of the February chickens, as the majority of them were pullets. What cockerels there were among them, and also those hatched in March, were sold to the Canada Produce Co., Toronto. The February chickens weighed, on an average, four pounds each at four months old, and the March ones weighed three pounds at three months old. The February pullets commenced laying in August, moulted the last of September, and commenced laying again soon after, and have been laying ever since.

I have used a Cyprus incubator for two years, and am having good success with them this year.

Constancy.

*The constant drop of water
Wears away the hardest stone;
The constant gnaw of Towser
Masticates the hardest bone;
The constant wooing lover
Carries off the bashful maid;
And the constant advertiser
Is the man that gets the trade.*



GOLDEN LAD, P. 1242, H. C., J. H. B.
The great improver of latter-day Jerseys on the Island and in England.
OWNED AT TIME OF DEATH BY MR. R. J. POPE, BERESFORD MANOR, PLUMPTON, SUSSEX.

The Care of Milk for Buttermaking.

To the Editor "Farmer's Advocate":

After milking, take the milk as soon as possible to a milk-house that is well ventilated and surrounded with pure air; here place your cans, pails or other vessels holding the milk, in a tank of good cold spring water and stir while cooling. If you have plenty of water, have your milk-house arranged so as to run this water off and refill occasionally. Cool the milk to a temperature of 55 or 60 as soon as possible, but under no consideration leave it any time after milking before doing so; cool immediately and drive off the animal heat. After you have the milk cool, place a cloth over the cans to keep out any dust or dirt that occasionally blows around in summer; a double piece of good cheese cotton is the best thing for this.

A word about the milk-house. It must be well ventilated. See that a good draft of pure fresh air is in circulation while cooling the milk to help drift away the gases, or they will likely stop around the walls of the house and cause trouble if not closely looked after. You know milk when drawn from the cow contains a certain amount of dissolved gases. These gases contain what is called animal odor, easily removed from the milk by exposure to the air while cooling, so see that your milk-house has lots of pure, fresh air. The cover you place over your cans to keep out the dust or dirt should be kept clean. Pails, strainers, and everything in connection with the milk-house and milking should be thoroughly clean. Washing cans and pails, etc., with one pail of lukewarm water is not the thing, and must be stopped if we are going to succeed in having good milk producers. First rinse them thoroughly in lukewarm water; second, wash them thoroughly with a good sal soda water as hot as possible, using only a brush for the purpose; third, thoroughly rinse with hot water and expose to the bright sunlight for several hours.

To have this milk delivered at the factory in prime condition, first when the milk-drawer comes along, if he take a thermometer and try the temperature it will be about 60 F., and look clean and sweet. Do not own a can that has a rust mark on it. If you do, see that it is used as a slop can, but in no case send it to a factory, for if you have a maker that knows his business, he will reject milk coming in such a can. Farmers and dairymen, this matter of good milk supply is laid at your door. If you have not the right man in charge of your factory, discharge him for one that is known to do the work. Milk for the creamery should be in such condition when it arrives at the creamery that a sample can be tested with the Babcock tester to allow the farmer his proper allowance. If his milk has not been aired and cooled (at the same time stirred, too) below the surrounding atmosphere, the cream will become tough and will not mix in with the milk and you will blame the buttermaker for not giving you the right tests. With milk aired, cooled and stirred immediately after milking, there will be comparatively little tendency afterwards for the cream to separate from the milk. If you are a farmer known to supply good, pure sweet milk, and your neighbor is not, see that something can be done to help him along. Have a maker that can show each farmer where he can improve on the quality of the milk supplied. I have found it a good plan to observe the different kinds of milk and write to each farmer as often as possible or go and see them, and in this way the farmer will soon appreciate the interest taken and will take better care of his milk and more interest in the factory and maker.

ROBT. IRELAND.

Kingston Dairy School. Ins. in Buttermak'g

Creameries: Co-operative or Proprietary.

In answer to the question, "Which is the most profitable—proprietary or co-operative ownership of creameries?" the New York Produce Review gives the following answer:

"Co-operation to be successful in any line must be co-operation in the true spirit.

"We presume the questioner means which is the most profitable to the milk producers, and in that case it depends so much on the conditions, there can be no doubt that wherever the milk producers have learned to co-operate in the true co-operative spirit, that system will be the most profitable to them.

"There is always human nature to be considered, and it is natural that when a milk producer sells to an individual creamery he is apt to forget that even then he co-operates and to be short-sighted in his reasoning.

"He will often say to himself, 'What do I care whether my milk is clean or not as long as it is received at the weigh-can. The creamery-man won't pay me any more.'

"Whereas, if he delivers to his own co-operative creamery, he will, as a rule, have a feeling of responsibility to his own pocketbook and to his neighbors', and, if he forgets the latter, they will be likely to remind him.

"This is in reality the main reason why co-operative creameries should be more profitable.

"The fact that the extra profit necessary to the individual owner, on account of the risk incurred in building a creamery, which is at the mercy of the milk producers, comes next, and last, as well as least, is the reduction in expenses by the farmer manager putting in \$1,200 worth of time, energy and ability for from \$50 to \$300, as well as cheap hauling, cutting ice, etc.

"It is a matter of education, and if the farmers have not attained it; if they are jealous of each other, instead of trusting the man among them whom they have chosen as manager; or if (but this is doubtful) there should not be a man among them with sufficient business capacity, then it will be better for them to sell their milk to an individual creameryman.

"If we ask the farmers of Denmark, New Zealand, or of Minnesota, the answer will be co-operation, but in many States it seems as if the farmers do not trust themselves; at any rate, they will say that co-operation is a failure!"

On the Prevention of Swarming.

BY MORLEY PETTIT.

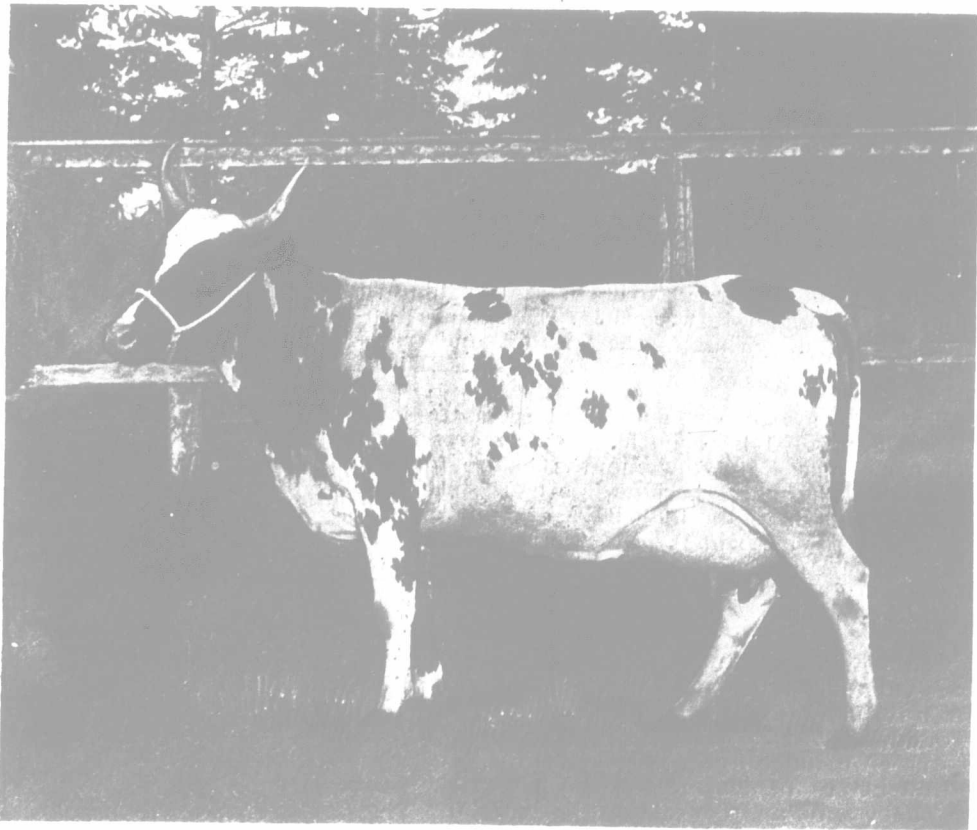
In the "Farmer's Advocate" for February 5th, page 92, of the current volume, there were stated some of the conditions under which increase by natural division or swarming takes place. It is the purpose of the present article to consider ways and means of preventing such conditions and bringing the swarming impulse as nearly as possible under control. While this subject is not exactly "seasonable" in April, it is of the utmost importance that the apiarist be well prepared, both in plans and appliances, for the summer's work before the beginning of June. It must also be borne in mind that methods in bee culture are peculiarly subject to the season and locality, the style of hive used, and the man. Hence the impossibility of laying down hard and fast rules and the necessity of taking time to carefully consider all methods proposed in bee literature before adopting them in their entirety. In view

of these facts, this most important subject is introduced thus early in the season that it may receive due consideration.

In the article mentioned, the swarming impulse is said to depend partly on the race or strain of bees employed. "Other qualities being equal," then, "it is obvious" that the race with the least swarming propensity is preferable. Whether this be Carniolan, Italian or Black, the writer is not prepared to state. His experience with the first in this respect has been anything but encouraging; but others, in a different locality and perhaps with different management, prefer Carniolans and have very few swarms. For a general-purpose bee take a hybrid of Italian and Black blood, or, perhaps, substitute Carniolan for the latter. Much can be done towards improving one's stock by careful and scientific selection in breeding.

The other conditions as tabulated are: (a) "The super is crowded with honey." To prevent this condition give, at the beginning of the honey flow, what experience and the strength of the colony shows to be sufficient super room to afford the workers no prospect of being crowded. In the "locality" of Elgin County, colonies which have been wintered and "sprunged" well must have a super in May (preferably of half depth) to store honey from fruit bloom. Do not delay giving a super until the combs of the brood chamber are whitened, as many text-books recommend. By that time the bees have probably decided to swarm, and prevention is very much easier than cure. At the beginning of white clover, the fruit-bloom honey should be removed and super room given equal to one and a half times or even twice the capacity of the brood chamber. As soon as a little capping is done, extract about half of the super, choosing the best-capped combs, that storing may go on in these while the others are being capped. When these others are about half capped extract them; and repeat this, alternating from one side of the super to the other, as long as the honey flow lasts. The above method applies particularly to deep supers. With shallow supers the tiering-up system is best—that is, placing supers of empty combs, as they are needed, beneath those already on.

(b) The queen crowded in the brood chamber often, though not always following (a), is avoided either by removing some of the brood or by enlarging the brood chamber. Adopting the former plan, remove most of the brood and substitute empty combs or frames of wired foundation, at or shortly after the time of giving supers for the main honey-flow. The brood is used to build up weak colonies or to form nuclei for increase. It will be seen that this method prevents swarming by checking the growth of the colony and keeping it within the limits of a small hive, and while it answers the requirements of many men and localities it has its disadvantages for others. By the second plan the brood chamber is enlarged beyond the laying capacity of the queen, which accomplishes the same result, and has the advantage of allowing the colony to attain its utmost strength without any division of the working force. It is from such powerful colonies that big yields of extracted honey are obtained. The thoughtful apiarist will, no doubt, use either method, as the individual case requires. If increase is desired, form nuclei. If any are weak, help them from the strong. As soon as all are



LADY BUTE OF MID-ASCOG 9185
Imported Ayrshire cow. (See article page 281)
OWNED BY MR. J. N. GREENSHIELDS, ISLEIGH GRANGE, DANVILLE, QUE.

strong, enlarge the brood chambers—but not too much, lest the lower part fall into disuse except as a storeroom for pollen.

(c) A slow yield of nectar excites breeding, but does not wear out the workers, and the hive becomes overpopulated. This condition may, in a measure, be overcome in the same manner as (b).

(d) A negative condition, no ventilation nor shade, is answered positively. Give ventilation and shade, a large entrance and upward ventilation in the super, a non-conducting lining to the cover, and the shade of trees.

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.

LACK OF CONDITION—WORMS—LICE.

1. I bought a mare, two months ago, that had been badly fed when young, and was worked at two years old. She was very poor when I got her and is out of condition yet. Is now four years old. What should I use to get her into good condition?

2. I have a five-year-old mare that passes little worms, about two inches long, in her dejections.

3. What is good (!) for lice on calves and colts?

J. P. SOMERSET.

Ans.—1. If you are convenient to a qualified veterinarian, would recommend that you have the mare's teeth examined and put into shape if needed. Would advise you to give a pint and a half of raw linseed oil as a drench, to be followed with these powders: Pulv. sulphate of iron exsic., 1½ ounces; pulv. nux vomica, 1½ ounces; pulv. gentian root, 3 ounces. Mix, and make into 16 powders. Give one in the feed morning and night.

2. Get a similar prescription for the mare with worms. An injection per rectum of two quarts of water in which is dissolved a handful of salt will also be useful.

3. A mixture of coal oil and lard, equal parts, or insect powder, will prove to be bad for lice. If you are some distance from a veterinarian, would advise you to procure a copy of "Veterinary Elements" (price, \$1.50), from this office.

CHRONIC FOUNDER.

I have a mare, eight years old, which had a sweny on the right shoulder about a year ago, and I cured same; but last spring, about seeding time, she got foundered from drinking a little too much cold water when heated. I saw the local vet. about it, and he gave me a physic ball for her, but it did not seem to do her any good. Her feet are all right yet, except when drawing a heavy load. She goes lame for 3 or 4 days, and it seems to catch her in the shoulder. Please let me know, in your next issue, what is the best thing to do under such circumstances?

P. V. SUBSCRIBER.

Ans.—At this late date, the disease has become chronic, and, consequently, will be hard to get rid of entirely. Get the following prescription from your druggist: Nitrate of potash, 4 ounces, bole armen. qs. color. Mix, and make into 16 powders. Give one powder in every alternate feed. You had better procure this blister: Biniodide of mercury, 1 dram; cantharides, 1 dram; lard, 1½ ounces. Clip the hair from the pasterns, and apply the blister from the coronets to the fetlocks; don't rub in at the flexure of the fetlock joint (behind). Tie the mare's head up for 12 hours after blistering, and apply clean sweet lard daily to the blistered surfaces after 24 hours have elapsed.

PROBABLY STRINGHALT.

Heavy Clyde mare, in good condition, has something wrong with her hind legs. Is not lame, but when made to stand over in stall lifts one leg high as though it were stiff. Hocks are apparently sound. What is the trouble, and treatment?

SUBSCRIBER.

Assa.

Ans.—The symptoms submitted seem to indicate stringhalt. I have noticed some mares show such symptoms for a few months before foaling, after which the mares became free of the stiffness. Such stiffness is often indicative of bone spavin. If stringhalt, you cannot do a great deal. In some special cases an operation is performed known as "peroneal tenotomy," and occasionally results favorably.

PARALYTIC STROKE.

Will you let me know, through the columns of your valuable paper, if a horse that has had a paralytic stroke will take another one? R. B. Brandon District.

Ans.—We judge our correspondent's horse has had an attack of azoturia. If such was the case, the chances of another attack depend largely on the care and feed of the animal. It is quite within the range of possibility that the horse may be attacked again. It is an open question whether one attack predisposes to a second.

FAILURE TO BREED.

Would it be advisable to breed a Clydesdale mare to a Percheron horse? The mare raised two colts when she was four and seven years old, but since then I cannot get her to breed. She is now twelve years old.

NEW SUBSCRIBER.

Brandon District. Ans.—There would be nothing gained by using a Percheron stallion. In some cases, a jackass has been used. It might be well to have the generative organs examined by a veterinarian, as there may be some hindrance to impregnation, the result of a former foaling. We presume the mare comes in season regularly. You might be accessible to a Percheron horse more vigorous than a Clydesdale; in that case, you might try the French horse.

CHRONIC BIG-LEG.

I have a horse that had sore legs, about two years ago, and one hind leg swelled up to the body and broke out in boils; the boils burst, and a discharge came of a bloody, thick nature. I had a vet., but he did him no good. I fed the horse arsenic and gave him a ball of aloes (Barb.) and poulticed the legs. The boils healed up and left thick bunches where they were, and there is a ridge or callous on the other leg and also on the front legs. Please inform me what will remove these enlargements?

SUBSCRIBER.

Arcola, Assa.

Ans.—Judging from the description, your horse had an attack of what is termed by the professionals, suppurative lymphangitis; or, as spoken of by horsemen, big leg. At this late date, the chances of removal of the enlargement are practically nil. You might try giving 2-dram doses of iodide of potash in his feed daily for two weeks, and apply some mild liniment to the parts. I am of the opinion that much money spent on medicine would practically be thrown away.

COWPOX—ITCHINESS (ERYTHEMA) IN HORSES.

1. Every year a blister, size of 25-cent piece, breaks out on the teats of my cows, the one after the other. They become so painful it is a great trouble to milk them. Please let me know the cause, also a preventive and cure?

2. My horses standing in the stable keep kicking and scratching themselves all the time. I have examined them for lice, but find none; they have been so for over two months. What can I do for them to relieve them?

TOBY.

Letellier.

Ans.—1. Your cows suffer with cowpox (variola vaccinia), for which I would recommend you to use one of the following lotions: Boric acid, 1 ounce, water 1 quart, or hyposulphite of soda ½, water 1 quart. Apply to the sores with a piece of clean cheesecloth before each milking. After the milking, apply some carbolized vaseline or carbolized oil.

2. The itchiness which causes the kicking and scratching is due to one of two things: either the presence of some small parasite or a diet of too stimulating a nature. This condition is liable to be present in the spring during the shedding of the coat. Would recommend clipping the horses, and if being fed heavily, to moderate somewhat, and include bran in the ration. If you are certain no parasite is present, give a laxative of Glauber's salts, 1 pound, in 3 pints of water, or cream of tartar, 1 ounce, in the feed once or twice daily. If any parasites are present, and clipping will enable you to detect and treat more readily, purchase some Zenoleum, advertised in our columns, and apply in a five-per-cent. solution.

ABORTION—RETAINED FETUS.

1. Have a valuable cow that has slipped her calf this winter and last year also. How long should I let her go before breeding her again? Can there be anything done to make her stop slipping them? She dropped one at seven months and the next at five months.

2. A cow I paid \$150 for was with calf a year ago, and she never calved; the calf can be felt quite plainly in the side. She made a little bag a year ago, and has been coming in heat ever since, sometimes in two weeks and sometimes in three weeks. Would the calf remain there dead, and what can I do to remove it? The cow is in good health.

AN OLD SUBSCRIBER.

Miami.

Ans.—1. Abortion is evidently present in your herd. To control it you will need to go to considerable trouble. Disinfection of the genitals of the cow must be carefully carried out by the use of some antiseptic. The West Disinfecting Co. and the F. O. Maber Co. each handle cheap solutions for this purpose. Quicklime or chloride of lime should be sprinkled around the stables. The cow should not be bred for three months after the discharge, often following the disease has stopped. You might give carbolic acid in the feed, starting with 15 drops and gradually increasing to 2 drams, dissolved in glycerine, two or three times a week. Would advise you to procure a copy of Veterinary Elements (price \$1.50) at this office, and read up on the diseases of the cow, and be particularly careful, thorough dissection.

2. Such cases have been known to occur, the fetus being retained. Would advise you to call in your veterinarian and have a thorough examination.

PUNCTURED STOMACH.

A young heifer was gored in the side by another beast. The wound is quite high up on the left side, between the two last ribs. The wound bled a little, but soon closed up. Now it has broken open, and a lot of fluid, with food, is running out. The stomach is seemingly punctured. What would be the best method of treating the wound? Heifer eats well, and has no pain, apparently.

O. K.

Wawanasa.

Ans.—It would be advisable to limit the diet of the heifer. Avoid feeding bulky food; confine to a mash diet. Inject the wound with an antiseptic solution once or twice daily. Grease the skin below the opening, which will prevent the discharge setting up a local irritation. The age of the animal is in its favor, and we should expect a good recovery from the use of the solution indicated above. Zenoleum or the disinfecting fluid of the West Co. (see our advertising columns) will be found cheap and effective. If a cure should not result, an operation would be imperative.

NASAL GLEET.

I have a horse, four years old, that got some kind of distemper that was going round last fall, and has a discharge of whitish matter from the left nostril ever since. At first had an offensive smell, but does not seem to now. Discharges most when the horse is driven; has no cough; appetite good, and seems to be all right every other way. Kindly answer, through the "Farmer's Advocate," and oblige.

FARMER.

Alameda, N.-W. T.

Ans.—The distemper has left your horse with what we presume is nasal gleet. Would recommend you to get the following powders at your drug store, and give one twice daily in the feed: Copper sulphate pulv., 2 ounces, iron sulphate exsic., 2 ounces, pulv. gentian root 4 ounces; mix and make 24 powders. The injection of a ten-per-cent. solution of hydrastis canadensis into the affected nostril will also prove useful. Use a small (1 ounce) hard rubber syringe or atomizer to apply the drug, and raise the head as you would to drench him, otherwise he will object to spraying the inside of his nostrils. It is always well to be suspicious of glanders in any chronic nasal discharge. In such cases, however, it is usual to find an enlargement of the glands in the space between the lower jaws.

WART ON COLT.

I have a colt, two years old in the spring. I got him last fall. There was a little lump like a wart on the front of his hind leg, at the gambrel joint. If the top of the wart was rubbed off, it would run a little matter, then would gather again. About four weeks ago I noticed that the leg was commencing to swell around the bottom of the wart. The colt was stepped on on that leg by his mother when about a week old. Will that have anything to do with it?

Macdonald District.

A SUBSCRIBER.

Ans.—Make a solution of copper sulphate (bluestone), 1 ounce to the quart of water, and swab the growth with the solution once daily. The trouble may be due to the accident you mention. The chances are that the colt was affected with what is known as navel-ill, and not stepped on when quite young.

HORSE SORE IN FRONT.

I have a six-year-old horse with some nervous disease. He stretches out like a foundered horse, and will shake. He is stiff when in the stable. He has good feet, and is in good order. Has been like this for a year.

J. McN.

Ans.—Your horse has either navicular disease or chronic laminitis. Remove the shoes, pare the feet well down at the heels, clip the hair off the coronet for about 1½ inches above the hoof all round. Blister with 1½ drs. each biniodide of mercury and cantharides, mixed with 2 ozs. vaseline. Rub blister well in, tie so that he cannot bite the parts. In 24 hours rub well again, and in 24 hours longer wash off. Let his head down and apply some vaseline to the parts every day. Blister every month for five or six times, and turn him on soft ground as soon as the grass grows and the weather becomes fine enough. Cases of this kind require a long period of rest and treatment.

OBSTRUCTION TO MILK DUCT.

When I took the calf from one of my cows I noticed that the milk did not come freely from one teat. It takes about four times as long to milk her as it should. There is a small growth at the lower end of the teat on the inside.

Give a recipe for worms about one inch long in a calf about 10 months old? D. G. McK.

Ans.—There is a small tumor in the milk duct, and it will require an operation with an instrument called a concealed bistoury. It requires an expert to perform the operation, and unless you can employ a competent veterinarian you had better leave it alone, as unskillful interference will make matters worse by setting up inflammation of the udder.

The worms described are called pinworms, and are found in the rectum. Inject into the rectum 1 part turpentine to 16 parts raw linseed oil. Repeat in three days.

PECULIAR TROUBLE IN COW.

A cow suddenly took sick in stable; showed great pain; turned purple on hind parts, udder and tongue; would bellow from pain; throw herself in a great many positions; diarrhea set in, with a yellow, frothy discharge; temperature normal; died in less than ten hours. Several cows have shown similar symptoms in this neighborhood within the last few years, but all recovered.

Ans.—It would require a careful post-mortem examination to determine the cause of death. It somewhat resembles anthrax, but the fact that it is not usually fatal dispels that idea. It must be some disease due to local causes. The symptoms given indicate a stoppage of the circulation from plugging of an important artery. A condition of the arteries called embolism causes such symptoms, but nothing can be done to give relief.

COW WITH A COUGH.

About a month ago a three-year-old cow began breathing heavily. She does not appear to have a cold, but coughs some in trying to get her breath. She was fed on hay, pulped turnips, and chop. Now she cannot eat either of the latter, but can eat hay and whole turnips. She drinks all right. She is getting thin. She stands with her head stretched out, and can be heard breathing for quite a distance. I think the trouble must be in her throat or windpipe.

A SUBSCRIBER.

Ans.—It is probable your cow has tuberculosis, either of the glands of the throat or the lungs. You had better have her tested with tuberculin, and if she reacts, destroy her. If she does not react, blister her throat well with the ordinary paste blister and give her one dram iodide of potassium twice daily. The fact that she can eat hay and whole turnips and cannot eat either pulped turnips or chop is peculiar. Try spreading the chop thinly over a large surface, so that she cannot get a mouthful, but will be compelled to eat slowly.

CATARRH OR GRUB IN THE HEAD IN EWE.

A ewe with lamb about a month old has refused to eat for about a week. There is a discharge of matter from both nose and eyes. Should she be removed from the other sheep? Should sheep be kept in the same stable as other stock? The stable is cement and the sheep-house is in one corner, with a partition between; one half of the door is opened every fine day.

SUBSCRIBER.

Ans.—It is not good practice to keep sheep in the same stable as other stock. Other stock require closer, warmer compartments than sheep, which should be kept in a wooden building with more ventilation. Your ewe has probably contracted catarrh as a result of too close quarters. Steam her nostrils by holding her head over a pot of boiling water, in which has been poured about a dram of carbolic acid, twice daily. Give her some boiled flaxseed and $\frac{1}{2}$ dr. powdered gentian as a drench several times daily until she will eat a little. See that the premises are well ventilated and dry. If she has grub in the head, benefit may be derived by causing her to inhale the fumes of burning sulphur.

LICE ON CATTLE AND SKIN DISEASE IN MARE.

Our cattle have lice (white body and reddish head). Do the lice stay on the cattle or in the stable during the summer? We whitewashed our stalls last fall.

We have a mare that breaks out in spots on neck and body. The hair comes off, and in the center of bare place there will be seen a small pimple or scab. She had the same last summer.

H. H. Mc.

Ans.—Lice may remain on cattle continuously. They cannot remain in the stable if it has been thoroughly whitewashed. Get some stavesacre seeds, put an ounce to a quart of water and fetch it to a boil, then allow it to simmer for four hours; draw off and add water to make a quart. Wash the affected cattle with this once weekly for three applications. Any of the recognized sheep dips also destroy lice on cattle.

Your mare is predisposed to eczema. Give her a purgative of 8 drs. aloes and 2 drs. ginger. Then give 2 ozs. Fowler's solution of arsenic twice daily for a week or ten days. Wash her well with strong soft-soap suds; rub her until dry. Then apply twice daily: Creolin, 1 part; water, 70 parts.

COLT THAT GOT HIS STIFLE HURT.

A two-year-old colt got his stifle hurt last fall. I used a liniment for awhile, and then blistered three times, about three weeks apart. Is this good treatment?

A. H.

Ans.—You do not state the nature of the injury received, nor yet the condition of the part at present, hence it is impossible for me to say whether your treatment is correct or not. If the colt is lame or has an enlargement, you are treating for all right; but if there is a raw surface or a discharge of pus, the treatment is wrong.

LYMPHANGITIS.

My horse's left hind leg is swollen. The cord on the inside is swollen up to the body, and is very sore to the touch. The sheath and floor of the abdomen is also swollen. The first day he refused food. He was quite lame at first.

G. F.

Ans.—Your horse has lymphangitis, often called weed, or Monday morning disease. He will doubtless be over his lameness, although swelling may still be present, by the time you see this. This disease is generally preceded by a day or longer of idleness, during which time the horse has been well fed. Horses that are exercised every day seldom suffer. Treatment consists in giving a brisk purgative of 8 drs. aloes and 2 drs. ginger, excluding all drafts, bathing the leg long and often with warm water, and after bathing applying camphorated liniment, which can be bought in any drug store. He should not be exercised until the lameness has disappeared, and then exercise dissipates the swelling, but it will return to some extent at nights for some time. Repeated attacks of this disease terminate in a chronically enlarged leg.

WIND SUCKER AND COLT WITH WEAK FETLOCKS.

1. A four-year-old colt has acquired the habit of sucking. He works his jaws and makes a noise, but does not take hold of anything.

2. A colt now two years old was weak in the fetlock joints when foaled. He would go forward on them until the joint would touch the ground. He is much better now, but still weak, and sometimes stumbles.

A. C.

Ans.—1. Your four-year-old colt is a wind sucker. This is a vice, not a disease. As a rule, a horse addicted to this habit will catch the manger or other object, but occasionally we see one that does not. The habit is very hard to check. Buckling a strap studded with tacks around his throat so that when he commences to suck the enlargement of the throat causes the skin to come in contact with the tacks will check him. This will need to be worn for a long time, as the habit is likely to return if the strap be removed.

2. It is not probable your two-year-old colt will ever be very strong in the fetlocks or very sure-footed. Blistering the joints every five or six weeks during the spring and summer will benefit the case.

PARALYSIS IN SOW.

About a week ago I noticed my sow staggering with her hind legs. She gradually got worse until she lost the use of them entirely. I gave her a dose of saltpetre without result. She has been running in the barnyard and been fed on corn, with water to drink.

J. W. C.

Ans.—Your sow has either paralysis caused by digestive derangement (probably due to feeding entirely on corn), else she has rheumatism caused by sleeping in heated manure and then being exposed to cold. Change her food entirely. Give raw roots, bran, and a little shorts. Purge her by giving from 4 to 12 ounces Epsom salts, according to size. Give $\frac{1}{2}$ dram powdered nux vomica three times daily. Take her to a comfortable, dry pen and keep her well bedded.

WORMS IN HORSE.

A five-year-old horse passes fine, small worms, and also some 10 or 12 inches long. I cannot keep him in good condition. He scratches one hind leg with the other.

C. N.

Ans.—Get the following prescription: Powdered sulphate of iron, powdered sulphate of copper, tartar emetic, and calomel, of each 1 $\frac{1}{2}$ ozs.; mix well and divide into 12 powders. Give one every night and morning. Feed nothing for 12 hours after giving the last, and then give a purgative of 8 drs. Barbadoes aloes and 2 drs. ginger. Give nothing to eat but a little bran until purgation commences. He may work until he receives the purgative, but must have three days' rest then.

CONTUSED WOUNDS—RINGWORM.

A mare got in the manger and bruised herself badly. It has broken out in places and leaves a raw hole in the flesh. After it has finished running, what should I do to heal it up?

Also, please give treatment for ringworm in calves.

E. H. S.

Ans.—Keep the parts clean by bathing with warm water three times daily, and after bathing dress with carbolic acid 1 part, water 40 parts. Inject a little of the lotion into the holes mentioned. Continue this treatment until the parts are well healed.

2. Remove all scales and scurf by washing with warm water and soap, and apply tincture of iodine once daily for three or four applications.

PHYSIC FOR CATTLE.

Would a dose like the following be all right or not for a physic for a cattle beast: Epsom salts, 1 pound; brown sugar, half pound; common salt, 2 tablespoonfuls; ginger, 1 tablespoonful; common soda, 1 tablespoonful? If it is possible let me know in April 21st number of "Advocate," and oblige.

WILLIAM DIXON.

Ans.—For a full-grown adult animal, the dose is a good mixture, the other ingredients added tending to promote the action of the salts. For a smaller, younger beast, the quantity of salts should be reduced. Heavy (and repeated) dosing with salts alone is a mistake.

IMPACTION OF THE THIRD STOMACH, OR FARDEL-BOUND.

Two weeks ago a Shorthorn bull went off his feed. I treated him for indigestion, or clogging of the manyplies. On Wednesday I gave him a handful of salt dissolved in water, and also considerable water to drink. Next day he was no better, and I gave him a pound of Glauber salts, and another handful of salt and water to drink. Next day he passed nearly clear water, and I thought I had given him too much purgative medicine. I then gave him a tablespoonful of ginger, three of whiskey and one of laudanum to check purgation and act as a tonic. The same day I was in town and told the local veterinarian about the case. He did not condemn the treatment, but told me to be careful to not stop the action of the bowels too quickly. The bull continued to pass fluid at intervals of a few hours. On Sunday morning he appeared rather better, but would not eat. I boiled hay and gave him the liquid to drink, also burned flour; mixed it with water and drenched him with it. I continued the administration of ginger, whiskey and laudanum. The clear water stopped coming, but a colored fluid was passed. He died the next Friday night. A post-mortem revealed his liver much inflamed, and one end of the manyplies moist, but nearly the whole of it was dry, one layer after another packed with dry food. His stomach was nearly full. Now, the query is, where did the salt and Glauber salts go? They surely never went through the manyplies. It seems a mystery. There are more cattle die from this complaint than from all other diseases put together.

A. M.

Ans.—Fardel-bound, or impaction of the third stomach, in the ox is a very hard disease to treat, and often proves fatal. My experience has taught me that it is not, as you say, very common. In this section it is comparatively rare, while in yours it must be quite common, as it causes more loss than all other diseases in cattle. It is caused by dry, indigestible food, a nonactive condition of the glands of the organ, or a partially paralyzed state of the muscular walls. The liver is not involved in cases of this kind, and the fact that in your case this organ was diseased indicates that that may have been the primary trouble. If the liver be diseased to such an extent as to materially interfere with the secretion of bile, digestion in the small intestines will be largely interfered with, and in such conditions the stomach cannot perform its normal functions. Impaction takes place from the fact that the injeesta cannot pass backwards, and this is followed by a dryness of the contents, especially of the third stomach, which, under normal conditions, is only moderately moist. This condition of the liver is often not even suspected until symptoms of fardel-bound are exhibited, and even then there are no definite symptoms to indicate liver disease, and all that can be done is to treat for fardel-bound. If the condition be due to liver disease (and often when from other causes) the disease will be fatal. It has been the experience of all who have had experience with this trouble that it is not unusual for the administration of a purgative to be followed by the evacuation of a quantity of liquid feces, often as thin as water, such as you describe. It would take too long to describe the way in which medicines are believed to act in such cases, but the fact remains that we get this action, even though it may appear mysterious, as you state. I may say that the manner in which many medicines act is not well understood. We know that we may reasonably expect certain actions to follow the administration of certain drugs. We know this from experience, and the experience and experiments of others, but why or how a medicine should act in one way rather than another we do not know, but we do know how they act under normal conditions, and we also know that their actions are modified or in some cases entirely suspended by diseased conditions of the organs upon which they should act. As stated, a purgative given in a case of fardel-bound is often followed by the passage of liquid feces without materially altering the condition of the third stomach. You should not have tried to check purgation. Treatment consists in administering a purgative of one to two pounds Epsom salts, and about an ounce of ginger. It is good practice to add one ounce aloes, as aloes has a special action upon the third stomach. This should be followed by two-dram doses nux vomica three times daily. If the bowels do not act well in 24 hours, give a pint of raw linseed oil, and, if necessary, give this every day. If after about two days constipation continues, repeat the Epsom salts and ginger. In the meantime nourishment should be given by administering a drench—a few bottles full of boiled flaxseed three or four times daily. This treatment has given me the best results, but frequently is not successful. Fardel-bound will not occur as a primary affection if the food be of good quality. But where it occurs as a sequel to disease of some digestive organ, it cannot be averted or cured unless the primary disease be diagnosed and successfully treated before it has reached an advanced stage.

INFLAMMATION OF THIRD STOMACH.

Two-year-old heifer due to calve in May took suddenly ill; stamped and struck at her belly with her hind feet; would lie down and get up again; vet. said it was colic; gave her treatment, including a pint of raw linseed oil; after a few hours pain gradually subsided; physic did not operate; some pain still continuing, but not very severe; he gave her another pint of oil in about thirty hours, also some powders, to be taken at intervals; that dose did not physic; pain nearly, or quite, all gone; pulse all right; respiration the same; eyes bright and normal in appearance; voided urine several times while sick, also two or three lots (about a single handful) of a black, tarry substance, with a bad odor; blackness appeared to be caused by blood; fifth day had several passages from the bowels; not more lax than when on grass; frequently worked her tongue as though trying to spit something out of her mouth; would grind her teeth occasionally, but not very much; a small quantity of liquid came from her mouth once or twice, and that had a very bad odor; in five days she died; had not eaten anything and drank only three or four quarts during the five days; listless, but would coax to be petted; died without a struggle; the vet. and myself opened her; found a small spot of inflammation in one of the small intestines; no mortification, and bowel not closed up; third stomach (manypiles) filled with liquid, and the lining would slip off in the fingers in places; a large quantity of water in the other stomachs as well; she had been watered a few hours before we noticed her ailing; did not drink a very large quantity, and it is pumped from a deep well; vet. said it was inflammation of the third stomach; did not know what had caused it; I asked if the food would cause it, and he said not; feed was hay, cured corn fodder, and a few mangels every day; always appeared well and felt well until the day she took sick. 1st. What was the disease? 2nd. What would cause it? 3rd. Is there any remedy? If so, what is it, and how should she have been treated? J. K. D.

Ans.—1st. Your veterinarian was correct in diagnosing the disease as colic or indigestion, which resulted in inflammation of the stomach. This was proved by the post-mortem.

2nd. A change of food or water, or large quantities of either, will cause such diseases, and often they appear without any well-marked cause, due to an unexplained weakness of the digestive glands and organs.

3rd. The treatment adopted was quite correct. You should not blame your veterinarian if he fail to effect a cure in all cases. In this case he evidently understood the case, and acted intelligently. The post-mortem established the correctness of his diagnosis and treatment.

DISLOCATION OF PATELLA.

A three-year-old filly becomes helpless by spells on left hind leg. She has no power at all. Her leg is stretched backwards, drawing the foot on the ground, showing the sole from behind. It gets all right after awhile. E. S.

Ans.—The patella (stifle bone) becomes dislocated, and, as a consequence, the filly has no power in the affected limb. This condition occasionally occurs and will rectify itself. Put her in a roomy box stall with a level floor, and keep her well bedded, so that she will not slip when lying down or rising. Blister the front and inside of the stifle joint in the usual way once every month for three applications.

ECZEMA IN COLT.

A yearling colt bites his legs. He has been doing so for about two months. He is in first-class condition. Has been fed on hay, bran and chop all winter, but for some weeks has been fed nothing but bran and carrots. Our veterinarian treated him for worms, and he voided a few. SUBSCRIBER.

Ans.—Your colt has a skin disease, to which horses of the heavier breeds are especially liable, and it is occasionally noticed in the light breeds. Give him a purgative of about 4 drs. aloes and 1 dr. ginger. After his bowels regain their normal condition, give him ½ oz. Fowler's solution of arsenic in his bran twice daily. Dress the legs (being sure that the dressing reaches the skin) well once or twice daily with corrosive sublimate 1 part, water 1,000 parts.

Miscellaneous.**STALLION OWNER'S NOTE FORMS.**

Kindly let me know what you are charging per 100 note forms similar to those recommended in the "Farmer's Advocate" of February 20th for the special use of stallion owners? H. E. W. Holmfield, Man.

Ans.—As a number of other similar inquiries have been received, we understand the Richardson, Bishop Stationery Company, Winnipeg, can supply the desired contracts in book form at 75 cents per 50. They have adopted the form recommended in the "Farmer's Advocate."

TAMWORTH ORIGIN—A READER FOR 35 YEARS.

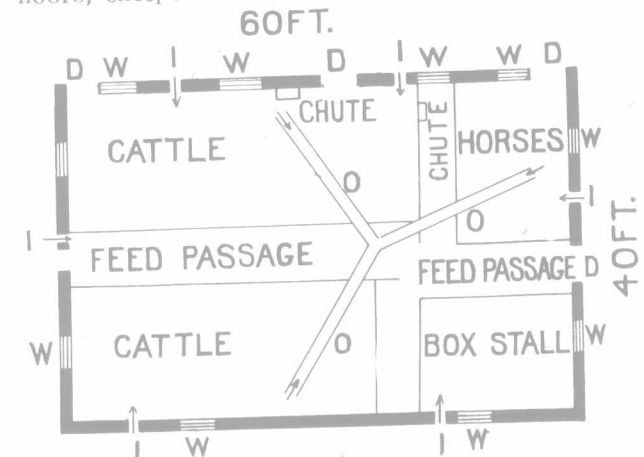
What is the origin of the Tamworth hog? Are they a distinct breed, or are they bred by crossing?

I believe I am one of your oldest subscribers, having taken the "Advocate" for 35 years without a break, and can truly say it gets better every year. R. ROBINSON.

Ans.—The Tamworths take their name from Tamworth, in South Staffordshire, England, where they have been extensively bred, and in adjacent counties, such as Leicestershire and Northamptonshire, as far back as the early part of the past century. Somewhat rough, though hardy, they were improved by infusions of Neapolitan blood, and about 20 years ago, when the bacon type form started, they were pushed to the front by enterprising English breeders, and were given separate classes at the Royal Show. They are certainly entitled to be described as a distinct breed, which is also apparent from their impressive character in crossing.

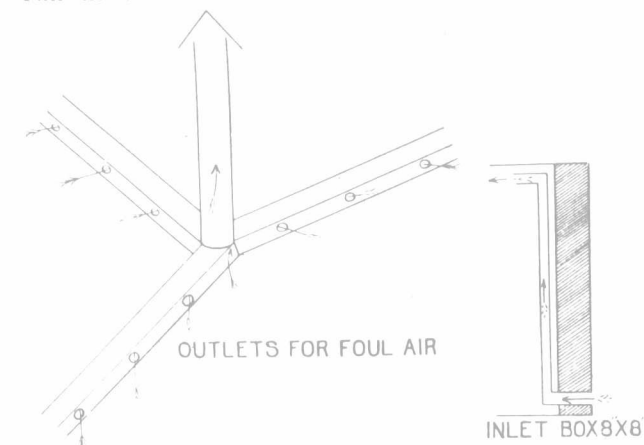
VENTILATING A STABLE.

Would you describe for me, through your valuable paper, plans for ventilation of a stone stable, which is very damp. The ceiling and west side get very wet. Some readers of the "Farmer's Advocate" will no doubt have had similar experience. The stable is 40x60 feet, as per diagram enclosed, with 7-foot ceiling, and cement floor, except in box stall. N. GREENIANS.



Ans.—First, to provide inlets at the points I, or thereabouts, shown in Fig. 1, the style of inlet being shown in Fig. 2. Each inlet begins near the base of the wall, runs through the wall from the outside, then up to the top of the wall inside, where the air is admitted into the stable. The box should be about 8x8 inches, or about 64 square inches, and should be made of thin lumber or galvanized iron.

For outlets, shown in Figs. 1 and 3, a straight pipe or box from the ceiling up through the roof is required. At the ceiling of the stable branches run in three directions to different parts of the



stable, these branches being provided with small openings at intervals for the purpose of drawing in foul air and moisture from all parts of the stable.

As we do not know exactly the interior arrangements of the stable or the barn above, we cannot give exactly the best placing of the inlets and outlets. The owner must depend on his judgment for that, placing these inlet and outlet boxes where they will do most good, and where they will be out of the way. J. B. REYNOLDS.

ENSILAGE AND COWS' TEETH.

Having heard that silage is injurious to cows' teeth if fed to them for a number of years, I would be pleased to hear, through your valuable paper, if such is the case? DONALD McNIVAN.

Ans.—Some of our staff have been feeding ensilage for ten years, and have noted no ill effects of that kind, but we have frequently heard the objection raised. Among animals (as among men) there are doubtless differences in the natural preservative or resisting powers of teeth to the action of the acids in silage, lactic, we understand, being more prejudicial than acetic acid. The danger is more speculative than real, else more would have been heard of teeth rotting during all these years in which ensilage has been fed to thousands of herds of cattle.

PRESERVING EGGS.

1. Will you kindly furnish me with a formula for pickling eggs? I am in the baking business and I would like to pickle my own eggs, if you think I can do it successfully. 2. What is the best kind of tubs, vats or barrels to use? E. FRENCH.

Ans.—1. If good, freshly-burnt lime can be obtained, as much as two to three pounds to five gallons of water is used, though with such lime as is here referred to, one could rest assured that one pound to five gallons (50 pounds) would be ample, and that the resulting limewater would be thoroughly saturated. The method of preparation is to slake the lime with a small quantity of water, and then stir the milk of lime so formed into the five gallons of water. After the mixture has been kept well stirred for a few hours, it is allowed to settle. The liquid, which is now "saturated" limewater, is drawn off and poured over the eggs previously placed in a water-tight vessel. As exposure to the air tends to precipitate lime (as carbonate), the vessel containing the eggs should be kept covered. The air may be excluded by a covering of sweet oil or by sacking on which a paste of lime is spread. If after a time there is any noticeable precipitation of the lime, the limewater should be drawn or siphoned off and replaced with a further quantity newly prepared. Prof. F. T. Shutt, who made a special enquiry into the subject, says: "It is essential to notice the following points: 1. That perfectly fresh eggs be used. 2. That the eggs should, throughout the whole period of preservation, be completely immersed. Although not necessary to the preservation of the eggs in a sound condition, a temperature of 40° to 45° F. will no doubt materially assist towards maintaining good flavor, or, rather, in arresting the stale flavor so characteristic of packed eggs. Respecting the addition of salt, it must be stated that our experiments, conducted now throughout three seasons, do not show any benefit to be derived therefrom; indeed, salt appears to impart a limy flavor to the egg, probably by inducing an interchange of the fluids within and without the egg. Water glass (sodium silicate) has been extensively used, with solutions varying from 2 per cent. to 10 per cent. Although in the main the results have been fairly satisfactory, we are of the opinion that limewater is fully its equal, if not its superior, as a preservative; and that this latter preservative is both cheaper and pleasanter to use, there can be no doubt."

2. The size of the vessel or tank will depend upon the number of eggs to be preserved. An exporter who last year stored, treated and shipped 500,000 dozens of eggs to the English market, recommends a tank not more than 4½ feet deep in the cellar, made of brick and cement mortar, and plastered inside and out (with cemented bottom) to prevent leakage. The eggs are placed in this and the liquid poured on. A tank made of cement concrete, carefully constructed, would answer the same purpose. Put on a cover. If only a few eggs are to be stored, a good tub or barrel would, we presume, answer the same purpose.

FARM GOSSIP.**Taxing Oleomargarine.**

At the close of a lively debate in the United States Senate on April 3rd, the Oleomargarine Bill was passed by a vote of 39 to 31.

During the afternoon a perfect flood of telegrams poured into the Senate from all parts of the country, urging senators either to support or to oppose the measure.

The measure, as passed by the Senate, differs in some respects from that passed by the House of Representatives. It provides that oleomargarine and kindred products shall be subject to all the laws and regulations of any State or territory, or the District of Columbia, into which they are transported, whether in original packages or otherwise; that any person who sells oleomargarine and furnishes it for the use of others except to his own family, who shall mix with it any artificial coloration that causes it to look like butter, shall be held to be a manufacturer and shall be subject to the tax provided by existing law; that upon oleomargarine colored so as to resemble butter, a tax of 10 cents a pound shall be levied, but upon oleomargarine not colored, the tax shall be one-fourth of 1 cent per pound.

That upon adulterated butter a tax of 10 cents a pound shall be levied, and upon all process or renovated butter the tax shall be one-fourth of 1 cent per pound. The manufacturers of process, or of renovated, or of adulterated, butter shall pay an annual tax of \$500; the wholesale dealers shall pay a tax of \$480, and the retail dealers a tax of \$48 per annum. The measure provides regulations for the collection of the tax, and prescribes minutely how the various products are to be prepared for market.

A Canadian Railway Commission.

Hon. A. G. Blair, Canadian Minister of Railways, has introduced in Parliament, at Ottawa, a bill providing for the abolition of the Railway Committee of the Privy Council, and for the appointment of three commissioners to exercise the functions of that body, a change in accordance with modern requirements. The commissioners are to hold office during good behavior for a period of ten years, are eligible for re-appointment, and are removable only by the Governor-General on the address of both the Senate and House of Commons. The position will be quite as honorable and distinguished as a seat on the Bench, and will command sufficient salary, as well as prestige, to make it desirable to men of ability. The powers of the commission extend to all matters with which the Railway Committee is now authorized to deal. In the matter of rate regulation, these powers are far more extensive than were conferred on the Railway Committee. Freight is divided into three classes. On ordinary traffic, no greater, less or other tolls can be levied than those fixed by the commission, and no change can be made until it has been actually approved by that body. On freight classed by the commission as "commodity," a maximum and minimum toll is to be established. The railway companies will be allowed within these limits to fix a working tariff of charges, as is now customary with all freight, but every such working tariff must be filed with the secretary of the commission, and must remain in force until another within the same limits is filed. The commission has power to revise the working tariff so filed or to alter the maximum or minimum. The third class of traffic is that between competitive points. The commission may thus designate any cities, towns, places or districts in Canada, and permit between them lower rates for a long than for a short haul. The railway companies may make reductions between such points at any time by simply mailing the new schedules to the commission, but increases cannot be made without official approval. With regard to through rates and traffic arrangements, the bill gives the commission power to fix rates and apportion percentages between railway companies. The act provides that the commission may not only determine the reasonableness of rates submitted by the railway companies, but may specify rates, a power which the Interstate Commerce Commission is seeking to obtain in the United States.

The leading principle of the bill is the authority which will be conferred on the commission in supervising all dealings and deciding all disputes between the railways and their patrons. Similar authority is conferred in regard to expropriation, right of way, company organization, and other matters connected with railway construction and operation. In such matters, as well as in regard to unjust discriminations, the leading features of the existing law are retained, with the all-important difference that the machinery has been provided for carrying the law into effect. This legislation is a recognition of the right of the people to control their highways.

The Horse Show a Success.

The annual Canadian Horse Show, held at Toronto last week, was a decided success, notwithstanding the weather was not specially favorable, the character of the exhibits of horses being well up to a high standard, and perhaps better on the whole than at any of the previous shows, while the attendance of city people was quite as large as usual, the afternoon and evening sessions being exceedingly well patronized. The attendance of farmers was not increased to the extent that was hoped for in response to the earlier date chosen, but the display of stallions in both the heavy and light classes was distinctly larger and of better quality than in former years. Thoroughbreds were not strongly represented, but in the classes for Standard-breds, carriage horses, Clydesdales and Shires, it was decidedly the best spring show seen here in the last ten years or more, while the saddle and harness classes were simply grand, showing a very marked improvement over those of former years.

In the class for mature Thoroughbred stallions, Mr. Wm. Hendrie's Versatile, in his 14-year-old form, was accorded first place, and he was also the championship winner. In Hackney stallions, Mr. Robert Beith's Alarm, a handsome and typical brown 5-year-old son of Wildfire, and recently imported from the Chestnut Hill stud of Mr. Mitchell Harrison, of Pennsylvania, was first in his class and the sweepstakes winner. Mr. Beith had also the sweepstakes female in the brown 4-year-old Hermia, by Royal Standard. Mr. H. G. Boag, Churchill, carried off the first prize in mature Clydesdale stallions with Lyon Stewart, a substantial bay 4-year-old, bred from imported sire and dam. The first-prize 3-year-old Clydesdale stallion, Strathcona, shown by Mr. J. M. Gardhouse, Highfield, was a popular winner of the championship of the class, combining sufficient size with high-class quality. He has since been sold to Wilkinson Bros. & Fyfe, Palmerston, Ont. The sweepstakes Clydesdale mare was Moss Rose 2nd, by Macqueen, shown by Graham Bros., Claremont. The first place in mature Shire stallions, and the sweepstakes of the class, was given to imported Blenheim William, a magnificent bay 6-year-old son of Hibernia Conqueror, shown by Berry & Geiger, of Hensall, and the first-prize 3-year-old stallion was imported Newnam Duke, an exceptionally good horse, owned and exhibited by J. M. Gardhouse, Highfield.

The first prize for mature carriage or coach stallion, not less than 16 hands, went to Performer, by Phenomena, shown by W. N. Scott, Milton, and second to J. L. Reid's (Derry West) Lord Roberts, by Wiley Buckles. An extended report of the show will appear in our next issue.

Want Canadian Eggs.

Buffalo, N. Y., April 9.—Negotiations have just been completed by Swift & Co., Chicago, meat packers, with the Treasury Department for the establishment here of a bonded warehouse for eggs. One story of the Buffalo Cold Storage Company's warehouse will be used for the purpose. According to the plans of the Chicago firm, it is the intention to buy up eggs in Canada and keep them in bond here until sales can be effected. By this plan the firm, of course, avoids paying duty on the eggs until sales are made. For the privilege, Swift & Co. will have to reimburse a Government inspector at the rate of \$3 a day. This inspector will be appointed by Collector Brendel from the civil service list. Swift & Co. have furnished a bond in the sum of \$15,000, which, being twice the value of the eggs to be stored, means that Canadian eggs with a duty value of \$7,500 may be warehoused here.

Coming to Canada.

The McCormick Harvesting Machine Company, of Chicago, are now contemplating the establishment in Toronto of works nearly as large as those of the Massey-Harris Company. They have decided to build a branch in Canada, and the other day their representative had surveys made of two sites in this city. The new move is intended to meet the requirements of their Canadian business, which they state doubled last year. If they decide to come here they will probably locate in the north-west section of the city.—Globe.



IMPORTED BARRED PLYMOUTH ROCK COCKEREL.

Sire of winners of sweepstakes at the Ontario Winter Fair, 1901. PROPERTY OF J. W. CLARK, ONONDAGA, ONT.

Ottawa Notes.

At the Experimental Farm, Ottawa, an experiment is being carried on with the work horses for the purpose of ascertaining the feeding value of the different kinds of grain. One lot are being fed ground oats and cut hay, while another lot are being fed two parts of oats to one of barley and cut hay. The third lot are being fed equal parts of barley, oats, and hay. The diet will be changed at the end of each and every month, and a new one substituted. Prof. Grisdale says that the experiment will last about a year.

The Ayrshire cattle that Prof. Grisdale imported last summer have all calved, and are milking remarkably well, giving in the neighborhood of fifty pounds of milk per day. One cow is doing a little better, giving 55 pounds, which tests 4 1/2 per cent. of butter-fat. The Ayrshire heifers are giving about 30 pounds per day, which is considered fairly good.

One of the Large Tamworth sows, crossed with one of the Large Black boars which were imported last fall, has just farrowed. She had a litter of seven, and the officials intend to experiment with them as soon as they are weaned.

Mr. Thos. Bradshaw, who had charge of the feeding experiments in the piggery, under the herdsman, Mr. Brettell, has resigned his position, to accept charge of Mr. P. Clarke's farm at Lake Deschenes.

Dr. Rutherford, Dominion Veterinary Inspector, left for Fort McLeod on Saturday, 5th inst., to attend a meeting of the Western Live Stock Growers' Association. He will also meet Commissioner Perry, of the Northwest Mounted Police, while in the West, to discuss with him the administration of quarantine in the West. The Mounted Police look after this work throughout the Territories.

Mr. J. A. Ruddick, Chief of the Dairy Div. Dept. of Agriculture, has called a meeting of dairy experts and cheese instructors in the Dominion to meet in Ottawa on the 29th and 30th inst. The idea is to discuss prevailing systems of manufacture, and also to arrive at a more uniform method of dairying which may be carried on in the future. It is expected that fully fifty dairymen will be present.

Montreal Markets.

Montreal, April 10.—About 350 head of butchers' cattle, 350 calves, 40 sheep and 30 spring lambs offered to-day. Prices were higher than has been paid here for many years past, quality considered, and about 1/2c. per lb. all round above the very high prices prevailing on previous market. Mr. G. Martel paid 6 1/2c. per lb. for four prime steers. Other sales of prime beefs were made at from 5 1/2c. to 6c. per lb.; pretty good cattle sold at from 4 1/2c. to near 5 1/2c., and the common stock, including a large number of milkmen's strippers, brought from 3 1/2c. to 4 1/2c. per lb. Calves sold at from \$1.50 to \$6 each. Sheep sold at from 3 1/2c. to 4c. per lb., and yearlings at from 4 1/2c. to 5c. per lb. Spring lambs sold at from \$2 to \$4.50 each. Fat hogs sold at from 6c. to 6 1/2c. per lb., weighed off the cars.

Chicago Markets.

Chicago, April 16.—Cattle—Good to prime steers, \$6 to \$7.50; poor to medium, \$4.75 to \$6.50; stockers and feeders, \$2.50 to \$5.25. Hogs mostly 10c. higher; good to choice heavy, \$7.20 to \$7.40; rough heavy, \$6.90 to \$7.15; light, \$6.75 to \$7; bulk of sales, \$6.95 to \$7.20. Sheep steady; good to choice wethers, \$5.25 to \$6; Western sheep, yearlings, \$5.25 to \$6; native lambs, woolled, \$4.75 to \$6.85; Western lambs, \$5.25 to \$6.85.

British Cattle Markets.

London, April 15.—Prices firm; live cattle, 13 1/2c. to 14 1/2c. dressed weight; refrigerator beef, 12c. per lb.

Fair Dates.

Edmonton.....	July 1, 2, 3
Calgary.....	July 9, 10, 11
Carberry.....	July 15 and 16
Wawanosa.....	July 17
Portage la Prairie.....	July 17 to 19
Winnipeg Industrial.....	July 21 to 26
Dauphin.....	July 23 and 24
Brandon, W. A. A. A.....	July 29 to Aug 1
Neepawa.....	Aug. 5 to 6

Testimonials.

Alex. Galbraith, Janesville, Wis., February 28th, 1902: "You are getting out a grand paper and doing fine work."

Samuel T. Scarlett, Carstairs, Assa., April 5th, 1902: "I appreciate your paper, and don't want to be without it."

A. N. LeCain, Hyde, Assa., March 25th, 1902: "I have taken the 'Advocate' for a long time, and think it is an excellent paper for the farmer. It has improved very much since I first knew it, about 20 years ago."

Mary Speakman, Fenhold, Alta., March 21st, 1902: "Received your cheque for \$5 for first prize in your competition, for which I am very much obliged. Might say that father has taken the 'Advocate' for years, and we like it very well; in fact, we could not do without it."

Alfred Jackson, Fernton, Man., March 21st, 1902: "Yours, enclosing cheque for \$3 for second prize in essay competition, to hand. I wish the 'Advocate' continued success. Though all departments of your paper are excellent, your reproduction of great paintings is beautiful, and must have an ennobling effect upon the minds of the youth of rural districts."

Dairy School Results.

The results of the examinations in the professional butter course at the Manitoba Dairy School are given as below. The possible total points were 700: C. Liddiard, 657; Jeus Christenson, 597; T. B. Malone, 582; J. A. Scott, 526; W. J. Buxton, 492.

A Choice Herd of Ayrshires.

The handsome imported Ayrshire cow illustrated by a photo-engraving on another page in this issue is representative of the high-class herd of Ayrshires maintained by Mr. J. N. Greenshields on his beautiful Isaleigh Grange Farm, at Danville, Quebec. Lady Bute was born April, 1895; bred by Messrs. R. & J. McAlister, Mid-Ascog, Rothsay, Scotland; imported by Mr. Greenshields in 1898; sired by Yellow Chief of Castlehill; grandsire the noted Peter of Whitehill; dam Dandy S. of Mid-Ascog, by Prince Duncan. She is a cow of grand constitution and large capacity for dairy work, and has a model milk vessel. A bull calf from this cow, and sired by the champion bull, Napoleon of Auchincrain, is offered for sale in Mr. Greenshields' advertisement in this issue. Guernsey cattle are also bred at Isaleigh Grange, where a first-class herd of this breed is kept. In a note just received from Mr. W. Reid, Jr., the capable farm manager, ordering a change of advertisement, he says: "This last month has been a phenomenal one in the way of sales of young stock. We can attribute this chiefly to our advertisement in the 'Farmer's Advocate.'" Anyone desirous of purchasing Ayrshires or Guernseys should write Isaleigh Grange Stock Farm for information.



"And, Robin, is it you whose song comes up the hollow?
Trill upon trill, a song whose meaning I would follow;
Again, as when a child, full wonderingly I listen,
While o'er the timid grass the tears of April glisten."

Domestic Science.

HOW TO TREAT A WOUND.—In an emergency, to make a compress for a wound, if nothing better is at hand, clean tissue paper makes an excellent application. It is much to be preferred to a strip torn from clothing or a soiled handkerchief, which may be the only other choice.

FURNITURE POLISH.—A reliable furniture preparation for cleaning picture frames and restoring furniture, especially that somewhat marred or scratched, is a mixture of three parts of linseed oil to one part spirits of turpentine. It not only covers the disfigured surface, but restores wood to its original color, leaving a polish upon the surface. Apply with a woollen cloth, and when dry rub with woollen.

HOW TO STOP NOSEBLEED.—Where nose-bleed is unusually obstinate, refusing to yield to the ordinary remedies, a dernier resort is to plug the nose with a piece of cotton about the size of the first joint of the thumb, around which a bit of thread is tied. Oil the plug, roll to a point on one end and introduce in the nose with a twisting motion until it reaches the point where the bleeding comes from.

TO CLEAN CARPETS.—A method of cleaning carpets which has been pronounced in every way satisfactory is to make a suds of good white soap and hot water, adding enough fuller's earth to secure the consistency of thin cream. Then, after providing a number of clean cloths, a scrubbing brush, a large sponge and a bucket of fresh water, pour some of the cleaning mixture into a bowl, dip the brush into it and brush a small piece of the carpet at a time, washing it with the sponge and cold water and drying with the cloths. When it has all been gone over in this way, let it dry.

TO POLISH WINDOWS.—The best thing for polishing windows is a small hand mop made of scraps of chammois. Pieces no larger than a dollar can be used, and if well worn the mop will work so much the better. String them all together on a piece of strong twine, then tie together in a bunch. When dirty, wash it out, dry, and before using rub it soft between your hands.

CURRIED BEEF, MADRAS STYLE.—Melt in a saucepan two tablespoonfuls of butter, add two onions sliced, and fry until brown; then add two tablespoonfuls of curry powder. Cut the meat in pieces about an inch square, put in the saucepan and add half a cupful of sweet milk. Simmer for thirty minutes. Just before serving add the juice of a lemon. Send to the table on a platter bordered with boiled rice.

CHICKEN HASH ON RICE TOAST.—Chop the cold chicken fine. Have ready some cold boiled rice, which has been pressed in a mould. Cut into slices half an inch thick and toast a delicate brown. Put the slices on a hot platter, butter them, then cover evenly with the minced chicken, and serve.

DISHES IN MOULDS. To remove any dish from a mould when cold, wrap a hot cloth about the outside of the mould for a minute or two. To remove a hot dish, wrap a cold cloth about it.

ARTICLES OF FOOD THAT ARE DAMP or juicy should never be left in ordinary paper. Paper is made of wood-pulp, rags, glue, lime and similar substances, with acids and chemicals intermixed, and when damp is unfit to touch things that are to be eaten.

FOR GREASY DISHES. A little soda in water used as a wash is a great help, and a bit of blue in the water in which glass is washed adds much to its brilliancy. Glass cloths must be free from all fluff.

DEVONSHIRE CREAM. A subscriber has asked us to publish a good recipe for Devonshire cream. Here is an excellent one, given by a lady who is famous for the way in which she prepares this dainty: Use milk fresh from the cow; set the pan away in a cool place for 24 hours, then, taking care not to disturb the cream, put the whole pan, just as it is, over boiling water, until it is very hot, so that you can scarcely bear your finger in it, but be careful not to let it boil. Set it away again for another 24 hours, then skim off the cream.

Something About Women: Here and There.

[No. 1.]

Our happiness or unhappiness, our content or discontent with our lot in life, is more often than not a matter of temperament, a remark, however, which applies to both sexes alike. We find what we look for, mostly, but not always, for in spite of every desire to fit the back to the burden, to bear with philosophy or "sweet reasonableness" disheartening surroundings, in some lots there really is a crook which must remain a crook so long as life lasts. No two lots are ever quite alike, and no one woman can be a fair judge of how her sister woman is making the best or the worst of that state of life in which she has been placed. Amanda cannot see why Mary Jane should not be always in the mood to be singing as she scrubs the floor, or why Sarah Ann who carries her milking pail through the sweet clover meadows should be blind to the beauties of nature and not be able to see in them a compensation for hours of toil, while probably it is just as hard for Mary Jane or Sarah Ann to understand how Amanda can have any grievance whatever when she walks in silk attire and lives, as it were, in the very lap of luxury. But, nevertheless, unknown to one another, each may have a very real thorn in the flesh to test and try the mettle of which she is made.

Perhaps the best human antidote to the habit of introspection, which generally tends to magnify one's woes and worries, is, after having counted up and honestly acknowledged one's own mercies, to look at the many elsewheres of this terrestrial globe, where the lot of millions of our sister women is so incomparably worse than that of any woman in any corner of our own dear land. I do not dare to assert that amongst the readers



GOOD FRIENDS.

of the "Advocate" there are any to whom this little mental discipline may be necessary, but it may not be uninteresting to them to read some of the fragments about those other women which I have gathered together from time to time as a corrective to any attack of the "blues" which may come to any one of us from indigestion, from inherent crankiness, or from that veritable thorn in the flesh which tears it so cruelly.

We will take China to begin with: "There, if a woman murders her husband, she is chopped up into seven pieces and is thrown out without proper burial; but if a husband murders his wife, he is only imprisoned for three months. In China, a wife is never seen by her future master. Some relative bargains for the girl, the stipulated price is paid, and she is afterwards a submissive wife and slave.

"In Turkey, woman is kept in the most rigid seclusion. She must always appear veiled. With pigs and dogs, she is forbidden to enter a mosque, and the Koran declares a woman who is unmarried to be in a state of reprobation.

"Siberian women are raised as abject slaves, untidy in dress, and are bought with money or cattle. The most capricious whim of her husband is law to the Siberian woman, and should he desert or divorce her she has only to tear the hair from her head.

"Among the Congo negroes, when a man wishes a woman to resign one and become an obedient slave, he at the end of the year for months and years, but should she prove an unembarrassing slave, her back is sent to the parental roof.

In a recent issue of the Uganda Standard we read: "The status of woman is improving, an invariable

sign of advancing civilization. Many of the chiefs sit down to table like more civilized people, one of them actually going so far as to have his wife eat at table with him! It was an unheard-of thing until lately for a big chief's wife to eat in the same house as her lord. Another leading man (ordained) has gone the length of allowing his wife to walk down the street with him, even permitting her to take his arm; but few can muster up courage for this yet."

A writer in "The Contemporary," in discussing the native problem of South Africa, urges that the hope for the native is to induce him to work instead of living lazily while his wives do all the hard labor. In his proposition for "a judicious taxing of the population to make a proportion of labor compulsory," he advocates as a first step towards stopping polygamy and the sale and purchase of women, the imposition of a cumulative tax on every wife after the first.

Amongst the Hindoos, woman is held in complete subjection. Amongst their laws stand the following:

"Woman is unworthy of confidence, and the slave of passion." "One should not eat with his wife." "Whether of bad conduct or debauched, or even devoid of good qualities, a husband must always be served like a god by a good wife." "Day and night should women be kept by the male members of the family in a state of dependence." "It is the nature of women in this world to cause men to sin." A later code declares: "Woman is not to be relied on." Amongst the proverbs of these people, regarding our unhappy sex there, occur these questions and answers:

"What is that poison which appears like nectar? Woman."

"What is the chief gate to hell? Woman."

"What is cruel? The heart of a viper. What is more cruel? The heart of a woman. What is most cruel of all? The heart of a soulless, penniless widow."

"He is a fool who considers his wife as his friend."

"Educating a woman is like putting a knife into the hands of a monkey."

I would just stop here for a moment to take breath, then after thanking God for His many mercies, and without even one backward glance at any real or imaginary crook in our own lot, let us take a peep at some of our sisters amongst the civilized countries of Europe. "The sphere of women in Italy, France, and Germany," says a writer in the New York Churchman, "includes heavy field work, as well as all household drudgery. It would make the heart of every American woman ache to see the heavy loads which the poor, overworked old women carried on their backs in the rural districts. The haying in Italy was chiefly done by women. We saw one of them carrying bricks on her back from one end of a yard to the other, and knitting industriously as she walked. The men who were building a house would load and unload her much as if she were an animal. Indeed, both women and animals are sadly overworked in Italy. Surely discontented American women need to come over to Italy to appreciate their own greater advantages."

That there are still some lingering prejudices to be overcome before the native races of our own land quite recognize the place in creation the Great Father has assigned to the "weaker vessels" is somewhat humorously told by a teacher in an Indian school, who, during a flag drill where the partners were a boy and a girl, instructed the latter to go first, the former to follow after her. Oh! the indignity of it! "Do you know, Miss B.," said Isaac Crane, in his solemn way, "you have struck at the root of an Indian national custom?" "How so, Isaac?" "Why, it is the custom for the man to go first, carrying his dignity, and for the woman to follow, carrying everything else."

There are two sides to every question, and, space permitting, I may have something to say in our next issue about the brighter and more hopeful prospects which, thanks to the growing enlightenment of this generation, await the womanhood of the new century. H. A. B.

Her Answer.

I studied my tables over and over, and backward and forward, too; But I couldn't remember six times nine, and I didn't know what to do. Till my sister told me to play with my doll and not to bother my head. "If you call her 'Fifty-four' for awhile you'll learn it by heart," she said. So I took my favorite, Mary Ann (though I thought 'twas a dreadful shame To give such a perfectly lovely child such a perfectly horrid name). And I called her my little "Fifty-four" a hundred times, till I knew The answer of six times nine as well as the answer of two times two. Next day Elizabeth Wigglesworth, who always acts so proud, Said "Six times nine is fifty-two," and I nearly laughed aloud! But I wish I hadn't when teacher said, "Now, Dorothy, tell, if you can." For I thought of my doll, and—sakes alive!—I answered, "Mary Ann!" —By Anna M. Pratt.

THE QUIET HOUR.

Just an Ordinary Angel.

Sometimes I am tempted to murmur,
That life is fitting away,
With only a round of trifles
Filling each busy day;
Dusting nooks and corners,
Making the house look fair,
And patiently taking on me
The burden of woman's care.

One day is just like another,
Sewing and piecing well,
Little jackets and trousers,
So neatly that none can tell
Where are the seams and joinings.
Ah! the seamy side of life
Is kept out of sight by the magic
Of many a mother and wife!

And oft, when ready to murmur
That life is fitting away,
With the self-same round of duties
Filling each busy day,
It comes to my spirit sweetly
With the grace of a thought divine:
"You are living, toiling for love's sake,
And the loving should never repine."

"You are guiding the little footsteps
In the way they ought to walk;
You are dropping a word for Jesus
In the midst of your household talk;
Living your life for love's sake
Till the homely cares grow sweet,
And sacred the self-denial
That is laid at the Master's feet."

—Margaret E. Sangster.

I have heard of one of these "ordinary angels," who looked like an old farmer. He was sitting in a railroad station, waiting for his train. "Pretty tired, marm?" he said, addressing a woman who came in, carrying a baby and innumerable parcels. Two small children were clinging to her dress. They teased and fretted as children will sometimes, and the poor mother would have been quite worn out before the long delay of two hours was over, if the farmer had not come to the rescue. Soon both children were hanging round him, eating peppermints and listening to lively stories about the lambs, calves and chickens at home. Then a piece of string came out of this "angel's" pocket and they were soon playing "cat's cradle" on the floor. Then the heavy baby was taken from the tired mother's arms, and tossed until he crowed with delight. Many another chance of helping other people did this real gentleman take advantage of on that day, and on other days, too.

Many definitions of the word "gentleman" have been offered to the world, and some of them are very unsatisfactory definitions too; but surely one who tries to carry out the golden rule of doing to others as he would they should do to him, has a right to the title. The old idea that a gentleman is a person who does no work, is quite out of date. We, in Canada, will hardly agree with the prince Lee Boo, who concluded that the hog was the only gentleman in England, because he was the only animal who did no work.

Once an English nobleman said to a fair American that there did not seem to be any gentlemen in America: "I mean, a leisured class, with nothing to do."

"Oh, yes," she replied, "we have lots of them, but over there they are called 'tramps.'"

I seem to have wandered from angels to gentlemen; but never mind, it is very much the same thing, don't you think? If an angel's business in this world is to minister to those who need, surely a gentleman's business is not very different. Anyone who is always looking after the interests of "number one" is certainly no gentleman. What a splendid specimen of a gentleman Moses was. Do you remember how promptly he stood up for the man who was being ill-treated by an Egyptian? Afterwards, as a matter of course, he insisted that the rights of the daughters of the priest of Midian should be respected. He evidently believed in the principle of "ladies first." Then how loyally he stood by his poor, downtrodden people, freeing them from the oppression of Pharaoh.

There is a legend in the Greek Church about two Saints, one of whom thought only about his own concerns—spiritual or physical—while the other forgot himself in lending a hand to others.

St. Cassianus enters heaven, and Christ says to him: "What hast thou seen on earth, Cassianus?"

"I saw," he answered, "a peasant floundering with his wagon in a marsh."

"Why didst thou not help him?"

"I was coming before Thee," said Cassianus, "and I was afraid of soiling my white robes."

Then St. Nicholas enters heaven, all covered with mud and mire.

"Why so stained and soiled, St. Nicholas!" said the Lord.

"I saw a peasant floundering in the marsh," said the Saint, "and I put my shoulder to the wheel and helped him out."

St. Nicholas was blessed with a fourfold blessing because he thought of others instead of being concerned only with his own affairs.

Does this legend remind you of our Lord's description of the Last Judgment? Those who minister to the sick, the hungry, the poor, will be placed on the right hand. Those who let their opportunities of helping slip past them, "shall go away into everlasting punishment." Every day we have opportunities of ministering to Christ. Are we taking advantage of them, or will He say to us, "Inasmuch as ye did it not to one of the least of these, ye did it not to Me"?

"We cannot see Thy face, Lord;

We cannot touch Thy hand;

The mystery of Thy being

We do not understand;

Yet beside us daily

Needy ones there be;

In succoring the helpless

We are helping Thee."

HOPE.

A Sinner Unrepent.

"My, but your mornin' glories do look nice, Miss Phemeys! Wish you'd save me some seed often that white one." It was Mrs. Ridley coming up the walk.

"I will, Mis' Ridley. Come in and set down. There's a pa'm leaf on the lounge, an' mebbe you'll take a glass of cool water. It's a scorchin' mornin'," said Miss Phemeys.

"I would like a drink, thank you," responded Mrs. Ridley. "Seems like when anybody's fat as I am, they just get he't' up like a coal stove. My, that tastes good. You got a grand well, Miss Phemeys."

The hostess smiled a flattered smile, but before she could speak, Mrs. Ridley went on: "I brought over three of Mr. Ridley's vests, Miss Phemeys, to get you to mend 'em. He's bu'sted 'em ever' one right down the back, f'r all the world like a seven-year locust, I tell 'im, an' it seems like I got no time to fix 'em, with Emma May gittin' married next week. We're just livin' in a regular whirlwind, an' sorry as I'll be to see Emma May go—not that I don't like Charlie Foote, but you know what I mean—I cert'ney shall be glad when all this fuss is over."

"I expect it is trying," sympathized Miss Phemeys. "But Emma May's always been a good daughter, an' she deserves a fine weddin'."

"Taint that I don't want her to have it," said Mrs. Ridley, hastily. "But I'm just dog-tired this mornin'—for the land sakes, it's half-past ten o'clock a'ready; I got to go. You bring them vests over when they're done, Miss Phemeys, and I'll pay you f'r 'em. I'd send one o' the boys over, but Emma May wants you to come pertickler an' see her presents, so 't'll be killin' two birds with one stone." She chuckled comfortably as she stepped outside the door.

Miss Phemeys looked after her departing form with resentful stare. "Yes," she muttered, "she can get Miss Maxwell to make Emma May's weddin' clothes, but I'm good enough to mend up Jim Ridley's old vests. I'll charge her fifteen cents apiece, see 'f I don't; that'll be forty-five cents. Does seem a good bit to charge f'r mendin' three vests."

Miss Phemeys went in and shut out the glare of the summer day. As she picked up the package of vests her thin little hands trembled. Tears sprang to her eyes and she burst out fiercely: "'Taint right! I made Emma May Ridley's dress to be christened in, little teenty baby as she was, an' I made her a dress to be confirmed in, an' I made her a dress when she gragwated at the High School, an' she'd always said I should make her weddin' dress. That fauntin' city thing's got all my trade! I've sewed here all my life and dealt honest by all, an' it's not fair." The tears rolled down her withered cheeks and fell unheeded upon Mr. Ridley's second best pepper-and-salt vest. Presently her wrath flamed anew.

"Emma May wants you to come pertickler to see her presents! 'Taint no hint; oh, no! Sally Ridley needn't a'troubled herself to say that. I got a present for Emma May, an' I'm going to give it to her. I'd like to get even with them, the whole kit band of 'em. Jest as if I couldn't a'made Emma May's weddin' clo's! They tell me Miss Maxwell uses a chain-stitch machine. I always did say chain-stitch machines was made for the careless, an' I don't see no reason to change my mind. Well, 'pon my word, this vest ain't on'y bu'sted, but frayed int' the bargain!" Miss Phemeys fell briskly to sewing.

The next day, despite the threatening rumble of a distant storm, Miss Phemeys dressed in her best and started toward the Ridleys, carefully carrying two packages. She was graciously received by Emma May, a fat, fair girl of pleasant mien and placid disposition.

"I brought home them vests," explained Miss Phemeys; "and here, Emma May, is a little present I brought for you. It'll be nice f'r your dining-room table. I thought." She held out a small white paste-board box, with an expression of the heaping-coals-of-fire kind.

"Ma," called Emma May, "come here; Miss Phemeys brought me a butter knife! Wisht you'd look! That cert'ney is beautiful."

"It's solid silver," said the donor, proudly. "My niece down to New York got it for me." She received the thanks, delivered a trifle embarrassedly, of mother and daughter, with polite coolness.

When the bride-elect invited her to an inspection of the presents, Miss Phemeys looked them over and made few comments. She turned the set of silver spoons, "presented by the groom's parents," so that the plate-mark was visible, and she tapped the globe of a gaudy china lamp with the remark that they were just two dollars and thirty-nine cents down to Beedham's. When she had looked at all, she said, cheerfully:

"Now I want to see your clothes, Emma May."

Mrs. and Miss Ridley exchanged glances of annoyance, but the latter led the way to the spare room, where, on bed and chair, lay the creations of Miss Maxwell, "City Modiste."

There was the white silk wedding dress, the tan travelling dress, some odd waists, a black satin, stiff with jet, and a "tea gown." No girl in a country town marries without these last indispensable garments; they are the real backbone of the trousseau.

Miss Phemeys looked at the display, felt the quality of the material, and examined the despised chain-stitching, without a word. At last she said, pleasantly conscious of paying old scores:

"If I might persoom to criticize, I really do think it's a pity you got your wedding dress made with a p'inted overskirt. All the latest fashion books say they're not worn at all this season; and box-pleats, too, is kind of droppin' out. I was readin' only yesterday that 'twas just the cheapest goods was made up so any more. That black satin's real pretty, though. Did you see Lena Sullivan's black satin? Hers was a beauty—finest piece o' satin I ever cut into, an' all made up with these here pleated ruffles. Why, Emma May, seems if you'd be most afraid to leave all these fine things in here with the winder open, this room on the ground floor like it is. It's been a real treat to see such elegant clothes, an' I hope your married life 'll be happy. The Footes have all got terrible onreasonable tempers, they say; but I hope you'll be able to manage Charlie. Good-bye, all."

Miss Phemeys walked home slowly. Even the thought of the darts she had planted in Mrs. Ridley's capacious breast brought her no real comfort, when the vision of the snowy wedding dress rose before her.

"Things ain't edge even yet," she murmured. A low growl of thunder startled her, and she hastened into the house to shut out the cutting flare of the lightning. When the kettle boiled she set her lonely table and made tea. The quick thump of heavy rain-drops on the roof made her start nervously. Night had come with the storm, and, after supper was over, Miss Phemeys sat in the dark and meditated. About ten o'clock the rain ceased, and she flung the shutters open. The stars were shining now. The air outside was cool and damp and fragrant. She looked over toward the Ridley house, and as she did so their last light went out. Miss Phemeys strained her eyes to no avail. All was darkness there.

"I'm agoin' to do it," she said aloud, determinedly. Rummaging over the table, she found a pair of scissors. She took a match from the box beside the window and unlocked the door. The moon was creeping up, a flat disk of pale yellow. Miss Phemeys looked down at herself and saw that she still wore her best dress. "It'll be all drabbed," she thought; then recklessly, "I don't care, nohow."

She brushed against the dripping flowers beside the garden path, and held her breath as the gate gave a whining creak. Out on the road, walking noiselessly, she went. Once she heard a team coming and crouched in a corner of the worn fence, behind a little sweet-gum sprout, till it was past. She recognized the doctor's rig, and her heart came up in her throat and beat there, with great frightened leaps; but he passed by safely, and she crept on.

At last, after a seemingly unending journey, she reached the Ridley's gate. The maples threw deep shadows, and, so sheltered, she reached the house. Round to the left wing—slowly—slowly—and the window was still open! She stopped and looked in. The moonlight lay in patches on the floor, the dresses spread upon the bed, and there, within reach, it fell full upon the wonderful pearl beading of the wedding dress and made scintillating lights. Miss Phemeys saw all this, and slowly—slowly—her hand went out toward those glistening beads. A quick jerk, and the waist of Emma May Ridley's wedding dress lay across her knees. She sought the seam in the middle of the back. She could feel the despised chain stitching, and she slipped her fingers deftly along toward the collar. What was this? A loose end of thread—a little pull—r-i-i-i-i-p—it was done! In a spasm of fear Miss Phemeys hustled the waist through the window, back into place, and ran into the concealing shadow. Out to the gate, down the road again—she was almost home. Suddenly she stopped and gave a little chuckle.

"Them bastin's 'll hold it together so nobody 'll s'spect—lucky she left 'em in. But when Emma May puts it on, big an' fat as she is, it'll burst square up the back like a frog." She couldn't help laughing at the idea; it tickled her fancy so. She forgot her wet feet, her draggled, muddy skirts, and went to

bed with a smile still pulling at the corners of her mouth.

The next morning the exposure had done its work. She was hoarse and feverish, and there was a sharp pain that stabbed her at every breath. "Threatened with pneumonia," the doctor said, and commanded her not to stir from her bed, though she could not have done so had she so wished. The neighbors were very kind and attended her faithfully, and the tenth day found her sitting up, very weak and frail, but with life in her eyes and voice.

Mrs. Emerson, the town gossip, came in and brought a bundle.

"Jest as soon as you git able, Miss Phemey, I want you to make me a dress. It's one Mr. Emerson got me over to Bristol, an' he showed real good taste for a man, I must say. Look-a-there, ain't that fern leaf real pretty?"

"It's just beautiful," assented Miss Phemey. "Seems if you'd have Miss Maxwell make it up, bein' she's from the city an' all."

"She'll never cut into a piece of goods f'r me, I c'n tell you," said Mrs. Emerson, with emphasis. "Ain't nobody told you how she made Emma May Ridley's weddin' dress and never sewed up the back, an' Emma May, not suspicionin', put it on an' bu'sted it clean wide open? O' course, you was sick an' didn't git to the weddin'; but I was there, an' the weddin' party was nigh an hour late jest on that account. Nothin' but a bastin' thread to hold it together; such shif'lessness! Course, bein' had luck, Emma May never tried on the dress after it come home, like she did the others, an' I c'n tell you she was hoppin'. People at the church didn't know what on earth was the matter. No'ndeed, Miss Maxwell makes no clo's f'r me."

After her visitor was gone, Miss Phemey lay back on her pillows and looked out of the window a long time.

"'Twas an awful mean trick, I know," she said at last. "'Twasn't right; but I got this spell o' sickness to pay up fer it, an' that butter knife was solid silver and real expensive. I'm evened up all 'round—an' somehow—I jest can't care.—[Sophie Gates Kerr.]

Ingle Nook Chats.

My dear Guests,—

"Nature as far as in her lies
Imitates God, and turns her face
To every land beneath the skies,
Counts nothing that she meets with base,
But lives and loves in every land."

So said Tennyson, sounding the praises of his own "Merrie England," while Balfe, the pleasant song-writer, expresses the same idea in other words, singing of Ireland's Killarney:

"Bounteous nature loves all lands,
Beauty lingers everywhere,
Footprints leaves on many strands,
But her home is surely there."

Christian Reid grows ecstatic recounting the charms of Mexico, the "Land of the Sun," and thus on indefinitely; but this morning, while enjoying a drive along one of the picturesque roads which here abound, I felt disposed to question the veracity of any writer who should claim his country to be more fair than this, our own young Canada. It is but just that each should sound the praise of his native land, as "man's first, best country ever is—at home"; we have no word of commendation for him who should fail to do so.

We have just been celebrating the feast of the Resurrection, the glad Easter-tide, and Nature, in imitation, is also undergoing a thorough renovation—doing her spring housecleaning, so to speak. The first bright blades of green are just beginning to peep from beneath sere grass of autumn, and, although we still see the bright glitter of sap-buckets in the maple groves, and occasional remnants of snow in shaded nooks, the already-swelling buds proclaim that soon the enjoyable occupation of syrup-making will be over. The revived green of the fir trees, the merry croaking of the frogs, the busy twitter of birds seeking summer residences, and the warmth of the bright sun, combine to give one a feeling of exhilaration not easily portrayed in words.

A deep river in proximity to the roadway adds another charm, sweeping proudly on, as it does, in its haste to join the noble Ottawa. Its glassy breast is resplendent with myriads of diamonds as the bright morning sun beams down upon it, save at one point, where it is covered with logs en route to the sawmills some miles farther down.

These are but a small relic of the almost fabulous wealth of timber that in time past has been carried over this same river. The old lumbering days form an ever-interesting topic of conversation to old inhabitants, and many are the stories told of deeds of strength, daring and bravery in camp and on the "drive." Perhaps some of our younger guests may not understand the above term, so, although knowing I can but inaccurately do so, I shall attempt to explain it.

You all know how in winter large numbers of men went to the woods to cut the huge pines and other timbers; these logs were then hauled out to the rivers and lakes, and when spring came

were carried by the water to sawmills at various points. Sometimes the logs were hewn into square timber in the woods, and in this case a certain number of these timbers were formed into what is called a "crib," which was propelled by three or four men with oars; twenty-five or thirty of these cribs were then connected, forming what is called a "raft," and in smooth waters sailed along all together. In some places the river becomes narrow and very rapid; the raft was then disbanded and the oarsmen acted as steersmen only, the current being sufficient power of locomotion. Where the rapids are very dangerous, slides are constructed and the cribs went through them one by one, until, on reaching smooth water, they were again formed into a raft. When the Ottawa was reached the raft was tugged by a steamboat until rapids again intervened, and thus on to the great St. Lawrence; on and on again until old gray Quebec, which was the usual market, was reached. This journey of four hundred miles or thereabout might be accomplished in twelve days did everything go well. Dangers in plenty attended those trips, yet the life was full of charm, and men willing and eager to embrace it were never wanting. Still more dangerous was the breaking up of "jams," where the loose logs that were simply allowed to float along became in any way obstructed and collected in jams.

Men became very expert in handling them, and, to inexperienced eyes, it seemed wonderful to see them step from log to log as unconcernedly as if on terra firma. A log-rolling contest was a favorite pastime with the drivers. In this trial of skill, two men stood on a log and caused it to



"THE NEWHAVEN FISHWIFE."

revolve with such rapidity that the water often splashed as high as their heads, they all the while maintaining their position. He who longest sustained his place without receiving a ducking was, of course, victor.

But these are stories of the past (since railroads have penetrated every recess of the country), and lose much of their merit in being told by one not an actual eye-witness of the scenes they describe.

I have widely digressed from my original subject, yet I trust some, at least, of my readers may find the latter part of my chat sufficiently interesting to condone the fault.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

Humorous.

A certain minister lost his MS. one Sunday morning, so made this announcement:

"I am very sorry to have to inform you that I have—er—somehow or other, mis-laid my sermon for this morning. I must—er—therefore, trust to Providence for inspiration. To-night I will come better prepared."

Recently in a Washington trolley a colored dude was seated among the passengers. A young woman of his own color entered, and he immediately rose, and offered her his seat. She gracefully declined, and said, "I do not like to deprive you of your seat." "Oh, no depravity, miss," he replied. "no depravity at all; I prefer to stand."

"The Newhaven Fishwife."

Our Newhaven fishwife, as she leans against her well-filled creel, looks the embodiment of health and content, and if her face is a true index to her mental condition (as why should it not be?) she has not a carping care to worry her. Well and sensibly clad in her short striped-linsey skirts, woollen stockings and stout leather boots, what cares she for wind or weather! The salt air braces her for her daily labor, and she gladly takes her share in the family support by selling in the streets of New Haven what her husband and sons have caught in their nets at sea. She evidently knows she is being photographed, and apparently enjoys the process. If she could but bring that creel to our doors in Western Canada, where the sea is not nor the fruit thereof, would we not empty it before she could get to the corner of the first block?

H. A. B.

Nature's Te Deum.

We read so much about the awakening of a summer's morning. Now all nature joins in the opening of a new day. The first music of the morning is the whispering wind in the pines, playing a soft accompaniment to the glad worshippers, the birds. Then the animals in turn awaken and pay their tribute to the goddess of morning, while the flowers, too, open their cups and petals in greeting, and all nature joins in the morning music, heralding in the new day. Few of us ever hear this morning Te Deum of Nature; it is sung while the worries and cares of the world are sleeping, before man with his spirit of unrest is abroad, and so it seems profoundly solemn and sacred, as though the spirit of the great Creator must be there amid the purest and most beautiful of His handwork, sinless, as in the morning "when the stars sang together."

What a different chord in our nature is touched with the awakening of a spring morning! The first note of a robin sends a thrill of new life and gladness through our veins, and with the smell of newly-plowed fields, we long to hunt the "folded green things in dim woods," and become "kith and kin to every wild-born thing that thrills and blooms." Perhaps the robin has found a resting-place in more hearts than any other of our birds. He has not only been designed by the Creator for ornament and pleasure, but is a positive blessing to man in protecting vegetation, destroying the larvæ of many insects in the soil, and living upon worms and insects, except for a month or two when he changes his diet to strawberries and cherries, but we can surely forgive a thief whose song is such a welcome prelude to the general concert of summer.

Thus far, the proverbial fickleness of April none of us shall question; her eyes have been full of both tears and snow, with enough sun to open the frogs' throats and shut them again for the third time. This, however, is a sure sign of spring! So the popular belief declares, and we shall trust it is so, for we want no more doubts about the germinating of our sweet-pea seeds, though I suppose having perfect faith in the efficacy of the flight of the first bluebird, we need fear neither frost nor cold to blight our flowers. Few of us have the faith of the man who will sow his cabbage seed Easter Sunday and his onion seed in the new of the moon. We prefer pinning our faith to something firmer than legendary omens, and rather say with the poet of the seasons:

"Be gracious, heaven! for now laborious man
Has done his part, Ye fostering breezes, blow!
Ye fostering dews, ye tender showers, descend!
And temper all, thou world-reviving sun,
Into the perfect year."

Some writer has suggested the idea of making a calendar of trees, but just now we perhaps turn more fondly to making our calendar of birds and flowers. It would be very interesting if we were to start with the month of May, making, we shall more appropriately call it, a diary, noting the appearance and disappearance of birds, for there is constant shifting among the feathered population; and so also with the blooming and passing of flowers. This would make a walk interesting, and keep us healthier—mentally and physically.

Our robin is a night as well as a morning bird. I hear one singing now a requiem for the dying sun, and as we follow that great brilliant orb towards the western world, does it not make us feel that beyond all, in some unknown space, is a greater world, of which, perhaps, this bit of the Heavenly Artist's picture is but a harbinger,

a picture hung out in Nature's gallery to show what lies beyond this world of change and selfish ends? And now I am going to say good-bye to you for some time. I feel I'm only taking up space which others better can fill.

We have not forgotten Clarissy Ann and her practical helpful hints, and I'm sure we all want to hear more from her. So, Clarissy Ann, we invite you to step into the shoes of

ONE OF THE GIRLS.

Where?

"Why, where are you going, my dear?"
 Asked the Seal of the white Polar Bear;
 For he seemed just about on a trip to start out,
 With luggage to last him a year.
 He fastened his pack with a pin,
 Then said, with a sorrowful grin,
 "I'm sure I don't know, but somewhere I'll go
 Where folks won't make rugs of my skin!"
 "Good, I'll join you myself," said the Seal—
 Her languor replaced by great zeal—
 "Or the fur on my back may become a long sacque,
 To which an objection I feel!"
 "I'll go with you, friends!" cried the Mink;
 "I don't need a moment to think;
 Let me go where minks' tails don't command such
 large sales—
 A traffic from which I so shrink."
 The Grey Squirrel tilted his head:
 "The move is expedient," he said,
 "For I learn from friend Wind, cloaks with squirrels
 are lined—
 A fashion I certainly dread!"
 "My breast and my wings, I have heard,
 Are coming in style!" screamed a bird;
 "So let me go too, I shall not hinder you,
 A Gull's not a troublesome bird!"
 "Very well, then, let's start," growled the Bear,
 "For we haven't a moment to spare;
 There is no knowing when those terrible men,
 With guns and harpoons will appear."
 So led by the white Polar Bear,
 The procession set forth. But oh, where
 Will they find that new zone, where man is unknown?
 Can any kind friend tell them where? —A. L. H.

What Not to Wear.

This is the advice—as good as it is briefly put
 —which a writer in Leslie's Weekly gives on what
 not to wear:
 White petticoats on muddy days.
 Cheap jewelry any time.
 Bright red with a florid complexion.
 Conspicuous bicycle costumes.
 A broad belt on a stout figure.
 A plain basque on a slim figure.
 Cheap trimmings on a good dress.
 Cheap lace on anything.
 Diamonds in the daytime.
 Linen collars with dressy frocks.
 Picture hats with outing costumes.
 Soiled white gloves on a shopping expedition,
 or at any time.
 Worn shoes with an elaborate toilet.
 Dotted veils with weak eyes.
 A linen collar that is not immaculately fresh.
 Gloves with holes in, or boots with buttons
 missing.
 Hair dressed high with a snub nose.
 Hair in a Psyche knot with a Roman nose.
 Pointed shoes while bicycling.
 Gaudy colors in cheap materials.
 The new tight sleeve on a long, thin arm.
 Tan shoes in midwinter.
 A long dragged skirt on a rainy day.
 Lace frills or chiffon ruches for work or
 school.
 Elaborate toilets for church.
 Untidy frocks for breakfast.
 Horizontal stripes or tucks on a stout figure.

Where Moths Originate.

The distracted housekeeper wages war against the little white-winged moths that fly around so industriously in the spring, usually near her most expensive carpets, draperies, and furs. She wonders where they can come from in such armies, and she spends a great deal of time and strength in scattering borax, insect powder and naphtha about her carpets, and uses every available newspaper and countless moth balls in stowing away her winter furs, John's best overcoat and numerous other garments that these little pests like to feed upon.

Now, I am quite sure if this same vigilant housekeeper were some day to go on a hunting expedition from attic to cellar, she would be more than likely to run across an old horse blanket or piece of fur which contained larvae enough to stock a whole neighborhood with these pests. Perhaps a skein of soft white wool might be pulled out of some corner not often peered into, which would literally drop to pieces when she touched it, so industriously had it been preyed upon by these busy workers.

If the search should be very thorough, and everything thus infested should be burned, she would be apt to find the next year, when she looked around her carpets and closets, that her labor had not been in vain. And if she should continue to destroy all useless woollen garments that prove such prolific breeding places, she would in time completely rid herself of the troublesome carpet moth.—(Helen M. Richardson.)

THE CHILDREN'S CORNER.

Prize Competition: "Canadian Country Life."

This has been a very satisfactory competition, although a few of the young poets have strayed from the subject, and some others have very elementary ideas about rhyme and metre. The winners are: Class I., Lorne Tremain, Blair, Ont. (aged 14); Class II., Olive M. Sproule, Wexford, Ont. (aged 12); Class III., Wesley Scott, McIntyre, Ont. (aged 10).

The best poem was sent in by Charlotte Hunter, Norval, Ont., but, as she did not give her age, it could not be put into any class, although I hope to print it before long. Percy McDavitt also neglected to mention his age, which was a pity, as his lines were also well written. We must stick to rules, you know. Those deserving honorable mention are: Class I., Hilda Bowman, Gertrude Shannon, Isabella Mackenzie, Ellie Letson, Gertie Cannon, Maud Jose, Alexander Nixon, Pearle Stacey, Christina Kitchen, Florence Usher, Annie Matheson, Georgina Matheson. Class II.—Lena Myles, Margaret Lockwood, Morley Scott, Elsie MacDonald, Jennie Cannon, Fannie Scott, Mildred Atwater. Class III.—Alda Sproule, James Scott.

Class I.—"CANADIAN COUNTRY LIFE."

Oh happy is the country life—
 Full of toil, but free from strife,
 Obeying simple rules of health,
 Not selling souls for fleeting wealth,
 But happy with an humble home
 In which to dwell 'till life is done.

Living mid fresh and bracing air,
 The red-cheeked boys and maidens fair
 Play round the maples in the spring,
 Or race with robins on the wing;
 And then when time for summer comes,
 They feast and live on pears and plums.

The peasant in his humble cot
 Lives near the rich and envies not—
 His harvest brings him untold joys.
 He likes to sit among his boys,
 Telling them tales of bygone years,
 His youthful pleasures and his fears.

And now when winter comes with snow
 The farmer is right glad to know
 That he can rest for a short time
 Until there comes a warmer clime.
 He is the picture of health now—
 No wrinkle mars his honest brow.

The winter brings the children out.
 They laugh, they play, and sing and shout;
 The skates and sleighs are all brought down,
 The good mother will never frown
 To see the children have good fun
 When all the other work is done.

Guided by nature's skillful laws,
 Taught in school, of verb and clause,
 They grow up pure, with well-stocked minds
 To pursue duties of all kinds;
 So out into the world they go,
 Some of Canada's stock to show.
 Lorne Tremain.

Class II.—"CANADIAN COUNTRY LIFE."

Wouldn't you like to hear of the girls and boys
 Who don't play in the nursery with toys,
 But all day play in the pleasant fields,
 'Mong the grain so tall, that the harvest yields?
 And when they're tired of their play,
 They go asleep in the new-mown hay.
 But better still: did you ever taste
 The golden honey, and sweet flaky bread
 With milk? (and none to waste)
 Eaten in the shade of the great willow trees,
 Where their hot cheeks are fanned by the evening
 breeze.

And in the autumn the nuts they come;
 The leaves are heaped in the hollows deep,
 And each one takes his turn in the fun,
 To jump right into the big brown heap.
 The skating and coasting are yet to come.
 And then, oh then, the fun is begun.
 Over the plains and down the hills,
 The skaters and coasters skum along,
 And don't you wish you heard their song?
 In spring come the flowers,
 And kites for the boys;
 Fishing too, don't forget those joys.
 The leaves grow green,
 And the rain comes in showers,
 Then the roses in June;
 But I'm back to summer.
 So I won't say more, but hope you'll come soon.
 And then you'll forget 'bout city strife,
 And enjoy "Canadian country life."
 Olive M. Sproule.

Class III.—"CANADIAN COUNTRY LIFE."

Spring comes the third month in the year:
 I think the grass is, oh! so dear;
 I like to gather pretty flowers,
 And sit beneath the shady bowers.

I do not like to see the mud,
 But like to see the trees in bud;
 I like to hear the robin's song,
 And could listen to it all day long.

I go up to a gravelly hill,
 Me and my little brother Will;
 Then we go down the other side,
 And Pa will give us a horse-back ride.

I like to ride upon the roller,
 And like to talk to Harry Bowler;
 He is our hired man,
 And he gives me all the rides he can.

I like in summer to see the sun,
 In summer I have lots of fun;
 I have not got to go to school,
 But sometimes have to drive the mule.

I like to ride upon the binder,
 Our hired man could not be kinder;
 He lets me sit upon his knee,
 Then all the binder I can see.

When threshing comes the men work,
 And I toe in like a little Turk.
 I like to hear the whistle blow,
 And see the men to their dinner go.

And when the autumn winds come
 The bees put away their solemn hum;
 When winter comes with all its snow,
 To the southern part the birdies go.
 Wesley Scott.

I am glad to find that so many of our children know how to appreciate the simple country pleasures within their reach. I was also agreeably surprised with the quality of most of the MSS. sent in. Perhaps you may make Canadian poetry famous some day—who knows! I hope you will respond as well when our next competition is announced.
 COUSIN DOROTHY.

Travelling Notes.

This time Mollie's message is a very short one. Just a mere mention, in a private letter, of her safe arrival at Grasse, "Alpes Maritimes," in the south of France, where her relatives had already established themselves in most pleasant surroundings, a fuller description of which will probably reach us for our next issue. "Fancy," says Mollie, "there are no less than ten of us Canadians from London, Ontario, in this delightful corner of the European continent. As a newcomer, I have not yet got over the charm of novelty, but to all appearance the rest of the party might have been here all their lives; at any rate, although they may be equally alive to the sweet scents and foreign sounds, they have passed through the first 'Oh!' and 'Ah!' and 'is not this charming?' stage, which finds almost involuntary expression until one has become accustomed to it all. I must slip into my envelope a few of the sweet-smelling violets, acres and acres of which surround us. Now is the harvest of the olives, and they are being gathered by the wagon-load; so also are the flowers, literally by the bushel for the perfumeries; indeed, the whole air is laden with perfume. Some day I must tell you of our outing at Cannes, where we witnessed a 'battle of flowers,' a sight not easily to be forgotten.

"There is a dear little English church about ten minutes from here; it is very pretty, with some beautiful windows given by wealthy English winter residents. Baroness Rothschild's place is near, and as she keeps fifty gardeners, you may guess how grand are her grounds and gardens. When Queen Victoria was at Grasse, ten years ago, she gave a tea for all the English residents, so, by one and another of our new acquaintances, we are constantly being told of some of her sweet ways. One old gentleman related that he apologized for his wife not coming, telling the Queen that she was blind. Two days afterwards Her Majesty drove up to their house to visit the blind lady, and remained some hours, bringing both herself and her husband a handsome present, which he showed me. Strange, too, to relate, this blind lady died the very same day as the Queen. In a few days we are all going to Nice, Monte Carlo, Monaco, and Mentone, none being far off from here. I shall then have more to tell you. Good-bye for this time.
 MOLLIE."

Thomas—A fine soft mornin', Andra.
 Andrew—Oo aye; but why dinna ye pit oop yer umbrella?

Thomas (aghast)—Sosh; ye were always a wasteful mom, Andra; can ye no' see it's a new ane?

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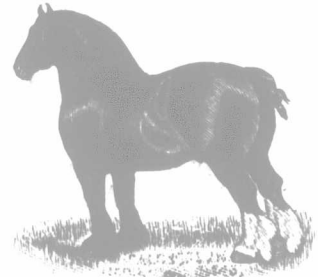
GOSSIP.

As already announced in our advertising columns, the great event of the season in Shorthorn circles in the West—that is, the dispersion sale of the Pioneer herd of Walter Lynch, of his farm, near Westbourne—is to take place on June 11th. This will afford intending purchasers a chance to obtain animals of superior merit at

their own prices, as Mr. Lynch has determined to disperse the entire herd. Among the offspring will be found 27 breeding females, all in the best of condition, and 24 young heifers of various ages. All the females have been bred on the farm, and are conspicuous for constitution, quality and breed character. The 3-year-old bull, Scottish Canadian, imported in dam, the bull at the head of the herd, is also included in this offering. Catalogues are now ready for distribution. Every breeder and every Western farmer and rancher who appreciates the importance of improved stock should attend this sale.

Jas. Smith, Alex. Galbraith's manager at Brandon, called in when en route from Janesville with another importation of Clydesdales and Percherons, some of the former just having arrived from Scotland. Included in the lot is Gallant Burnhead (10754), the Auchtermuchty premium horse bred by Professor McCall, Milton of Campsie. The sire of Gallant Burnhead is a grandson of Prince of Wales (673), and his dam is a daughter of Barnley 222, and full sister to Top Gallant (1850). St. Kennera 10897, another in the same lot, was the South Tyne premium horse in 1901. His grandam is a Macgregor mare, and a great grandsire is the noted old Prince of Wales (673). A 2-year-old, coming three, Inventor, is a grandson of Prince Alexander, and is a colt of whom Mr. Smith expects great things. Valley Prince, a 4-year-old dapple gray Percheron, weighs up to the 19-cwt. mark. Lord Castlegreen, a massive dark gray 3-year-old Percheron, weighs close to a ton.

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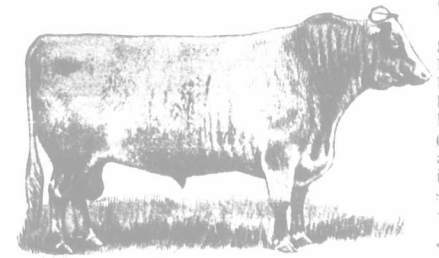
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If you contemplate the purchase of a machine, our best recommendation is for you to ask one of your neighbors who has the National—its users are our strong advertisers.

An investigation as to its merits we confidently assert will be to your advantage. The National is a Canadian machine, made by the Raymond Mfg. Co., of Guelph, Ont., and full stock of repairs always on hand at Winnipeg.

National No. 1, capacity 330 to 350 lbs. per hour.
National No. 1 A, capacity 450 to 500 lbs. per hour.

JOS. A. MERRICK, AGENT MANITOBA AND NORTHWEST.
117 BANNATYNE STREET, EAST.
WINNIPEG, - - - MANITOBA.
AGENTS WANTED IN UNREPRESENTED DISTRICTS.

LISTER'S ROYAL FIRST PRIZE
"ALEXANDRA"
CREAM SEPARATORS

They have stood the test of time, and notwithstanding many competitors, are still in the front rank and recognized as

THE SIMPLEST. THE SAFEST. THE STRONGEST. THE BEST.

Disinterested users claim that they increase their butter yield at least 20 to 25 per cent., and their calves thrive on the skim milk.

Altamont, Feb. 7th, 1902.

Messrs. R. A. Lister & Co., Ltd.,
Winnipeg, Man. :

Dear Sirs,

I have used your No. 11 Alexandra Cream Separator during the last four years, and the machine has given me perfect satisfaction. It turns easy, skims clean, and up to the present time has cost me nothing for repairs.

The first year we used the machine we made forty pounds more butter per cow than from the old system.

Yours faithfully,
(Signed) ANDREW WAGNER.

R. A. LISTER & CO.,
LIMITED,
Largest Manufacturers of Dairy Machinery in the British Empire.

232 AND 234 KING ST., WINNIPEG.
Montreal Branch: 378 to 381 St. Paul St. Head Office: Dursley, England.

PLEASE MENTION THE FARMER'S ADVOCATE.



VINCENT & MACPHERSON,
The Leading Western Undertakers and Embalmers.
Rosser Avenue, Brandon.

BRITISH COLUMBIA FARMS.
If you are thinking of going out to the Pacific Coast, try British Columbia. A delightful climate, no extremes of temperature; fertile land; ample rainfall; heavy crops; rapid growth and splendid market for everything you raise, at good prices. The celebrated valley of the Lower Fraser River is particularly adapted to dairying. Write for farm pamphlet telling you all about it, and containing a descriptive list of farms for sale.
-m
THE SETTLERS' ASSOCIATION OF B. C.
BOX 540, VANCOUVER, B. C.

FARM HORSES
For Sale.
Clyde and Shire Bred.
Prices reasonable per carload. Write:
High River Horse Ranch,
HIGH RIVER, ALBERTA.

PERCHERON STALLIONS
FOR SALE.
Two prizewinners, registered, pedigreed Percheron stallions, sired by that noted horse, Producture. A rare chance to procure a high-class horse. Address:
G. W. BUCHANAN,
PINCHER CREEK, ALTA.

RAW FURS WANTED
We solicit your patronage. Our prices will meet with your approval. **A. & E. PICKER,**
Tribune Building, Winnipeg, Man.
Reference: Dominion Bank.



Brantford Galvanized
ROLLER BEARING
STEEL WIND MILLS
NEW CATALOGUE
SEND FOR

COCKSHUTT PLOW CO. (Limited),
Agt. for Manitoba and N.-W. T., Winnipeg.

NOTICES.
WESTERN HAIL INSURANCE CO.—A feature worthy of special note at this time in hail insurance business is the innovation just introduced by the Western Hail Insurance Co., of Wawanesa. This consists of the addition of two non-hazardous classes to their classification of risks. The rates charged on these classes are very low, and should satisfy anyone, even those living in districts considered hailproof. An insurer able to state that no destructive hail had fallen on his quarter-section for a period of 20 years is given a rate of 12½ cents per acre, under the classification of an extra special non-hazardous risk, on an insurance of \$5. In cases where for 15 years no destructive hail has fallen, the classification of special non-hazardous is given a rate of 15 cents per acre on a \$5 insurance. The other rates are arranged on a sliding scale, in accordance with the hazard of the risk. Another feature of the published tariff of this company is that when notes are accepted in settlement of premiums, the extra charge is plainly stated. For instance, where the cash rate on a first-class risk is 17½ cents per acre, or 3.5 per cent, the note rate is 22 cents per acre, or 4.4 per cent, and so on for each classification. Apply to the company for particulars.

GOSSIP.

Geo. Lawrence, Killarney, has leased the Mitford ranch near Calgary, owned by Lady Adelaide Cochrane.

Wilcot Thumper has been purchased by Jno. Armstrong, Pilot Mound, Man., from Bawden & McDonnell, Exeter, importers of Shire horses.

Anyone wanting Jerseys should note the advertisement in this issue of the dispersion of the herd of John McDonald, for 15 years a resident of Winnipeg, at Streetsville, Ontario.

J. G. Washington, Elysee Stock Farm, Ninga, has a Shorthorn yearling bull, by Indian Warrior 2nd, out of a Syme cow, yet on hand for sale.

Fred West, of Deleau, has sold the Hereford bull, Campaign, to J. Ferris, Bagot.

J. S. Robson, Geo. Motheral, Alex. Forrest, J. S. Miller, Wm. Hamilton and Ed. Bailey, of Manitow, have syndicated the Clydesdale stallion, McNabb's Heir.

We often hear of works of art! If the Christmas number of the "Farmer's Advocate" (Canada) doesn't come under this category, we are anxious to see the paper that does.—Wool Markets and Sheep.

G. B. Murphy, Carberry, the well-known live-stock dealer, has imported the bay Clydesdale stallion, Conquering Hero 11310, imported by Dalgety Bros., London, Ont. The Plains district is becoming well supplied with pure-bred stallions.

The farmers of Beaver district have organized a Farmers' Institute, with the following officers: President, F. N. Martin; Vice-President, Geo. Cooper; Secretary, T. H. Lamont; Treasurer, W. Young. There was an attendance of 40 at the initial meeting.

Shortreed Bros. have purchased a yearling Shorthorn bull from J. G. Washington, Ninga. He is one of the thick-set, thrifty fellows, being out of a Kinellar Rosebud cow, and is got by Indian Warrior 2nd, and thus a grandson of the sweepstakes Indian Warrior.

J. A. S. Macmillan has sold the imported Clydesdale stallion, Jerviswood, to Dr. Henderson, Carberry. Jerviswood was first-prize horse at Dumfries, Scotland, in 1901, and is by the noted Montrose Sentinel, a son of the great Prince of Albion, and is out of Delilah (11809), of the Macgregor family.

Joseph Laidler, Neepawa, Man., writes: "Business in spring pigs is very brisk this year. I have made a lot of sales, and have received inquiries for more by every mail. Many of them mention having seen my advertisement in the "Farmer's Advocate." March 28th, 1902.

K. McIvor, Roselea Farm, Virden, Man., the man whose name is so well known in connection with the introduction of native rye grass (*Agropyrum tenerum*) reports a ready demand for grass seed this spring. He also states that his market is widening, as he has received inquiries from many of the States to the south of us, from Minnesota, the Dakotas, Montana, Iowa, Texas, and Oklahoma.

Capt. W. H. Hayes, F. R. C. V. S., whose article on South African horses in the last Christmas number of the "Advocate" will be remembered by our readers, writes us that the 6th edition of Veterinary Notes for Horse-owners is now in the press. This work is an invaluable work for the practising busy veterinarian, and as such should prove very acceptable to Canadian veterinarians. From our acquaintance with previous editions of the work, we can unhesitatingly recommend it as being clear, up-to-date, and while scientific, is entirely free from "a confusion of technical terms," which, unfortunately, too often afflicts veterinary writers. Points of the Horse, second edition, is now out of print, but will, in its third edition, be larger and more finely illustrated than ever; this book is the standard work on the subject in the English language. Veterinary Notes for Horse-owners can be procured from this office when published at the regular retail price.

YOUNG BRITISHERS FOR WESTERN FARMS.

Cheap land and the small amount of capital required to start farming in this great Canadian West, tends to make men ambitious to own their own homes rather than work for others. This tendency makes skilled farm labor exceedingly scarce. Men having served a short apprenticeship on a farm and saved a little money are in haste to get started for themselves, to take advantage of the free homesteads or cheap lands before these are all taken up. There is scarcely a farm in the West where there is not room for a good willing young apprentice— young men willing and anxious to learn farming, ready to make themselves useful in any capacity on the farm on small wages in exchange for the knowledge and experience they will acquire. There are hundreds of young Britishers coming out at this season, and those desirous of obtaining the services of one or more should make immediate application to the Dominion Immigration Commissioner, Winnipeg.

**— DE LAVAL —
CREAM SEPARATORS.**



**HIGHEST AND ONLY REGULAR AWARD
CHICAGO EXPOSITION, 1893.**



**HIGHEST AWARD AND ONLY GRAND PRIZE
PARIS EXPOSITION, 1900.**



**HIGHEST AWARD AND ONLY GOLD MEDAL
BUFFALO EXPOSITION, 1901.**

**2000 PRIZES, MEDALS AND AWARDS.
Every Important World's Highest Award
From 1880 to 1902.**

THE DE LAVAL SEPARATOR CO.

Montreal.
Toronto.
New York.
Philadelphia.
Chicago.
San Francisco.
Poughkeepsie.

Western Canadian Offices, Stores and Shops:

248 McDermot Ave.,

Winnipeg, Man.

DISPERSION SALE OF
THE PIONEER HERD OF

SHORTHORNS

FARM AND IMPLEMENTS.

Wednesday, June 11th, 1 o'clock p. m.

75 Head Scotch-Topped Shorthorns

PRINCIPALLY YOUNG FEMALES AND COWS IN CALF.

On account of advancing years, I am offering my entire herd, and farm, thoroughly equipped, containing 800 acres, well fenced; about 200 acres under cultivation; 70 acres young oak timber, affording excellent shelter; abundance of hay and water, and fair buildings.

The herd was established over 30 years ago, and is well known throughout the Northwest; has been handled on common-sense lines, and is noted for constitution, substance and utility.

Situated four miles from Westbourne, where teams will meet trains.

Lunch at 11.30. Positively no reserve.

Terms: Five months' credit, with interest at 8 per cent., and 8 per cent. discount for cash.

Reduced passenger and freight rates to intending purchasers.

FOR CATALOGUES AND FULL INFORMATION APPLY:

D. S. MACDONALD,
AUCTIONEER,
PORTAGE LA PRAIRIE, MAN.

WALTER LYNCH,
PROPRIETOR,
WESTBOURNE, MAN.

THE TORONTO GENERAL TRUSTS CORPORATION

CAPITAL, \$1,000,000. HEAD OFFICES: TORONTO, ONT. ESTABLISHED 1882. RESERVE FUND, \$270,000.

Branch Office: Bank of Hamilton Building, Winnipeg.

PRESIDENT: JOHN HOSKIN, K. C., LL. D. MANAGING-DIRECTOR: J. W. LANGMUIR. VICE-PRESIDENTS: HON. C. S. WOOD, W. H. BEATTY.

Authorized to accept and execute trusts of every description, and to act in any of the following capacities, namely: EXECUTOR, TRUSTEE, ADMINISTRATOR, GUARDIAN, LIQUIDATOR, ASSIGNEE, RECEIVER and GENERAL AGENT.

MONEY TO LEND.—The Corporation has a large amount of Trust and other Funds to lend on Mortgage Security at the Lowest Current Rates, either on first-class City Property or Improved Farms in the Provinces of Ontario and Manitoba.

MANAGER WINNIPEG BRANCH: JAMES DAVEY.

Clydesdale Stallion for Sale. Pride of the West 2046. A prizewinner and sure stock-getter. By the noted Charming Charlie, a Provincial winner. Write for particulars. **SAM. McLEAN,** Franklin, Man.

Bulls for N.-W.T.

Arrangements have again been made by the Pure-bred Cattle Breeders' Association of Manitoba, whereby pure-bred stock will be shipped from Manitoba to the Territories under arrangements with the Territorial Government. Apply to Department of Agriculture, Regina, for conditions, etc. Freight charges: Only \$5 per head on bulls; \$7 on females. The Association can confidently recommend Mr. William Sharman, Souris, Man., commission agent, to intending purchasers. Manitoba breeders should at once advise me regarding stock for sale.

GEO. H. GREIG,

Sec'y Pure-bred Cattle Breeders' Association
WINNIPEG, MAN.

Aberdeen Polled Angus Cattle.



Heifers and bulls, ready for service, for sale. Correspondence solicited.

W. CLIFFORD,
AUSTIN, - - MANITOBA.

DE LAVAL SEPARATOR.—On another page we beg to call attention to the advertisement of the De Laval Separator Co., bearing on the question of prominent awards, regarding which there has been more or less controversy.

Do You Want to Buy a Farm

IN MANITOBA OR THE NORTHWEST TERRITORIES?

Do You Want to Sell a Farm in Manitoba or the Northwest Territories?

We are the largest dealers in farm lands in the Northwest, exclusive of the railway companies. We own and have for sale two hundred and fifty thousand acres of land in Assiniboia, south of Indian Head. In one of the most productive wheat-raising districts on earth. We advertise very extensively in all the American papers, and have a large demand for improved and unimproved farm lands in Manitoba and the Territories.

THE HASLAM LAND AND INVESTMENT CO.,

FORUM BUILDING, WINNIPEG,
AND 1019 PIONEER PRESS BUILDING, ST. PAUL, MINN.

David Maxwell & Sons,

ST. MARY'S, ONTARIO.



STEEL ROLLER BEARINGS, IMPROVED DETACHABLE LINK,

PATENTED IMPROVED STEEL FRAME, COMBINED LEVER AND FOOT DRIVE.

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

No.	CAPACITY.	Churns from
0	6 gl.	1 to 3 gl. cream.
1	10	1 to 5 gl. cream.
2	15	2 to 7 gl. cream.
3	20	3 to 9 gl. cream.
4	26	4 to 12 gl. cream.
5	30	6 to 14 gl. cream.
6	40	8 to 20 gl. cream.

SOLD BY ALL LEADING WHOLESALE HOUSES AND DEALERS.

The New Kentucky Interchangeable Shoe and Disk Drill



meets exactly the demands of the farmer who wants both a shoe and disk drill and who does not wish to make the expenditure necessary for two drills. In case of the Kentucky one drill does the business. Our disk bearing—absolutely dust proof, specially chilled will wear as long as the disk and is only two inches wide over all, leaving abundant room for clearance of clods, sods, rubbish, etc. Disks easily set at any desired angle. Our Detachable Heel Shoe is already too well and favorably known to tell about it here. Shoe heel may be instantly detached and sharpened at almost no cost. New heels cost less than sharpening old style shoes. Shoes and Disks easily and quickly interchanged on the New Kentucky Drill. Fit every condition of soil and all varieties of crops. All about it in our New Illustrated Catalogue. Copy mailed free. Ask for it.

Brennan & Co., S. W. Agricultural Works,
Dept. 135, Louisville, Ky.

These drills carried in stock and can be shipped from Brandon, Man.

THE KELSEY WARM AIR GENERATOR.

THE PRINCIPLE of the Kelsey is to warm great volumes of air by bringing it into ACTUAL CONTACT with an EXTENSIVE and PROPERLY HEATED surface.

This is accomplished by sending the air in SEPARATE CHANNELS THROUGH the long hollow corrugated cast-iron sections which form the fire chamber.

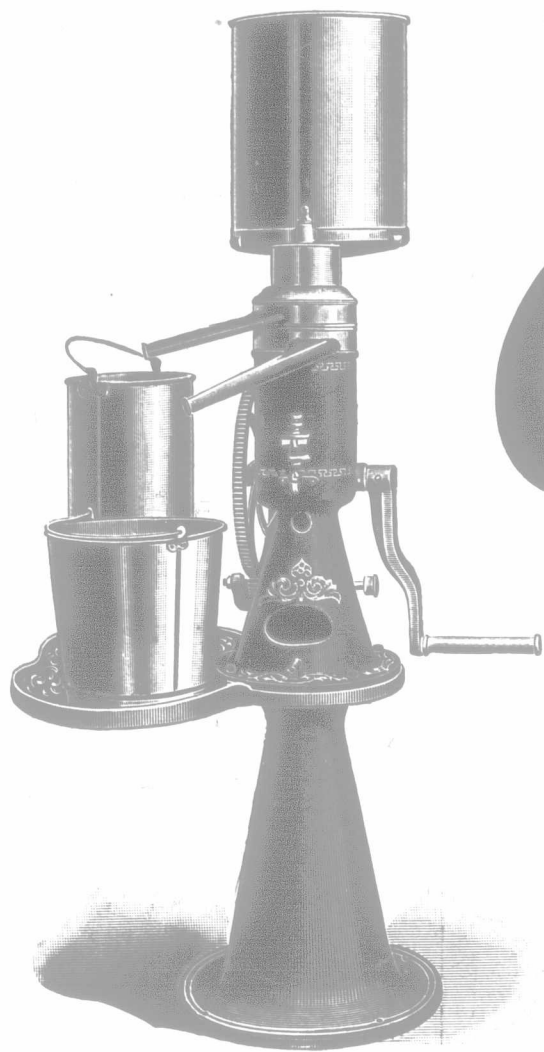
This is a far more effective method, and the air is more thoroughly and evenly heated, than by simply PASSING OVER or NEXT to a hot surface.

Each section has eight square feet of heating surface, and weighs about seventy pounds. There are from nine to seventeen sections in each generator, according to its size. This means a powerful and economical heater, and an abundance of pure warm air. Each section is an independent heat generator, and by capping over one or more, and extending a heat-conducting pipe therefrom, the warm air is forced through long or level pipes to the rooms so connected. Ask for booklet, "KELSEY HEATING."

We take direct contracts and guarantee proper results.

THE JAMES SMART MANUF'G CO., LIMITED, BROCKVILLE, ONTARIO.

244 PRINCESS STREET, WINNIPEG, MANITOBA.



Empire

EASY -
RUNNING
Cream
Separators

Are the Simplest, Most Durable, and the Closest Skimmers. You are not making a mistake when you purchase one.

The Manitoba Cream Separator Co.,

H. P. HANSEN, MANAGER.

LIMITED.

187 LOMBARD STREET, WINNIPEG, MANITOBA.

GALLOWAYS:

Bulls and heifers for sale.

APPLY TO

T. M. CAMPBELL,
"HOPE FARM,"
St. Jean Baptiste, Manitoba.

Herefords. The meat-makers. Range favorites and stocker-getters. FOR SALE: bulls of the right age and type. Also Barred Rocks—eggs or chickens.
FRED WEST, DELEAU, MANITOBA.

Aberdeen - Angus Cattle.



LADY AMY.

Bulls and heifers of all ages for sale. 300 head to select from. Farm 3 miles from Deleau and 10 miles from Oak Lake. **JAMES D. MCGREGOR,** Brandon P. O., Man.

OAK GROVE FARM.

Shorthorns and
Yorkshires.



MASTERPIECE = 23750 = red-roan, by Grand Sweep (imp.). Three young bulls by Masterpiece, and heifers by Knuckle Duster (imp.), Village Hero and Masterpiece.
Improved Yorkshire sows in pig. Boars fit for service. Orders booked now for young pigs. Pairs not akin.
White Plymouth Rock eggs.

JAMES BRAY, LONGBURN, MANITOBA.

SHORTHORNS

I am offering three red bulls, one aged, of the heavy-fleshed type, also well-bred females. **LEICESTERS** of both sexes for sale. **GEO. ALLISON,** R. R. STATION, ELKHORN, C. P. R. Burnbank, Man.

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

PLEASE MENTION THE
FARMER'S ADVOCATE

Authorized Capital,
\$500,000.00.

Head Office, Wawanesa, Man.

THE WESTERN CANADIAN HAIL INSURANCE COMPANY

SEEDING is a little late, but with the energy characteristic of the MANITOBA FARMER, it will be rushed to the finish. Then will follow the anxious season. Anxious days and nights for the man who, with a good crop in sight, takes chances on losing it by HAIL. Better insure it, and let us occupy the anxious seat. That is our business. You will sleep better at night with one of our Insurance Policies under your pillow.
Don't wait until hail has given you a touch-up. Too much like locking the stable after the horse is stolen. Insure early and enjoy protection during the whole growing season.
Our agents will be pleased to furnish full information as to rates, etc., or write to

JOS. CORNELL, SECRETARY AND MANAGER.

THE only Company in Canada conducting Hail Insurance on established insurance principles, with absolute security for payment of losses.

RIVEREDGE FARM.
Shorthorn Cattle and Standard-bred Horses
Herd headed by Sittlyton Stamp (imported). Females bred from or tracing to Windsor (imported).
A. TITUS, NAPINKA, MAN.

Breeder of Shorthorns.

Imp. Baron's Pride 28855 at head of herd. B. P. Rocks and Bronze turkey eggs for sale.
J. H. KINNEAR, SOURIS, MAN.

SHORTHORNS.

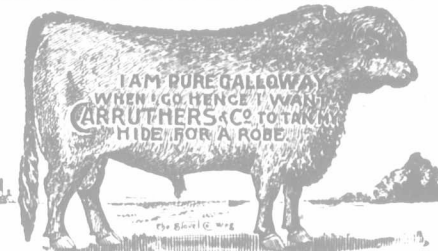
Will sell either of my stock bulls, Robbie O' Day 22672 - or Veracity 31449 - Also a number of young bulls, some good enough for herd headers. **YORKSHIRES.** - A few young sows to farrow in May. Orders booked for spring pigs. **PLYMOUTH ROCKS.** - Some choice cockerels. **RYE GRASS.** - Large quantity of clean, bright seed, also clean Flax Seed.

ANDREW GRAHAM,
FOREST HOME FARM,
POMEROY, MAN.
Carman and Roland shipping stations.

LOCAL AGENTS WANTED TO REPRESENT
THE WESTERN FARMERS'

Live Stock Insurance Co.

HEAD OFFICE: Winnipeg,
ROOM 251 GRAIN EXCHANGE.
Chartered by the Manitoba Govt. and the N. W. T.
P. O. Box 1382.
D. PRITCHARD, President.
H. S. PATERSON, Secretary.



"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.

25 BULLS, 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.

CHOICE Shorthorn Bulls FOR SALE.

All nearly 2 years old. Apply for pedigrees and particulars.
FOREMAN, Castle Farm, TEULON, MAN.

Maple Grove Stock Farm SHORTHORN BULL CALVES FOR SALE.

From three months to eight months old. Sired by Lord Stanley 25th - 29247. Also have left a few

P. R. COCKERELS,
WALTER JAMES,
ROSSER, MAN.

15 mile west of Winnipeg, on main line C. P. R.

ROBERT I. CRISP,

SOURIS, MAN.

LIVE STOCK AUCTIONEER.

Sales conducted in any part of the Province. Apply early for terms and dates.

SHORTHORNS Have sold all our young bulls for this season. Have still some fine young heifers for sale. Call and see them, and compare prices and quality with what others are offering. Correspondence solicited.
PAUL BROS., Killarney, Man.

Lakeview Stock Farm. SHORTHORNS FOR SALE.

I am offering for sale bulls and heifers of good quality. Cheap if sold soon.

THOMAS SPEERS,
OAK LAKE, MANITOBA.

SHORTHORNS

Gold Medal herd of 1889-1900. Bulls in service are Nobleman (imp.) and Topsman's Duke. Some good young bulls for sale.
J. G. BARRON, Carberry, Manitoba

LAKESIDE SHORTHORNS FOR SALE

3 young bulls, 11 to 14 months old; quality and prices right.

R. McLENNAN, HOLMFIELD, MAN.

Shorthorns and Clydesdales.

One Shorthorn bull for sale.

J. G. WASHINGTON,
Elysee Stock Farm, Ninga, Man.

PURE-BRED REGISTERED JERSEYS

FOR SALE:

1 cow 6 years old. 1 cow 5 years old.
1 cow 4 years old.

2 heifers 2 years old. 2 heifers 1 year old.
1 heifer calf 7 months old.

1 bull 1 year old.

Seven of the above herd believed to be in calf to pure-bred registered sires. The owner,

JOHN MACDONALD, R. N.,
would like an offer for the entire herd, as he is retiring from business.

STREETSVILLE, PEEL COUNTY, ONT.

Home Bank Farm OF LARGE ENGLISH BERKSHIRES

Are still to the front. Some grand sows, bred for the spring trade. Have two fine litters ready to ship about March 15th. Now booking orders. Call or write for prices.

Jos. Laidler, Neepawa, Man.

YORKSHIRES!

Bred sows all sold. Orders taken for spring pigs from large and matured sows. Send your orders in early and have first choice. Price: \$10 each, \$18 a pair. Address:

KING BROS., Wawanesa, Man.

SEED GRAIN—All new, reliable and clean. Speltz, \$1.75 per 100 lbs.; Odessa barley, 50 cts.; Banner oats, 50 cts.; Red Fife wheat, 70 cts.; bags free. N. Wolverson, Brandon, Man.

FOR SALE:

Flaxseed ready for drill, in new bags. I sold all my flaxseed last year for seed. Apply—

L. EILERS, EMERSON, MANITOBA.

YOUR COMFORT

IS ASSURED IF YOU

TRAVEL VIA

Canadian Northern Rail'y

LOWEST RATES TO

ALL POINTS

IN THE

EAST, WEST AND SOUTH

Daily Solid Vestibuled Train, with Sleeping Cars, to St. Paul and Minneapolis.

OCEAN STEAMSHIP TICKETS

Full particulars on application to any agent Canadian Northern Ry., or

GEO. H. SHAW,

TRAFFIC MANAGER, WINNIPEG.

Pave the way to victory by investigating the merit of **Chambers' Barred Rocks.** They are always among the winners at the leading shows. Also Bull Rocks (Nugget strain), B. Hamburgs, and S. C. B. Leghorns. Eggs, \$2 for 13, \$1 for 30. **Thos. H. Chambers, Brandon, Man.**

THERE ARE GLANTS IN THESE DAYS.

BIG LIGHT BRAHMAS.



My birds won the Lieut. Governor's cup, the \$1000. Dreyer cup, the silver and gold medal, the Brandon cup, the Winnipeg armchairs, the special for best breeding pen, special for best display, first for cockerel, cock and pullet, and other prizes, all at the Poultry Show held in Winnipeg, Feb. 17 to 21, 1902. A few cockerels and hens for sale. Price of eggs: \$3 for 15 eggs; \$5 for 30 eggs.

Shipped when wanted. Book orders early.
J. W. HIGGINBOTHAM, VIRDEN, MANITOBA.

White Plymouth Rocks.

Cock and Pullet

were each awarded first prize, Winnipeg Poultry Show, '02. Cook was 1st prize as cockerel, Toronto Poultry Show, '01. These are being penned with 1 highest scoring pullets in America. Eggs for sale.

E. SCABLETT, Oak Lake, Man.

Farm Lands.

McMicken & Co.,

413 Main St.,

Winnipeg, Man.

WE have a large quantity of vacant lands in Manitoba and the Territories for sale, on easy terms. Also some bargains in improved farms, in different portions of the Province. For instance, one hundred and sixty acres (twenty-five cultivated), good house, and two stables, for \$800. If you wish to sell, write us.

CORRESPONDENCE SOLICITED.

SPELTZ

2,000 bushels at 75c. per bushel of 48 pounds for sale; also Rye Grass, Brome Grass, Spring Rye, Flaxseed, and a quantity of Japanese Buckwheat at 75c. per bushel. Sacks, 80, each, extra. All above are native grown, and are the very best.

W. J. LINDSAY, BOX 69, BRANDON, MAN.

THE FARMER'S ACCOUNT BOOK

Simple, complete, practical. Every page ruled for a specific purpose. Printed headings. No previous education necessary. Don't guess; have figures to prove what you are doing. Price, \$1.25, postpaid. If you breed registered stock, cattle, hogs or sheep, you should have our Private Herd Register; price, 50 cts. Circulars free. Address:

THE FENIMORE FARM, Box 62, Miles, Iowa.
We breed Shorthorn cattle and Poland-China hogs.

SPELTZ

The most profitable feed grown.

SEED FOR SALE:

75c. per bushel of 50 lbs. at our farm, section 15, 15, 2 E., near Balmoral. Buyer's own bags or charged extra at cost.

Samples on Application.

Apply to the

EXORS. OF ALEX'D McINTYRE,

Room 203, McIntyre Block,

Winnipeg, Man.

The Weekly Telegram

Has proved itself to be the indispensable family journal of Western Canada farmers. It contains all the news in a bright, readable form. Besides this service, it also gives the fullest and most reliable market reports and special features, prepared specially to meet the needs of the farming community.

DO YOU READ IT?

If not, permit us to send you a sample copy. After examining it you will be unable to do without it.

ONLY \$1 PER YEAR

Clubbing rates with your local or agricultural paper. Address:

THE

Telegram Printing Co.

(LIMITED).

WINNIPEG, MANITOBA.

GOSSIP.

Percheron Norman stallions, German Coach, Belgians, and large trotting stallions are advertised in this issue by Messrs. J. Crouch & Son, La Fayette, Indiana. This firm was very successful in winning prizes at the Pan-American and at the Chicago International Shows last year, their German Coach horse, Euto, winning the \$300 gold medal sweepstakes at Buffalo. They state that they have Percheron stallions weighing from 1,800 to 2,400 lbs. Being large importers and having 200 stallions in their barns at present, they can sell as low as any firm in the United States. See their advertisement, and write for what is wanted.

Wat Card, Neepawa, Man., has purchased the imported Shire stallion, Provost, a grandson of the noted prizewinner, Harold. Provost was imported by Bawden & McDonnell, Exeter, Ont., weighs close to a ton, and is dark brown in color. He is a solid looking horse, with lots of substance, and is well muscled, as becomes a draft stallion, and is also a fair mover for such a weighty horse. He has a showing record in the Old Country.

H. E. Waby, Holmfield, Man., writes under recent date that he has recently chased the black Norman stallion Facteur (imp.) 2846 (44259). This horse was foaled in 1898, imported in 1902, bred by M. Brault, commune of St. Germaine Condre, Department of Orme, France. Mr. Waby describes Facteur as a stallion of unusually beautiful proportions, with extra clean bone and the best of feet, combining with these qualities great style and action. He is a descendant of old Brilliant 1271.

Thos. Mercer, of Markdale, Ont., is one of the younger Shorthorn breeders that is rapidly coming to the front. His present herd of 60-old head is made up of a number of each of the following families: Missies, Floras, Clarets, Princesses, Red Roses, Stamfords, Fashions, Matchless, and Crimson Flowers, and headed by that splendid stock bull, Village Squire 24993, sired by the champion, Abbottford 19446, dam Village Flower 16865, by Prince Albert, by Barmpton Hero. Mr. Mercer's first venture in the Shorthorn arena was by the purchase of the prizewinning heifer, Dolly Stamford 29129, from the Messrs. Watt. Since then numerous purchases have been made, which have brought the herd to its present high standard. A glance at the stock bulls that have been used on the herd will show that Mr. Mercer has started right, and understanding as he does that the secret of success lies in the use of high-class sires, the public may rest assured that every care will be exercised to keep the herd at the front. Village Squire succeeds Aberdeen of Markham 23331, by Imp. Aberdeen, and Lovely Victor 22170, by Imp. Albert Victor. Mr. Mercer reports the demand for Shorthorns away ahead of any previous year. He also reports sales as being in every way entirely satisfactory. There is nothing in this herd reserved; everything can be bought worth the money.

Manitoba Commission Co'y,

LIMITED,

LICENSED AND BONDED.

Consign your grain and save middleman's profit. Perfectly reliable.

251 GRAIN EXCHANGE, WINNIPEG.
P. O. BOX 1382.

H. S. PATERSON, MANAGER.

45,000 Russian Poplars and Willows.

20,000 Petrofsky Poplars, 10,000 Wobstl Riga Poplars, 5,000 Russian Golden Willows, 5,000 Russian Laurel Willows, 5,000 French Laurel Willows.

We are offering the above quantity of beautiful, healthy, well-rooted, young Russian trees, about two feet high, for next spring's planting, besides a good stock of small fruits, flowering shrubs, Virginia creepers, etc. For pretty trees, very hardy and fast growers, there is nothing that compares with this Russian stock. Send for descriptive price list.

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"Virden Nurseries," VIRDEN, MAN.

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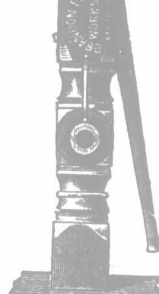
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THE CURVE OF LONG LIFE
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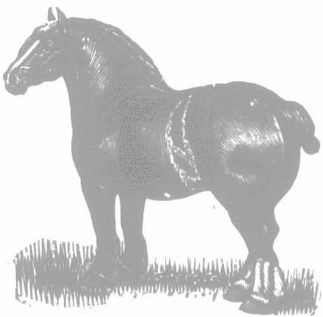
- FORSYTHIA VIRIDISSIMA,
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That I am now breeding to that noted stock horse, Lord Lynedoch (Imp.) (4530), also 4 young stallions under 2 years, and The Royal Arch [3171], rising 4 years old, sired by Erskine's Pride (Imp.) [1332], and a grand son of that prizewinning mare, Daisy (Imp.) 977.

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I do not know of anything in the shape of a premium that should so appeal to the average man in this western country.—C. H. Shera, Port Arthur.

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I think that your thermometer and barometer is a dandy. I am well pleased with it. I thank you very much for it.—Charles S. Yeo, Douglas, Man.

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It is the best I have received or seen since I came to this country.—H. Kolterman, Lacombe, N. W. T.

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323 AND 325 MAIN STREET, WINNIPEG
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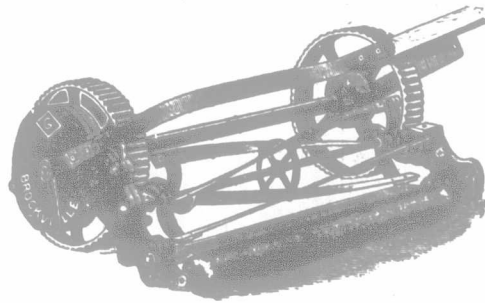


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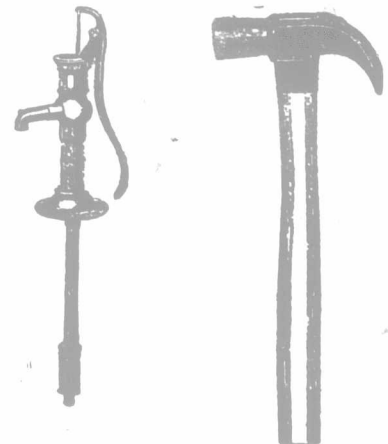
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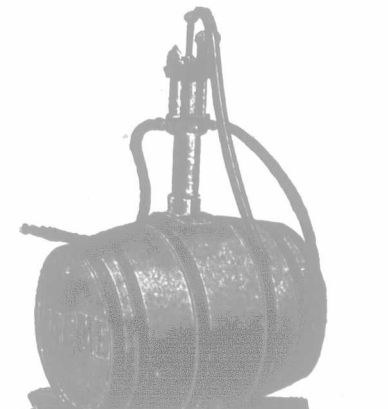
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failing to do duty any longer, and as a result it is necessary to turn attention to wire fencing. Barb wire has proven too damaging to stock, and unsatisfactory in other respects, but the Coiled Steel Spring woven-wire fence seems to have given general satisfaction. The London Fence Machine Company, of London, Ont., have sent us a copy of their spring catalogue, illustrating and describing the London fence machine, which certainly builds an excellent woven fence. From reports received, it is proving a thorough success. We take pleasure in complimenting the firm on the style of their new catalogue, a copy of which farmers should secure. It is very attractive, and contains a large amount of useful information in regard to bracing posts, etc., for farmers who require wire fencing. Their machines and goods are first-class. Their advertisement may be found on the back cover of this issue.

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GOMBAULT'S
Caustic Balsam
The Great French Veterinary Remedy.
A SAFE, SPEEDY AND POSITIVE CURE.



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As manager or foreman on large farm, by capable married man, with thirteen years' experience in Canada. Best of references. Address: om P. F. R., FARMER'S ADVOCATE, LONDON, ONTARIO.

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One seven-year-old. om
One three-year-old.
Three two-year-olds.
Also a few mares and fillies of good size and good quality. I. Devitt & Sons, Freeman P. O., Ont. Burlington Junction Station 1/4 mile from farm.

IMP. CLYDESDALES AND AYRSHIRES.
The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentain. Ayrshires all ages; and poultry, utility breeds. Eggs for sale. om
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7 Canadian-bred Cows and Heifers.
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Shires, Shorthorns, and Leicesters.
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BLACK HORSE HOTEL, FRONT STREET, TORONTO, ONT.,
on Wednesday, March 5th, for one week; after that at our own stables, London, Ont. Any one in need of a good stallion should not miss seeing our stock before buying. Prices right. Apply: om

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PROPERTY OF FREDERICK C. STEVENS, ATTICA, N. Y.

Have won more challenge cups, more championships, more first prizes, and more value in prizes during the past seven years than all the other Hackneys of America combined.
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Stallions of all ages, mares in foal, young mares and fillies. The best three carriage horse sires in America at the head of this stud: Langton Performer, Clifton 2nd, and Fandangoo. om
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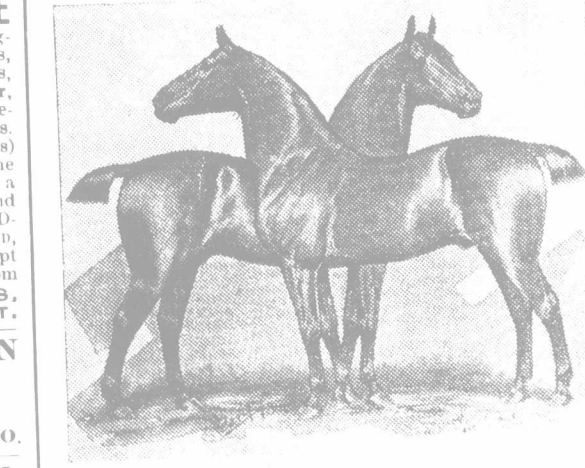
Is the result of scientific study. It is formulated by Dr. Hess, a graduate of both veterinary and medical colleges. If the colleges of veterinary science know of nothing better it must be good.
What prominent Indiana stockmen say of it:—
Evansville, Ind., Dec. 7th, 1901.

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GENTLEMEN.—We are feeders of Dr. Hess's Stock Food, and we will never do without it. We made a special test of it. We had a cow that was not doing well, little bit on the sick list. We began to feed Dr. Hess's Stock Food just as the directions stated, and in several days she showed an improvement in her appearance. A few days following we made a test of her milk, weighed it daily and in seven days she showed a gain of four pounds. We are feeding 60 head of cattle, 14 horses, 25 hogs, and our stock never did as well since we are in business. We cheerfully recommend Dr. Hess's Stock Food to the dairymen and stockmen. It will keep the cattle, horses and hogs in a fine condition.
Yours truly,
C. W. & C. KRATZ.

Dr. Hess's Stock Food is a Guaranteed Milk and Flesh Producer.
It is not a stimulant, but a tonic. It builds up the system of the animal generally. Horses show greater ambition when fed Dr. Hess's Stock Food. They do more work and stand it better.
Feed Dr. Hess's Stock Food to your cows; if it doesn't pay, your money will be refunded. 7-lb. sack, 65c; 12-lb. sack, \$1.00. om
SOLD BY DEALERS GENERALLY. OR ADDRESS:

THE GREIG MANUF'G CO'Y, CANADIAN AGENTS, MONTREAL, QUE.
FREE.—Dr. Hess's scientific veterinary work, giving the symptoms and latest treatment on stock diseases, will be mailed you for the asking.—Address:
DR. HESS & CLARK, ASHLAND, OHIO.

Lafayette Stock Farm.



HORSES
OF AMERICA.

One importation of German Coachers arrived January 9th, 1902; one of 42 head arrived March 9th, 1902, and our fourth importation so far this year, of Percherons and German Coachers, arrived March 30th. Our draft stallions, 3 to 5 years old, weigh 1,800 to 2,400 lbs. The great German Coach horse makes the best cross on small trotting-bred mares, producing horses that weigh from 1,100 to 1,400 pounds and stand 16 to 16 1/2 hands high, with finish and action. We give gilt-edge guarantee and terms to suit buyers.

Oldenburg German Coachers, Black Percherons, Normans and Belgians.

We import and sell more German Coach stallions than all others. We buy every horse ourselves direct from the breeder in Europe. Come to headquarters for high-class, service-able stallions.
J. CROUCH & SON, LAFAYETTE, IND.

The REID Hand Separator



gets from every milking the greatest quantity of cream available for churning; makes more and better butter possible. It is the only perfect hand Separator. Runs lightest, lasts longest. Sent anywhere on 10 days free trial. Send for our new catalogue and revised pricelist.

A. H. REID
30th and Market St.
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Sent anywhere on 10 Days' Free Trial

High-class Herefords

We have for sale the following choice young stock, which have been bred from imported and American sires. Intending buyers will do well to inspect the following: 18 young bulls, 2 aged bulls, 20 young heifers. Correspondence invited.

A. S. HUNTER, DURHAM, ONT.

INGLESIDE HEREFORDS.



A few choice heifers and young bulls by **Mark Hanna**, sweepstakes bull at Pan-American.

Shropshire Sheep and Tamworth Swine.

H. D. SMITH,
Compton, Quebec.

SHORTHORNS, SHROPSHIRE, COTSWOLDS.

We are now offering a number of heifers and heifer calves; a few bull calves; a number of cows; all bred in the purple and as good as the best. Also Shropshire and Cotswold sheep.

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JOHN DRYDEN,
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BREEDER OF

CRICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

Choice Young Bulls and Ram Lambs for sale. Write for prices.

J. R. McCallum, Iona Station, Ont.

Offers young **SHORTHORN BULLS** and **HEIFERS**, of choice breeding, at reasonable prices. Iona Sta. on M.C.R., half a mile from farm.

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Both sexes. IMPORTED AND HOME BRED. All ages. Prizewinners at home and abroad.

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"ORCHARD HILL" SHORTHORNS.

Herd comprises representatives of best Scotch-bred families, with Lord Lavender at head. Young animals of both sexes for sale.

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SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.

Meaford Station, G. T. R. North. **JAMES BOWES,** Strathnairn P. O.

FOR SALE:

SHORTHORNS: 7 young bulls, from 8 to 10 mos. old, sired by Leta's Lad and out of deep-milking cows. **H. E. HIND, Hagersville P. O. and Station, G. T. R. and M. C. R.**

SHORTHORNS.

Fashionably bred, of both sexes and all ages. Nothing reserved.

H. PARKER, Durham P. O. and Station.

Maple Lodge Stock Farm.

ESTABLISHED 1854.

SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale. **LEICESTERS.**—A grand lot of ewes, bred to our imported rams, and a few choice rams, now for sale.

A. W. SMITH,
Ailsa Craig Station, G.T.R., 3 1/2 miles. **Maple Lodge P. O., ONT.**

GREEN GROVE HERD OF SHORTHORNS.

This herd is headed by the famous show bull, Spicy Robin 28259 = (bred by J. & W. B. Watt), grandson of Imp. Royal Sailor, and of the noted English family, and contains such noted tribes as Nonpareils, Crimson Fushies, Mysies, Butterflies, and Languishes. Short-horns of both sexes. Also a choice litter of York-shires about 4 mos. old, for sale. Address: **George D. Fletcher, Binkham P. O., Ont.** Erin Shipping Station, C.P.R.

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A QUICK, SHARP CUT
hurts much less than a bruise, crush or tear. Done with the **KEYSTONE KNIFE** is the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying.

David and Manufactured by R. H. McKenna, V. S., Picton, Ont.

SHORTHORNS FOR SALE.

Two good young bulls fit for service. Also females all ages. Herd headed by (imp.) Spicy Marquis.

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ROSEVALE SHORTHORNS



Are of the up-to-date sort. We have for sale a number of young bulls and heifers of all ages. Marengo Heydon Duke (imp.) heads the herd.

W. J. SHEAN & CO.
Owen Sound, Ont.

Scotch Shorthorns

Of both sexes, of the following noted families: Golden Drops, Rosebuds, Claras, Matchlesses, Strathallans, Vain Duchesses, Marr Beautys, Mayflowers, Crimson F owners, and others; 56 head to select from. Herd headed by the imported Bracelet bull, Red Duke = 36084 = (77585).

DAVID MILNE & SON, ETHEL P. O.,
Huron Co., Ont.
Ethel Station, G. T. R., half mile from farm.

JAMES A. CRERAR, Shakespeare, Ont.

BREEDER AND IMPORTER OF

HIGH-BRED SCOTCH SHORTHORNS

SHORTHORN BULLS FOR SALE: A choice lot of Shorthorn bulls from 10 to 16 months old, sired by Imp. British Statesman (63729) = 20833 =; and cows of the Mara family. They must be sold at once. Prices away down to suit customers. **FITZGERALD BROS.,** on Elmvale Station, G.T.R. Mount St. Louis P. O.

A FEW CHOICE SHORTHORNS

YOUNG COWS AND HEIFERS

In calf to Imp. Prince of the Forest and Prince Ramsden; also a few young bulls fit for service.

G. A. Brodie, - Bethesda, Ont.

Bonnie Burn Stock Farm, 40 rods north of Stouffville Station, Ont., offers Shorthorn bulls and heifers with calf. Shropshire ewes with lamb, and Berkshire pigs. All at farmers' prices. Inspection invited.

D. H. RUSSELL, Stouffville, Ontario.

12 SHORTHORN BULLS.

ALL UNDER TWO YEARS OLD.

PRICE, FROM \$100 UPWARDS.

At the Toronto Industrial, 1900, the herd was awarded first for aged cows, three-year-old cows, two-year-old heifers, sweepstakes for female any age, first for herd (bull and four females), and first for breeder's herd.

Young Street trolley cars, from Union Station, Toronto, pass the farm several times a day.

J. & W. RUSSELL,
RICHMOND HILL, ONT.

SHORTHORNS.

THORNHILL HERD. ESTABLISHED 27 YEARS.

Imp. Royal Member and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls.

REDMOND BROS., Millbrook Sta. and P. O.

Mercer's Shorthorns

Are represented by Missies, Stamfords, Floras, Claret Princesses, Red Roses, Fashions, Crimson Flowers, and Matchless families. Headed by Village Squire 24963, a son of Abbotsford. Stock of both sexes and all ages for sale.

T. MERCER, MARKDALE P. O. & STN.

J. & W. B. WATT,
SALEM, ONTARIO
(POST AND TELEGRAPH OFFICE),

BREEDERS OF—

Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

Our herd contains such families as Matchlesses, English Lady, Mildreda, Village Buds, Missies, Stamfords, Mysies, Vanillas, Clarets, and Marthas. The imported bulls, Scottish Peer and Coming Star (a prizewinner at Chicago in 1901), now head the herd.

Farms 2 miles from Elora Stn., G.T.R. and C.P.R., 12 miles north of Guelph.

Shorthorn Bulls.

Good ones. Chocily bred. Moderate prices. Send for bull catalogue. Also Scotch-bred cows and heifers.

H. SMITH, HAY, ONTARIO.

Exeter station on London and Wingham branch of the G. T. R. adjoins the farm.

LESS LABOR AND MORE MONEY ON THE FARM.

BUY A LOW-DOWN, THICK-FLUSHED

Hillhurst Shorthorn Bull,

Scotch-topped, from Cumberland, Gloucestershire, or Canadian dairy strain, and raise **DEEP-MILKING, BIG-FRAMED COWS AND BABY BEEF** in nature's way. Many cows that do not pay board at the pail will give a handsome return in growing beef. Four handsome young bulls, seven to nine months old, reds and roans, by the celebrated imported sires, "Joy of Morning" and "Scottish Hero," for sale at moderate prices. Low freights.

M. H. COCHRANE, COMPTON CO., P. Q.,
G.T.R., 117 MILES EAST OF MONTREAL. **HILLHURST STATION.**

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

Imp. Golden Drop Victor our present stock bull. Eleven young bulls and some young cows for sale at reasonable prices.

H. CARGILL & SON,
Cargill Station, G. T. R. CATALOGUE FREE. **Cargill, Ontario.**

ARTHUR JOHNSTON, GREENWOOD, ONTARIO.

BREEDER OF POST OFFICE AND TELEGRAPH OFFICE. IMPORTER OF

SHORTHORNS ONLY.

FOR SALE: 9 imported bulls and bull calves. 11 home-bred bulls and bull calves, from imported cows and by imported bulls. 17 home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

RAILWAY STATIONS: PICKERING, G. T. R., 22 MILES EAST OF TORONTO. CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

Spring Grove Stock Farm.

Shorthorn Cattle AND Lincoln Sheep.



HERD prize and sweep-stake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the

get of the great sire, Wanderer, of the Cruickshank Bra with Bud tribe. High-class Short-horns of all ages for sale. Also prizewinning Lincolns. Apply

T. E. Robson,
ILDERTON, ONT.

Rapids Farm Ayrshires.

REINFORCED BY RECENT IMPORTATIONS of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows last year. Imported Douglasdale of Dam of Aber, champion at the Pan-American, heads the herd. Representatives of this herd won the first herd prize at the exhibitions at—



Toronto, London and Ottawa in 1900, and at the Pan-American in 1901.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Come and see or write for prices.

Robert Hunter, Manager
for W. Watson Ogilvie, Lachine Rapids, Quebec.

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**Mark Your Stock
Dip Your Stock
Cure Your Stock
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We make a specialty of Ear Labels and Buttons, Tattoo Markers, Milk Oil Sheep Dip, Cooper Sheep Dip (English), Worm Powders, Insect Powder, Rice's Lice Paint, Shears, Shearing Machines, Toxaline French Worm Cure, Crooks, Bells, Poultry Tonic, Poultry Bands, Shepherds' Cordial.

All Best and Cheapest.
Write for Illustrated Catalogue.
F. S. BURCH & CO.,
178 Michigan St., Chicago.
Mention this paper

SHORTHORNS: We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir. -om

ROBT. GLEN, Owen Sound, Ontario.

Scotch-bred Shorthorns FOR SALE—One 3-year-old Gloucester dam; three bulls from 9 to 16 months old, from Cecelia dams. Prices right. **N. A. STEEN,** on MEADOWVALE STATION AND POST OFFICE.

Shorthorns, Cotswolds & Berkshires

FOR SALE: Nine young bulls from 6 to 18 months old, sired by Prince George—28973—, a Scotch-bred bull of the Miss Ramsden family, and from good milking dams. Cows, heifers and heifer calves. A choice lot of ewe lambs. Young pigs of the bacon type from 2 to 6 months old. -om

F. BONNYCASTLE & SON, CAMPBELLFORD, ONTARIO.

Centre Wellington Scotch Shorthorns

Young bulls, heifers and young cows for sale. Farm adjoining town on G. T. E. and C. P. R. Correspondence solicited. -om

H. B. Webster,
Box 66. **FERGUS, ONT.**

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramsden dams. **THOS. ALLIN & BROS.,** on **Oshawa, Ont.**

HIGH-CLASS SCOTCH SHORTHORNS

Of the following families, for sale at moderate prices: Village Girls, Broadhooks, Beaufort Roses, Missies, Clarets, Marr Floras, Nonpareils, Minas and other choice families. Write for catalogue. Shropshire rams and ewes for sale as usual. -om

ROBERT MILLER, Stouffville, Ont.

SHORTHORNS (IMP.)

Cows and heifers, imp. and home-bred. Bulls, imp. and home-bred—all ages. Representing the fashionable blood of Scotland. -om

EDWARD ROBINSON,
MARKHAM P. O. & STN.

Charles Rankin

WYEBRIDGE, ONT.,
IMPORTER AND BREEDER OF
**SHORTHORNS,
OXFORD DOWNS
AND
BERKSHIRE PIGS.**

Young stock always on hand. -om

WE HAVE FOR SALE

10 SHORTHORN BULLS

From 6 to 18 months old. Nearly all from imp. dams, and sired by the imp. Golden Drop bull, Royal Prince. Catalogue upon application. -om

John Miller & Sons, Brougham P. O.
CLAREMONT STATION, C. P. R. **ONT.**

W. G. PETTIT & SON,
FREEMAN P. O., ONT.,
IMPORTERS AND BREEDERS OF

**Scotch Shorthorns and
Shropshire Sheep,**

Are offering 10 imp. bulls from 10 months to 2 years old; 10 home-bred bulls from imp. stock, 10 to 15 months old; 40 imp. cows and heifers, all ages. Home-bred cows and heifers all ages. Also a grand lot of ram and ewe lambs and yearling ewes for sale. -om

Burlington Jct. Stn. Tele. & Phone, G. T. R.
PLEASE MENTION FARMER'S ADVOCATE

GOSSIP.

Mr. J. E. Casswell, breeder and exporter of Lincoln sheep, Shorthorn cattle, and Shire horses, Laughton, Folkingham, Lincs., England, who advertises in the "Farmer's Advocate," and who has one of the best flocks of Lincolns in England, writes: "I am glad to be able to inform you that so far the season has been most favorable to sheep-breeding. Both ewes and lambs are strong and healthy, so have been very little trouble. Up to February 12th I had 165 pairs, and 315 single lambs have gone away, which gives a little over one third pairs. My yearling rams are very even throughout, and look very promising; they were sired by the following rams: Laughton Ring-leader (6271), which won all the champion prizes he was eligible to compete for last season, including the Royal; also his sire Lincoln 130 Guineas (2783), which was the sire of Laughton 235 Guineas (4613), the champion sheep of the year 1899, also the sire of Laughton Ringleader. Laughton Why Not (6272), which won 1st in a pen of five at the Lincolnshire Show, 1900. Pointon 105 Guineas (6409), Nocton Big Skin (3785), which cost 125 guineas as a shearing. Laughton Eclipse (5512), a son of Laughton Perfection. Laughton Vigor (3689), and others. This year's lambs are by the above rams, and others added to the flock as follows: Laughton Supreme (-), which won 3rd prize in a pen of five at the Royal Show held at Cardiff; the Laughton Rambler, which was highly commended at the same show; Pointon James, 1st in a pen of five at the above show and 1st at the Great Yorkshire Show.

"In Shire horses, of which I breed a good number, you will at once realize the quality of animals I keep when I tell you that I have been using for stud purposes such noted horses as Buscot Harold, Markeaton Royal Harold, Bury Victor Chief (all of which have won the championship in London two and three years together), Stroxtan Tom (champion, 1902), Meustrel, Hitch-en Drayman (first-prize winners). The latter horse was purchased by myself and cousins for £600. If at any time you are in England, I shall be pleased to see you, or your friends, at Laughton."

The 23rd annual sale of Shorthorns from the Browndale herd of Mr. H. F. Brown, at Minneapolis, Minn., on March 25th, was very successful, the 35 head sold making an average price of \$750. The Canadian-bred bull, Royal Banner, bred by the Messrs. Watt, of St. John, Ont., and sired by the champion Judge, brought \$1,505, being purchased by W. O. Carpenter, Pukwana, S. D. Imp. Juno, a red four-year-old, by Star of Morning, sold for \$1,550, the highest price for a female, to W. H. Dunwoody, Minneapolis, Minn. Seven other females ran into four figures, bringing \$1,000 to \$1,300, the former price being paid for the Canadian-bred cow, Minnie Benson 3rd, bred by David Birrell, Greenwood.

On March 26th, E. R. Strangland, Marathon, Iowa, sold 41 head of Shorthorns at auction at an average of \$485, the 37 females making an average of \$523, and the four bulls \$1,250 each. 20th Linwood Victoria, an American-bred cow, topped the sale at \$1,775.

On March 27th, Hector Cowan, Jr., Paulina, Iowa, sold 49 head for an average of \$512, the highest price, \$1,400, being realized for Dalmeny Princess 9th, by Scottish Sailor.

Mr. W. W. Chapman, Fitzalan House, Strand, London, the British agent of the "Farmer's Advocate," who is also Secretary of the Southdown Sheep Breeders' Association of Great Britain, has had large experience in selecting and shipping stock of all classes for export, and will be pleased to receive a call from Canadians visiting the Old Country in quest of stock and to afford any assistance in his power either in the purchase and selection of stock or in the shipping arrangements.

THE "FARMER'S ADVOCATE" SELLS THEM.

Mr. George G. Stewart, importer and breeder of Clydesdale horses, Rosebank Farm, Howick, Quebec, writes regarding his advertisement which appeared in our last issue: "With sixteen years' experience as an importer and advertiser in different papers in Ontario and Quebec, yours is the best and quickest returns I have made for all investments in that line, having disposed of Clydesdales 'Amphion' and 'Bucephalus' to Graham Bros., of Claremont, Ont.; 'Voyageur' to John McCaig, of Kilarney, Man., and 'Lord Gartley' to Wm. Hodgins, of Portage du Fort, Province of Quebec. Many farmers of the counties of Chateaugay and Huntington part with 'Lord Gartley' with regret, as he had gained a fine reputation, which will follow him. I leave for Scotland this month, and hope early in June to give you a list of my then importations."

HAWTHORN HERD

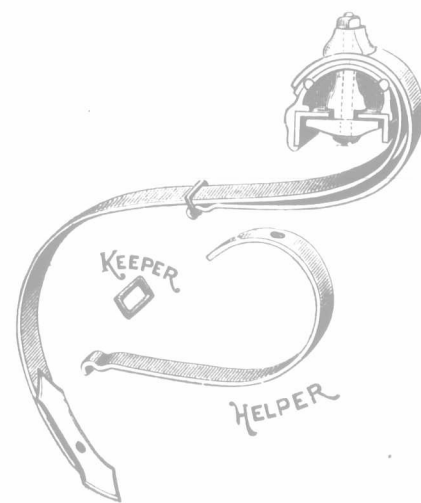
of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from A1 dairy cows. **WM. GRAINGER & SON,** on **Londesboro, Ont.**

For Sale: Very heavy, massive cows of Bates and Cruickshank breed. Two-year-old heifers in calf. Stock bull, Imperial 2nd, No. 28883. Bull calf, 11 months (Cancopper Boy 2nd—39878—), dam Flora—32974—; also dark red heifer calves. **John McFarlane, Dutton, Ont.** -om

A CULTIVATOR STORY

THE Massey-Harris Cultivator

is undoubtedly the most satisfactory and the simplest Cultivator made.



The "Keeper" and "Helper" shown are important features—they prevent the teeth breaking.

If you don't want continually to buy new teeth for your cultivator, obtain a

"Massey-Harris"

in the first place.

The Massey-Harris name is known in every farmhouse in the Dominion. It stands for Canadian industry, reliability, and fair usage to customers. -om

Shorthorns and Berkshires

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin. -om

MAC CAMPBELL, NORTHWOOD, ONT.

Shorthorns, Berkshires, Leicesters

An offering at present the grand stock boar, Crown Prince; also some young ones. -om

ISRAEL GROFF, ALMA, ONTARIO.

SCOTCH SHORTHORNS.

We are now offering a few young bulls, from 6 to 11 months; also a few heifers, from 6 months to 2 years; all showing No. 1 quality. -om

W. G. HOWDEN, -om COLUMBUS P. O.

SHORTHORNS.

One bull, 1 year old; two bulls, 7 months old; a few heifers of choice breeding and superior quality. -om

AMOS SMITH,
Listowel station. **Trowbridge P. O., Ont.**



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

Shorthorns & Clydesdales

100 SHORTHORNS TO SELECT FROM.
Herd bulls (imp.) Diamond Jubilee—28861— and Double Gold—37852—. April offering: Eight grand young bulls, and cows and heifers of all ages. Clydesdales: One 3-year-old stallion, and one 4-year-old mare in foal. Farm one mile north of town. -om

FOR SALE: 5 Scotch Shorthorn Durhams (bulls), 5 to 16 months; 5 young cows and heifers. Berkshire pigs, both sexes. Prices reasonable. "Camden View Farm." **A. J. C. SHAW & SON, Thamesville P. O.** -om

HOLWELL MANOR FARM

SHORTHORNS,
SHROPSHIRE,
YORKSHIRE,
SCOTCH COLLIES.

D. G. GANTON, ELMVALE, ONT.

QUEENSTON HEIGHTS SHORTHORNS

SCOTCH AND SCOTCH TOPPED

In service: Derby (imp.)—32057—; Lord Montalis, by Collynie Archer (imp.)—28860—. Some choice heifers and young cows with calf at foot or in calf to imported bull at moderate prices.

HUDSON USHER,
QUEENSTON, ONT. -om
FARM 3 MILES NORTH NIAGARA FALLS

SHORTHORNS. FOR SALE: 2 choice bulls—one 20 months old and the other 11 months. Also Barred Rock eggs, \$1 per setting. Millar strain. Write: **C. & J. CARRUTHERS, Cobourg, Ont.** -om

Shorthorn Cattle, Lincoln Sheep

Imp. Prime Minister at head of herd. Imp. Clippers, Miss Ramsdens, and other Scotch families. Lincolns won more than half the money and first for flock at the Pan-American; International, Chicago, 1901 and 1902. -om

J. T. GIBSON, on DENFIELD, ONT.

Hillside Shorthorns and Shropshires.

Bulls, from 8 to 18 months old; heifers, various ages, of true type and fashionable breeding; also 25 ram lambs and 15 ewe lambs, from imp. sire. Will quote prices right for quick sales. -om

L. Burnett, Greenbank P. O., Ont.; Uzbridge Sta., G. T. E.

SHORTHORNS (imported)

Two choice young imported bulls—one roan and one red. Write: **THOS. RUSSELL, EXETER, ONT.**

25 HOLSTEIN CALVES

For March, April and May delivery, from such noted strains as Homestead De Kol, Abbecker Chief, and Corelia Ykema, imported, and others. We have spared no expense in getting the best pedigrees furnished. Express prepaid. Safe arrival guaranteed.

H. GEORGE & SONS,
CRAMPTON, ONT. -om

PLEASE MENTION FARMER'S ADVOCATE.

4 HOLSTEIN BULLS 4
 FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inks, Netherland, Royal Aggie, and Tritonia Prince, and out of imported females that have proven their worth at the fair.
THOS. B. CARLAW & SON,
 Warkworth, Ont.

RIDGELING CASTRATION.
 om- Dr. J. Wilson, V. S., Wingham, Ont., Specialist in the castration of ridgeling horses and colts. Terms and testimonials on application.

Ridgedale Farm Holstein-Friesians for Sale.
 2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. **R. W. WALKER,** Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C.P.R. om

BRAMPTON JERSEY HERD
 Offers: 3 St. Lambert bulls from 6 to 14 months old, out of high-testing cows; 1 yearling and 5 bull calves, sired by Brampton's Monarch (imp.). Four young bulls sired by him won 1st, 2nd and 3rd prizes under one year, and 1st prize under six months, also 1st, 2nd and 3rd at London and Ottawa, in 1901. The best is none too good. These young bulls have never been beaten. Get one to head your herd. -om
B. H. BULL & SON, BRAMPTON, ONT.
 G. T. R. and C. P. R. Stations.

FOR SALE: A SPLENDID LOT OF Jersey Cattle.

41 HEAD TO CHOOSE FROM.
 Close descendants of my most noted prizewinners, and closely related to many animals I have sold that have won easily in the Northwest and all over Canada. My shipments last summer ranged from Manitoba to State of Delaware, U. S. -om

MRS. E. M. JONES,
 BOX 324, BROCKVILLE, ONT., CAN.

F. L. GREEN,
 BREEDER OF
 Jersey Cattle and Yorkshire Pigs.
 Choice stock of each sex for sale. -om
 PICKERING STATION, G. T. R.
 CLAREMONT STATION, C. P. R. **GREENWOOD P. O.**

JERSEYS FOR SALE

A few choice Jersey bulls and bull calves for sale at very low prices. Choice breeding; good colors. Write for prices.
W. W. EVERITT
 CHATHAM, ONT.
 "Dun Edin Park Farm," Box 555. om


Wm. Willis, Newmarket, Ont.
 Breeder of A. J. C. C. Jerseys and registered Cotswold sheep. Have yet two fine young bulls from Count, fit for service; also Yorkshire swine. -om

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 Get Your Tag On It!
 No need to silt the ear of your animals to mark them. Mark all your stock with the Alumina "Stay There" Ear Marker. Contains your name, address, and consecutive numbers on each tag. No rusting or wearing off, inexpensive, and perfectly easy and simple to attach. We send free sample and prices upon application.
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AYRSHIRES AND YORKSHIRES.
 We always have on hand choice individuals, male or female, of above breeds. Write us.
 om- **ALEX. HUME & CO., Meile, Ontario.**

SWISS Cow Bells
 Patented Design. Made from Finest Quality Swiss Bell Metal.
 We sell exclusively to the jobbing trade, but to introduce these delightfully musical toned Swiss Cow Bells more generally, offer them singly or in sets, tuned to accord. Made in 8 different sizes, with extra fine and substantial straps, or singly with or without straps. Send for circular of Cow, Sheep and Turkey Bells, etc. We are the oldest Bell Makers in America.
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To Rid Stock of Lice AND ALL SKIN DISEASES.
 Also to Keep Poultry Healthy

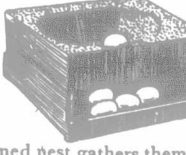
WEST'S FLUID

Which is also a SURE CURE OF CONTAGIOUS ABORTION. STANDARD SHEEP DIP IS CHEAP AND GOOD. Pedigree forms free to customers. Manufacturers:

The West Chemical Co'y,
 om- **TORONTO, ONT.**
 Agt. for Manitoba: **W. R. ROWAN,**
 132 Princess St., Winnipeg.

"VIGILANT" NEST


SLIDING-ADJUSTABLE
 (Patented Can. & U.S.)
 The only nest in the World which positively prevents hens from eating their eggs.
 Simple-Effective-Durable
 No springs - Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to **L. P. MORIN,** Inventor, Mr., 12 Antoine St., St. Hyacinthe, Que.
 Price 45c. each. AGENTS WANTED.



FOR SALE:
 Three grandly-bred Ayrshire bull calves, 12 to 15 moe. old. Also young calves, by Napoleon of Auchebenrain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Collie pups, from Perfection Queen. Address -
T. D. McCALLUM,
 Nether Lea, -om Danville, Que.

NEIDPATH AYRSHIRES. Four (4) August, 1901, bull calves. A number of heifer calves, yearlings and two-year-olds. Also a few March, 1902, bulls. **W. W. BALLANTYNE,** Stratford, Ont. Farm adjoins city, main line G.T.R. om

Ayrshire Bulls from 1 1/2 years to 6 months, from special milking stock, sired by the sweepstakes bull, Cock of the North - 9997 - also females all ages. Shropshire sheep. Berkshire pigs, either sex, and B.P. Rocks. For particulars write -om
J. YULL & SONS, Carleton Place, Ontario.



AYRSHIRE CATTLE AND POULTRY.

FOR SALE: Royal Star of St. Annes, 1st-prize bull at Toronto and London, also heifer calves, heifers and cows from dams with milk records from 40 to 64 lbs. per day. Price from \$35 to \$80 each. Barred Plymouth Rocks, Black Minorcas, Cornish Indian Games, \$1.50 each. Four pair Toulouse geese, \$1.00 per pair. For particulars write

WILLIAM THORN,
 Lynedoch, Ontario.
 Front Run Stock Farm. -om
 Norfolk Co.,

NO HUMBAG!
 9 PERFECT instruments in 1. One. Humane Swine V. Stock Marker and Calf Dehornner. Sows swine of all ages from rooting. Makes 48 different ear marks, large or small, with same blade. Extracts horns. Testimonials free. Price, \$1.50; or send \$1, get it on trial, if it suits send balance.
 Patented April 23, 1901, U. S.
FARMER BRIGHTON, Fairfield, Iowa.



Tredinnock Ayrshires.

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchebenrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address
JAMES BODEN, Mgr.,
 St. Anne de Bellevue, Quebec.
 Farm close to St. Anne Station, Quebec.
 G.T.R. & C.P.R., 20 miles west of Montreal. om

LITTLE'S PATENT FLUID
(NON-POISONOUS)
SHEEP DIP AND CATTLE WASH

THE ORIGINAL Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep. Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

Beware of Imitations.

Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranch men, and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET.
Robert Wightman, Druggist, Owen Sound
 Sole agent for the Dominion. -om

GOSSIP.

A St. Joseph, Missouri, horse dealer is reported to have got a contract for 12,000 horses, to be delivered at the rate of 500 per month, for use in the British army in South Africa.

J. & W. B. Watt, Salem, Ont., breeders of Shorthorns and Clydesdales, write: "Our cattle came through the winter looking their best. We have a very promising lot of calves, and although we have made a great many sales, the herd numbers seventy-five head. About the end of February we shipped our junior sweepstakes bull (at Toronto Industrial), Royal Wonder = 34682 =, to C. L. McClellan, Lowden, Iowa. Royal Wonder was never beaten in Canada, and when sold weighed 1,900 pounds, at 29 months. We recently purchased the three-year-old Clydesdale mare, Grace Darling, 5th, from Mr. John Isaac Markham. She was the highest-priced mare at Mr. Isaac's sale, and weighs 1,650 pounds. The third-prize mare at Toronto Industrial last year, Moss Bank (3043), which we purchased from Mr. George Crawford, Oro, is looking fine, and weighs over 1,900 pounds. These mares are full of quality, and have the best of action."

The third international conference of sheep breeders will be held at Carlisle, England, on July 5th, during the week of the Royal Show, which is this year to be held in that city. Mr. A. Mansell, of Shrewsbury, will read a paper at the meeting on "The deleterious effect produced by the use of substitutes for wool in the manufacture of so-called woolen articles in England, America, and on the Continent; their injurious effect on the prices of wool, and the desirability of legislation to prevent the sale of such goods as woolen goods." The Secretary, Mr. W. W. Chapman, 32 Fitzalan House, Arundel St., Strand, London, will be pleased to have the names and addresses of breeders or representatives of societies who may intend to be present at the conference, so that any subsequent communication that may be needful can be made direct to them.

We are in receipt of the 1902 catalogue of the Ratcheugh herd of Shorthorns belonging to Mr. William Bell, Alnwick, England, whose advertisement is running in the "Farmer's Advocate." The catalogue contains the pedigrees of nearly one hundred animals, representing a number of excellent families and the blood of a long list of choicely-bred bulls from such noted herds as those of Messrs. Duthie, Cruickshank, Campbell, Marr, Shepherd, and of others bred in the herds of Her late Majesty Queen Victoria and Lord Polwarth. Among the stock bulls in service is Baron Abbotsford, first as a two-year-old at the Royal Show last year, by Baron Alnwick, out of Lady Clara 3rd, by the Duthie-bred Abbotsford, and her dam by Lord Lavender, bred by Mr. Cruickshank; grandam by William of Orange. A full brother is Baron's Pride, bred in the herd, a prizewinner at the Royal and many other leading shows, their dam, Lady Clara 3rd, having been a winner at the Royal three years, at the Highland Show three years, at the Yorkshire four years (including the Shorthorn dairy prize and the family prize with her two sons), and at Durham two years, including champion cup for best breeding animal among cattle. Canadian importers would do well to look over the Ratcheugh herd, where they will find quality, substance and symmetry combined with good sound breeding.

GOOD PRICES FOR HEREFORDS.
 At the sale of 75 head of Herefords from the Weaverage herd of Mr. T. F. R. Sotham, Chilloithe, Mo., held at Chicago, March 25th, good prices were realized, the entire disposal averaging \$454 per head. The two-year-old heifer, Galatea, by Corrector, topped the sale at \$1,650. Mr. Geo. E. Ricker, Quincy, Ill., being the purchaser. Lady Charming, a six-year-old daughter of Corrector, brought \$1,350, and two others sold for \$1,000 and \$1,005.

NOTICES.
BARN PAINT.—Realizing the hesitancy on the part of farmers to buy high-priced oil paints, the Zanibar Paint Co., Ltd., Toronto, have put on the market a barn and roof paint in several attractive colors, at a price which will enable almost every farmer to keep his buildings in a good state of preservation and well appearing. Zanibar barn paints are smooth, durable, and bright ready for the brush, and easily applied. See advertisement.

IDEAL FENCING.—McGregor, Bannwell & Co., Windsor, Ont., announce that they have embarked in the manufacture of woven wire fencing, with ample up-to-date machinery. They have issued a catalogue which freely describes the excellencies of their fencing, with which readers would do well to familiarize themselves by obtaining a copy.

A FINE COOK BOOK FREE.—By sending your name and address on a post card to J. Hewitt, 61 Front street east, Toronto, and mentioning the "Advocate," you can get a fine cook book containing 262 recipes, sent to your address, absolutely free of charge. Besides the recipes, this book contains much information valuable to the careful housewife. Send for it to-day. You will be delighted with it.

I Will Cure You of Rheumatism
 No pay until you know it.

After 2,000 experiments, I have learned how to cure rheumatism. Not to turn bony joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask for no money. Simply write me a postal and I will send you an order on your nearest druggist for six bottles of Dr. Shoop's Rheumatic Cure, for every druggist keeps it. Use it for a month, and if it does what I claim, pay your druggist \$5.50 for it. If it doesn't, I will pay him myself.

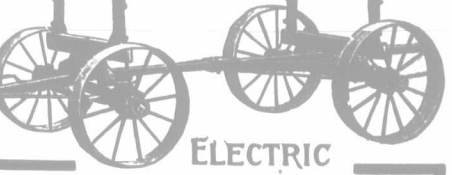
I have no samples. Any medicine that can affect Rheumatism with but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most difficult, obstinate cases. No matter how impossible this seems to you, I know it and I take the risk. I have cured tens of thousands of cases in this way, and my records show that 89 out of 40 who get those six bottles pay, and pay gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal card or letter. Let me send you an order for the medicine. Take it for a month, for it won't harm you anyway. If it cures, pay \$5.50. I leave that entirely to you. I will mail you a book that tells how I do it.


Simply state which book you want and name of your dealer, and address
DR. SHOOP, Box 63, Racine, Wis.

ELECTRIC Handy Farm Wagons
 make the work easier for both the man and team. The tires being wide they do not cut into the ground; the labor of loading is reduced many times, because of the short lift. They are equipped with our famous Electric Steel Wheels, either straight or stagger spokes. Wheels any height from 24 to 60 inches. White hickory axles, steel hounds. Guaranteed to carry 4000 lbs. Why not get started right by putting in one of these wagons. We make our steel wheels to fit any wagon. Write for the catalog. It is free.
ELECTRIC WHEEL CO., BOX 253, QUINCY, ILL.



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THE CANADIAN WINDMILL TORONTO
 ONT WIND ENGINE & PUMP CO.



Canadian AIRMOTOR

IS A
TERROR TO WORK.

WHY? CAST-IRON CONSTITUTION MECHANISM SO SIMPLE. MATERIAL THE BEST.

ONT. WIND ENGINE & PUMP CO., LIMITED. TORONTO, ONT.
 Manitoba Agents: **BALFOUR IMPLEMENT COMPANY, Winnipeg, Man.**

Fitzgerald Bros., Mt. St. Louis, Ont., offer, at farmers' prices, young Shorthorn bulls sired by Imp. British Statesman. See their advertisement.

NOTICE.

NEW VETERINARIANS.—At the closing exercises of the Ontario Veterinary College in Toronto, on March 27th, Prof. A. Smith, F. R. C. V. S., Principal, took the chair, and addresses were delivered by Mayor Howland, Prof. Mavor, and Prof. Lang, of the Toronto University; Mr. W. K. McNaught, President of the Toronto Industrial Exhibition, and Dr. Duncan, M. D. Mayor Howland congratulated Principal Smith upon his success in conducting the College. There were some seventy graduates, representing Great Britain, Newfoundland, the United States, and Canada.

FARMERS!
KEMP'S INSTANTANEOUS
Sheep Dip

Contains more value for the money than any other Dip on the market. We will send a tin prepaid to any part of Ontario for **ONE DOLLAR**. Half gallon, Imperial measure, in each tin. It is the cheapest disinfectant for outbuildings, drains, etc.

W. W. Stephen,
MEAFORD, ONTARIO.

EUROPEAN ADVERTISEMENTS.

Ayrshire HERD OF 150 cows and heifers, bred from deep milkers, with large teats, of a commercial stamp. Established over half a century. **J. & A. Wilson,** Boghall Farm, Houston, Renfrewshire, Scotland.

PEDIGREE AYRSHIRES. Cows and heifers, all bred from prizewinning stock at the leading shows. **Robert Wilson, Mansuræ, Bridge of Weir,** Renfrewshire, Scotland.

English Shorthorns.

Both and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdbook. Royal and Highland prizewinners included for the last two years. Close on £400 won in prizes last year and this.

WM. BELL,
Ratcheugh Farm, Alnwick, Northumberland, Eng.

FAMOUS ALL OVER THE WORLD
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LIVESTOCK AGENTS AND EXPORTERS,
SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to **ALFRED MANSELL & CO.,** Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

HAMPSHIRE DOWN SHEEP
GREAT
ENGLISH PEDIGREE SALES,

July, August & Sept., 1902
Waters & Rawlence, Salisbury, Eng., will sell by public auction, during the season, upwards of

50,000 PURE-BRED EWES, LAMBS, RAMS, including both rams and ewes from the best registered prizewinning flocks in the country. Commissions carefully executed. Address

Waters & Rawlence,
SALISBURY, ENGLAND.

WALTON HERD
OF
PEDIGREE PIGS,
The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day. Its show yard career is unique, the champion prize for the best Large White pig at the R. A. S. E. having been won by pigs bred in the herd in 1896, '97, '99 and 1901, besides leading prizes too numerous to mention at all the principal agricultural shows in England. A choice selection of boars and sows for sale. Inspection invited. All purchases carefully shipped. For particulars, apply to the Manager, **M. J. HALLAS, Higher Walton, Warrington, England.** Railway stations: Warrington (Bank Quay) per L. & N. W. Ry.; (Central) per N. & W. Ry.; or G. C. Ry. Telegrams, "HALLAS Higher Walton."

W. W. CHAPMAN,
Secretary of the National Sheep Breeders' Association,
Secretary of the Kent or Romney Marsh Sheep Breeders' Association,
and late Secretary of the Southdown Sheep Society.
Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.
Address: **FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W.**
Cables—Sheepcote, London.

FAIRFIELD LINCOLNS
Imported ewes and lambs. Can supply show flocks.
J. H. PATRICK, ILDETON, ONT., CAN.

COTSWOLD HILL STOCK FARM
Offers imp. and home-bred Cotswolds of both sexes and all ages, from the champion flock of Canada for the last six years.
JOHN PARK & SONS,
Burgessville P.O. and Stn.

COOPER SHEEP DIP
STANDARD OF THE WORLD
for 60 years. Used on 250 millions annually. Superior to all other kinds. No smell. Benefits while it cures. Keeps flock clean a long time. Increases growth and quality of wool. Used by large majority of sheep breeders in all countries.
If local druggist cannot supply, send \$1.75 for \$2 (100 gal.) pkt. to **EVANS & SONS, Limited,** Montreal and Toronto.

American Leicester Breeders' ASSOCIATION.

A. W. Smith, Pres., Maple Lodge, Ont.
Pedigrees now being received for Vol. 4. For information, blanks, etc., address:
A. J. TEMPLE, Sec., CAMERON, ILL., U. S. A.

JOSEPH FERGUSON, UXBRIDGE, ONT., BREEDER OF
Pure-bred Cotswolds—choice quality
om UXBRIDGE P. O. AND STATION.

IMPORTED COTSWOLDS

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID,
COURTICE P. O.
SIX MILES FROM OSHAWA STATION, O. T. R.

CHAS. GROAT,
BROOKLIN, ONT.,
OFFERS FOR SALE

Cotswold Ewes and Ewe Lambs of good quality and breeding. Also a registered stallion, 1 year old, and oneilly foal. Good ones. A Duchess of Gloster bull, 15 months old, for sale. Write for price and particulars.

SUMMERHILL OXFORDS.

Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.
PETER ARKELL & SONS,
Teeswater P. O. and Station.

BROAD LEA OXFORDS.

Can sell a few choice ewes of different ages, bred to our imported rams. May King 1st and Earl of Fairfield 2nd; also 75 good ewe and ram lambs, and an imported two shear ram. Come and see our flock, or write us for prices, etc.

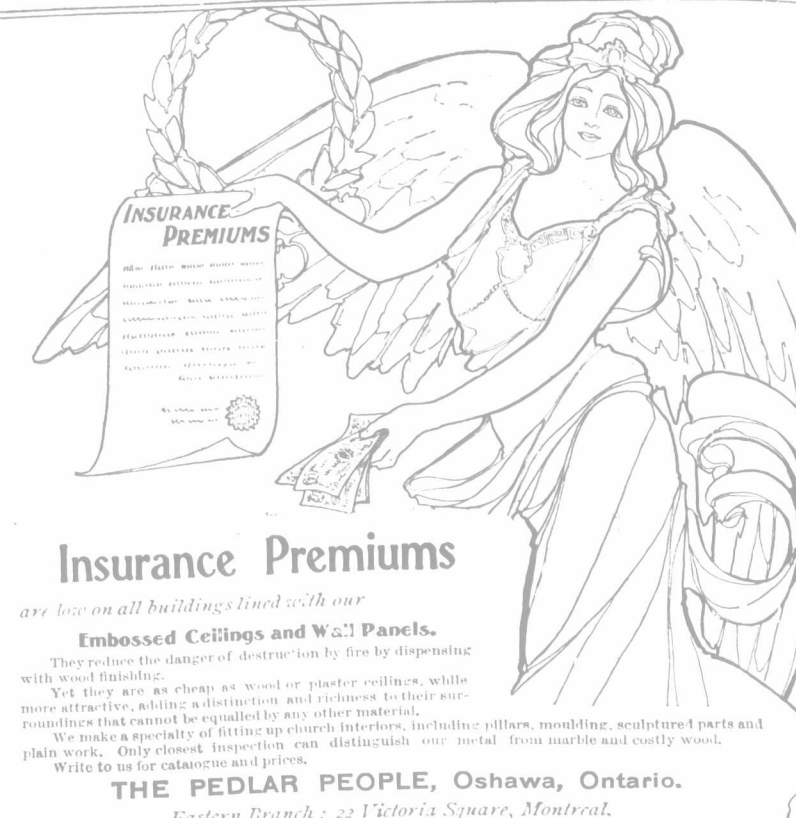
HENRY ARKELL & SON, TEESWATER, ONT.,
MILDMAY, G. T. R.; TEESWATER, C. P. R.

Linden Oxford and Shorthorns

Flock composed of selections from the best English flocks and their progeny. None but the best imp. rams used. Stock for sale.
R. J. HINE, Dutton, Ont.

REG. 50 SHROPS. 50
FOR SALE:
Shearling and two shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade. Foundation stock bred by Mansel, England. Prices moderate. A card will bring them.
ROWAT BROS.,
Phelpston station, G. T. R.; Hillsdale, Ont. miles east. Simcoe Centre.

Insurance Premiums
are low on all buildings lined with our
Embossed Ceilings and Wall Panels.
They reduce the danger of destruction by fire by dispensing with wood finishing.
Yet they are as cheap as wood or plaster ceilings, while more attractive, adding a distinction and richness to their surroundings that cannot be equalled by any other material.
We make a specialty of fitting up church interiors, including pillars, moulding, sculptured parts and plain work. Only closest inspection can distinguish our metal from marble and costly wood.
Write to us for catalogue and prices.
THE PEDLAR PEOPLE, Oshawa, Ontario.
Eastern Branch: 22 Victoria Square, Montreal.



To House Owners.

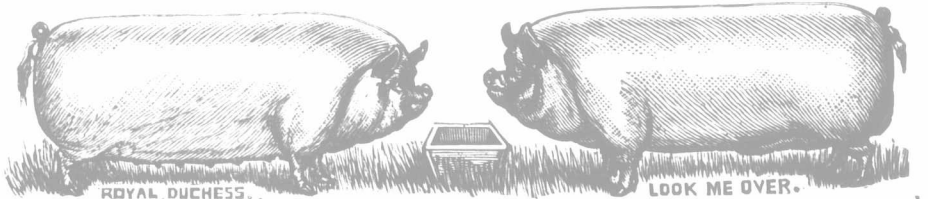
"Ill fares the land,
To every ill a prey,
Where Paints deteriorate
And houses decay!"

The use of **THE CANADA PAINT COMPANY'S PAINTS** will preserve your buildings and add to their value and appearance.

THE CANADA PAINT COMPANY (LIMITED),

The largest manufacturers in the Dominion of Canada of high-class **PAINTS** for interior and exterior use.

SUMMERHILL HERD OF Large English Yorkshires.
HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given; all the medals and every first prize but six won by the Summer Hill Yorkshires. When in need of the best write **D. C. FLATT & SON, MILLGROVE, ONT.** Telephone: Millgrove, Ont.

Large English Berkshires.
My herd consists of sows imported from England; three of them (including a show sow) were selected from the herd of Geo. Green and were bred to his show boars. Young stock for sale (not akin).
JNO. LAHMER, VINE, ONT.

HIGH-CLASS SHROPSHIRE.
A flock of 75, of good type. Two-shear rams, yearling rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. **Abram Rudell, Hespeler P.O., Ont.** C. P. R. and G. T. R.

Imported Poland-China Hogs. We are offering choice, of both sexes, any age (pairs not akin), from imported stock, and of the true type. Easy feeders, rapid growers. **ROBT. L. SMYTH & SONS,** om Fargo P. O. and Station, M. C. R.

W. S. CARPENTER,
"MODEL FARM," SIMCOE, ONT.,
BREEDER AND EXPORTER OF
Shropshire Sheep.

Rams and ewes for sale. Well covered. Station 1 mile from Farm, Wabash and G. T. R.

WILLOW LODGE BERKSHIRES FOR SALE
Two boars 11 mos. old; 4 boars 6 mos. old; 3 boars 5 mos. old; 1 boar 3 mos. old; also a number of sows from 3 to 5 mos. old. Now is the time to order spring pigs, which are arriving daily, sired by Longfellow 1st, H. F. No. 8633, Willow Lodge Prince (9789) and Milton Lad (9660). Pairs supplied not akin.
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STEWART'S SHEEP SHEARING MACHINE
 Highest and Only Award at Pan-American Exposition.
 1902 Model, price including grinder, only **\$1850**
 Will be fitted with the wonderful Stewart Shear cutter of 10 Sheep or more can afford to shear by hand even though the work be done for nothing. Don't butcher your sheep. Shear with this machine, and get **ONE POUND WOOL EXTRA PER HEAD.**
 Will more than cover the whole cost of shearing. Send today for valuable book on shearing. It is free and will save you money.
CHICAGO FLEXIBLE SHAFT CO.,
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YORKSHIRES.
 TWO good 7-months-old, pure-bred Yorkshire sows, bred to a pure-bred Chester hog. For sale reasonable.
R. H. HARDING, Thorndale, Ontario.

YORKSHIRES
 Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow.
WM. TEASDALE, Dollar, Ont.
 Northern branch G.T.R., 15 miles from Toronto. om

YORKSHIRES AND POULTRY.
 Young pigs, both sexes, extra choice. Eggs for hatching. No. 1 pens \$1.50, No. 2 pens \$1. from B. P. Rocks, W. Wyandottes, White and Brown Leghorns. A few Buff Orpington eggs at \$2.50 per setting. Choice pedigree collie pups. M. B. turkey and Pekin duck eggs. om
A. B. ARMSTRONG, CODRINGTON, ONT.

Imported and Canadian-bred
YORKSHIRES.
 A number of good young sows in pig, boars ready for service and young pigs from 2 to 3 months old, direct from imported stock. Pairs and trios supplied not akin.
H. J. DAVIS,
 Box 290, WOODSTOCK, ONT.
 Importer and breeder of Shorthorns and Yorkshires.

FOR SALE:
Yorkshires and Holsteins
 Best type and quality. Young stock constantly on hand. Prices right. **R. HONEY,** om
 Brickley P. O., instead of Warkworth.

NEWCASTLE HERD OF TAMWORTHS
 We are now offering a dozen boars fit to wean about 1st to the 10th May. A few young sows 3 months old, from Toronto Industrial winners. Prices right for quick sale. om
COLWILL BROS., NEWCASTLE, ONT.

Coldspring Herd Tamworths.
 Offer choice Oct. and Nov. boars and sows. Also my stock boar, Advance. This is the spot for the best. Write for prices. They are moderate, quality considered. om
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 BRANT CO.

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 for the New Pictorial Stock Doctor and Live Stock Cyclopedia, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages to agents. A full-page announcement of this book appeared in the ADVOCATE of the issue of June 5th. Particulars mailed free. Address **WORLD PUBLISHING Co., Guelph, Ont.**

EGGS FOR HATCHING.
 Barred Rocks (exclusively) bred from C. Mueller's noted prizewinners, carefully selected and mated as to color, shape and size. \$1 per 13. Give me a trial and be convinced that my stock is right. **ALLEN SHANTZ, Waterloo, Ont.**

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 CUTS BY ALL PROCESSES
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Family Knitter
 Cheapest, Simplest, Best.
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 DUNDAS, ONTARIO.

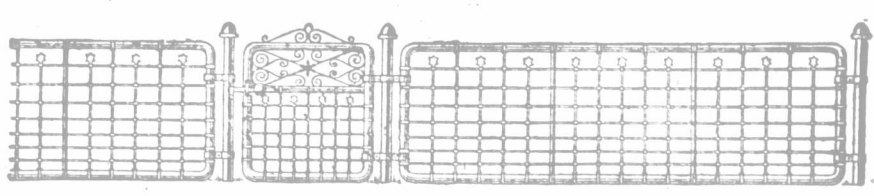
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FARMER'S ADVOCATE.

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

A VALUED PUBLICATION.
 A publication of interest to stock-breeders the world over is the annual report of the U. S. Bureau of Animal Industry. The 17th annual report is just to hand, and contains the report of the Chief, Dr. D. E. Salmon, and his corps of assistants; such subjects as the free distribution of blackleg vaccine, a strong case being made out for the continuance of the scheme; some diseased conditions found as a result of meat inspection; and an interesting chapter on ocean transportation. Rabies is taken up by the Chief, who also contributes a useful article on "Poultry-raising on the farm." Other subjects of more or less strictly scientific nature, together with a number of fine plates and a lot of statistics, make up a bulky volume of 650 pages. The tardiness with which the report makes its appearance is its chief drawback. The front page contains the motto of the U. S. Department of Agriculture, viz., "Agriculture is the foundation of manufacture and commerce," which our legislators would at all times do well to remember.

THE ART OF FEEDING.
 The Macmillan Co. have added another excellent volume to their Rural Science Series of books, so often mentioned favorably in the "Farmer's Advocate." It is entitled "The Feeding of Animals," and is written by a first-class authority, Prof. W. H. Jordan, Director of the New York Experiment Station. The aim of the work is to present the main facts and principles fundamental to the art of feeding animals as now understood, and the author, we are bound to say, has done his work with ample knowledge and a wise discrimination. Agricultural students and storkmen will alike find it valuable. He wisely intimates, we think, that it is time to break away from an indiscriminating adherence to mathematical doses of nutrients, the accuracy of which was long held by some to be the measure of successful feeding. Formulas are an aid, but must be used with discretion under the great variety of circumstances and conditions which arise in the course of the feeder's experience. In the chapter on corn ensilage and the silo, he records that the weight of evidence shows that the wastes in field-curing are greater than with the silo, besides which, of course, there is the gain in succulence and palatability. It is a well-printed book of 450 pages, convenient in size, and sells at \$1.25.

A BOOK FOR STOCK-RAISERS.
 The World Publishing Company, of Guelph, Ont., has put upon the market a new work, "The New Cyclopedia of Live Stock and Complete Stock Doctor." This is a work of over 1,400 pages and 800 illustrations. It treats at length with the different classes of domestic animals, viz.: Horses, cattle, sheep, swine, poultry and dogs, with a chapter on bees. The author of every article in the book is a specialist upon his particular subject. It deals briefly but comprehensively with the anatomy of the above-mentioned animals, furnishes cuts to illustrate points of the same, also to illustrate the desirable conformation, especially of the horse. It is replete with excellent illustrations of well-known high-class prizewinning individuals of all classes of stock. It deals at length with all animals in both health and disease, and describes the causes, symptoms and treatment for diseases. A chapter is devoted to the examination of a horse as to soundness; others to the education of a horse, how to buy and sell, etc. It deals with the origin and history of the different breeds of all classes, the characteristics and peculiarities of each breed, best methods of breeding, general care of stock, construction of stables, grooming, feeding, watering, etc. A chapter is devoted specially to the American trotter; one to the bacon hog; one to horse-breeding, giving tables on the points of excellence in each class; one to dairying and dairy buildings; and one to poultry. As far



Ornamental Gates and Lawn Fences
 are a specialty with us. Prices on application.
THE FROST ornamental gates are the handsomest and best. Write for catalogue.
THE FROST WIRE FENCE CO. LTD., WELLAND, ONT

PAGE METAL GATES are so low in price no one can afford to use wooden ones. Light, and yet strong enough to support a heavy man on the end while he swings around the circle without causing them to sag. They are neat in appearance, will last a lifetime. Will not sag nor get rickety. They are supplied with latches which allow them to be opened either way and are self acting. The only good metal gate that is low enough in price for general farm purposes. We also make Farm and Ornamental Fence, Poultry Netting, Nails and Staples. **The Page Wire Fence Co., Limited, Walkerville, Ont.]**

THIS CUT ILLUSTRATES THE ONLY "Hinge" Stay Fence
 It will not sag, and is cheap, strong and durable. Write for circular and prices.
Good Agents Wanted in every locality, to whom we guarantee good returns.
The Strathy Wire Fence Co. (LIMITED), OWEN SOUND, ONT.
 SHOWING HINGE MOVEMENT OF STAYS UNDER PRESSURE. STAYS CANNOT BEND & WILL SPRING BACK TO PLACE WHEN PRESSURE IS REMOVED. **Nº13**

THE GYPHERS INCUBATOR
 ON SALE BY RESPONSIBLE CANADIAN AGENTS.
 Used with uniform success on twenty-six Government Experiment Stations in the U. S., Canada, Australia and New Zealand; also by America's leading poultrymen and many thousands of persons in every non-moisture incubator, fully covered by patent. **The original and only genuine**
WRITE FOR NAME OF CANADIAN AGENT NEAREST YOU.
 Agents carry incubators in stock, duty paid, and can save you money. Complete 180-page catalogue for 1902, finely illustrated, free if you mention this paper. Ask for Book No. 110. Address **Gyphers Incubator Co., Buffalo, N. Y., Chicago, Ill., Boston, Mass., New York, N. Y.**

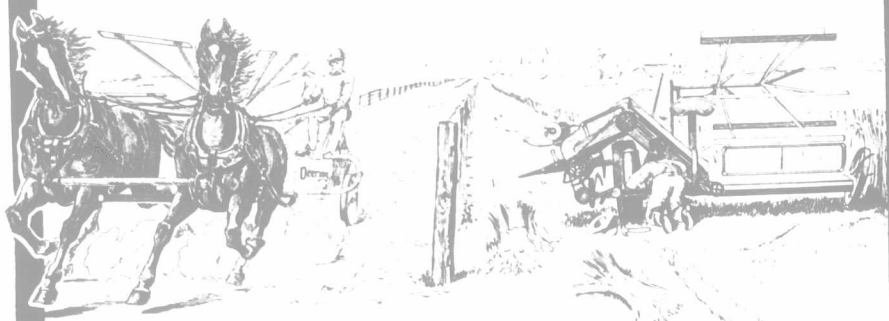
DENTONIA PARK FARM
EGGS
 S. C. Leghorns—White, Buff and Brown - \$1.50 per 13.
 Andalusians, White Langshans, - - - - - 1.50 per 13.
 White Wyandottes, - - - - - 1.50 per 13.
 Pekin ducks (special matings), - - - - - 1.50 per 11, 5.00 per 100.
 S. C. White Leghorn breeding pens mated with cocks direct from Wychoff's stock, of Groton, N. Y. Stock for sale. Correspondence solicited.
O. REYNOLDS, Coleman, Ontario.

100% a Year is Big Interest
 but that is what many users of **THE IMPROVED U. S. SEPARATOR** are receiving on the money invested.
 It is nothing unusual to receive letters from users of the U. S. stating that it has produced enough more cream in a year to pay for the machine, to say nothing of the improved quality of the product and the saving of time and labor.
 The U. S. Separator is not only "The kind that gets all the Cream," but it also wears the longest and saves its users much by not requiring repairs like other makes. Write for our latest illustrated catalogues,—Free. 260
VERMONT FARM MACHINE CO., BELLOWS FALLS, VERMONT.

as possible there is an absence of technicality, all being written in plain English. This work should be a valuable addition to the library of any person who breeds or owns stock.
J. HUGO REED, V. S.
 The price of the volume, which is handsomely and substantially bound and well printed, is: Cloth bound, \$3.75; half Russia, \$4.50.

INCUBATORS AND BROODERS.
 Guaranteed to give satisfaction. Built to last a lifetime. Absolutely self-regulating, self-ventilating, and perfectly reliable in every way.
 For circular giving prices, etc., write the manufacturer: **J. E. MEYER, Kossuth, Ont.**
 Shipping station: Guelph.
GRAMMING MACHINES, FATTENING COOPS, Incubators and Brooders POULTRY SUPPLIES. A. J. MORGAN, MFR., LONDON.
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EGGS FOR SALE. B. P. Rock, W. Wyandotte, Buff Orpington, and Houdan; also Pekin ducks; \$1.25 per setting. om
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 And Family Almanac for 1902. 100 pages 120 engravings. The best work of its kind ever published. Gives recipes for making condition powders, remedies for all diseases of fowls, plans and diagrams for building poultry houses, kills and traps for rats, etc. Also profitably gives description with illustrations of leading varieties of poultry fowls, also and poultry supplies at lowest prices. It is an encyclopedia of chicken raising. It is worth many times its cost. It is a must for every poultryman. Buy your copy now. It is not to be without it. Send for it now. Receipt of price guaranteed. Ask for it. om
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DEERING TO THE RESCUE!



WHEN SOMETHING GOES SNAP

on that binder for which so much was promised, and there is an enforced halt in the midst of the busy harvest, the farmer instinctively turns to the Deering for succor.

No crop is beyond harvesting when there is a DEERING IDEAL BINDER on the ground. It will cut, elevate and bind any condition of grain. It is built to meet every requirement, and meet it satisfactorily. It is the all-round, ever-dependable machine.

Get a Deering Binder and you will be always ready for harvest.

The Deering Harvester Company controls the entire output of the Mann Manufacturing Co., Limited, of Brockville, Ont., and are prepared to supply the trade with the famous Mann line of Seeding and Tillage machines.

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CANADIAN BRANCHES: TORONTO, LONDON, MONTREAL, WINNIPEG.
World's greatest manufacturers of Binders, Headers, Mowers, Reapers, Corn Binders, Corn Shockers, Huskers and Shredders, Rakes, Twine, and Oil.

CANADIAN PORTLAND CEMENT



BRANDS:

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Excels all other cements for durability and economy in building concrete silos, barn foundations, floors, hogpens, cisterns, etc.

Watch our advertisement in each issue. Write for prices and other information to our sales agents.

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SUNLIGHT SOAP

If your Grocer cannot supply, write to LEVER BROTHERS LIMITED, Toronto, sending the name and address of your grocer, and a trial sample of Sunlight Soap will be sent you free of cost.

REDUCES EXPENSE

One woman will do more work than two will with impure soap. Ask for the Octagon Bar

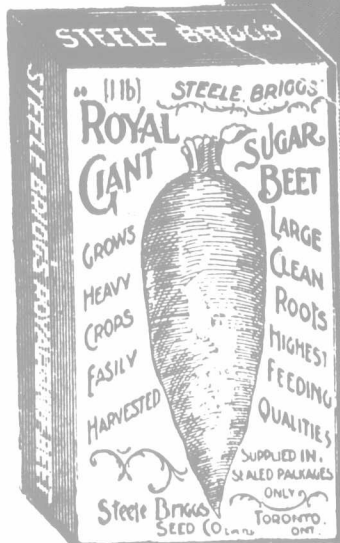
"CANADA'S GREATEST SEED HOUSE."

The Growers' Favorite

STEELE BRIGGS

"ROYAL GIANT"

SUGAR BEET



A TRUE SAYING

"Imitation is Flattery."

When an article has merit and becomes popular it is likely to be imitated.

To imitate is to impose upon the buyer thereof and mislead those wanting the genuine. Ask for

Steele, Briggs' "ROYAL GIANT" Sugar Beet

It is supplied only in 1 lb. packages, as represented in above cut. See that their name is upon the package.

PROTECT YOURSELF

If your local dealer cannot supply you send order direct for "Royal Giant."

PRICE (Carriage Paid)

1 lb. packages, 10 cts. per lb. in 10 lb. quantities, 85 cts.

What Growers Say.

"'ROYAL GIANT' gives a surprisingly heavy crop of clean, handsome roots, and easily harvested."

"It beats them all; wish I had planted all my sugar beet crop with your 'Royal Giant.' I shall do so this season."

"I never had a crop like 'Royal Giant' gave me; they are large, clean and easily taken up; keeps solid all winter."

"You recommended me to plant your 'Royal Giant.' I did so, and had the finest root crop I have ever grown; all animals upon the farm eat it with relish."

Use Steele, Briggs' "ROYAL GIANT."

A Valuable Root Crop.

Stock feeders and producers of milk will find that

"Royal Giant"

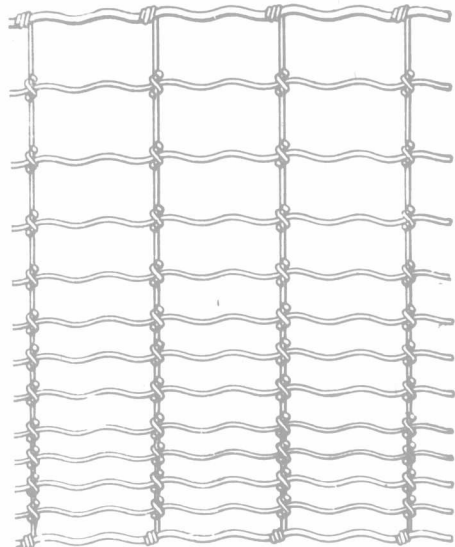
is not only a good flesh maker, but also increases the flow and enriches the quality of milk, which enhances the value of butter and cheese by improving the quality and flavor.

No other class of roots is so desirable for feeding milch cows or more profitable for the grower as a crop producer.

The Steele, Briggs' Seed Company, Limited
TORONTO, ONTARIO.

PLEASE MENTION FARMER'S ADVOCATE.

LAMB FENCE



What is the difference between "LAMB FENCE" and a Bass Drum? You can beat the Drum, but you cannot beat "Lamb Fence." Heavy, hard wire cross-bar. High carbon laterals.

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FREE SAMPLE OF LIEBIG'S FIT CURE.

If you suffer from Epilepsy, Fits, Falling Sickness, St. Vitus Dance, or have children or relatives that do so, or know a friend that is afflicted, then send for a free trial bottle with valuable Treatise, and try it. The sample bottle will be sent by mail, prepaid, to your nearest Post Office address. It has cured where everything else has failed. When writing, mention this paper and give name, age and full address to THE LIEBIG CO., 179 KING ST. WEST, TORONTO, CANADA.

The Flow of Milk will be increased.



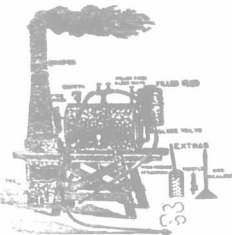
Why go to all the trouble of keeping cows and get only about half the milk they should produce.

Dick's Blood Purifier

strengthens the digestion and invigorates the whole system so that the nutriment is all drawn from the food. It takes just the same trouble to care for a cow when she gives three quarts as when she gives a pail. Dick's Blood Purifier will pay back its cost with good interest in a few weeks. 50 cents a package.

Leeming, Miles & Co., Agents,
MONTREAL.
Write for Book on Horses and Cattle free.

RIPPLEY'S COOKERS



Are now made in Canada, saving duty and freight for our customers. Made of boiler steel. No flues to rust or leak. Will cook 25 bushels roots or grain in two hours. Fine for heating stock water-tanks, dairy rooms, pigpens. Can be used outside or attached to a chimney same as a stove. Used and endorsed by the following Canadian breeders and many others: Brethour & Saunders, Burford; W. D. Platt, Hamilton; D. C. Platt & Son, Millgrove; H. J. Dancy, Woodstock; Ontario Agricultural College, Guelph; also James Boden, Graham Bros., Newton & Cash, J. A. McDonald, J. P. Connely. Prices, \$10 to \$15. Took first premium at Toronto and London fairs. Catalogue and prices mailed free. Address:

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BOX 215, LONDON, ONT.
U. S. Factory: Grafton, Ill.

IN WRITING
PLEASE MENTION FARMER'S ADVOCATE.

NEW FIELD ROOT. Giant Sugar Mangel.

GREATEST YIELDING ROOT GROWN. OF HIGHEST FEEDING VALUE FOR PRODUCING MILK, OR AS A FLESH FORMER.

Since the introduction of the Danish Sugar Beet, an extraordinary demand has been created for a field root containing a higher percentage of nutritive value as well as producing the large weight per acre usually attained from the Mammoth Mangel. This new root, now offered for the first time, and which we have named "Giant Sugar Mangel," is really a full blooded Sugar Beet, growing to an immense size and producing a heavier weight per acre than any Sugar Beet now before the public. The magnificent roots (well shown in the accompanying illustrations), are of the Giant Intermediate type, absolutely clean and free from the coarse and prongy roots so frequently found among Sugar Beets and certain classes of Mangel Wurzel. We have never seen a more handsome growing crop, the perfect shaped roots standing at least three-fourths out of the ground, with a rich pink and white skin contrasting with the upright deep green foliage cannot help but attract attention. The flesh, which is so exceptionally firm, is by far the sweetest of all roots, and greatly relished by all classes of stock. They are extra fine when cooked for the table. "Giant Sugar Mangels" are the easiest of all roots to harvest. "Push them over with your foot." No trouble to top them as the leaves grow upright and well together. The roots weigh heavier and will keep longer than either Carrots, Turnips or Mangels. Taking everything into consideration no better root for stock feeding has ever been placed before the public.

Every progressive farmer and dairyman will act wisely by giving Rennie's "Giant Sugar Mangel" a thorough trial.

PRICE.—Pound 35c.; 3 lbs. \$1.00 postpaid.

Famous Waverley White Oats. From Europe.

Gives astonishing returns grown in Canada. Positively the Heaviest Weight and Finest in Appearance of any Oat now before the public. Thin in the hull with bright amber colored straw standing upright in almost all kinds of weather. Our crops have satisfied us that it is wonderfully adapted to both soil and climate of this country. Give it a trial.

PRICE.—lb. 30c.; 3 lbs. 75c. postpaid. Peck 60c.; ½ bushel \$1.00; bushel \$1.60; 5 bushels \$7.50 by freight at purchasers expense. Cotton Bags each 18c. extra.

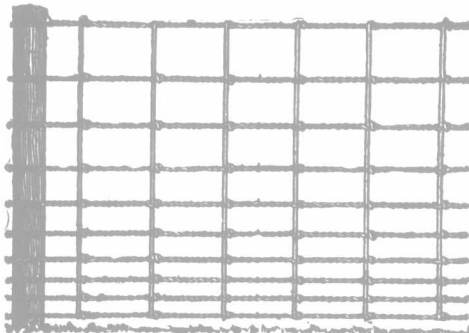
ADDRESS ALL ORDERS TO **WM. RENNIE, TORONTO.**



NEW GIANT SUGER MANGEL.

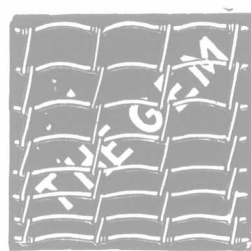
REMIT CASH WITH ORDER.

FENCING and GATES



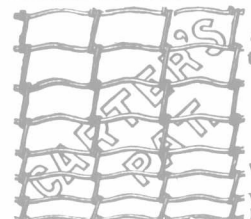
Buy your fencing and gates direct from the manufacturer. The Oshawa Wire Fence Co., Limited, are the largest manufacturers of different styles of fencing and gates in Canada. Send for catalogue and prices.

OSHAWA WIRE FENCE CO., Ltd.,
OSHAWA, ONT.



Latest and best devices for wire-fence building, including

GEM and McCLOSKEY weaving machines, also Coiled Spring and other fence wire at lowest prices. Write on McGregor, Banwell Fence Co., Limited, Box 23, Windsor, Ont.



A MACHINE to weave your own fence of Coiled Hard Steel Spring Wire. 32 inches high, at 25 Cts. per 100 rod fence. Agents Wanted. Catalogue Free. **WALTER Wire Fence Mach. Co.** Box 1, Ridgeway, Ont.

FRED SMITH, BRANDON, MAN., Gen. Agent.

Ewing's

ESTABLISHED 1869.
SUCCESSORS TO WM. EVANS SEED CO.]

Seeds

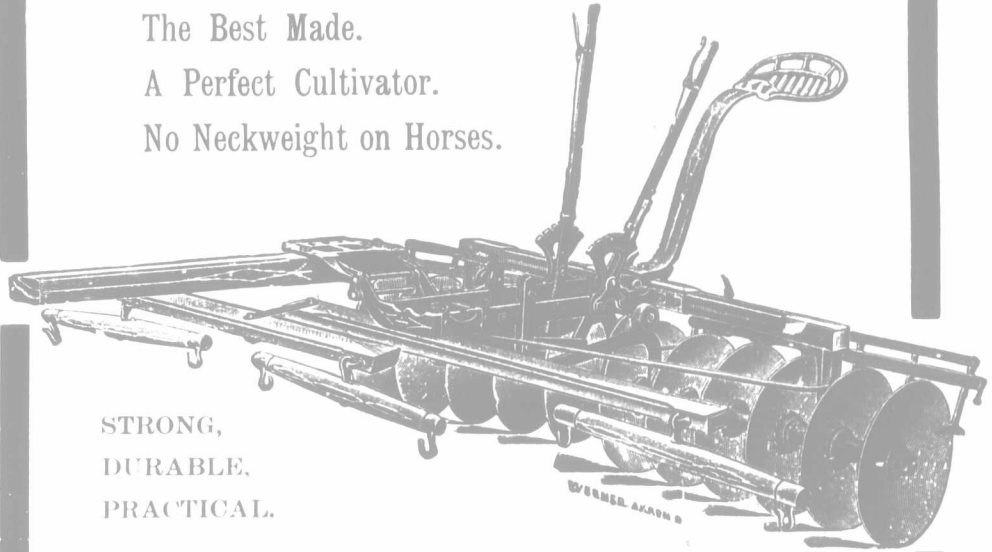
are thoroughly reliable, and better cannot be found. We mail Free our Illustrated Seed Catalogue for 1902, to all sending us their addresses. No seed house has a higher reputation nor can serve you better in regard to quality, extent of assortment or prices.

WM. EWING & CO.,
SEED MERCHANTS,
142 MCGILL ST., MONTREAL.

THE FROST & WOOD

WINDSOR DISC HARROW

The Best Made.
A Perfect Cultivator.
No Neckweight on Horses.



STRONG,
DURABLE,
PRACTICAL.

Does the hardest farm work in the easiest way for man and beast.

A labor saver. A time saver. A money saver.

The Frost & Wood full line of farm machinery is unexcelled.

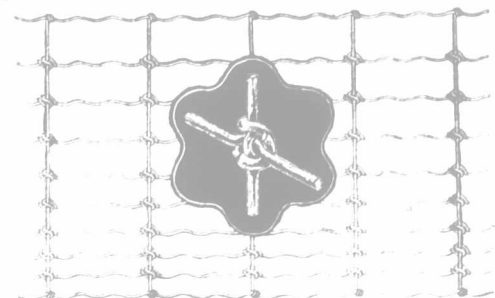
See what we have to say in the next issue.

Head Office and Works:

Smith's Falls, Ontario.

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Toronto, Ont.
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Winnipeg, Man.
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Ideal Woven Wire Fencing

Complete in the roll. A heavy one-piece stay that will not buckle up and cannot slip. Note the lock. No. 9 hard spring wire throughout. A fence that WILL LAST.

McGregor, Banwell Fence Co., Ltd.
WINDSOR, ONT.

Coiled spring and other fence wires.

Sale of Men's Suits

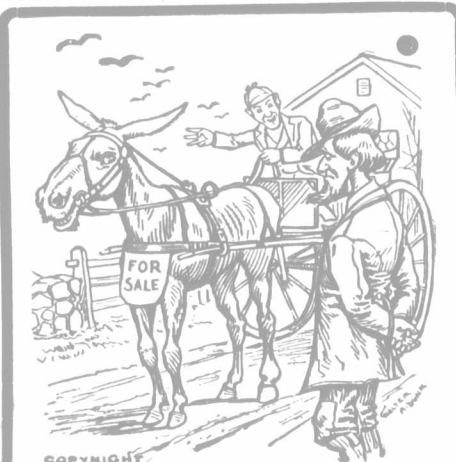
\$7.65 FOR SUITS THAT WERE \$9.50, \$10.50, AND \$12.50.

All the most stylish and up-to-date cut. The very newest weaves in Canadian, Scotch and English Tweeds; many of those **FAMOUS LEADER SUITS** being among the lot. Spring or winter weights.

\$9.65 FOR SUITS THAT WERE \$12.50, \$13.50, AND \$15.

Made of Scotch and Irish Tweeds and English Worsteds. This special sale was inaugurated for the special purpose of making room for spring stocks soon to arrive. Goods exchanged if not satisfactory.

THE HUDSON'S BAY CO., 178 to 184 MAIN ST., WINNIPEG.



"I sell him cheap!"

YOU can judge the value of an animal and most articles in commerce by appearance and price. — With Seeds it is different. — Any Seed must be valued by what it will grow and not by a "cheap" price.

Poor Seeds are those of uncertain growth and product—they are as valueless as the broken-down mule. It is extravagant waste to use them. "Cheap" Seeds may give greater profit to the seller but the user is the loser.

"GOOD QUALITY" in Seeds is the foundation of worth—it is the result from selecting and improving strains, together with care and intelligence in growing and means success to the user.

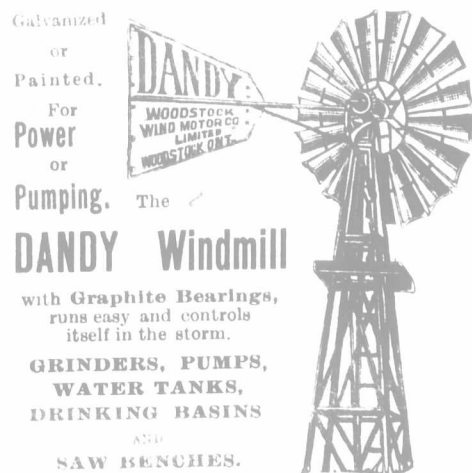
Steele-Briggs Seeds are known for their "Good Quality" and "Worth." More of them are sold and used in Canada than any other kind.

Buy your Seeds from dealers who sell **Steele-Briggs Seeds** and insist upon having them. If you cannot get them from a local merchant send your order direct. Refuse substitutes or "Just as Good." Send for catalogue if you have not received it.

The Steele-Briggs Seed Co., Limited, Toronto.

"CANADA'S GREATEST SEED HOUSE."

WOODSTOCK STEEL WINDMILLS



DANDY Windmill

with Graphite Bearings, runs easy and controls itself in the storm.
GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS
AND
SAW BENCHES.

WOODSTOCK WIND-MOTOR CO., WOODSTOCK, ONT.

E. J. C. SMITH,

Agent for Canadian Kodak Co.
Supplies of all Kinds.
Printing and Finishing for amateurs.
276 SMITH ST., WINNIPEG.
Send for Catalogue. Established 1882.

Dentonia Park Farm, estate of the late Mr. W. E. H. Massey, Coleman post office, East Toronto, advertises eggs for hatching of five popular varieties of fowl, and also of Pekin ducks. Look up the advertisement if interested in this line. No expense has been spared in securing the best of each breed for the Dentonia breeding pens.

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.

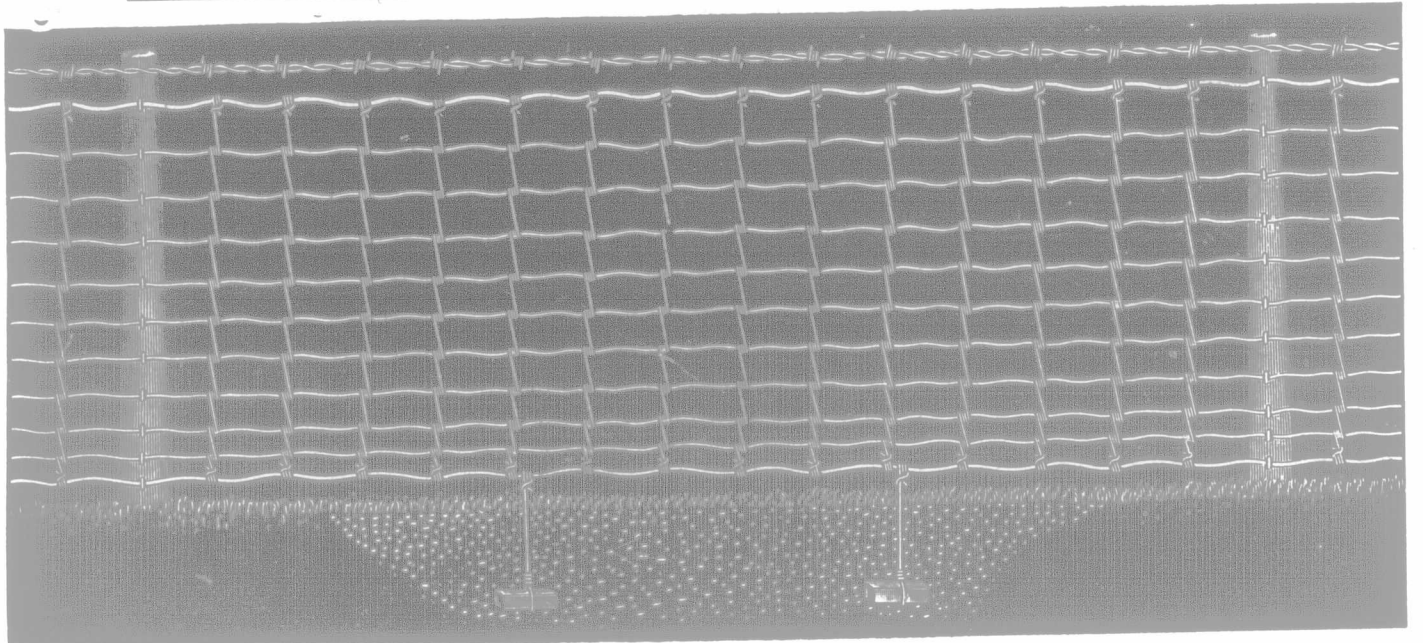
(CATALOGUE NO. 40 FREE ON REQUEST.)

J. J. H. McLEAN & CO.,

503 MAIN STREET, WINNIPEG, WHOLESALE AND RETAIL AGENTS FOR MANITOBA

London Fence Machines

Build Fences that are worth more, pound for pound, than any factory or lock fence ever erected, because they can be well and evenly stretched, and will not rust or fall to pieces.

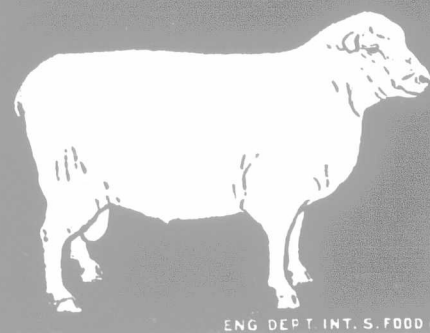


This 11 bar Coiled Spring Steel Woven Wire Fence, with a tensile strength of about 15,000 lbs., with No. 7 top, No. 12 body and No. 9 bottom wires, with No. 13 stays, 12 inches apart, will cost you 30c. per rod for the wire. We will furnish wire for 100 rods of the above, freight prepaid to any point in Western Ontario, for \$30 cash with order, or will pay partial freight to more distant points, or we will ship the above with same freight allowance, together with a London Fence Machine, a London Tackle Block Stretcher, and 60 ft. best 3/4-inch Rope, and a Wire Grip, also a Wire Reel and a Pair of Bernard's best Nickel-plated 61-inch Cutting Pliers, on receipt of \$45 cash. If the Barb Wire is desired, add \$3.25 to either of the above amounts. If preferred, we will ship C. O. D. for 70c. extra.

LONDON FENCE MACHINE CO., LTD., LONDON, CAN.

See article entitled "Wire Fencing," on page 303.

\$400.00 CASH FOR LARGEST RAM IN THE WORLD



We hereby offer \$400.00 cash for Largest Ram of any breed or cross. Ram to be weighed November 20, 1902, and sworn statement of owner and weigher and three witnesses to be forwarded to the "American Sheep Breeder," Chicago, Ill. Ram winning this offer to be delivered in Chicago at the Live Stock Show in December, 1902, when the \$400.00 will be paid by International Stock Food Co.

"INTERNATIONAL STOCK FOOD" causes Horses, Cattle, Hogs, Sheep, Colts, Calves, Pigs and Lambs to grow very rapidly and makes them Healthy and Vigorous. It is used and strongly endorsed by over 500,000 Farmers. We feed it every day to the stock on our "International Stock Food Farm." It is sold on a Spot Cash Guarantee to Refund Your Money in Any Case of Failure, by over 30,000 Dealers. It will make you extra money in Growing or Fattening Stock. Owing to its blood purifying and stimulating tonic effects, it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It fattens Stock in 30 to 60 Days less time, because it aids Digestion and assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 67 3/4 CENTS PER 100 LBS. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 Leading Farm Papers. It was included in the U. S. Government Exhibit and Won the Highest Medal at the Paris Exposition in 1900.

A \$3000.00 STOCK BOOK FREE

For You and Every Reader of This Paper.

This Book Contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc. It costs \$3000 to have our Artists and Engravers make the Engravings. It contains a finely illustrated Veterinary Department that will save you Hundreds of Dollars. Gives description and history of the Breeds of Horses, Cattle, Sheep, Hogs and Poultry. The Editor of this Paper will tell you that you ought to have a copy of our finely illustrated book for reference. We will ship you \$14.00 worth of "INTERNATIONAL STOCK FOOD" absolutely Free if our Stock Book is not exactly as represented.

THIS BOOK FREE, Postage Prepaid, if You Write Us (Letter or Postal) and Answer 3 Questions:

1st—Name this Paper. 2nd—How much stock have you? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs?

Answer the 3 Questions and Write Us At Once for Book.

INTERNATIONAL STOCK FOOD CO., MINNEAPOLIS, MINN., U. S. A.

DEALERS SELL THESE ON A "SPOT CASH" GUARANTEE

INTERNATIONAL STOCK FOOD. INTERNATIONAL POULTRY FOOD. INTERNATIONAL LOUSE KILLER.

INTERNATIONAL WORM POWDER. INTERNATIONAL COLIC CURE. INTERNATIONAL HARNESS SOAP.

INTERNATIONAL GALL CURE. INTERNATIONAL HEAVE CURE. SILVER PINE HEALING OIL, ETC.

ENGLISH JERSEYS SELL HIGH.
At Lady de Rothschild's annual sale of Jersey cattle, on March 20th, from The Rookery Farm at Aston Clinton, Bucks., 210 guineas (price) was realized for the prize cow, "Cairn," purchased by Mr. A. Miller-Bell. Mrs. Ratcliffe took Coralie at 115 guineas and Lady Rowena at 105 guineas, while Sir T. Cochrane took Wild Rose at 110 guineas. The 56 head sold averaged close to £40. It is worthy of note that last year 34 cows in this herd yielded an average of 507 gallons milk. In 1900, 34 cows averaged 291 gallons, and in 1899 25 cows averaged 593 gallons. The highest individual yield in one of the three years was made by Rosebud,

giving, in 1899, 8,087 lbs. or almost 804 imperial gallons. In the two succeeding years she gave 793 and 765 gallons, respectively.

Two first-class imported Scotch-bred Shorthorn bulls, two years old and in fine condition, are advertised in this issue by Mr. Thomas Russell, Exeter, Ont., who is a well-known and reliable breeder and importer, who has for many years maintained a high-class herd of Short-horns. Seen in a rich town, of standard-bred, and heavy and level, has been imported by and makes one of the best of the breed. He was two years old last month, was bred by Mr. J. J. H. McLean, Kincardine,

Shire, sired by Lord Hampton, by Bapton Czar, a Sittytion Cicely bull by Gravensend, and out of a Missie cow by William of Orange. The dam of Scotchman, Strawberry Blossom, of the Bracelet tribe, was for five years in succession the 1st-prize cow at the Kincardine show, and was barred from showing any longer. The other bull, Fragrant Bink, is a smooth, straight, stylish bull by the same sire, and from the same herd, his dam being of the Lady Fragrant family, a choice tribe represented largely in the noted herds of King Edward and Lord Roseberry. Such bulls as these are needed, and should quickly find places at the head of first-class herds.