

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

VOL. XXXVI. WINNIPEG. OCTOBER 21, 1901. MANITOBA. No. 536

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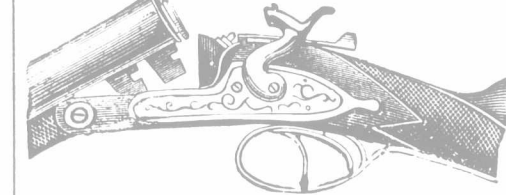
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* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE. *

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Vol. XXXVI.

WINNIPEG, MANITOBA, OCTOBER 21, 1901.

No. 536

The Cost and Work of an Agricultural College.

The "Farmer's Advocate" of March 5th gave a lucid and comprehensive plan for a School of Agriculture for Manitoba farmers' sons, which was practical in its outline and suited to the needs of the country. Many requests have been made that the plan as outlined be again published, which is done, for the benefit of our large number of new subscribers and those in whom the project of an agricultural college is awakening enthusiasm.

LAND AND BUILDINGS NEEDED FOR EFFECTIVE WORK.

The outlay at the start will undoubtedly be the largest, and considerably greater than what will be needed annually. The necessities would be a farm, which would cost from \$10,000 to \$16,000, depending on its size and location, neither of which, if within reason, would have much to do with the success of the institution. A common error which exists in the minds of many people is, that in order for agricultural college education to be practical, the students should do farm work, plowing, cleaning out stables, threshing, etc. Right here we unhesitatingly state that every student should be proficient in the ordinary farm work before coming to such an institution. Life is too short and the student's time too valuable when at the College to be spent at the lowest grade of farm work, the purely manual labor.

A building in which to give lectures, having offices for the teaching staff, library, reading room and gymnasium, would cost about \$25,000, for which money a building of three stories and basement could be supplied, somewhat similar in design to some school building. Farm buildings, sheep sheds, hogpens, poultry and implement houses would necessitate an expenditure of about \$3,500 to \$4,000. Elaborate buildings are not needed, neither would they be desirable in a Province whose income is comparatively small. The College should not attempt to board or room students, such necessitating big expense for dormitory, furniture, female helps to provide meals and clean the rooms. In addition, discipline is difficult to maintain in a residence.

THE COST OF THE NECESSARY LIVE STOCK.

For teaching purposes, representative animals of breeds suited to Western conditions would be needed. Two teams of Clydesdale mares, costing about \$800, and one team of lighter horses, at \$250, would be ample for the farm work and useful for instructional purposes. An expenditure of \$2,500 to \$3,000 would be needed to provide the College with a bull and three cows of four or five of the pure breeds suited to our conditions. Sheep, \$250 would be ample to obtain good specimens of the long-wooled and medium-wooled breeds, a ram and ten ewes being sufficient in one case. Swine, of three leading breeds, of which a boar and two sows, could be got for about \$150. In addition, \$100 invested in the best breeds of poultry would be ample. If

valuable pure-breeds of varieties not at the College were available in the neighborhood, they might be utilized for instructional purposes by permission of their owners or on payment of a small rent. Farm implements, incubators and brooders, a few skips of bees and miscellaneous articles would call for \$1,500 to \$2,000. Separators and other dairy utensils would doubtless be loaned by the manufacturers for the work in the dairy department, as is done in similar institutions. The total initial expenditure can be put at \$50,000 to \$60,000.

THE TEACHERS REQUIRED, THEIR WORK AND COST.

The essentials to be observed in manning such an institution is, provide men thoroughly trained and experienced in the work they have to teach, men with energy and lots of enthusiasm for the future of agriculture. While the old-established colleges have large staffs, such will not be necessary or advisable at the start. Four professors and three instructors, would be ample until the attendance became very large, one of the professors also acting as head of the institution, with the work of administration in addition to his teaching duties. The staff might be constituted as follows:

1. Professor of Agriculture, whose duties would be to give instruction in the principles of soil cultivation, the growing of farm crops, cereals and grasses, drainage, silos, etc., together with such instruction as is deemed necessary in the construction and draft of implements, the application of chemistry to farm conditions, the judging of grains, roadmaking, and weather forecasts.

2. Professor of Horticulture, who would take up the teaching of plant life, small-fruit culture, gardening, forestry, the suppression of weeds, the prevention of rust, smut and other fungous diseases of plants, judging of roots and vegetables. He might, in addition, supervise Provincial weed inspection.

3. The Professor of Animal Husbandry would teach the principles of breeding, instruct the students in the characteristics of the different breeds of live stock, besides drilling them in the judging of animals for draft purposes, the block, or the dairy. The feeding of animals, elementary bacteriology and veterinary science would fill out his College work. In addition, the experiments with live stock would be under his control.

4. The Professor of Dairying would take up that science in all its branches, give the necessary lectures and practical work, instructing the students in testing with the Babcock, oil and acid tests, churning, and the handling of cream separators, together with elementary dairy chemistry and bacteriology, conduct experiments, and look after the travelling dairy and supervise factory inspection.

The services of the professors would be available for institute work. The salaries for such men would be about \$1,500 each a year to start with. Cheap men or men lacking in training or energy would be dear at any price. The three instructors needed would be: One to give instruction in farm bookkeeping, the principles of political economy, and parliamentary practice, in addition to teaching the drawing of plans of farm buildings. Such a man could also act as bookkeeper and secretary of the College, and could be got for \$800 to \$1,000 a year. A carpenter and blacksmith would be needed to give instruction during the school term. Each could be got for \$75 a month, say \$750 for the course

Three men would be necessary to attend to the live stock, each at \$10 a month. Wear and tear, incidentals, printing and advertising, would mean a yearly outlay of \$15,000 for running expenses.

As the Agricultural College is an educational institution similar to other professional institutions, it would not be expected to pay any dividends in cash for the money invested. The benefit to the agricultural interests, and therefore to the country at large, would, however, be incalculable. The course for which such an outlay and staff are described should be one of 14 to 16 weeks, running during December, January, February and March, thus not interfering with the farm work, and permitting the farm laborer who desires to render himself more accomplished, and therefore more valuable to his employer, the maximum period in which to earn wages.

Far Away Pastures Look Greenest.

When the wheat-grower is in "hard luck," produced by any of the many vicissitudes that may overtake his crop or from such a fearfully disastrous spell of weather as has prevailed this harvest, eyes of envy are frequently turned away toward the ranches where the cattle range the thousand hills, growing in stature and waxing fat without reference to stacking or stook threshing, half-manned threshing gangs or leaky engines, without paying the least heed to whether the grade is one hard or rejected, tough and sprouted.

But it ought to be remembered that the other fellow has his "spells of hard luck," too, and this fall has brought disappointments to the cattle rancher as well as to the grain-grower. The cattle did not fatten as early as usual, owing to the washy nature of the grass on account of so much rain during the early part of the season. Then, just as the cattle were in readiness for shipping, some hitch took place in the car supply. The shippers complained that they could not get cars enough and that the cattle trains were being run on very slow time, which was detrimental to the stock and also to exporters who have ocean-boat space to fill. The railroad men claimed they were not to blame, as shippers frequently ordered more cars than they really needed, thus delaying the distribution, and also that the cattle shipments had been lunched at the tail-end of the season, coming all at once, instead of extending over several months. After a very vigorous kick on the part of the exporters, everything was reported to be running satisfactorily again. The Medicine Hat News, reiterating the complaints of the exporters, says that while the Old Country markets are good buyers, they had not been taking the stock, and that two-thirds of the export cattle were still on the ranges unsold. (This under date of Oct. 19th.) The News further says: "Under the circumstances, the stockmen cannot be blamed for casting their eyes south, and watching the advent of Jim Hill's road into the stock country, through the broad gauging of the A. R. & C. Ry., with the prospect of a competing line to Chicago, or for the handling of export stuff, in bond, over a competing road."

The system of selling by weight, instead of by the head, is gradually being adopted, the cattle being weighed off cars in Winnipeg. The yards in Winnipeg have been greatly improved of late. Instead of the old bog holes that the cattle used to wallow in, most of the pens are now floored, and many of them are roofed, so that the stock is kept dry and comfortable while being rested and fed.

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WINNIPEG, MANITOBA.

Scolding the Farmer.

For several months the local press carried on a campaign of crop booming, vying with one another in making exaggerated statements. When the unfavorable weather set in and the majority of the crop was still in stook, these same papers opened fire on the farmer, scolding him for not having his grain stacked. The farmer is lectured and lectured, told how to stack and when to do it: in many cases by scribes whose hearts failed them when boys on the old farm, and who then sought easier jobs. The trouble is, there is too much booming of wheat-growing; men are tempted to sow more than they can reap. Under a system of smaller farms, with more attention given to crop rotation, live-stock raising, etc., which would necessitate the employment of labor more evenly throughout the year, crops could be raised with less risk and the work got through with more expeditiously. With the present system of large wheat farms, all the work on which (except harvesting) can be handled with very few men, there is a chance of making bigger money for the outlay than by any other kind of farming, and the farmer, like nearly every class in the community, is anxious to make money and to make it as easily and quickly as possible, and with this object in view is willing to take the risk.

The heavy crop of this year was cut and stooked in very short order. Seldom has such a crop been handled so quickly. To stack the crop was, with many, an impossibility. Stook threshing saves time and money when the weather conditions are favorable, and who can tell what the weather will do? A better part that must be

borne in mind is that grain is safer in stook if heavy rains come than in stack, unless the stack is well built. To build a good stack that will be rainproof requires some experience and considerable care, and skilled labor of that kind is almost impossible to get in these days. Of course, there were some farmers who, after finishing cutting, sat down to wait for the threshing machine, when they might have stacked a considerable portion of their crop before the weather broke, and such deserve all the loss they will sustain. Most of those that got caught, however, had all their forces on threshing outfits, making the most of every hour of daylight, and don't need any scolding from the newspaper scribe.

Nature Study in Public Schools.

The "Farmer's Advocate" is indebted to Prof. Jas. W. Robertson, Commissioner of Agriculture for Canada, for a copy of the report of a conference of teachers held last summer at Bilton Grange, near Rugby, England, to consider the question of nature study in elementary schools, introduced by addresses by Messrs. T. G. Rooper, J. C. Medd, C. S. Roundell, and Prof. Robertson, describing what is being done in Germany, Holland, Cheshire, and Canada. An unimportant event, one might surmise in passing, but a perusal of the report leads to a very different conclusion. It has a bearing of decided moment both in relation to educational methods and to agriculture itself, and the subject presented deserves the careful consideration of leaders of thought in each of these departments.

Ten years ago the Inspector of Schools at Siegburg began to interest the teachers of the hundred schools under his charge in the theory and practice of horticulture, and now has a school garden in connection with all his schools, save in two towns where the land is too expensive. Not having been taught science at their training colleges, his first difficulty was with the teachers; but this was in part overcome by an arrangement whereby they attended the horticultural schools at Cologne and Bonn. To the pupils the results have been most beneficial, and fruit-growing, once at a very low ebb, but now placed upon an intelligent basis, has become an important industry. In all rural schools in Prussia a garden and house are provided for the head masters. The boys do not spend less time over their books than formerly, but they make better use of their time. Purely memory work has been curtailed, and, finding that the boys take greater interest in the home garden through what is taught them at school, the parents are more friendly toward the school and co-operate with the teachers. The agricultural societies encourage the school gardens by offering prizes for the successful cultivation of fruit and flowers, but special care is taken that the school gardens do not go into competition with private fruit-growers, the production being limited to what is needed for instruction. School gardens were also carried on and special instruction in horticulture and agriculture given in connection with the Evening Continuation schools, at which the general educational course is connected with the practical requirements of students in their daily occupations. At Oppeln a specialist in agriculture visits each group of six villages, two hours' instruction one evening per week being given by him in the village school. In addition to the instruction of teachers at the training colleges, short courses are provided for them at the schools of agriculture and horticulture, expenses being paid out of funds provided by the Minister of Agriculture and Education. At Proskaw a Royal Pomological Institution exists to promote and improve gardening in all its branches, by (a) instruction courses, (b) cultivation of trees and plants, and (c) investigation and experiment. The courses of instruction are (1) a two-years course for students; (2) at least six months for guests; (3) for teachers in training colleges and elementary schools; (4) for foresters; (5) for apprentices in the Proskaw School of Forestry; (6) for all interested in the diseases of plants and fruit trees; (7) for gentlemen's gardeners; and (8) for all interested in gardening and fruit-growing (land-owners, etc.). In the domain of higher education, chairs and professorships are established at the universities, and there the high learning is devoted to research, the re-

sult of which is spread through secondary and intermediate schools, and through these to the continuation and elementary schools. The elementary instruction is provided either by agricultural societies or clubs (of which there are 1,600 or 1,700 in Prussia), by private enterprise or by provincial public funds.

In Cheshire, England, the county council is promoting the introduction of nature study combined with the literary courses. At the Banbury school, for example, a specialty is made of collecting insects, during the last half year 50,000 pests having been brought in, including 1,400 ox warble flies. The nature of these various insects is taught, with a view chiefly to develop the powers of observation—to train the hand and eye. Wild flowers and weeds are used in the same way. Now it has been found that the average attendance at these schools is greater and the children remain one year longer at school than where the old, purely bookish system is followed, and the children have a brighter, more intelligent look in place of what Mr. Roundell described as that "bovine expression" attending the bad system which he hoped was passing away. In order to the preparation of teachers for this class of work, the county council offer scholarships to boys and girls to take them to the secondary school, a place of higher education; scholarships to pupil teachers, enabling them to secure special courses in technical and higher subjects (science, art, and commercial); and a scholarship to head teachers to take them to the county agricultural and horticultural schools, of which large numbers are availing themselves. The scholarships cover fees and travelling expenses. The results of the system have already proved excellent.

The most interesting feature of the system of elementary education in Holland is the extent and perfection with which nature study is taught by means of object lessons in the urban primary schools. The objects such as plants and flowers are either brought to the school by the pupils or are secured out of the experimental or demonstration plot in the school yard. This teaching is not done with the idea of taking the child out of town and making a tiller of the soil out of him, but to arouse his interest and develop his faculties of observation. It shows how a practical people like the Dutch place a high value upon this feature of general education. In all their teacher-training schools there is excellent theoretical and practical instruction in subjects bearing on horticulture and agriculture. Mr. Medd said it was a wholly mistaken opinion to suppose that a different training was needed for urban and rural teachers. No greater mistake could be made than to differentiate and create two distinct classes. In protesting against the old idea, he thought it wise not to rush to the other extreme and convert the modern elementary teachers of general education into an expert in some particular branch of it.

Prof. Robertson described the introduction of manual training in elementary town schools in Canada through the generosity of Sir Wm. C. Macdonald, who provided enough money to bring over 27 skilled manual-training instructors from England, and others from elsewhere, and to pay their salaries and the expense of maintenance and equipment of the schools for a term of three years. Over 6,000 boys from the public schools and about 600 teachers will receive training for three years, free of all expense to the public. He had observed that even in young, vigorous Canada the elementary education was becoming too bookish, and hoped for improvement in the rural schools by the use of garden plots and in other ways, not to train gardeners, but to impart and nourish ideas to cultivate the mental faculties, to develop inclination and ability, and the capacity for getting the best out of life by following the innate desire of the youth to do something. The subject is a vital one, deserving the best thought of educationists in every Province of Canada.

A Correction.

In the editorial, "Popularize the Farmers' Institute," appearing in our issue of Oct. 5th, the cost of the dairy division of the Department of Agriculture was made to read \$800, when it should have read eight thousand (\$8,000) dollars. In reality, \$8,500 was the appropriation placed in the estimates last winter by the Legislature.

Stock Judging Competitions.

Speaking of stock-judging competitions, and the offering of a substantial special championship prize at the International Live Stock Exposition, Chicago, the donor has this to say about such contests generally: "It has been proved that even those not naturally gifted with a sense of animal excellence can, by diligent study, acquire an understanding of form and quality, while those who possess an innate sense of comparison of animal outlines will be rapidly equipped by such instruction as the colleges (agricultural) are now giving in judging for close discrimination in the selection of the best types of the different breeds. Certainly all thoughtful breeders of pedigreed live stock are vitally interested in raising up an army of young men who are not only able to purchase stock for their own farms intelligently, but who will be trained of eye and hand to go about the important work of awarding prizes at live-stock exhibitions. The dearth of men trained to do this duty is striking. Mere age does not qualify. Long life on the farm does not fit for this duty. The handling of farm stock is only an aid to an education in this line. A fundamental understanding of the excellencies after which breeders earnestly seek is necessary, and an up-to-date acquaintance with the types that command popular favor is demanded. These may be acquired by education, by study, by practice." We commend these words to those who doubt the usefulness of an agricultural college, of a stock-judging institute or a stock-judging contest. The great hindrance to live-stock improvement is not poor buildings, lack of money on the farmer's part, high transportation rates, difficulty of getting first-class stock; but apathy! The farmer needs, in the matter of live stock, a general stimulation of enthusiasm, which can best come through the avenue mentioned above.

Quarantine Reform.

The following cable despatch from Berlin, Germany, to the American papers, recalls attention to suggested shortening of the present vexatious 90-day Canadian cattle quarantine, the outrageous condition of which at various times in the past has been more than exposed in the "Farmer's Advocate." It has done a vast deal of harm to the animals in passing through it, owing to its filthy condition, and served as a constant hindrance to the importation of greatly-needed pure-bred stock. The despatch is as follows: "Dr. Koch, the eminent specialist who recently upset all consumption theories, is about to fight for a new reform. Under the leadership of Frank W. Foxworthy, an American army surgeon, Dr. Koch will try to bring about a complete change in the quarantine systems of the world. Other physicians who will lend their patronage to the scheme are Drs. Virchow, Pasteur, Treves, Woodhead and other leaders of the medical world in Europe and America. Mr. Foxworthy will sail for the United States in October, after a consultation on the subject of the congress with the eminent men already named. The congress will attempt to formulate a uniform code of quarantine laws which shall be recognizable as the standard the world over. Dr. Foxworthy will seek to secure the approval of the project by the United States Government, and to induce it to invite the participation of foreign nations. He thus speaks: The quarantine systems of the world are chaotic and contradictory. Their inconsistencies are so glaring that Dr. Koch asserts that they might as well be abolished altogether. The rigor shown in one place is discounted by the laxity shown in another, and not infrequently the one exists where the other belongs. Commerce and the convenience of travelers, as well as the demands of the public health, call aloud for quarantine reform. The ruthless destruction of valuable cattle and the time-killing indignities suffered by tourists in many of the chief ports of the world are too dear a price to pay for the continuance of unreasonably and unsystematic quarantine regulations."

Care for the Milking Cows.

Now that frosty nights have come, there will be economy in stabling the milking cows at night to avoid the shrinkage of milk that surely comes with exposure to the chilly night air at this season. Now that the flies have received their quietus, show stock and calves that have been kept in the stable during the hot summer days may be turned out by day for exercise and to get some green grass to mix with the dry rations received in the stable at night. This will tend to cool their blood and keep their legs light.

Weaning Colts.

The time has now arrived when the majority of foals, having arrived at the age of four or five months, will be weaned. The usual custom is to separate the dam and foal completely and permanently at once. This I consider is irrational, and injurious to both. We know that sudden changes of diet and usage are not advisable in animals of any age; much less, then, are they in young animals. It is better to make such changes gradually. When it is decided to wean a foal, it should be placed in a nice box stall, or if the weather be fine, in a small paddock. Whichever place be selected, it should be seen to that the walls, doors or fences and gates are such that the little animal can not injure himself in his endeavors to get out, as he certainly will endeavor to in order to reach the dam. It is good practice, when practicable, to remove the dam to some safe place, out of sight and hearing of the foal. Allow the dam and foal to get together (leading the dam to the foal, in preference to taking the foal to the dam) for a few minutes three times daily for say a week; then twice daily for a week; then once daily for the third week. After that, especially if the dam be secreting considerable milk, once every second day for a time. This practice removes the probable injurious effects of a too sudden change in diet for the colt, and also to a very great extent obviates the danger of mammitis in the dam, besides

into the barnyard or paddock every fine day. I have known farmers to turn their colts out and leave them out all day and every day during the winter, without shelter, whether the weather was mild or otherwise, claiming that such usage made them tough and hardy and made better horses of them. Such usage certainly does make them tough, as far as looks are concerned, but just as certainly destroys the spirit and constitution of the poor creatures.

I consider well-saved clover hay the best for these young things, and it should be given in just such quantities as will be eaten without waste. As to grain, I think chopped oats preferable to whole; at least, give chop night and morning, and for a variety, whole grain at noon. It is good practice to place the morning meal in a vessel the night before, and pour sufficient boiling water upon it to cover it; then place a cover on the vessel, to retain the steam and heat. In the morning this will be a soft mash, of which the colt becomes very fond, and it is easily assimilated. The evening meal can be prepared in a like manner, in the morning, and, as before stated, whole oats, with say a carrot, or two if small, to be given at midday. As to the quantity of chop to be fed, this will, of course, depend upon the breed and size of the colt, but I consider there is little or no danger of overfeeding if regular exercise be allowed. But, of course, with foals, as with all animals, more food should not be given at a meal than will be eaten. It is not good practice to keep food constantly before any animal. In such cases he never becomes really hungry, and hence never thoroughly enjoys his meal. Variety of food, such as a little linseed meal occasionally, and a feed of bran say twice weekly, instead of the chop, is enjoyed, and it is good practice to give them; but I do not consider it wise to feed young animals corn, wheat, peas or barley. In fact, oats should be the only grain given regularly. It is good practice to handle the colt, teach him to lead, to stand tied; put a little bridle on him to get him accustomed to the bit, etc. All this takes little time, and its benefit will readily be noticed when the time comes that the colt is required to drive or work. Look well to the little fellow's feet; the feet grow very rapidly, and are apt to grow out of shape, especially if the stall be not regularly cleaned out, as is often the case. Still, it should not be. With a blacksmith's foot knife and rasp, pare and rasp the feet down to the natural shape at least once every month. Keep the heels well rasped down and do not allow the toes to grow too long. The cause of weak and defective feet in many horses can be traced to neglect or carelessness on the part of the attendant during colthood. I have said nothing about water. It is better if the animals can have access to good clear water at will; but if this be not expedient, they should be watered at least three times daily. "WHIP."



TEMPLE OF MUSIC, PAN-AMERICAN EXPOSITION.
The building in which President McKinley was assassinated.

removing the necessity of milking by hand in order to avoid danger. The secretion of milk is not suddenly suspended in the dam when she is removed from her foal, and we all know that if some means be not taken to relieve the mammary gland of its normal secretion, inflammation will be the result; and, as such is the case, is it not better that the foal should receive the benefit of it than that it should be wasted? By treating as suggested, not only does the colt receive the benefit, but the functions of the gland become gradually suspended in what might be called a normal manner, and both dam and foal gradually become accustomed to do without each other's company, and the latter to subsist without depending upon the nourishment it has hitherto received. It, of course, is understood that the colt has been taught to eat oats or chop before weaning operations are commenced. When weaning is commenced, the little fellow should be fed liberally. This is a very important period in the life of the young animal, and if allowed to fail in condition now it is a very hard matter to make him up again, and in some cases, where a colt is neglected or poorly fed during the first winter, it appears to stunt him for life, and he will never make as valuable an animal as he would have been had he been well cared for the first year. During and after weaning, a colt should have all the good, clean, unsugared food he will eat, it being always understood that he gets a fair amount of exercise. It is better he should have a nice roomy, well-ventilated and well-bedded box stall, and should be turned out

Treatment of Brood Mares.

Too much kindness is responsible for almost as much trouble among brood mares as is actual neglect. As all horse owners of experience are aware, there is a much lower percentage of losses among mares which are kept at work right up to the date of foaling than there is among mares which are specially kept for breeding purposes and never put to work from one end of the season to the other. There is work and work, of course, and, as everyone knows, there are certain classes of work to which it would be injudicious to put a mare that is heavy in foal; but experience shows that even when in that condition mares are capable of withstanding quite a deal of knocking about. An excellent illustration of what they can endure in that condition is given by a writer in one of our contemporaries. Some years ago this gentleman bought a mare which he thought to be a maiden, and hunted her severely right through the season, only to find that in the spring time she produced a vigorous and healthy foal. Acting upon the lesson taught by this experience, the same gentleman subsequently hunted several in-foal mares, and though some of them had known the least injury to result therefrom, and he never had a loss at foaling time. While this may be safe treatment, and indeed it has proved so, the severe exercise should not be brought on suddenly when the mare is forward in foal after a period of comparative idle-

ness. Any sudden changes of diet or conditions are dangerous, and should be avoided, but the regular performance of daily toil or regular work, so long as the mare's physical strength does not suffer, conduces to the welfare of the natural functions. The writer knew a race mare well that changed hands, and was pregnant without the purchaser's knowledge. She was raced severely during several months, and as she commenced to show "heavy," which was naturally accompanied with an increased appetite, the mare was muzzled daily to prevent her eating her bedding. Later, unmistakable evidence of pregnancy led her owner to take her from the track, but she was jogged up till foaling time, and produced a strong foal as active as need be, and it grew up to be a good horse. The condition of maternity in any domestic animals demands for a strong issue that the mother be treated in a natural manner, rather than pampered, so that it is wise to keep the in-foal mares at work during the fall and winter months, and at the same time keeping up their condition with liberal, nutritious and moderately succulent food until near the foaling time.

Farmers' Institutes in the West.

BRITISH COLUMBIA SUMMER MEETINGS.

A series of meetings of Farmers' Institutes was held during the month of August at various places on Vancouver Island, in the Fraser Valley, the Nicola Valley, and in the Okanagan Valley. These meetings were arranged and all were attended by Mr. J. R. Anderson, the active Deputy Minister of Agriculture for British Columbia, who also ably fills the difficult post of Superintendent of Farmers' Institutes for the whole Province. The Farmers' Institute is a much newer development in British Columbia than in the older provinces, and many districts have not yet organized themselves into institutes. Where, however, organization has been effected, the members appreciate very fully the advantages to be derived from the system. Farmers come to the meetings knowing what they want, and are prepared to put their views plainly before the meeting, and get the opinion of others upon subjects of general interest. The Province has a most useful and painstaking officer in the Deputy Minister, who makes a point of attending officially all meetings whenever possible, and the farmers in that way have frequent opportunities of bringing their wishes directly before an executive officer of the Government. The Central Farmers' Institute is firmly established, and the annual meeting is well attended by delegates from all parts of the Province. This meeting is held in the autumn. Ever since the establishment of the Institutes, special speakers have been provided by the Provincial Government to address the meetings upon agricultural subjects at each place at least once or twice a year. In this way, the farmers of the Pacific Province have had an opportunity of hearing some of the best institute workers of the East. Among others, series of several meetings have been held during the last four years, by Messrs. Robertson, Hodson, Fletcher, Stewart, Maker, Ruddick, Shutt, Gilbert, Drummond, Raynor, etc.

At the meetings lately finished the only speakers were Dr. Fletcher and Mr. Anderson.

COMOX.—The first meeting was held at this place. There are few places better suited to dairying than this. Most luxuriant crops of hay and other fodders are grown, and the pastures are excellent. A butter factory has been lately established, and is doing well. Fruit is also grown to advantage.

ALBERNI has an active Institute, and a good meeting was held. Great interest was evinced in the proposed action of the Department to assist farmers in the very heavy and expensive work of clearing away the stumps of the gigantic trees which are characteristic of that part of Vancouver Island. It was announced by Mr. Anderson that the Minister had made arrangements by which gunpowder of the most suitable kind would be provided at half the price they could get it themselves, if they would conform to certain conditions. There was an animated discussion on the weeds of hay lands and pastures. Dr. Fletcher spoke of the great importance of the new educational movement known as "Nature Study," which he claimed must be of inestimable value to farmers; in fact, he declared nature study was the common sense of education, whatever might be the chosen vocation of any school boy or girl. But this was more particularly true of farmers, for all their work had to deal directly with objects, a knowledge of which came within the limits of natural history. Successful farmers were those who understood their business best. The farmer who knew how plants grow, feed, and develop, would best understand how to fight weeds, which crops were suitable for certain soils, the way to treat them, their requirements, and how they could be used to his own greatest advantage.

A knowledge of zoology would be of use in

cares for and breeding stock. With even an elementary knowledge of entomology, he could cope much better than the farmer of to-day with the many insect enemies which yearly destroy a large proportion of every crop. To illustrate this, reference was made to Mr. Anderson's good work at the beginning of the cutworm outbreak last year.

The benefit of cultivating clovers and other nitrogen-gathering crops was explained, the best time to cut hay, and the advantage of a proper rotation of crops. Speaking of the great interest now being created in forestry by the new Canadian Forestry Association, he urged his hearers to do everything in their power to preserve the magnificent forest around Cameron Lake, within a few miles of Alberni, which he had driven through when coming to the meeting, and which he believed was one of the finest pieces of standing timber in the world. The very size of the trees, as there was no railway yet, would protect it for many years if they could only keep out the greatest enemy of all—fire. There were few places where trees of from five to eight feet in diameter could be seen, as was the case there, by thousands. Everyone could do something to create an interest in this subject, if not, indeed, on occasion, to prevent fire from spreading. A single spark was enough to start a disastrous conflagration.

NANAIMO was next visited, and a good meeting was held, at which an animated discussion was held on many subjects of local interest. The best crops to grow on certain soils and the best way to treat them were the chief topics brought forward.

SAANICH.—A largely-attended meeting was held at this place, many of the audience, including the leading school teachers, going out from Victoria by special train. Nature study, as affecting agriculture, was the chief topic of discussion, this subject having been recently added to the subjects taught in all the schools on the regular curriculum.

CHILLIWACK.—The farmers of this fertile district always turn out in large numbers, and the last meeting was no exception. Insect injurious to fruit crops was dealt with, and particular reference was made to the disastrous outbreak of the variegated cutworm in 1900. Dr. Fletcher congratulated the farmers of the whole Province on the activity of the Department of Agriculture, and the prompt manner in which the best-known remedy, the bran and Paris green mash, had been brought before the country through the public press. A tribute was also paid to the agricultural and daily press for the way in which they always published at once anything likely to be helpful to farmers, recognizing that anything which affected the prosperity of the farmer also affects that of the whole community.

NICOLA LAKE.—Reaching Kamloops on the 18th of August, the party drove, the next day, sixty miles down the Nicola Valley to Nicola Lake, where a well-attended meeting was held. Locusts have done a considerable amount of harm on the cattle ranges of this valley during the past summer. The different kinds of these insects were described, and the remedies which have been found useful in similar regions were treated of.

ENDERBY.—The first meeting in the rich Okanagan Valley was held at Enderby, and was full of interest. After the regular meeting was closed, several farmers waited and held an informal, but, as all acknowledged, a most useful discussion on various subjects connected with farming.

VERNON.—A meeting was held in the town hall in the afternoon. Fruit, grain and fodder crops were discussed, as well as their insect enemies. Rattlesnakes, which are not uncommon in the locality, were also a subject of debate. It was thought that the virulence of the poison of the variety occurring in this valley was not as great as that of those further to the south. The awnless brome grass had not succeeded as well here as it had in some other parts of British Columbia and in the Prairie Provinces.

After the meeting a visit was paid to Lord Aberdeen's ranch at Coldstream, where the capabilities of this fertile district are plainly visible. Good management and horticultural skill have combined to make this a model of what a successful fruit farm can be in this district.

KELOWNA.—This was the old Okanagan Mission, but the enterprise and activity of the members of the Kelowna Shippers' Union have made a new place of it. Here fruit of the best quality is produced in larger quantities every year, and every boat that leaves the wharf carries a freight of delicious fruit to less favored localities. The suitability of the soil to produce an excellent quality of cigar tobacco is now well known, and a thriving cigar factory has been established, with expert makers of homemade and home-grown cigars, which are gaining favor daily over the whole Dominion. The meeting was largely attended, and an interesting discussion took place on plant diseases and the weeds of the farm. Specimens were shown of the leaf spot of the tobacco, of diseased potatoes, and of poverty weed. The last named is a deep-rooted perennial,

a native of alkaline lands, and a most difficult enemy to eradicate.

These meetings were satisfactory throughout, and the wish was frequently expressed that the speakers would soon return to hold similar meetings.

Noms de Plume.

To the Editor "Farmer's Advocate":

As you invite suggestions on how to improve the "Advocate," I wish to offer one, which, if followed out, will help to make more valuable one of your most important departments.

Many of our most practical and best-informed farmers are deterred from giving the benefit of their experience to others through the medium of an agricultural paper because of unkind criticism sure to come from other farmers of their own district who know them and consider themselves equally well advanced in the science of agriculture and equally well qualified to write for the agricultural press. Or, if they know that they themselves are unable to write valuable articles, then they ascribe their neighbor's article to be the outcome of an abundance of self-conceit, "which they always knew he possessed." This same unjust criticism (?) is encountered to a greater or less extent in all the trades, but it seems to be especially evident in farming communities.

So much for the complaint. Now let us try to find the cure. In scientific articles and other matter of a like nature, the name of the author adds a great deal to the importance of the article, but this does not hold good to any great extent in agricultural letters; in fact, it usually has an opposite effect. If the author lives in another part of the country, it is not likely we know him, and we are adverse to admitting that he can be of any great importance without our having heard of him, and if he lives close to us, we are apt to doubt that any good thing can come out of Nazareth, and, more than that, we are very apt to know some mistake he has made in some of his farming operations, and the thoughts of this mistake come so strongly into our minds that it totally destroys any good impression the article in question might have had. For these and other reasons, is it not better that farmers writing for your columns should, in most cases, sign a nom de plume or pen name to be printed with the article, sending at the same time their real name and address for the editor's information? Pen names are common enough, that it should not be difficult for any man to choose one and use it in connection with all his letters to a certain paper. Names of geometrical figures are especially well adapted for use as pen names.

Hoping that some one may give us, over a nom de plume, the benefit of experience that he would have hesitated to have published over his own name, and wishing the "Advocate" every success,

(There are occasions when the use of a nom de plume seem advisable, and when desired by a contributor to use a nom de plume, we are always ready to do so, his name and address accompanying for private reference. But, while admitting that farmers are very ready to criticize the writings of their fellows, we are, nevertheless, of the opinion that articles over the signature of an earnest, honest writer will carry more weight and accomplish greater good than when the correspondent hides under a pen name. There is always satisfaction in knowing who the writer of an article is. An article bearing the name of someone known to you will always be read more eagerly than if you have no idea of its source. A man giving an honest expression of opinion, drawn either from personal experience or close observation, whether relating to his or his neighbors' successes or failures, has no reason to fear criticism. And the man who is mean enough or small enough to sneer at such worthy efforts, even although the writer does not live up to his teachings, is not worthy of notice. If farmers, especially successful ones, could only realize how greatly they can help others not so successful, or who have newly settled in the country and are unacquainted with the best methods, by relating their experiences in print, they would be more ready to contribute articles to the columns of the press.—Ed. F. A.)

Essays on Tree Planting.

The mayor of Medicine Hat is offering prizes for essays on tree-planting, open to the school children of his town. He has requested Angus McKay, Superintendent of the Indian Head Experimental Farm, to examine the essays. As a guide to competitors, he suggests the following headings:

The best season to plant trees here—the reasons why.

Preparations necessary for tree-planting.

Cultivation necessary after planting.

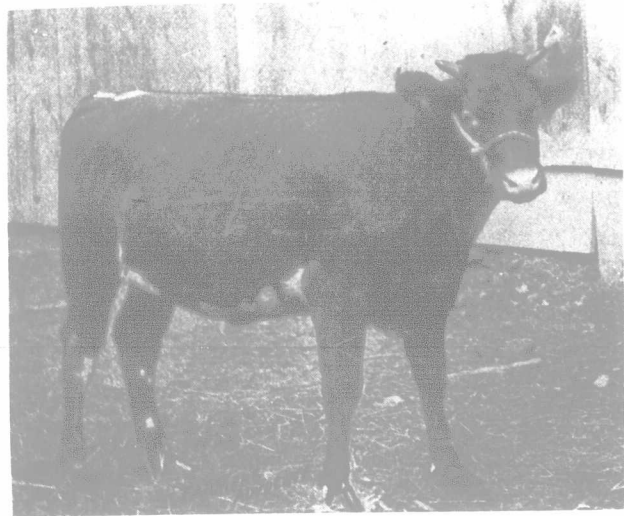
The best trees to plant here, giving reasons why.

The benefits derived from growing trees, and any other matter referring to the subject of the essay the writer may think of.

A New Insecticide.

A local daily paper gives the following suggestions for an insecticide, which our readers would do well to try:

"The common garden larkspur is one of the very best insecticides. The trouble is, one can seldom buy it, and the most of those who need it have no chance to raise it. It should be sown rather thickly and cut when the first flower-stalks are well budded. Dry in the shade, tie in bundles and hang where it is dry and airy. Every part of the plant, leaf, stalk and blossom, has the virtue of killing vermin, particularly the vermin which infests living things. For fleas, lice and nits upon cats, dogs and poultry, a washing with



MISS CAMPBELL 2ND.

Sire Imp. Blue Ribbon = 17095; dam Miss Campbell = 27948— of the Miss Syme family. Shorthorn heifer calf to be sold at the auction sale of the herd of A. & D. Brown, Iona, Ont., November 12th, 1901.

larkspur soap, followed by dusting with larkspur powdered and mixed with cornstarch, works wonders. Unlike carbolic soap, the larkspur soap is not poisonous—thus an animal licking its coat after the washing is in no danger.

"To make the soap, first infuse a generous handful of dry larkspur stems and leaves in barely enough water to cover for several hours. Strain off the tea, melt some good soap in a water bath and beat the tea into it. Continue beating until the soap cools, and leave the vessel containing it in a warm place for several days. Then cut out the soap and set the cakes to dry. They should have a faint greenish color.

"For the powder, pick off leaves, make them crisp in the oven, rub fine between the hands and sift through fine net. Mix what passes through with the starch, but do not throw away the coarser residue—it serves excellently to make a wash for scalding out bird cages and so on. In using the powder, part the hair along the animal's back and gently shake it in. The closer the backbone and spaces back of the ears are covered the more certain the effect.

"In the poultry house, larkspur is invaluable. A strong fusion of it, mixed in whitewash, prevents the minute pests which trouble all sorts of feathered things. Mix larkspur stalks in the nest straw for sitting hens, and shake the powdered leaves mixed with flowers of sulphur well through the feathers on the back and around the neck. Mix the same powder freely in the ashes of the dusting-box."

Timothy and Brome Compared.

Following is a summary of results of an extended test of the above two grasses made at the North Dakota Experiment Station at Fargo:

Brome grass produced a fair amount of pasturage in the dry year of 1900, while timothy made very little growth.

Animals prefer Brome grass to timothy, as shown in their grazing for 1899, when there was an abundance of both grasses, and in 1900 we have like results.

There was but little difference in chemical composition between pasture grass from Brome and from timothy. The total yield per acre was much in favor of the Brome grass.

Brome grass made a fair crop of hay in 1900, while timothy failed.

Brome hay contains about twice as much potash as timothy.

Brome hay does not contain more fiber than the average for timothy grown in all parts of the United States.

Brome grass sends its roots down deeper into the soil than timothy, and furnishes a great mass of roots in the first foot of soil, and hence the soil may be expected to blow less when plowed.

Soils on which Brome grass has been grown contain more organic matter and humus than those on which timothy has been grown.

Brome grass is a better humus former than timothy, and leaves the soil in better chemical and physical condition than does the timothy.

A Stacking Competition Suggested.

To the Editor "Farmer's Advocate":

Last autumn there was held at Ottawa, under the auspices of the Ottawa Valley Journal, a plowing contest, which appears to have had an educative trend in awakening the interest of the farmers in good plowing. While not undervaluing the cultivation of the land, I believe that on the harvesting of the crop depends, almost as much as on the preparation of the land, the success of grain-growing.

The experience of this and the past years has shown that shock-threshing does not work as satisfactorily as it might, as the grain becomes bleached in the shock and does not regain its color in the bin, and so loses its grade. This is different when the grain is stacked, as it sweats in the stack, and will, to a large extent, regain its color. The principal objection to stacking (around here at least) is that so many farmers are unable to build a rainproof stack, in which case the grain suffers more than in the shocks.

Now, I have been thinking that if we could arrange a stacking match on somewhat the same lines as the plowing matches, to come off some time next fall, great good would result. The greatest difficulty in connection would be in getting pitchers and loaders. In this connection I would suggest that minor prizes be offered for the best loaders, best broken team, etc. I am sure that the hearty co-operation of the business men could be obtained and considerable financial support be received from them, as they appear more anxious at this time of year for the safety of the crop than even the farmers themselves.

It would at least be interesting to have the opinion of the leading farmers of the Province as to the practicability of the scheme. It would certainly have an educative effect. Meantime, could not some of the men, while expressing their views on this suggestion, also give some hints as to their ideas on stacking?

Pembina Municipality. ROBERT REID.

Testing Test Bottles.

Prof. Farrington thus describes a new method of calibrating test bottles. It is called the Trowbridge method, after a Wisconsin buttermaker of that name who introduced the method.

For several years he (Trowbridge) has been testing graduations of milk test bottles by means of a thirty-penny nail, which he filed so that it would displace exactly two cubic centimeters of water. He attached a small wire to one end of this nail, and, after filling the test bottle to the zero mark of the graduation with water, he dropped this nail into the neck of the bottle by means of the wire. If the water rose in the neck to the 10-per-cent. mark on the scale, when the nail was entirely submerged, then he knew that the zero and the 10 mark on the scale, or the two extreme points, were correctly placed. The intermediate graduations are easily tested by means of a strip of paper on which lines are marked corresponding to the graduations of one per cent. of the scale. This strip of paper is then slid along and compared with the lines in each of the one-per-cent. sections of the scale.

We accidentally ran across this method, and Trowbridge sent me one of his standards for testing the graduations of the test bottles. I have given it a thorough trial, and found it to be very accurate and a very simple method of inspecting the graduations of Babcock milk-test bottles. These standard measures are now made by an instrument-maker in Chicago. The instrument they make costs 75c., and is just the thing that we have needed for a long time. With it every man who uses test bottles can test the accuracy of the graduations quickly and in a very satisfactory way.

Standard Breeds for Utility.

We should favor the union of fowls for the fancy as well as for market poultry and eggs. The proper selection of a variety according to one's liking might be made. To illustrate: Select, for instance, the White Plymouth Rock, choosing the very best to be had; let every egg laid be used for producing chicks; select from the increase all the high-grade females for breeding pens; those of modest or poor quality should be housed by themselves. All can be handled for market eggs during the whole year. As the proper time approaches for hatching, the very best males are to be put with the selected females, and from these matings hatch for the future supply.

Eggs from the other matings, known as incubator eggs, may be sold, which usually bring, by the hundreds, from three to five cents each. Gradually a sale of a few dozens for hatching may be made to those who are willing to pay about two dollars for thirteen eggs. As the stock improves they may be gradually worked into the fancy poultry trade, and in this way a plan of pleasure will have been gained without much cost or outlay, the utility or market poultry part of the business having been made use of to keep the poultry with profit while working up the ladder for reputation.—(The Feather.)

Fall Fairs.

KILDONAN AND ST. PAUL'S.

The above Association held its 7th annual fair on October 8th and 9th, and in spite of the unfavorable weather, which in this locality implies almost impassable roads, the fair was a success. The Society is provided with very good grounds, and a fine agricultural hall. The strength of the exhibition lies in the magnificent display of vegetables or field roots, and in this particular it is probably unequalled by any other local fair. The classification is divided so that market gardeners and non-professionals do not compete, and yet, to the visitor, there is comparatively little difference in the extent or quality of the exhibits made in the two classes. In the professional class the principal exhibitors were Charles Midwinter, Lay Bros., H. C. Whelams, W. A. Farmer, and Thomas Mackay; the first two named winning, in the order mentioned, the first and second prizes for the best collection of not less than fifteen varieties of vegetables. In the farmers' class, M. Harper and Mrs. J. R. McDonald won the first and second, respectively, on collections of vegetables and roots. In dairy produce, home dairy butter is one of the leading industries of the district. There were seven sections in the class, all first prizes going to Donald McIvor. Other successful exhibitors were Mrs. Bushnell, James Garvin, and Mrs. J. R. McDonald.

The ladies department in domestic manufactures and fancywork was particularly attractive, and the exhibits in several departments made by the boys and girls of the Indian Industrial School were of great merit and interest.

In the live-stock departments the exhibits were not as numerous as they would have been with favorable weather.

In Shorthorns, the well-known herds of Messrs. W. S. Lister and H. O. Aycarst, of Middlechurch, were represented, and such exhibits guarantee a good showing of this breed.

Ayrshires were well represented from the herd of James Garvin, Bird's Hill. John Oughton, Middlechurch, upheld the honors of the Holsteins. The grade cattle class was well filled with animals of the dual purpose sort, H. O. Aycarst, D. McIvor, M. Harper and J. H. Gunn being the principal exhibitors. John Oughton showed Shropshire sheep, and M. Oughton, Cotswolds. There were a few entries of pure-bred swine; M. Oughton and R. Inch showed Yorkshires, and John Oughton, Chester Whites. Some good grades of the bacon type were shown by E. Hodinott, R. Inch, J. H. Gunn, J. W. Wilson, D. McIvor, and others. The poultry exhibit was much above the average of the local fairs. Some of the exhibitors were Chas. Midwinter, with Leghorns, Barred Rocks, Wyandottes, Toulouse Geese, Bronze turkeys, and Pekin ducks. Thomas Mackay with Minorcas and Pekin ducks; D. McIvor with Brahmans, Leghorns, Minorcas, and turkeys; M. Harper with Barred Rocks. The horse sections were not very well filled. In the Roadster class, S. R. Henderson, J. B. Line, W. G. Mathe-



COTSWOLD EWE.

First-prize two-year-old and sweepstakes at Western Fair, London, 1901.

BRED AND OWNED BY T. HARDY SHORE & SONS, GLASWORTH, ONT.

son and A. R. Munroe were the principal prize-winners, and in the Agricultural class, D. Christie, R. B. Garvin, Wm. Mackay, Andrew Garvie and H. W. Matheson were the principal exhibitors.

STONEWALL FAIR.

The 21st annual fair of the Rockwood Agricultural Society was held in their large, well-fenced grounds at Stonewall on the 9th and 10th. The weather was unfavorable, but under the circumstances the exhibition was a success. There was a good turn-out of horses, such well-known horsemen as the Scotts, of Meadow Lea; the Mollards, of Balmoral, and others, contributing entries.

In cattle, there were a good number of grades entered. One Jersey bull shown by Jacob Scott,

Jr. In Shorthorns, the class was filled principally with representatives from the herds of W. G. Styles, Rosser, and John McQuat, Stony Mountain, the former winning the majority of first prizes, including sweepstakes male and herd prize. The bulls shown were a remarkably smooth and well-brought-out lot, reflecting credit upon the exhibitors, and indicating that the cattle interests of this district are in good hands. S. Scott showed a very good yearling, as did J. A. Mitchell; P. McArthur also contributed to the female sections. J. McQuat, Stony Mountain, won first in the grade class for registered bull and four females. Berkshire and Yorkshire swine were shown, and they were good representatives of the breeds, Jacob Scott, Jr., and J. Stratton being the principal exhibitors. T. Foster, Rosser, showed sheep. The poultry exhibit was good, and the competition in Plymouth Rocks strong, J. Stratton being the principal winner in this class: Thos. Lund in White Wyandottes; R. B. Sinclair and George Lang in Minorcas. In the large hall, which in winter time is used as a skating rink, the exhibit of grains, vegetables, dairy produce and ladies' work was displayed. This district was particularly noted for home dairy butter, and among the prizewinners were noticed Mrs. Nat Scott, Meadow Lea; Mrs. Alex. Morrison, Stonewall; Mrs. A. Mollard, Balmoral, and Mrs. Wm. Peel, Selkirk. Thos. Franklin had on exhibition several varieties of crab apples and seedling plums. The vegetable and root display was good, as was also the domestic and fancywork departments. A notable exhibit was that made in wood carving, the work of the late George Bescoby.

MAPLE CREEK, ASSA.

The Maple Creek Agricultural Society held its seventh annual exhibition on the 24th and 25th of September. The first day was occupied in placing the exhibits in the building. There was a magnificent display in all the different classes, especially in "ladies' work." Among the many exhibitors in this class we noticed as winners the names of Mrs. L. Hutton, Mrs. C. McCarthy, Mrs. J. Johnston. In domestic manufactures, the principal winners were Mrs. A. Cumberland, Mrs. A. B. Hasset, Mrs. R. P. Campbell, Miss S. Graham and Mrs. R. Kills.

The root and vegetable display was very fine, and bespoke for the district the adaptability of both the climate and soil to the production of such crops. Those taking the most of the awards in this class were R. Kills, T. Stewart, H. A. Greeley, M. L. A., T. C. Dixon and Joseph Dickson.

The exhibit of poultry was very small, but the quality good.

The horse races, in which only local horses competed, were a great source of interest, and some good sport was provided.

In the live stock considerable interest was shown, and some very fine animals exhibited. The day being very wet and disagreeable kept a number of ranchers from bringing their animals in, hence a few of the sections were not filled. A very good four-year-old Percheron stallion was shown by W. A. Douglas. The excellent Hackney stallion shown by the Canada Land & Ranch Company had no competition, but it would take a rare horse to beat this fine-actioned and smooth sire. While a number of choice Clydesdales are owned in this district, the state of the weather prevented them being shown. C. W. Sanders, on two good yearling Clydesdale stallions purchased this season, was given first and second; both superior animals that will do the district good.

In the brood mare and junior sections, most of the first prizes went to entries made by the Canadian Land & Ranch Co., R. Kills winning most of the seconds. T. Lawrence won on general-purpose team, M. Elliott on brood mare in the same class, and Dixon Bros. on foal. In the Roadster class, W. A. Douglas won on stallion, T. Quernelle first on team and also on single driver. T. Lawrence was the principal winner on saddlers.

In Shorthorns, Dixon Bros. won on bulls, the Canadian Land & Ranch Co. on females, with H. A. Greeley, M. L. A., sandwiching in for several prizes. The C. L. & R. Co. won on Hereford bull, and Dixon Bros. on Polled Angus. T. Dixon and H. A. Greeley divided honors on grades.

In sheep, the only exhibitor was M. C. Dixon, who showed a good Oxford ram and some grades.

Mr. W. W. Fraser, of Emerson, Man., acted very acceptably as judge in all classes of live stock.

MEDICINE HAT.

Medicine Hat Agricultural Society held their annual fair on the 18th and 19th of September. The weather was favorable and the attendance good, the gate receipts amounting to more than any previous year. The inside exhibit was very creditable indeed in all lines except grains, in which there were only some two or three entries. These were, however, of good quality. The horticultural portion of the exhibit was excellent in quality. The dairy exhibit was also very good, while the fine arts and fancywork display was of such a character that it would be

difficult to surpass it at any point in Western Canada. The building was lighted by natural gas the first evening of the fair, this being one of the natural advantages of this thriving town.

In live stock, the quality in most classes was very good. Mr. W. W. Fraser, of Emerson, judged all classes of live stock. The following is a brief summary of the awards:

In cattle, the principal exhibit was made in the Shorthorn class, James Hargrave carrying off most of the honors in the male section, and the Canada Land & Ranch Company in the female section; Hargrave won the herd prize. The C. L. & R. Co. won on Hereford bull, and also on Galloway bull; in the latter breeds they had very good entries in all the sections. T. H. Tinney won first and second on yearling bull. Jerseys were shown by George Bailey, who showed a yearling bull and several females. A fairly good exhibit was made in the grade cattle class. The principal exhibitors were Thos. Hargrave, T. H. Tinney, James Mitchell and McLaren Ewart.

In sheep there were but few exhibits. Peter Robertson showed Oxford Down and Leicester rams, and for the first time in this district an exhibit was made of Rambouillets or French Merinos. These were shown by Dorsey & Strode, Whitlash, Montana. The swine exhibit was also small, James Harper showing Berkshires, the only entries made.

In horses, however, the entries were much more numerous. In the heavy draft class the C. L. & R. Co. won first on aged stallion, H. Gobbette winning second; J. K. Dickson was awarded a first on two-year-old stallion. In the other sections, William Gobbette, A. Bleard, the C. L. & R. Co. were among the principal exhibitors, J. A. Grant being awarded a special on a three-year-old stallion. In the class for general purpose horses, H. Gobbette, A. B. Carle and D. Fenton divided up the prize money, the first named getting the majority of red tickets. In the Roadster class, Albert Ewes, James Mitchell, George Bailey, the C. L. & R. Co., H. Gobbette and W. Kelly were the principal exhibitors. Wm. Hargrave won first and second on saddle horse, and Horace Jenkins first on ladies' saddler. J. A. Grant was awarded a special on French Coach stallion, and the C. L. & R. Co. second on Hackney stallion.

SPRINGFIELD.

Surrounded by one of the most thickly-settled and prosperous settlements in the Province, the Springfield Agricultural Society's annual fair should be one of the best, as the district is entirely devoted to mixed farming, for which it is especially adapted, particularly as it lies convenient to the best market in the Province, that of the City of Winnipeg. The highest cash prices are always available for all kinds of farm and dairy products, poultry, vegetables, roots, etc. Although dairying is carried on extensively on almost every farm, there is no creamery in the district. Every housewife makes the best butter and finds no difficulty in securing high prices from regular customers in the city. The farm-dairy butter exhibit at this fair is always one of the most interesting features, and a careful study of the prizewinners shows a great number of names, evidence of the uniformity and excellence of the product. There seems to be no outstanding winners. The vegetable exhibit, and also that of field roots, was excellent, and creditable to the locality. Owing to the unfavorable season, the show being held in October 2nd, the live stock entries were not as numerous as might be looked for. Shorthorns were exhibited by E. Hudson, E. Anderson, R. Fisher, and J. R. Morrison; Jerseys by William Murray; Holsteins by W. S. Corbett; Beef grades by E. S. Dawson, H. Bray and E. Anderson; and dairy grades by O. B. Harvey, K. McLeod, and others.

A. Baxter, T. H. Smith and W. Murray were the principal exhibitors of sheep, while Kenneth McLeod, Mrs. W. Haines, W. Joly and J. R. Morrison were the exhibitors of swine. In horses, the exhibit was not up to previous years. D. R. and J. R. Morrison showed stallions in the draft class, and the latter a stallion in the roadster class.

THE ARGYLE, WOODLANDS AND WOONONA FAIR.

On September 27th, the annual fair of the above Association was held, and, although the weather was unfavorable, the fair was a success. In roots and garden vegetables, dairy products, domestic manufactures and ladies' work, the exhibit was remarkably good, nearly all sections being keenly contested. The number of entries in the live-stock classes were not as numerous as they would have been with more favorable weather conditions.

In Shorthorn cattle, W. G. Styles, Rosser, was the principal exhibitor and prizewinner in the female sections, also winning first and second on bull calves. A. E. Hainsworth won first on aged bull, and Langrell on yearlings. The only other breed shown was Ayrshires, in which class W. M. Champion, Reaburn, was the exhibitor. In the grade class there was strong competition in most of the sections, A. Scott, A. E. Hainsworth, Porteous, Haney, McMillan and Oliver being the principal exhibitors.

In the horse classes, T. Scott won in the roadster class on team, and S. Scott on single driver. Scott also won first on team in the general purpose class, with A. Proctor second, J. Haney winning on team in the agricultural class.

T. Foster and G. J. Doak were the principal exhibitors of Shropshire sheep. In Yorkshire swine, J. Scott, Jr., won on boar and also on young pigs, T. Foster winning on sow. In Berkshires, Scott also won on boar, Craddick on sow and young pigs, McMillan winning second on boar and on young pigs.

SWAN LAKE.

The Lorne Agricultural Society held their annual fair in the village of Swan Lake on the 3rd inst. The day was favorable, but such conditions were against the fair, as farmers were waiting for an opportunity to stack their grain, a work so long delayed owing to frequent rains. The entries made promised a full showing in the different lines, but all did not come in. If numbers and quality were wanting in exhibits, this weakness was partly made up in the quality shown. In this respect all lines were not equally strong.

Cattle were few, and each in its class good enough to exhibit, but it was evident that little had been done to prepare them for show.

Horses were more numerous, but wanting much in quality. Looking over them and remembering exhibits in past years, two facts were evident: that little effort is made to improve the stock, and as little taste and care expended in fitting up.

Evident it is that attention is given to sheep-raising in the locality, for a goodly number of very excellent animals were on the grounds.

Pigs were few. Poultry fewer.

The products of the agriculturist were unthreshed, and grains were very little in evidence. Some good field roots, however, were shown. Garden produce was excellent in quality. Of ladies' work the display was not very large, but the work was very good. The directors were all on the grounds, and had their work well in hand, giving all needed assistance to exhibitors and judges.

SALT COATS.

The fall fair, held on October 1st, at Salt-coats, was one of the most successful in the history of the Association, and, in fact, one of the best local fairs of the season. In every department, except, perhaps, field grains, the entries were numerous and the quality above average. In the horse classes there were 126 entries. In the agricultural class, Porter Bros., S. Taylor, T. MacNutt, J. Kerr and William Moffat were the principal exhibitors. In the general purpose class the principal prizewinners were W. Moffat, G. R. Goodday, A. Thompson, J. Kerr, G. Furr, H. Mills, and M. Farrel. H. Lennox won first on carriage team over 15 hands, and T. MacNutt first and second on brood mare. MacNutt also won most of the prizes in the class for roadsters bred from mares 14.1 hands and under. H. Holland, T. Lippington, C. Saunders, T. Kirkham and Porter Bros. were also successful competitors in the carriage class, while T. Cahill was successful in team and single driver under 15 hands, and also in saddlers. H. McFadyen and H. Lennox won on saddle horses over 15 hands.

The show of cattle was particularly strong, no less than 80 head being entered in the Shorthorn class. Here G. & W. Bennie, of Castleavery, won most of the prizes, including first on aged bull, first and second on yearling, first and second on cow and on two-year-old heifers, and first on yearling, first and third on herd and the male and female sweepstakes. J. Lippington, another prominent exhibitor in this class, won first on two-year-old bull with a bull of Watt's breeding, and second on a home-bred bull; also first and third on bull calf and second on herd. H. Lennox won first on cow in milk, and first on heifer calf. Other exhibitors were H. Dand, Blake Bros., Smith Bros., H. Holland, R. Mills, and J. M. Nichol. The grade-cattle class was also strong, and, as James Bray, of Longburn, who judged the cattle classes throughout, said, was one of the best classes in grade cattle he had seen at any agricultural fair. There were 73 entries. R. Allbright, Castleavery, being the principal prizewinner in the junior sections, winning also second herd prize; T. C. Loye winning the herd prize, first and second on cows of beef strain in milk, and first on cow, beef strain, not in milk. His entries were of particularly choice quality and remarkably good handlers. S. Taylor was also a successful exhibitor, winning first on dairy cow and third on herd prize. H. Holland, T. Lippington, R. Garoin, T. Foster and J. Nicol also shared in the distribution of honors.

The sheep exhibit was not very large and only of fair quality, the exhibitors being J. Emerson, A. Thompson, T. Norman, Wm. Moffat and J. Henderikson. There were but few exhibitors of swine. G. Martin showed a Yorkshire boar.

The principal exhibitors in dairy produce were H. Lennox, C. Vicars, T. Lippington and F. Kirkham, the latter exhibitor also winning in homemade cheese.

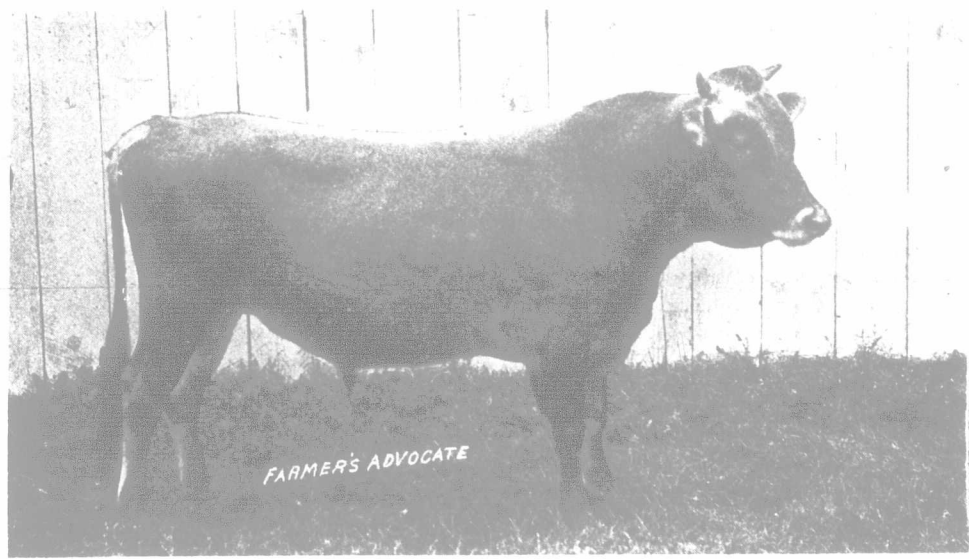
Our Scottish Letter.

September is the busiest month in the year in respect of sales of stock, and the trade in all kinds during the past month has been satisfactory. There has been an absence of sensational prices in any department, but there has been an excellent selling trade all round and business has seldom been better for good commercial stock of any kind. The best trade for all parties is a solid, level commercial trade, leaving a good profit to the breeder and the prospect of some profit, with the improvement of the animal, to the buyer. The leading trade among cattle has been in the Aberdeen-Angus breed, and certainly the lovers of the blackskins have no reason to complain of the values put upon their stock by owners both north and south. There are herds of black Polled cattle everywhere now, and the past month has seen quite as good trade for them in the extreme south of England as in the north-east of

castle-on Tyne, for a yearling heifer in the lot of Mr. Arch. Whyte. One of the Hayston cows made £106 1s., to Mr. Shaw Adamson, of Careston Castle; and a like figure (101 gs.) was paid by Mr. Kennedy, Doonholm, Ayr, for one of the two-year-old heifers from Spott. The high level of the heifers in this lot may be understood from the fact that nine two-year-olds made the fine average of £63 11s. 8d., and eight yearlings, £52 2s. 1d. The most extraordinary feature in this sale is the fact that at no time during its long, unbroken history of more than half a century has the Spott herd, of which the others are offshoots, been headed by a bull costing even as high as £50. Mr. Whyte is a first-class judge, and his sons run him hard in the same respect. Their "herd-heads" have been bought with rare skill and discrimination, as the above summary abundantly proves. At present the stock bull at Inverquharney is Melville Castle. He was bought at Perth, an undersized, poorly-milked calf, for £23. He is one of the best breeding bulls in the breed today. Like many another good one, he was bred by Mr. Smith, Powrie, Dundee, from whose herd a draft was sold on the previous day. The 16 head, which were all females except one bull calf, made an average of £29 1s. 5d. On the same day 38 head were sold from Mr. McIntosh's herd, at Balquharn, at an average of £21 16s. 7d.; and nine head—cows and heifers only—were sold from the Careston Castle herd of Mr. Shaw Adamson, at £28 11s. Similarly, eight head from the Earl of Airlie's herd, at Cortachy, made £28 7s.; and nine from one of the oldest and best herds in Scotland, that of Mr. Patrick Chalmers, of Aldbar,

reasons have been advanced to account for this drop in public estimation of a flock which held undisputed supremacy for a long series of years. Perhaps the most reliable is that the Mertoun (Lord Polwarth's) rams have been bred too long in one particular way. His Lordship never buys a ram or a ewe, and the flock is thus always recruited from within itself. It is doubtful if this can be done indefinitely, and although it used to be thought that Lord Polwarth had solved the problem, it is proved now that he has not. An eminent firm of breeders of Blackface sheep, with a much larger flock to draw upon than Lord Polwarth, carried on this policy with much success for a long time. At length this breed began to decay. There was not the same demand for this class of sheep, and it was recognized by those responsible that the plan of keeping the tribe self-contained had gone far enough. They, therefore, openly purchased sires in the best markets, and this year they have a good trade with the produce of these in-bought sires. Therefore, alike with cattle and with sheep, the lesson is being taught, and that in the hard school of experience, that line-breeding can only be followed within certain limits, and outside of these the results may be disastrous.

Great activity prevails amongst those who are in favor of repealing the law prohibiting the importation of Canadian store cattle, and meetings have been held in Perth and elsewhere in support of this movement. A conference is to be held in Edinburgh on the 9th of October, with the President of the Board of Agriculture, Mr. Hanbury, when he will be urged to undertake the repeal of the statute which makes slaughter at the ports compulsory. Certainly the zeal of those who are carrying on the agitation deserves success, but it may be doubted whether that will come. "SCOTLAND YET." Sept. 28th, 1901.



CHAMPION OF BURNSIDE.

First-prize yearling Jersey bull at the Western Fair, London, Ont., 1901. PROPERTY OF J. A. LAWSON, NILESTOWN, ONT.

Scotland. Mr. Bridges, of Fedderate, owns land both in Aberdeenshire and in Sussex, and many years ago, impressed with the excellence of the cattle on his northern estate, he founded a small herd of black Polled cattle in the south. He had a sale in the last week of August, when he disposed of 41 head of surplus stock, for which he received the useful average of £28 2s. 11d. apiece. He got 180 gs., or £180, for a yearling bull named Darlington, from one of his neighbors, and it shows what can be done with the breed that this bull is regarded as perhaps the best of his age at the present time. The gentleman who bought him, Mr. Batchelor, is a beginner at the business, but he is determined to have good ones, and is likely to succeed. The great difficulty cattle-breeders have to contend against in Sussex and Kent is drought. There was scarcely any rain down there during the summer, but there was, happily, plenty of spring water. This, of course, had to be pumped and carried to the cattle, but when so dealt with it is wonderful how cattle can be brought through even in such a season as last. The next notable sale of black cattle took place a good way north of Sussex, but still in England. Mr. Arthur Egginton, South Ella, Hull, in Yorkshire, has had a choice herd of A.-A. cattle for about fifteen years, and has bred several high-class show animals. He resolved to give up his herd, and it was dispersed on the 12th inst. The event was attended with great success, and an average of £12 2s. 8d. was obtained for 47 animals of all ages and both sexes. The cows were highly bred, a large proportion belonging to the famed Erica tribe, and the average price for 15 of them was £52 8s. 7d. One of them, Equalize 25327, went to Ballindallock at 130 gs., or £130 10s., and to the same famous herd went a yearling heifer, named Equidora 29949, at 100 gs., or £105. A capital breeding bull, named Mailboy 13637, in spite of his six years, was secured by one of the Sussex breeders, Mr. Schroeter, at £126, and a bull calf got by this sire went north to Dalmore, in Ross-shire, at £110 5s. These prices leave nothing to be desired, and show that much must be done to protect herds built up at such cost.

The final series of black Polled sales took place a week later in Scotland—at several of the best herds in Angus and Banffshire. The phenomenal sale of the series was held on the second day at Hatton of Eassie, in the fertile vale of Strathmore, when representatives of the three herds owned by Mr. William Whyte, Spott, and his two sons, were disposed of without reserve. All the 52 animals sold were females, and the average overhead was £50 6s. 4d., an extraordinary figure, considering that the constituents of the sale were 11 cows at an average of £41 6s. 6d., 17 two-year-old heifers at £58 6s. 1d., 16 yearling heifers at £53 18s. 10d., and 5 heifer calves at £28 7s. Mr. Arch. Whyte, Inverquharney, Kirriemuir, sold 23 head at £15 3d.; Mr. James Whyte, Hayston, 12 head at £19 7s.; and Mr. William Whyte, Spott, the father, 17 heifers at £58 3s. 7d. The highest price of the day was £20 2s., or £126, received by Mr. James Whyte for the two-year-old heifer, Ida VI. of Lednock 28102. She went to Great Marlow, Bucks, to join the herd of Mr. Hudson, at Danesfield. The next best price was £110 5s., paid by Mr. Bainbridge, from New-

made £30 11s. 4d. The sale on the day following that at Hatton of Eassie was held at Tochnieal, in Banffshire, when very good trade was again experienced.

Contemporaneously with these sales of black cattle, there has been a considerable number of sales of Shorthorns in the north of England, but the averages have been much tamer than those quoted. Forty-one cows and heifers at a sale held by Lord Brougham and Vaux, at Brougham Hall, near Penrith, drew an average of £30 19s. 9d., and 11 bulls made £49 8s. 11d. There was a good attendance at this sale, and several animals were bought for His Majesty the King. The next sale in the same district did not turn out so well. The average for 48 cows and heifers was only £23 12s., and twelve bulls averaged but £16 6s. 6d. These were nearly all cattle of Booth breeding, with perhaps an occasional dash of Bates blood entering into the composition of some of them. A much more significant sale still was held a week later at Underley, which used to be the home of one of the greatest herds of Bates cattle in the world. Fifty-five head of the stock sold, not now pure Bates, but mixed with almost everything in the Shorthorn way, except Scottish or Cruickshank blood, made an average of £27. There could be no more eloquent testimony to the changed conditions of cattle-breeding in this country than these figures; and while sympathy must be felt for breeders reared in particular schools, who cannot abandon the prejudices of a lifetime, the evidence is conclusive that without the thick-fleshed, stout, short-legged cattle from the north, it is not now possible to breed Shorthorns profitably. Men will have to abandon these predilections, and then they will be more prosperous financially than they are ever likely to become by adhering to an exploded cult.

This lesson has also been taught at the great Border Leicester ram sales at Kelso. Formerly these sales were characterized by the undisputed dominance of the rams bred and exposed by Lord Polwarth. The best pedigree for a Border Leicester tap was simply: sire a Polwarth ram. Two years ago there came a change; the taps sent in by His Lordship did not take the market and suffered a severe drop. Last year they made a recovery, but this year, in place of the wonted supremacy Polwarth first and the rest nowhere—it was a case of singing "We're a John Tamson's Bairns." The highest average was made by a Forfarshire breeder, Mr. David Hume, Barrowwell, Brechin, whose ten made the respectable average of £30 13s.; and the next best was the Messrs. Smith's lot of 21, from Leaston, in E. Lothian. Their average was £25 6s. 8d., and they sold one ram at £122. Lord Polwarth's average for 32 was £15 18s. 8d., a fall of £12 as compared with the price made last year. Various

Supports Koch's Position.

The Times correspondent, writing from Berlin, says: The Berliner Klinische Wochenschrift publishes an interesting paper by Professor Baumgarten, of Tubingen, in support of the theory that bovine tuberculosis is not transmissible to human beings. Professor Baumgarten, who shares with Professor Koch the honor of having discovered the tuberculosis bacillus, and who has made a special study of the disease, describes a series of experiments made by a Dr. Rotikansky some twenty years ago. Dr. Rotikansky, who was working in a hospital of which Professor Baumgarten was surgeon, had charge of patients who were suffering from incurable tumors, and whose deaths were only a matter of time. He hit upon the idea that, as cancer and tuberculosis seemed at that time to be mutually exclusive diseases, it might be possible to cure his patients by inoculating them with tuberculosis germs. He proceeded to make the experiment, using large quantities of bacilli from tuberculous cattle. No results, however, were obtained, and



BLOOMING HEATHER 2ND

Sire Imp. Blue Ribbon 17995; dam Heather Blossom 26500, from Imp. Charlotte by Gravesend. Shorthorn heifer calf to be sold at the dispersion of the herd of A. & D. Brown, Iona, Ont., November 12th, 1901.

none of the patients became infected with the disease, although some of them survived the experiment for several months.

Professor Baumgarten regards this as positive proof that bovine tuberculosis is not transmissible to human beings. He does not, however, follow Professor Koch in holding that the two diseases are essentially different, but believes that the tuberculosis bacilli suffer modifications in the bodies which they inhabit, and that these modifications are different in human beings and in the various animals. Bacilli which have accommodated themselves to the organisms of the lower animals become comparatively innocuous to man. He does not regard tuberculosis in cattle as constituting a great danger to human health, but does not think it would be wise to do away with the precautions which are now taken to prevent the spread of the disease by milk and butter.

Lumber and Fuel Used in Manitoba.

Crown Timber Inspector Stephenson gives the following statistics regarding the consumption of coal and lumber in Manitoba and the Territories:

The quantity of coal and cordwood consumed in Manitoba and the Territories as far west as Regina is approximately: American anthracite, 37,500 tons; American bituminous, 4,200 tons; Canadian anthracite, 6,500 tons; Canadian bituminous (Galt), 10,000 tons; Canadian lignite (Souris), 43,000 tons; total, 101,200 tons. Cordwood (Winnipeg only), 125,000 cords.

Mr. Stephenson expects that the completion of the locks in the Red River at St. Andrew's Rapids will reduce the price of cordwood 50c. to \$1.00 per cord, and the beneficial effects will extend to all the Red River Valley country as far south as Emerson.

Regarding lumber, there were 150,532,000 feet disposed of in Manitoba during the last year through the following agencies:

Rat Portage Lumber Co., Rat Portage, Ont., 55,000,000 feet; Beaver Mills, Rainy River, 6,000,000 feet; Keewatin Mills, Keewatin, 12,000,000 feet; Savanne Mills, Savanne, 5,000,000 feet; Port Arthur Mills, Port Arthur, 4,000,000 feet; Fort William Mills, Fort William, 8,000,000 feet; imported from British Columbia, 16,000,000 feet; manufactured under Government license in Manitoba, 23,532,300 feet; cut under Dominion Government permits for sale, 4,000,000 feet; taken under settlers' free permits (approx.), 6,000,000 feet; manufactured lumber imported from United States, 11,000,000 feet; total, 150,532,300 feet.

Although of the above quantity, about 25,000,000 feet, B. M., in the log, were imported from the United States, it is satisfactory to observe that, as regards manufactured lumber, our importation from the States is decreasing year by year. In the period to 30th June, 1901, the quantity imported was in excess of 24,000,000 feet, while for the present year the quantity is but 11,000,000 feet. The quantity of shingles imported from the United States was reduced from 10,235,000 for the year ending June 30th, 1900, to 2,340,000 for the year ending June 30th, 1901. "The American shingle is being forced out of the market by the British Columbia product."

In this connection, the development of the cement works within the Province is of interest, and respecting this industry, Mr. Stephenson says: "Manitoba Union Mining Co. have already shipped 55 cars of cement from Arnold on the Morris-Brandon branch. At the price obtained the consumers can probably save one-third the cost of imported cement."

Anthrax in the West.

Great excitement was occasioned throughout Canada by the press reports of a severe outbreak of the serious and dangerous disease, anthrax, on one of the Western ranches. Investigation shows, however, that the reports were greatly exaggerated, and that the disease was confined to sheep, of which about 2,000 (half the number stated) died. The disease is one which affects cattle, sheep, horses, and man. It is very rapid in its course, few symptoms being shown, the sudden death, especially of several animals, being the main symptom to awaken suspicion. The disease is of germ origin, and can only be controlled by preventive measures, which to-day consists of the use of the anthrax vaccine. In this connection, persons must be careful not to confuse anthrax and blackleg, two different diseases and requiring different vaccines. Anthrax is dangerous to man, attacks animals at any age, and is very rapid in its course. Blackleg is not dangerous to man, takes a longer time to develop, and is a disease of young cattle. In addition, the animal affected shows marked symptoms. Anthrax can be distributed by means of the hides, fleeces, and tannery refuse. Such being the case, all parts of the animals dying with the disease should be destroyed by fire, and a pest-mortem should never be held by the owner—it is too risky—leave that to the professional. The germ of the disease takes on a spore form at one period of its life, in which condition it is very hard to destroy. In cases where the disease is noticed at the onset, there will be found high fever, congestion of mucous membranes, signs of brain congestion, such as excitement, bellowing, convulsions, followed by stupor and death, and also bloody discharges from the natural openings of the body. The outbreak mentioned was at Swift Current, Assn., and is now under control. The Department of Agriculture, Ottawa, sent their veterinary chief, Dr. McEachren, and his assistant, Dr. Higgins, of Montreal, up West to investigate the trouble, where they consulted with Dr. Hargrave, of Medicine Hat. With an enforcement of stringent quarantine regulations in the affected district, the use of anthrax vaccine, and the destruction by fire of all carcasses, the outbreak will undoubtedly be brought to a close.

Flavor in Dairy Products.

It is a known fact that the smallest particles, scientifically termed molecules, of substances are not in contact and that they are in motion, which makes it possible for milk when in an atmosphere containing odors to become charged with them. If the odors of manure, of urine, of ammonia, or any of those associated with the decay of organic matter, are in the air above the milk, the rapid motion of those molecules will cause some of them to descend into the milk and accumulate there, until they become so numerous that just as many tend to escape per minute as tend to enter. The milk is then saturated with the odor in question.

The warmer the air surrounding the milk the more quickly will the condition of saturation be reached, simply because the rapidity of the motion of the molecules increases with the temperature, for when the molecules of a foul odor are once inside the warm milk they travel or diffuse downward more rapidly because it is warm.

It is well known that odors and flavors result from the introduction of solids into milk, and that unless great care is taken, both in keeping stables and cows clean and free from dust, the fine dirt particles falling into milk, even though that amount be small, may readily dissolve and impart a strong flavor to it; thus, one careless milker may easily injure very materially the quality of that of a whole herd. It should ever be kept in mind that a very little dirt is capable of being divided to an extreme degree, and that by means of the senses, taste and smell, extremely small amounts may readily be detected. Many flavors, however, are developed in milk after having been drawn and placed in the receiving can. Milk is a very nutritious fluid, and contains the necessary food elements for almost all life, from germs up to man; hence, not only must dirt be kept out, but also those germs which have the power of reproducing themselves in milk and producing undesirable odors and flavors, thus injuring the quality of the milk. The objectionable germs are liable to fall into the milk along with the dust particles, as well as by means of dirty milk cans or other receiving vessels. Hence, we see that the brushing of the udders and flanks and the wiping with a dampened cloth before milking is backed up by scientific reasons as well as practical experience. In this connection, dusty feed, such as hay or straw, or bedding, should not be handled in the stable within half an hour of milking, so as to allow the dust particles to have settled before the milk is drawn.

Weeds and Insect Pests.

As an additional safeguard against the spread of insect and weed pests, the "Farmer's Advocate" would suggest the formation of natural-history clubs or local botanical and entomological societies in every district in the country. These might become affiliated with some of the larger societies, and thus bring the smaller local organization into touch with some of our best authorities upon these subjects. It is a matter that Farmers' Institutes and agricultural societies would do well to encourage, but which can perhaps be best developed through the instrumentality of educationists in the cities and towns, acting in conjunction with the teachers of rural schools. To properly train the youth as observers of the habits of plants and insects will benefit them beyond computation in an educational way, and in time accomplish much for the advancement of Canadian agriculture. If the teachers become actively connected with such organizations, the results will naturally have a decided bearing upon their school work. In several centers we know of local botanical societies that have been for years doing good work by making a scientific study of the plant-life of the district, and we hope that other places will take up the idea and also encourage nature study in the schools by such methods as the offering of prizes at the local shows for named collections of weeds and other plants, or of insects, accompanied by written descriptions of how best to combat those of an injurious character. Prof. Robertson, of Ottawa, is doing good service by calling public attention to the advantages of manual training in the schools, and we should be glad also to see progress made in the directions suggested above.

Clean Fairs Wanted.

To the Editor "Farmer's Advocate":

Sir,—The Civic Committee acknowledges receipt of the "Farmer's Advocate" of Sept. 20th and Oct. 5th, containing most valuable editorials in behalf of the clean agricultural fair. The wide-open fair is passing into history, and such valuable journals as the "Farmer's Advocate" have largely secured this desirable end.

Very respectfully,

EBEN BUMSTEAD,

Sec'y Civic Committee.

Boston, Mass., Oct. 5th, 1901.

A Herdbook for Dairy Shorthorns.

It appears that one of the English professors has been advocating the addition to the already long list of herdbooks of another for the registry and records of dairy or deep-milking Shorthorns. Mr. Richard Stratton, of Wiltshire, a well and widely known Shorthorn breeder, and one who values highly the milking propensity in the breed, and whose herd is noted for this quality, fails to see the necessity for or the wisdom of the proposal, and tersely states his views in the following sentences in the London Live Stock Journal of recent date, from which we quote:

"I have read the letters under this heading with considerable interest, and, while attaching the highest importance to the milking properties of Shorthorns, I have no hesitation in giving my opinion against the scheme proposed by Professor Long. The objections to starting a second register for Shorthorns are, I think, much greater than the advantages to be derived from such a proposal, and I think a great fallacy underlies the idea that registration of milk yields insures continuity of milking properties. There is, of course, no doubt that 'like' tends very strongly to breed 'like,' but in Shorthorns good milking qualities depend quite as much upon the manner of rearing the females as upon their breeding, and whatever may be the milking antecedents of the parents, unless the offspring is reared to be a milker the chances are that it will not become one; it is not therefore entirely (or nearly so) a question of breeding. The objections to having two herdbooks are so obvious that I need not point them out; suffice it to say that the difficulty of obtaining really reliable milk yields must be very great, also the expense. Then, it must be remembered that milk yields depend very much on feeding, the nature of the land, etc. Then, a large yield may not necessarily be more valuable than a small one, provided the former is poor and the latter rich. The whole thing appears to me to be too complicated to be workable, and, while fully appreciating the objects of Professor Long—viz., the improvement of the milking properties of pure Shorthorns, and the demonstration of their capacity in this respect, which I contend is equal to that of non-pedigree Shorthorns—any attempt to establish another herdbook I should strongly oppose. It appears to be a common idea that a deep-milking Shorthorn is not one that will readily lay on flesh. This is entirely opposed to my experience. On the contrary, I find, generally speaking, the best milkers are the most regular breeders, last longer, and when dry lay on flesh faster than bad milkers; therefore, looked upon from any point of view, milking properties should be steadily kept in view by all Shorthorn breeders, and our agricultural societies should impress upon their judges the importance of this point."

The Breeding Sow.

As the time for the selection of breeding sows for next year's litters is now at hand, the following hints by a writer in the Farmer and Stockbreeder, of London, England, are opportune, and will commend themselves to farmers generally:

To start successfully in the breeding of pigs, care must be taken to see that the sow comes from a mother which is an easy feeder and a good nurse, and care should also be taken to see that she has not been stunted in the earlier stages of her growth for want of enough to keep her in comfort. These points are absolutely essential. What breed to work on will depend mainly on individual taste and judgment. She should not be bred from so early as to injure her own growth or the vitality of her offspring. If her first litter is fairly numerous—say, from seven to ten good pigs—and she nurses them well, that is a sow to retain as long as she is fit to breed. Such a sow, properly managed, will bear and nurse twenty pigs in a season, and pay her way with a good profit on all the skill and food she gets. If she does not keep up to her heredity, is a poor breeder, or a poor nurse, she may have another trial, and should that also prove unsatisfactory, she cannot too soon be made into pork. No matter how good she looks, she has failed in the main purpose of her existence. Heredity and selection by a man who knows at the same time how to manage his stock are the foundation principles of the work of pork-raising for profit. In a year or two, by careful management, a splendid breeding herd can be established, and all the cheaper products of the farm can by this means be readily turned into good money. Pigs are able to make much more effective use of the foods with which they are supplied than any other class of farm animals. Experiments have shown that, while the pig is capable of laying on flesh at the rate of 1 lb. for every 5 lbs. to 7 lbs. of dry food which it consumes, cattle require to eat from 10 lbs. to 12 lbs., and sometimes from 14 lbs. to 15 lbs., of dry food for every 1 lb. of increase in weight that they show.

Pan-American Butter.

Following are descriptions kindly furnished by the makers of the highest-scoring butter from various States in the Pan-American butter competition last month. The paragraphs in the following letters constitute replies to the eight questions under heading Toronto Industrial Prize Butter, which appear on page 640 in this issue.

NEW HAMPSHIRE PRIZE BUTTER WITHOUT A STARTER.

1. We have two skimming stations besides two separators in central plant. Have 140 patrons

when ready to put in churn. Such are my methods, and I am using them every day.
Olmsted Co., Minn. C. T. Radke.

MILK AND CANS MUST BE CLEAN.

Our butter that went to Buffalo was taken from our regular make. We always reject any milk that is not sweet, and cans and milk clean. We use no starter; separate our milk at 80 degrees F.; cream 40 per cent. fat.; began cooling at 12 o'clock; cooled steadily to 50 degrees F.; held at that temperature about 15 hours, then churned 50 minutes. Washed in two waters, 50 and 52 degrees F.; worked on Vermont Farm

Machine worker; worked twice. We used Moulton's Cadillac salt, 1/2 oz. to 1 lb. butter. Wells & Richardson's color. Thirty-pound tub, well soaked with hot brine, the last hour in fresh water; lined with parchment paper. Tub packed in full; edges of lining turned in; paper on top. We made our butter for New York State Fair about the same; scored 98.
H. W. Sedgell.
New Hampshire.

3. Wells & Richardson's butter color was used, half ounce to 100 lbs. of butter.
4. The churning temperature was 54 Fahr., and churned 45 minutes.
5. Butter was washed once, worked in a Disbrow churn, and packed in 60-lb. tub.
6. Worcester salt used, one ounce to the pound.
7. Butter room, 38 degrees Fahr.
8. One week.
Had 13,000 lbs. of milk and made 600 lbs. of butter, of which one tub was sent to Buffalo.
Will Co., Ill. G. Herman.

CHURNED AT LOW TEMPERATURE.

Cream was all from separator; part from hand separators and part at the creamery. Cream ripened at sixty for about twelve hours; cooled to fifty; no starter used; cream from twenty-four to forty-eight hours old. No color used; none needed. Churning temperature, fifty degrees; time churning, 40 minutes, in box churn. Washed once; temperature water 48 degrees. Mason worker (improved). Time, six minutes, four revolutions per minute. Packed in spruce tub, paper lining, soaked for twenty-four hours. Worcester salt, used 1/2 oz. Temperature butter room, 48 degrees. Made ten days before exhibit. Weather warm and milk came sour, so it was hard to get a good flavor. Creamery small one, so have to take milk we otherwise would not.
Grafton Co., N. H. Leon Lupien.

METHODS OF A N. Y. CREAMERY CO.

Our butter was taken out of a regular churning from each creamery. We use the De Laval separator, and did not use any starter.
The cream was 48 hours old when churned. We used 1 1/2 ounces of Wells-Richardson butter color for the churning, which was 390 lbs. of butter. The churning temperature was 55 degrees; time one hour.
Butter was washed twice, water at 46 degrees; worked in a Fargo worker, five minutes. Packed in 60-pound spruce tubs, lined with parchment; pounded down evenly and firmly with a round pounder. We used Diamond Crystal salt, half ounce to the pound.
Butter was made on the 6th of month, and shipped same night, by express. Exhibited the 10th. Temperature of butter storage room, 45 degrees.
We use the same process at all of our creameries. Some of our milk is not as good as it should be, and we often take milk that should be sent back, to save trouble.
Cherubusco, N. Y. T. B. Humphrey & Co.



CANADIAN EXHIBITORS OF SHEEP AT THE PAN-AMERICAN EXPOSITION.

delivering milk at these places, besides cream that is gathered from patrons along the route by our station operators, some of which is from hand separators, balance raised by gravity.

2. Used no starter, separating and holding cream at 68 degrees F. until 36 cc. acid developed (Mann's test), when cream was cooled immediately to 54 degrees F.—stirring nearly all the time; having mechanical refrigeration, it took only 1 hour—and held 6 hours before churned.

3. Used 1/2 oz. Wells, Richardson & Co.'s butter color to 100 lbs. butter, figuring yield at 5 per cent., which we have maintained all summer.

4. Churned 46 minutes, at 54 degrees F., in granules twice as large as wheat, in a Disbrow No. 4, putting it (the churn) on the slow motion as soon as butter commenced to "break."

5. Butter was washed twice, with water 2 degrees colder than buttermilk when drawn from churn.

6. Salted 3/4 oz. to the pound, with Worcester salt; and worked twice, three minutes each time.

7. Temperature of our butter storage room, 28 degrees, being cooled mechanically.

8. Our butter went direct from churn to Exposition, both in July and September; also to New York State Fair at Syracuse.

Note.—Would like to state, for the benefit of F. J. Sleightholm, of Middlesex Co., in regard to remarks on score card, that in the case of cut on color of his butter, it is never scored off on shade, as that is a matter of individual taste. His butter must have either contained mottles or was streaked.
W. B. Craw.
Wyoming Co., N. Y.

HIGH TEMPERATURE AFFECTS AROMA.

1. Cream was from De Laval separator.

2. Cream was ripened in a Boyd vat, after separating, for seven hours. Starter was skimmed milk heated to 180 F. the day before, then cooled gradually to 75 F. at night; put in butter room, where temperature is 52 all the time. Put in cream vat next morning and separated a 50-per-cent.-fat cream into it. Cream was 42 hours old when churned.

3. Used Wells & Richardson's color, 1 oz. to 100 lbs. of butter.

4. Churning temperature was 52, and cream broke in 45 minutes.

5. Washed once, with water at 52 F.; then sprinkled salt over it, sent the churn around three times; then put rollers in gear, worked once, then drained for 30 minutes; worked again, and drained same as before, then worked again, and then packed in a 20-lb. tub, lined with parchment paper.

6. Salt, Worcester, 7 lbs. to 100 lbs. of butter.

Butter room temperature 52 degrees.

This butter was made on Friday, and was 17 days old when scored at Buffalo. In using a high temperature while ripening, I think butter has its fine aroma, say at 80 to 85. I would suggest that 70 to 75 was sufficient, and be sure not to get it overripened. It should have a 36-38 acid (Mann) test or 56 Farrington test

centrifugal. No starter was used; was churned eighteen hours after separating. Wells & Richardson's color was used, about 1/2 oz. to 100 lbs. of cream. Churning temperature 58 F.; churned 1/2 hour. Butter washed in churn, water about 48 F. Worked and salted on Vermont Farm Machine power worker; salted with Worcester salt, 3/4 oz. to pound. The butter was made four days before shipped, and kept in storage room, temperature 50 F. The weather condition bad; the milk arrived at creamery in unsatisfactory condition.
W. B. Ellis, Business Manager.
Sullivan Co., N. H.

CLEANLINESS AND VENTILATION IMPORTANT.

1. Cream from United States separator.

2. No starter used: cream when churned 36 hours old.

3. Use no coloring. Keep Guernsey cows, and they produce yellow cream.

4. Temperature when in churn, 57 degrees; takes 50 minutes to churn.

5. Butter washed twice: first water 50 degrees, second water 43 degrees.

6. Two-thirds ounce salt to one pound butter used.

7. Cold storage, 43 degrees.

8. Butter made July 3rd, 1901.

9. Churn heavy cream, 48 to 50 per cent. butter-fat.

Keep 72 cows; have 3 silos; and take manure from stable every day. Have large ventilator to keep pure air in stable for cows, and the air is taken from floor, so stable is warm all winter. Vat sweet.
Ira Parker.
Grafton Co., N. H.

SAMPLE FROM LARGE CHURNING

1. Butter was from cream from separator.

2. Cream was cooled down to 62 Fahr. after separating, and pasteurized starter with Hanson's Lactic Ferment added, and cream was 18 hours old when churned.



JUDGING SHROPSHIRE AT TORONTO INDUSTRIAL EXHIBITION.

BUTTER AS MADE BY A WISCONSIN CREAMERY CO.

1. Milk all received, none rejected; was separated with Alpha separators, at temperature of 78.

2. Cream was ripened at temperature of 72 for ten hours, with 20 per cent. Hanson's Lactic Ferment starter; acid showed 30 (Mann's test); was cooled to 45 degrees and held till next morning; was then 46 degrees, and showed 41 (Mann's).

3. Alderney, half ounce to fifty pounds butter.

4. Cream was warmed up to 48 degrees, and churned in forty minutes.

5. Butter was washed once, at a temperature of fifty; salted and worked in a Victor churn, four revolutions with the rollers idle, put in motion and revolved twice around and drained, and so on every half-hour until the churn had gone 12 times around. Packed in parchment-lined 30-lb. spruce tub.

6. Worcester salt, $3\frac{1}{2}$ pounds to 50 pounds butter.

7. Butter storage 45 to 50.

8. Butter was made on Aug. 31; was shipped on Monday, Sept. 2nd; was scored about Sept. 10th to 15th. This butter was shipped from here to Chicago by express, with a temperature from 75 to 80 degrees. Think that might have affected it some, as I was cut on body by the inspectors in Chicago, who gave me: Flavor, 42; body, 24; color, 15; salt, 10; package, 5; 96. Walworth Co., Wis. G. G. McIntyre.

A POINTER IN PACKING SHOW BUTTER.

1. From separator.
2. Skim-milk starter. Cream 18 hours old.
3. Alderney color, $\frac{1}{4}$ oz. to 100 lbs.
4. Fifty-four degrees; 45 minutes.
5. One washing, 54 degrees; one working; packed at once; 30-lb. spruce tub, paper lined.
6. Genesee salt, $\frac{1}{4}$ oz. to pound.
7. Fifty degrees.
8. Four days.
9. When shipping this butter to Buffalo, I placed the tub inside a 50-lb. tub, and later saw the tub at Buffalo, and the package was the cleanest and whitest one there; no finger marks nor express tags on it. D. G. Donohue, Chittenden Co., Vt.

THE MAIN POINT IN BUTTERMILKING.

1. The cream was from separator.
 2. In a ripening vat. For part of the exhibit I used starter from dry lactic ferment, and the other from a starter received from Simeon C. Keith, Charlestown, Mass. Cream 24 hours old.
 3. Wells & Richardson and Alderney coloring; enough to give it light straw color.
 4. Churning at 47 degrees. Time, 1 hour and 30 minutes.
 5. Washed and worked in Disbrow churn; washed twice, water at 45 degrees; packed in Elgin tubs, lined with paper; cloth cap, with little salt on top.
 6. Worcester salt, $\frac{1}{4}$ to 1 ounce to the pound; depends on the condition of the butter or the amount of moisture it contains.
 7. About 42 degrees.
 8. From four to 7 days.
- Come to look over my answers, I will add a little to No. 2, which is the main point in buttermilking. I separated the milk at 80 degrees, cooled the cream to 70, and held there till the cream contained 37 cc. of acid by Mann's acid test; then it was cooled immediately to 47, and held there till churning time—four or five hours. Starter was added as soon as separation commenced. Wm. D. Griffiths, Cayuga Co., N. Y.

DOES NOT USE STARTER.

Cream was from separator. Cream was not ripened with a starter, and was three days old. Was ripened at a temperature of about 80 degrees, and then cooled down to about 55 degrees.

Wells, Richardson & Co.'s coloring was used in May exhibit; none in July; did not use any stated amount.

The churning temperature was 58 degrees; time in churning, from 30 to 40 minutes.

After the butter had formed in grades the size of wheat, or a little larger, the buttermilk was drawn off, water at a temperature of 55 degrees was added. For every ten quarts of cream twenty quarts of water was used, and the churn turned for a few times and the butter removed to the worker, and the salt well worked in. Then it was set into the ice chest for half an hour, and then it was gone over with the worker twice. Was then printed in two-pound blocks and cut in two, making pound blocks, and done up in parchment paper.

Worcester salt was used, at the rate of 1 oz. to the pound.

The butter was made two days before it started for the Exposition. Could not say how long before it was judged.

In making my butter, I have never used a starter, for I believe it does not show the skill of the buttermaker; or, in other words, the buttermaker tries to cover up the bad odors in his cream.

To make good butter, you must practice cleanliness from the time the milk leaves the cow until it is placed on the market.

Merrimack Co., N. H. Frank O. Melvin.

CARE IN HANDLING MILK IMPROVES FLAVOR.

Have creamery or a separator plant.

Cream was skimmed at a temperature of 85 degrees with an Alpha. Cooled to 76 degrees, and held at that temperature till it contained 32 per cent. acid by Mann's test.

I used Orin Douglas starter. Cream stood about 18 hours. When 32 degrees acid was reached, cream was cooled to 52 degrees, churning temperature, and churned in 40 minutes. Washed in one water; temperature, 52 degrees.

Worked and churned in a Disbrow No. 5; packed in 60-lb. tub. Used $\frac{1}{2}$ oz. to 1 lb. of butter, Diamond Crystal salt.

Used no storage.

Milk was not in very good condition. The creamery started up the 22nd of May, 1891, and I have had some trouble to get the people to take good enough care of the milk. If milk was in better shape, I could do better work on flavor.

Berrien Co., Mich. Robert J. Dowling.

Feeding Farm Horses.

Following is a summary of the results of a series of experiments, covering two years' time, conducted under direction of Chas. W. Burkett, Agriculturist at the New Hampshire State Agricultural College:

1. More working units of horse power are needed for the improvement of our soil.
2. Pure-bred sires of coach and draft breeds are necessary for the improvement of the farm-horse stock of the State.
3. Various kinds of foodstuffs can be used to advantage and with economy in feeding horses.
4. There is no so-called "one ration for horses."
5. Any foodstuff or combination of foodstuffs furnishing the desirable nutriment at least cost should be considered in preparing rations for horses.
6. A mixture of bran and corn, half and half, is a good substitute for corn and oats for feeding work horses.
7. Corn stover is a good substitute for timothy hay for winter feeding of horses, because of its feeding value, the yield per acre, and commercial value.
8. A change from a grain mixture, consisting partially of linseed-oil meal, slowly or abruptly, does not cause a decrease in weight in horses if a proper substitute ration is fed.
9. Feed influences the quantity of water drunk by work horses.
10. Labor influences also the quantity of water drunk by work horses.
11. The individuality of the horse has greatest effect on quantity of water drunk.
12. The quantity of water drunk by the five college-farm horses varied from 25,895 pounds per year to 32,997 pounds.
13. The average total cost per year for actual food supply per horse was \$74.32.
14. The average cost for feed per hour's work done during two years was 3.4 cents.

Care of the Fall Litter.

The fall pig, as a rule, is not as great a success in the average farmer's hands as is the spring pig. Certain essentials, such as a dry, warm pen and attention to the sow and pigs at birth, must be observed. In this connection it is important that the sow should not be fat and lazy at farrowing time, or her pigs will be laid upon. A help to prevent such an unfortunate contingency is the projecting ledge fastened to the pen walls. A piece 2 x 6 can be used for the purpose of affording a creep under which the young pigs can lie. The first few days after farrowing, the sow should be fed sparingly, or milk fever or garget will ensue, in which case she may refuse to let the pigs nurse, and they will die. Arrange so that sow and pigs can have plenty of exercise, and with plenty of skim milk, middlings or shorts, the pigs will make rapid growth. Some farmers wean at six weeks; we prefer eight weeks as the time. The important point in giving exercise to the sow and young pigs, is that by so doing that plague of the pig-breeder—thumps—will be avoided. If they get plenty of exercise, the food allowance can be all that they will take after the pigs are a week or ten days old. A box with a mixture of ashes and salt should be accessible at all times to the pigs, and a few sods as well. Keep the pigs growing right along, and don't limit their exercise until a few weeks before they are to go to the block. Kitchen refuse can be used with profit, unless highly charged with soap or lye, in which event poisoning of the pigs would be likely to ensue. A good practice to follow with the young pigs soon after birth is to break off their tusks, in order to avoid tearing of the sow's teats, in which event her udder might get sore and she would refuse to let the young pigs nurse.

Halter Pulling.

Buckle or tie a long halter-strap around the horse's fore leg just above the knee, pass strap through one ring of the bridle and tie the other end to hitching-post. I have never seen a horse that would pull more than once when thus tied. After a time they may with safety be hitched in the ordinary way.

Judging Sheep.

An onlooker observing the work of judging breeding sheep at the fairs is sometimes led by the actions of the judges to question whether too much importance is not often attached to what is known as a good-handling back, without sufficient reference to the general appearance, character and type of the animals. A level back, well covered with firm flesh, other things being equal or nearly so, is certainly a desirable quality, but does not such covering depend largely upon condition, and the art of feeding, and is it proper to judge animals intended for breeding purposes mainly by the same standard as in a fat-stock show, where the animals are supposed to be fitted for the butcher's block? Watching the average judge at his work, the vigorous gripping and careful feeling, one is apt to get the impression that the result of his inspection depends almost entirely upon the handling, that eyes are practically an unnecessary accompaniment, and that the man might about as well be blindfolded as far as his rating of the competing animals is concerned. It is true that in sheep the art of the shearer may hide defects that can only be discovered by handling; but is it not well first to note the general appearance from the standpoint of a breeder, as to style, type, freshness, vigor, quality of fleece and bone, and the way the animal stands on his legs, before going into the more careful handling? We have in mind a case at a show this year, in one of the long-wool classes, where a ram was given a place in the prize list apparently for no other reason than that his backbone was better covered than that of others that were left out, and that were decidedly more uniform in type with the first and second prize sheep, and vastly stronger in masculine character, in bone, fleece, and the general indications of usefulness as a sire than the weak-headed, fine-boned, fat-backed winner. In another case, at the same show, the two judges differed in opinion as to the merits of two lambs, one favoring a big, coarse lamb, lacking in type and evenness of fleece, but fat and handling well on the back; the other a medium-sized lamb, of attractive style and type, with even fleece of good quality, and in good condition, but not fat. The referee who decided in favor of the big lamb gave as his reason a better handling back and a stronger "dock." The tail having been cut off a few inches further from the rump than in the other case, and the lamb being fat, would account for the latter virtue, but it was not a fat-stock show, and yet the man evidently looked at the case only from that standpoint and judged only by that standard. Handling, we admit, is an important point in judging, but it is possible to make a hobby of it and to forget others quite as essential, as was evidenced at a prominent show this fall in one of the cattle classes, where an excellent breeding cow, forward in calf, was turned down because it was considered by the judge that her flesh lacked firmness in the handling, but she was not competing as a butcher's least. What is needed, it would seem, is a judicial summing up of all the evidence from the view-point of the breeder and of usefulness for breeding purposes.

Continuous Growth in Live Stock.

If all who keep live stock knew better the value of continuous growth in the young animals, more attention would be given to maintaining such growth. The problem is plain. Every day that a young beast makes only half growth, half the food of maintenance is lost. Every day that it makes no growth all the food of maintenance is lost. If a calf, for instance, stands still for a month after it is weaned, because the food is unsuitable, the food eaten by the calf for that month is entirely lost. If a young cattle beast makes no gain for a whole winter, as is frequently the case, no return whatever comes in from the food consumed. Boarding animals for nothing is a very poor business. The careful, thoughtful man will not do it. He will try and so feed his animals that they will continuously improve during every day that they are on his farm and have to be provided for by him. It is curious how years ago this fact was not more recognized. Since, for instance, young cattle were kept until eighteen months old, and were not much heavier at that age than they are now at less than half the age, they were kept over winter and had to be fed as a rule during that period without making much gain. This was a mistake. Somewhat similar was the mistake of keeping steers to the age of three and four years that ought to have been marketed at two years. The constant aim of the stock keeper should be to avoid to the greatest possible extent the boarding of animals for nothing.—(Minnesota Farmer.)

Agricultural Education and the Colleges.

Considerable attention is just now being given to agricultural educational matters. Apart from the question being one of the greatest importance, the Agricultural College Commission appointed by the Manitoba Government is now studying the matter in all its phases, and consequently this is the time for the farmers to push forward their claims for higher agricultural education. The following article from the able pen of the Rev. Henry Wallace, of Iowa, will be read with interest:

"If agriculture in the Western States is to be permanently successful, if the prairies are to furnish food for the hungry nations to the extent manifestly intended by their Creator, two things are essential. First, that the sons and daughters of their present owners and occupiers have an education along agricultural lines that will enable them to farm with the highest possible measure of intelligence and the greatest measure of profit; and second, that the experiment stations, usually in connection with agricultural colleges, have the means and the will to discover the unknown and verify the correctness of present apparently proven knowledge by far more extensive experimentation than has yet been done. The experiment stations aim to discover the unknown and verify that which is supposed to be known. The colleges teach the known.

The Government has dealt liberally with the farmer. By the Morrill-law enacted nearly thirty years ago, vast tracts of land were given as an endowment to colleges, the proceeds to be devoted to instruction in agriculture, and the mechanic arts and the sciences relating thereto. Subsequent legislation has added to this endowment at the rate of from \$15,000 to \$25,000 per year for each college, besides a donation to the experiment stations of each State of \$5,000 a year. Unfortunately, the land endowment was frittered away by most of the Eastern States and some of the Western, and what remained largely perverted from the purpose intended by Mr. Morrill, whose foresight gave the farmers this magnificent grant. The administration of it fell largely into the hands of men with no knowledge of agriculture and no sympathy with it, who spelled the sciences relating thereto in large capitals, the 'mechanical arts' in small letters, and 'agriculture' in the smallest type in the office. In other words, they aimed to make the agricultural colleges duplicates of the universities and normal schools, and to graduate doctors, lawyers and preachers instead of farmers.

In those early days the farmers themselves did not feel the need of an agricultural education; often, in fact, scoffed at it and trampled under their feet the pearls which Mr. Morrill had sown so liberally about them. Naturally, the earlier graduates of these colleges, who had been fitted through them for other professions, became members of the board of trustees or regents, and, with quite a few notable exceptions, aimed in their shaping of the course of the colleges to make additional sheepskins or diplomas more valuable in their own estimation by making the colleges less agricultural and more literary or scientific. In some cases presidents were elected whose education, tastes and habits were as far removed from agriculture as possible, and not being broad enough intellectually to comprehend the necessity of agricultural education in great agricultural States, are still striving to maintain only enough agricultural education to retain the control of agricultural funds to teach something else.

What is needed in the West is not more doctors, lawyers, preachers, school teachers or professors, but more educated farmers' sons, who, familiar by long practice with plowing, for example, will have an opportunity to learn why they plow and under what circumstances they should plow deep or shallow, early or late, and how they can best control the moisture which the Lord gives them; an opportunity to study the laws of the soil, the laws of growth in the plant and animal, the feeding values of different grains and grasses, and balanced rations, and thus become acquainted with the seen and unseen tools and raw materials with which they are to work in harmony with nature. Farming in the future, as it costs more dollars from year to year, must be done with more 'brains, sir,' from year to year, and any attempt to make the agricultural college, the farmer's heritage, or what little portions of it, a duplicate of the university and normal school is in one sense foolishness, and in another sense robbery.

How is the perversion of these college funds to be stopped? Simply by seeing that the trustees or regents, or whatever they may be called, elected by the legislatures to manage them, are in hearty sympathy with agriculture and elected because they have the good of agriculture at heart and not because they have been efficient henchmen for some successful seeker after office, or happen to be a little too big for a squire and not big enough for a member of the legislature. Kansas is not alone in the tendency to belittle agriculture while using agricultural funds to educate farmers' sons away from the farm, and there will be no peace until 'agriculture and the mechanical arts' are spelled in large capitals and 'the sciences relating thereto' in ordinary type."

Growth of the Farmers' Institute.

We have received from the Ontario Department of Agriculture the Report of the Superintendent of Farmers' Institutes for 1900, which, in its record of the year's progress, presents some features of unusual interest. The growing utility and popularity of Farmers' Institutes is indicated by a decided increase in the membership. A new departure in the publication of the report has been taken, in accordance with which it will hereafter appear early in the year, the reports of the local Institutes in detail being given in a separate annual bulletin. The membership has increased from 18,058 in June, 1900, to 20,387 in June of the current year. The number of meetings held increased from 715 to 725, the total attendance numbering 131,628. The largest Institute is that of Halton, with 748 members; the second being North Hastings, with 578. In the matter of attendance, Halton also heads the list, with a total of 5,490; South Bruce, with

able opportunities for presenting to large numbers of people the latest scientific processes and ideas. This work has been aided by the appointment of Superintendent Creelman as assistant secretary and editor of the Association of Canadian Fairs and Exhibitions, in which he can render excellent service to the movement. A strong effort was made to ensure a large attendance at the Provincial Winter Fair, the educational features of which were much appreciated by the 1,518 members of Farmers' Institutes who attended. A special programme was provided for the benefit of Institute workers, including addresses by Hon. John Dryden; Prof. I. P. Roberts, of Cornell; F. W. Hodson, Dominion Live Stock Commissioner; Thomas Crawford, M. P. P.; and President Mills and a number of the professors of the Agricultural College.

A new feature successfully introduced by several Institutes is an annual seed fair in March, when prizes for the best exhibits of seed grain are awarded, and an opportunity is given to buy or exchange seed. The system is likely to be adopted in other localities. The work of the Institute has been introduced into New Ontario, where an Institute has been established and a number of special meetings held in several localities.

The volume includes a number of addresses and papers by agricultural specialists and practical farmers, and a full report of some of the important discussions held at Institute meetings, embracing a great variety of topics. President Mills has a paper on a trip through Britain, with special reference to agricultural conditions. The management of soils is treated of by A. W. Peart, Burlington; F. M. Lewis, Burford; and F. A. Sheppard, Queenston. Simpson Rennie, Toronto, deals with noxious weeds. J. E. Orr, Fruitland, has a paper on the extermination of the codling moth. The cold-storage question finds an able exponent in G. C. Caston, Craighurst. "Canadian horses in the African War" is the topic of a paper by Lieut. John McCrae. W. S. Fraser, of Bradford, treats instructively of beef rings. Poultry is the topic of W. R. Graham, Guelph; Prof. A. G. Gilbert, Ottawa, and G. R. Cottrell, Milton. These are only a few of the valuable contents of the report, but they will suffice to give some idea of its comprehensive character and utility.

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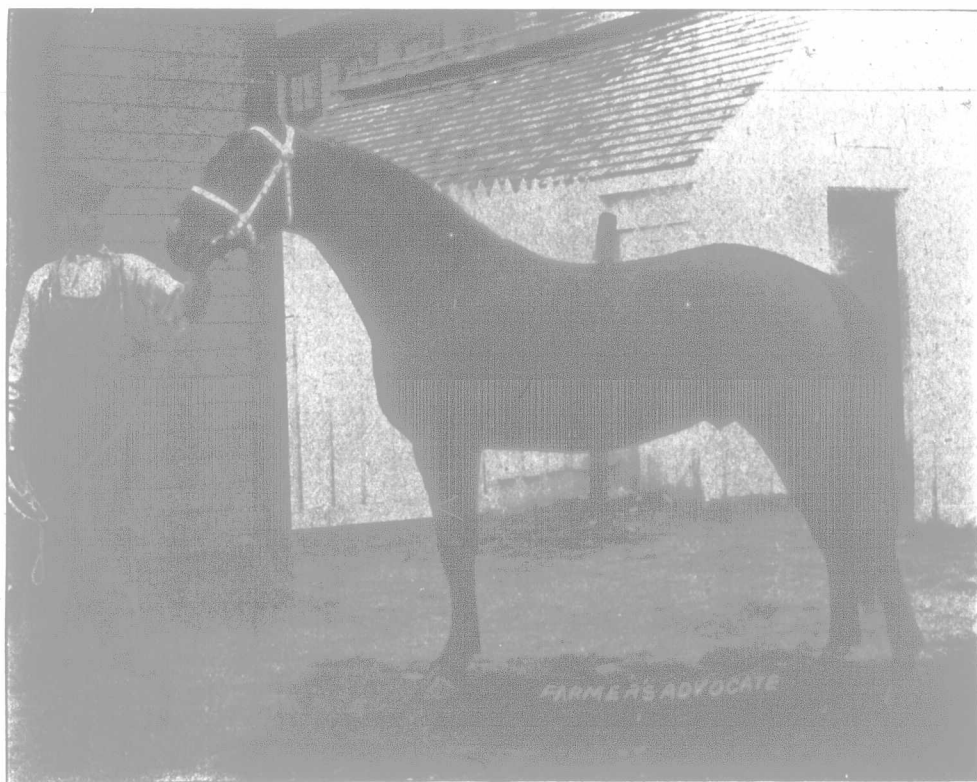
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Opportunities Opening.

Prof. John Craig, of Cornell University, N. Y., formerly Horticulturist at the Central Experimental Farm, Ottawa, says he has been greatly impressed the last few months by the demand for young men of education, practical experience and energy in the agricultural labor market. Requests for foremen, superintendents, experimenters and teachers at the present time greatly exceed the supply. Is not this a hopeful sign? It is to be traced, it seems, to an improved sentiment in the agricultural community, the changed attitude of capitalists to agricultural enterprises, and to the appreciation on the part of the business man of the fact that a trained foreman in agriculture, as in many other industries, is essential to successful farming. Another feature worthy of note, and a very important one, is the increase in the number of agricultural schools. Not only are some of the academies and high schools considering the question of adding agriculture to their courses, but agricultural high schools are being equipped in many parts of the country. There is also a much keener appreciation of and demand for good agricultural periodicals and books than ever before.



AUCTIONEER.

First-prize three-year-old Carriage stallion, and second sweepstakes for best Carriage stallion any age, at the Western Fair, London, 1901. (See Gossip, page 652.) BREED BY AND THE PROPERTY OF W. C. BROWN, MEADOWVALE, ONT.

4,200, holding the second place. Women's Institutes have increased in number to 32, with a total membership of over 1,500.

A number of changes of a beneficial character have been made in the arrangements. The Department has taken over the lecture work formerly carried on by the horticultural societies, and introduced the desirable feature of afternoon addresses to school children, which are much appreciated. Many of the Institutes now hold their annual meetings at the nearest fruit experiment station, where they have all the practical advantage of demonstrations in pruning, grafting and spraying.

The growing demand for Canadian poultry in Britain has rendered it important that the tastes of the consumer in the matter of dressing and preparation, as well as in the quality of the fowls, should be consulted. The subject has been made a specialty in Institute work, and the speakers at poultry meetings have given demonstrations as to the most appropriate methods of killing and preparing birds for the market. Another subject to which particular attention has been given is cold storage. The Institute delegates have received instruction in the different processes of refrigeration in connection with the plant at the Agricultural College, and have also inspected the car fitted up for the carriage of fruit for shipment abroad, rendering them able to disseminate accurate information on the subject.

The Department has made a special endeavor to get thoroughly in touch with the fairs and exhibitions held throughout the Province, realizing that these occasions offer particularly favor-

Sheep at the Pan-American.

"It was a splendid show of sheep," is the verdict of those who had the good fortune to be present when that section of the live stock was gathered at Buffalo, from Sept. 23rd to Oct. 5th, there being catalogued about 1,200 sheep, of 16 breeds, contributed by 57 exhibitors. The quality of the entries in all breeds was first-class, and they were in nearly every instance brought out in capital condition, reflecting credit on the owners or managers and shepherds. Canadian flocks were well represented in all the breeds that are kept to any considerable extent in the country, with the exception of Cotswolds, of which, owing, it is said, to a misunderstanding between the breeders, there were none sent from this country, but the standard of that breed was well upheld by Messrs. Geo. Harding & Son, Waukesha, Wis., who showed a choice lot, including a number of imported animals that were winners at the Royal Show of England this year, and were high-class representatives in style, quality and finish.

In several of the breeds where special prizes were offered by the breed associations for American-bred animals, Canadian breeders made a particularly brilliant record, winning almost everything in sight, and this is really the most creditable feature of the show to our country and people, showing as it does the good judgment and skill of our flockmasters and the adaptability of the soil and climate of Canada for the production of the most suitable foods for sheep and the best quality of stock.

LEICESTERS made a splendid showing, every section of the class being well filled with high-class entries. The principal exhibitors were Canadian breeders, the fine flocks of A. W. Smith, Maple Lodge; J. M. Gardhouse, Highfield; A. & W. Whitelaw, Guelph, and John Kelly, Shakespeare, being out in strong force, and in the best of fit, and to these went all the prizes in the class. The tournament opened with seven magnificent rams in the ring, two years old and over, Whitelaw Bros. showing one, and the other exhibitors two each. They were all so good it was not an easy matter to decide just how they should be placed, but the judge gave preference to Smith's Simon Smart, placing Whitelaw's Sam Slick second, Gardhouse's Sultan third, and Kelly's Sir Wilfrid fourth, but the order might have been reversed without doing injustice to any one, if, indeed, it would not have been an improvement, as, without reflecting on any of the animals, we are inclined to think it would. In a capital class of yearling rams, Whitelaw Bros. got to the top with Albino 3rd, a grand sheep, which was also awarded the sweepstakes as best ram any age, but he was closely pressed by Gardhouse's entry, of similar type and splendid quality. A mistake was made in the placing of the third award, a sheep of entirely different type and no special merit being chosen, while others of strong character and of uniform type with the first were left out of the money. Kelly came to his own in the ram lamb section by being placed first with a strong, level lamb with good fleece, but he was hard pressed by Gardhouse, whose entry was of excellent type and handling quality, and promising well for the future, as well as being strong for the present. Third prize went to a level lamb of Whitelaw's string. In a great class of ewes two years and over, pride of place was given to a magnificent ewe of Smith's, combining size, style and quality in high degree. She was adjudged the sweepstakes winner as best ewe any age; the second prize in the class going to Gardhouse's entry, a ewe of beautiful type and full of good quality; and third to one of similar stamp, from the same flock. Shearing ewes were a splendid class, in which Whitelaw's entry, placed first, was pressed so hard by one of Gardhouse's that it is a question which should win; and again in ewe lambs a very close match was that between Gardhouse's entry and Kelly's, both being of fine quality and character, but the judge placed Kelly's entries first and third, and Gardhouse's second.

The flock prizes for best ram over one year and four ewes any age were awarded: first to Smith, second to Gardhouse, third to Whitelaw. In the competition for the special prizes offered by the American Leicester Breeders' Association for sheep bred by the exhibitors, those for the best ram and three ewes over two years were awarded, first to Smith, second to Gardhouse; for the best shearing ram and three shearing ewes, first to Whitelaw, second to Gardhouse; for the best four lambs, two rams and two ewes, first to Kelly, second to Whitelaw Bros. William Parkinson, Eramosa, judged the class. In a competition for a special prize for the best five rams of any breed, owned and bred by the exhibitor, Mr. A. W. Smith won second award, with a capital exhibit of five yearlings.

LINCOLNS were grandly represented by selections from the noted flocks of John T. Gibson, Hderton, and J. H. Patrick, of the same place, whose exhibit was mainly made up of imported animals, in addition to a number of Royal winners

recently received and washed to get rid of the Old Country coloring, which left their fleeces lacking in the luster for which the breed is famous, but they were a big, strong, useful lot, and hard to beat in any country. Mr. Gibson's outfit, bred by himself, from his own importations, fitted to perfection without being overdone, and true to type, came out very fresh looking, and their handling qualities left nothing to be desired. The contest was close in nearly every section, Gibson winning first and third for ram two years or over; first, second and third for ewes two years and over, first and second for shearing ewes, the sweepstakes for best ewe any age, and the first prize for best flock of one ram and four ewes. Patrick had the first, second and third prize yearling rams, and first and second ram lambs and ewe lambs, and the sweepstakes ram, in his first-prize yearling. The first special prize, by the Lincoln Breeders' Association, for best flock bred by exhibitor, went to Gibson, second to Patrick, sweepstakes for ram to Patrick, and for ewe to Gibson. J. M. Gardhouse, T. Hardy Shore and Wm. Parkinson were the judges.

SHROPSHIRE.—Seldom if ever in America has a better showing of Shropshires been made. The competition lay principally between the flocks of John Campbell, Woodville, and D. G. & J. G. Hamner, Burford, representing Canadian breeders, and Dr. G. Howard Davison, Millbrook, N. Y., representing United States breeders, and who, having a show string made up mainly of imported sheep, brought out this year, and in high-class condition, made it decidedly interesting for all comers, getting rather the best of it in the regular sections of the class, capturing first prizes for shearing ram, two-year-old ewe and yearling ewe, sweepstakes for his imported yearling ram (Altamont's Khedive), sweepstakes for his two-year-old ewe (Buttar Fall), and the first open flock prize. John Campbell made a remarkable record with sheep of his own breeding and fitting, in the competition for the prizes offered by the Shropshire Association, winning first for the best five shearing rams in the American-bred class, first for the same open to all Shropshires, in which he competed with a pen of rams mostly imported and including the sweepstakes ram and the first and second prize yearling rams in the Exposition class. Mr. Campbell's same pen of rams later, in a special competition for the best five rams, bred and owned by exhibitor, open to all breeds, carried off the coveted trophy, all of his rams being sons or grandsons of his noted imported Newton Lord. Again, in the class for American-bred Shropshires, he won the first prize in every section, except for shearing ewe, and also won the sweepstakes for best ram, and first for senior flock of one ram and four ewes. Hamner & Son put up a very strong show, winning first in the section for two-year-old rams with their excellent (imported) Mansell-bred ram that was first at Toronto, first with the extra good Harding-bred ram lamb imported by Robert Miller and shown by him at Toronto, where he was also first; first and second for ewe lamb, first for American-bred shearing ewe, and second for open flock and American-bred ram lamb, and first for young flock, one ram and three ewe lambs. In the competition for five shearing rams, bred by exhibitor, R. Gibson, Delaware, won second award, and G. B. Phin, Hespeler, won second special for ram lamb bred by exhibitor, and also for five lambs, and third for young flock, one ram and three ewe lambs. The judges in this and the Southdown class were W. H. Beattie, Wilton Grove, Ont., and John L. Thompson, Gas City, Indiana, who did excellent work all through, keeping close to a type and basing their decisions uniformly on quality and character.

SOUTHDOWNS.—The symmetrical Southdowns were strongly in evidence, and made a splendid showing. The principal competitors were Geo. McKerrow & Sons, Sussex, Wis.; Hon. G. A. Drummond, Beaconsfield, Que., and John Jackson & Sons, Abingdon, Ont., each with capital outfits of typical and well-fitted sheep. The Wisconsin flock was mainly composed of imported sheep, brought out in fine fit by the accomplished shepherd, Dan Taylor, and were a strong contingent to compete with, capturing as they did a good share of the plums of the prize list, including first for shearing ram, two-year-old ewe and shearing ewe, sweepstakes for best ewe, and the first prize for open flock, one ram and four ewes. The Quebec flock, under the skillful management of Mr. Wm. H. Gibson, made a capital showing, the sheep being notable for truthness to type and full of quality. They were successful in winning first in the section for rams two years and over, and the sweepstakes for best ram any age, with the stylish and symmetrical Sandringham, bred by His Majesty the King, a model of the breed and a prince among his peers in an exceedingly strong section, in which the same flock also finished the second winner in imported St. Andrew, a close competitor to the first, and one that not a few good judges would place ahead of him. He is about as perfect in type and contour as can be produced. The first-prize ram lamb

was also found in this flock, a beautiful and very complete young ram, bred by the exhibitor. The first-prize ewe lamb was also of this flock, and the second prize for flock went to the same. A notable triumph for this flock was that in the competition for a special prize for the best exhibit of sheep of any breed, one ram over two years, one shearing ram, one ram lamb, one ewe over two years, one shearing ewe and one ewe lamb, judged on the basis of the best fitting and bloom. There was a sensational display in this competition, no fewer than nine flocks, of various breeds, competing, and all in splendid condition; but when the judges decided in favor of Mr. Drummond's Southdowns there was not a word of dissent, and congratulations were showered on John McLay, the shepherd, in recognition of his skill and success in preparing his exhibit. Jackson & Son always make a strong show and bring their sheep out in the pink of condition, but they have seldom, if ever, met as formidable competition as here; nevertheless, they got a fair share of the ribbons, and were close up to the winners all the way through the class, capturing second prize on their imported shearing ram (Abraham Yorker), second and third on two-shear-ewes, second on yearling ewe, and a large share of the Association specials for sheep bred by the exhibitor.

OXFORD DOWNS.—This breed was not so well represented as to numbers as one could wish, only three breeders competing, namely, Messrs. Geo. McKerrow & Son, Sussex, Wis.; A. Bordwell & Son, Fargo, N. Y., and J. H. Jull & Son, Mt. Vernon, Ont. McKerrow & Son made an excellent show of imported sheep of high-class character, winning all the first prizes in the class, including the first flock prize and the sweepstakes for best ram and best ewe any age. Their aged ram and shearing rams, bred by J. T. Hobbs, were grand specimens of the breed, full of quality and character, and standing well on the best of timber.

HAMPSHIRE were well shown by F. Milton, Marshall, Mich., and John Kelly, Shakespeare, Ont., the former showing a strong lot of imported sheep, which got away with the bulk of the best prizes, including the first flock prize and sweepstakes for ram. Kelly, who showed but a few, and they right good ones, captured first for two-year-old ewe, second and third for ewe lambs, and second for flock, besides a good share of specials for American-bred animals.

DORSETS made a magnificent showing, probably the best ever seen in America, the entries in all sections being typical of the breed and brought out in splendid condition, the exhibitors being John A. McGillivray, Uxbridge; M. N. Empey, Napanee, and R. H. Harding, Thorndale, all of Ontario, and J. R. Stuyvesant, of Tranquility Farms, Allamuchy, N. J., whose sheep, mostly imported, and fed and fitted to perfection by the capable and cultured young shepherd, Arthur Danks, were successful in the open Exposition class in winning the first prizes in every section but one, the sweepstakes for best ram any age and the first flock prize. Each of the Canadians showed strong and creditable entries throughout the class, and contested closely for the coveted honors.

Mr. McGillivray had the first-prize aged ewe, who was also the sweepstakes female, and to an onlooker it appeared that he might well have had first for his aged ram, which would have given him a fighting chance for sweepstakes, without injustice to any one, as he is a grand sheep, combining size and quality in high degree, and standing well on the best of feet and legs. The Uxbridge flock won, besides the second for aged ram, the second prizes for yearling ewe and flock, and a very large proportion of the first prizes in the competition for the Breeders' Association offerings for sheep bred by the exhibitor. It was, indeed, in this class that the Canadian exhibitors excelled, winning nearly all the prizes offered.

Harding had the second-prize aged ewe in the open class, in his excellent imported Attrill's I., and was placed third for flock, besides securing high commendation ribbons in several sections of that class, and a good share of the cash prizes in the breeders' classes. Empey showed a capital lot of young things, crowding the winners closely in many sections, and securing third for ram lamb in the open class, besides a goodly number of substantial first and second prizes in the competition for the Association specials for American-bred sheep, his winnings in all totalling over \$100.

MERINOS in their different divisions, Rambouillets, Delaine and Vermont made a very strong exhibit in each, showing much improvement and being typical of the various classes, but there being no Canadian exhibitors, and little interest taken in these by the majority of our readers, we refrain from giving an extended report of them. An exhibit by L. D. Ramsey, Lewiston, N. Y., of Highland Blackfaced sheep attracted a good deal of attention and were much admired; and a very nice exhibit of Cheviots was made by Wm. Curry & Son, Hartsville, N. Y., and E. E. Dawley, Fayetteville, N. Y.

The Orpington Fowl.

Among the breeds of poultry that are pushing to the front may be counted the Orpingtons, originated some years ago by Mr. Cook, of England. In the recent importation of stock from Britain for the Central Experimental Farm, as reported in our last issue by Mr. Grisdale, the Agriculturist, were included a number of these birds. The Orpingtons are black, buff and white, with both the single and double combs, and with white shanks and skins. In this they follow the American breeds, and do one better—there is now the Diamond Jubilee Orpington, that is broken in color, much like the Indian Runner duck. Mr. Lewis Wright, of England, in his recent writings, gives it as his opinion that the American breeds are better for their purpose than are the Orpingtons. He also states that the American breeds are better for eggs and market poultry than are the same fowl as bred in England. In England, the breeders incline toward the Cochin type in all these fowls; they go for more cushion, fluff and feather than in America, a condition that detracts from all utility qualities; but to the notion of the English fancier it adds to their beauty.

Autumn Management of Poultry.

Autumn management of poultry has much to do with the profits obtained during winter, the poultryman's harvest if right methods are adopted. First cull the flock and sell off all the males except a few selected breeders which you wish to use the following year. Cull the hens closely. It matters not the size of the flock—25 hens that are good will pay much better than 50 good and bad. Ordinarily, one-year-old hens will be profitable to keep over, and those, with all the early pullets, will prove most profitable during winter. All late hatches I put off for fries. Give the fowls extra attention during moulting time, and grain-feed everything that I intend to go in winter quarters. I always want all my hens brought as near the laying point before cold weather as possible, and this can only be done by good feeding in the fall. If I can get all my hens laying by the first of December—and by good management I can have many laying earlier—I can keep them laying all winter. Fowls must go into winter in good condition and be comfortably housed to be of good service until spring.

With some poultrymen it is the invariable rule to keep the pullets only one year. Feeding will do a great deal in the proper production of eggs, but not always. Old hens may put off fat, but they will not then lay many eggs. Their work is over and nothing remains to be done with them but to market them. The sooner that is done the better. Of course, the lives of some old favorites can be spared as long as they give good results; and with judicious mating, by which I mean the advantage of a comparatively youthful cockerel, may be the means of even exhibition poultry making their appearance from the eggs of the good old hen. A mess of potatoes, carrots or cabbage chopped fine should be given frequently to fowls, both young and old, for scarcely anything else conduces as much to their general healthfulness. All through the year vegetables are relished by my fowls. Chop the vegetables fine and mix them with scalded or moistened bran, or feed them raw with chop or bran; they like the change. Such foods materially assist in maintaining the general healthfulness of fowls by the prevention of all sorts of disorders. They also supply the needed green or vegetable food with which the birds must be supplied when confined, for which reason turnips should be grown for winter use.

Fowls need grit. If you are in doubt of this, hold a small chick up close to your ear and hear the gizzard grind. It is easy to tell the hen that is profitable. She has a red, highly-colored comb, is full of activity and life. Those in first-class market shape should be sold at once; they are a detriment to the others, as they take up valuable room. Feed good grain, even if it does cost a little more. Get rid of extra cockerels as soon as large enough. After a certain limit, they do not lay on flesh fast enough to pay for their food.

A food for young chickens that is rapidly growing into popularity is granulated oats. Some soft food should be given also, such as broken bread and corn cake. A mixture which fowls like for their evening meal in early autumn is buckwheat, barley and corn in equal parts.

We would have a very poor opinion of the manufacturer who did not know the cost of the goods he was manufacturing. Yet this is what many people are doing who keep hens. Keep an

account with them. (See Mr. Graham's letter, Sept. 20th "Farmer's Advocate.") Be careful when everything seems wrong-side up. No year is wholly smooth and prosperous. If vermin devastate your yards, take extra precautions in the future. If sickness come, an axe is usually of more profit than medicine. While there are now and then unavoidable mishaps, the majority of losses might have been averted by proper care in the first place. FARMER'S WIFE.

Uses of Coal Oil.

Kerosene is invaluable around a poultry ranch, writes a correspondent in an exchange. It is a simple remedy for many troubles. Put it on the roosts frequently; it will help keep the lice in check. Dilute it with sweet oil (about one-third of sweet oil and two-thirds kerosene) and inject in nostrils, roof of mouth, and corners of eyes, if your fowls have colds. Scaly legs are cured with it properly applied, and an internal dose will help in many cases. An easy way to apply kerosene to the legs and feet of fowls to destroy the insects which cause the scaly excrescences which sometimes appear is to fill an empty can two-thirds full of water, pour two or three tablespoonfuls of kerosene on the water and dip the feet and legs of the affected fowls therein. Two treatments always prove effective.

The editor of The Feather adds: If you will dip the legs and feet once or twice into pure kerosene it will be better than above. The mixture of water and oil on the shanks and feet will not act so well as the pure oil. After two or three dippings in the oil once each day, scrub the shanks and feet well with a stiff brush, soap and warm water. A pound of naphthaline balls to a gallon of kerosene will be better to kill lice on roosts, etc., than the oil alone.

Judges and Judging.

The close of another fair season seems an opportune time to review the work of the judges in the live-stock departments at leading shows, and to discuss the general subject of selection and appointment of judges. Fair Boards still find the problem a difficult one to satisfactorily solve, and each year brings its budget of complaints in some classes. We are not disposed to take a pessimistic view of the situation or to conclude that progress is not being made in the system of selection and the quality of the work done. We firmly believe that Fair Directors, almost without exception, are earnestly solicitous that only competent and unbiased men shall be chosen, and we believe that the instances in which, at the suggestion of designing exhibitors, unfit or unfair judges are appointed are exceptional and rare. Taking it as a whole, we are satisfied that better selections of judges are made and their decisions more intelligently rendered than in former times, and quite as impartially. We believe, moreover, that in no country is fairer or more consistent judging done than in Canada. The system generally adopted in recent years, of making selections from the list of judges approved and published by the Breeders' Associations, relieves Fair Boards, to a large extent, of responsibility for appointments that prove unsatisfactory. But it does, unfortunately, happen occasionally that appointments are made of men who prove to be either incompetent or lacking in the manly courage to do the right thing—placing the awards solely on the ground of merit, irrespective of ownership, friendship or other consideration. It is true that no man is infallible, that all are liable to make mistakes, that men honestly differ in opinion and judgment, for all of which facts due allowance should be made; but he who presumes upon these, making them merely an excuse for what is palpably seen to be a leaning in favor of a friend, is out of place in a judging-ring, lowers his reputation and character for fairness in the estimation of all right-thinking men, and he should not again be entrusted with so important a function.

While the Breeders' Association publish a sufficiently long list of approved judges—perhaps too long, and not sufficiently select—from which Fair Boards may make selections, yet the field is limited by the fact that many of the most capable are by common consent considered unavailable, owing to being themselves exhibitors or so related by family connections or business dealings with exhibitors as to render their appointment inadvisable, though we think this objection is often unduly pressed. A capable man, with a reputation to maintain, may generally be safely trusted to act on his judgment, and is infinitely preferable to one that is incompetent or erratic, no matter how honest in his intentions.

We do not propose in this article to discuss at length the question of one judge versus two or more, though we do not hesitate to affirm our preference for the single-judge system. Observation at the leading shows this year has doubtless led to the conclusion that neither is always an infallible tribunal, but we are pretty well persuaded that the difficulties and abuses are liable to increase in proportion to the number composing the awarding committee. But whether one or more is decided upon, it goes without saying that it is of the first importance, and essential to the permanent success of the fairs, that confidence in the impartiality of the system of appointing judges be established and maintained. Fair Boards and Breeders' Associations need to exercise more vigilance than ever in guarding the gate to the judiciary by a searching scrutiny of the character as well as the competency of the men entrusted with the duty of deciding on the merits of exhibits on the preparation of which the owners have spent a whole year's work, or it may be more. It is only by this course that new exhibitors will be encouraged to enter the list and the better class of the old retained. It will be regrettable and unfortunate if by lack of vigilance in this regard the impression is allowed to prevail that biased judges are nominated or appointed by or at the instance of interested parties to further their own ends, and that collusion is winked at in a field where only merit should win.

The inherent sense of justice entertained by all self-respecting Anglo-Saxons revolts at the idea of giving honors in a competitive examination on any other basis than that of individual merit, and no one with a fine sense of honor, will feel complimented or content to receive them on any other ground.



SUMMER HILL KATIE AND SUMMER HILL CICELY.
Yearling Yorkshire sows. The latter winner of first prize, the former of fourth prize, at Pan-American Exposition.
PROPERTY OF D. C. FLATT & SON, MILLGROVE, ONT.

Cleanliness in Poultry House.

"Care" is a small word of four letters, but it means much to the fowls and the owner. The henhouse should be cleaned out every other day, rain or shine, and aired every day, winter or summer, unless on a rainy or stormy day, when it should be kept closed. The droppings should be cleaned up at least every other day. The roosts should be movable, and they should be taken down and painted with a liquid lice-killer that you know to be good. Paint the sockets that the roosts rest in, then replace the roosts, and that will do for lice and mites. The house should be whitewashed at least four times a year, inside and outside, and use plenty of crude carbolic acid in the whitewash. After the droppings have been taken up and the floor well scraped, sprinkle the floor with air-slacked lime. Have a dust-box in one corner, filled with road dust and ashes, so that the fowls can dust themselves, as the dust bath will help to keep the vermin out, especially if you sprinkle a little lice-powder in the box. Keep plenty of ground oyster shells, both fine and coarse; also grit, mica crystal, and ground charcoal, where they can have easy access at all times. The drinking vessels should be washed out clean every day, and scalded once each week. Give the fowls fresh water to drink two or three times a day, especially during hot weather, and you will see them come up and drink every time. We must take every precaution against sickness and lice; see that the fowls are comfortable, and be regular in all things—in feeding, watering, and in general care—for they will do their part by us if we do our part by them. P. F. D.

See that all ditches and water courses are open before winter sets in. In cases where the fall is insufficient, great improvement may be made in a few hours with plow and scraper.

Cold Storages.

To the Editor "Farmer's Advocate":

In the manufacture of butter, the quality of the raw material and the ability of the butter-maker to turn out an A1 article are not the only features to be considered for putting on the market such a sample of butter as will meet with the hearty approval of the purchaser and always make a ready and profitable sale. But in combination with these go the storing of butter at the different creamery points, which for the present cannot be dispensed with. Owing to the absence of a ready demand, with good prices, for our produce at all seasons of the year, combined with the fact that there are no central storages in the West where weekly or semi-weekly shipments might be made and the butter held at that point for sale, each creamery should have a good cold storage, with capacity enough to hold at least 30,000 lbs., or a minimum carload.

The erecting of a good refrigerator is inexpensive, if we take into consideration—which we must do—the advanced prices ultimately obtained on butter stored in a room where the temperature would average about 32 degrees Fahr., or freezing, over that which is stored in a room with the temperature varying anywhere from 40 degrees to 60 degrees Fahr.

The accompanying thermograph record shows the exact temperature of the cold storage at Grenfell creamery for a period of two weeks during July.

THE THERMOGRAPH.

This record, when in position on the thermograph, is fastened solidly round a drum-shaped body, which is wound up and takes two weeks to run down, going in this time one revolution. The diameter of this drum is 3½ inches, and the record fits it neatly with the ends meeting. Against the record, gently rests a scooped pen which holds about a drop of ink, the pen being

may be rough inch lumber with paper and rejoin. For the outside, rough half-inch lumber, covered with paper; then another thickness of half-inch lumber, and another coat of paper; then put on two-inch strips, and on them another layer of half-inch lumber, with a coat of paper on top, and then inch lumber, with paper on top of that, finishing with shiplap. The paper must be well lapped and not torn. This will leave two dead-air spaces: One 4 inches and the other 2 inches wide. These, of course, must be properly sealed at the top, else all the other work is in vain. The ceiling and floor should also have a dead-air space.

The most convenient method for cooling such a room is by putting in vertical cylinders about a foot in diameter, having them extend from the floor through the ceiling, leaving them open at the top, to be filled easily. In a room 12x24x8, which will hold about 30,000 lbs. of butter, it will require 8 of these cylinders to keep the temperature, in hot weather, down to freezing point, and will necessitate filling them at least once a day—and probably twice—with finely-broken ice and coarse salt, using about 12 or 15 per cent. of the latter. A tightly-fitted cover for the top of the cylinders will help in excluding air, and thus save ice. The finer the ice, the firmer it is packed; and the more salt used, the greater the effect in lowering the temperature. To run a refrigerator of this size for six months, it will be necessary to store about ninety or one hundred tons of ice.

W. A. WILSON, Dairy Supt., Assiniboia.

Paying by the Babcock Test.

To the Editor "Farmer's Advocate":

Sir,—I have received a great deal of information from your valuable paper, and would not do without it on the farm; but the more information I receive, the more I want; so when I read in the August 5th number about the three

stant, so also will the test for casein, albumen and mineral, in a cow's milk.

What I want to know is, in a cheese factory would the lactometer test for the total solids be a more just basis for payment to patrons than paying by the Babcock test? Is the testing of milk samples by the lactometer laborious or expensive?

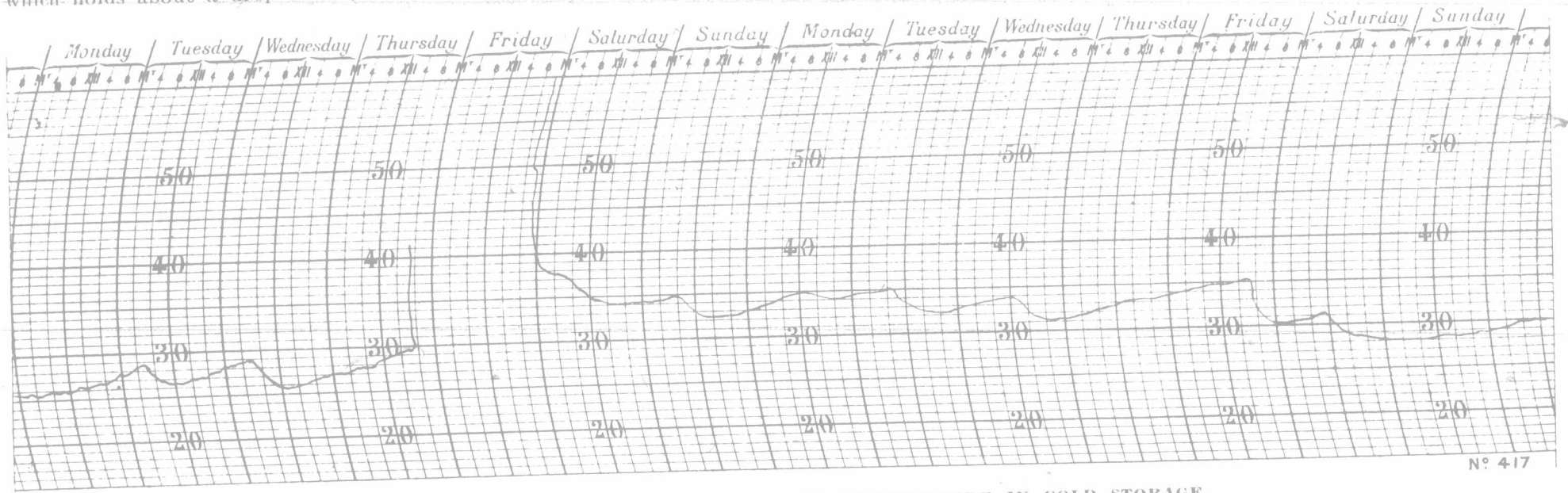
I am not trying to eulogize any breed of cattle, but only name them because of their Pan-American record. Neither am I trying to injure the Babcock test. I am asking for my own improvement, and believe this is a point on which farmers ought to be posted. I would be glad if some who have made a special study of the question would give their minds through your columns, believing that it would be appreciated by many dairymen anxious to learn. W. T. F.

Toronto Industrial Prize Butter.

1. Was cream from separator, or if raised by gravity, what was the method?
2. How was cream ripened, what "starter" used, and how old was cream when churned?
3. What coloring matter was used, and if any, how much?
4. What was the churning temperature and how long in churning?
5. How was butter washed, worked, and packed, and what style of package?
6. What salt was used, and how much?
7. Temperature of your butter storage room?
8. How long before exhibition was butter made?
9. Mention any other points deemed important.

PRIZE BUTTER MADE DAILY.

Separator cream was used which would test 40 per cent. butter-fat. This at a temperature



THERMOGRAPH CHART - FOR REGISTERING TEMPERATURE IN COLD STORAGE.

suspended on a slender arm attached to the base of the instrument, its mechanism being of such a nature that the slightest rise or fall of temperature effects it and raises or lowers the pen resting against the paper on the drum.

The ink line, starting at the top, shows when the instrument was placed in the storage, the temperature falling almost directly to below 40 degrees Fahr., and from that, gradually down to 35 degrees, keeping between 32 degrees and 35 degrees for over six days, when it fell to 30 degrees, afterwards going as low as 24.5 degrees. The horizontal lines indicate the temperature, and the figures 20, 30, 40 and 50, tell the temperature. Each line between those figures represents one degree. The vertical lines show the days for a period of two weeks, each day being divided into six watches of four hours each, viz., midnight, 4 and 8 a. m., noon, 4 and 8 p. m., and midnight again. At the end of every two weeks the instrument has to be re-wound and a new record put in place round the drum.

REFRIGERATOR.

In conclusion, I might mention briefly the principles of the construction of a refrigerator. The chief end to aim at is the prevention of all circulation and penetration of the air in and through the walls, and to obtain this it is absolutely essential that one or more perfect dead-air spaces should be constructed in the wall; i. e., a space, say the width of the studding, so sealed that there is no inlet for outside air or outlet for the air inclosed. Consequently, the inclosed air is perfectly still or dead, no circulation going on, so when the heat from the atmosphere penetrates the walls as far as the dead-air space, it is checked, for without the circulation it cannot reach the inside wall or heat the cool air inclosed in the space.

WALL CONSTRUCTION.

The construction of the walls may be as follows and will give good satisfaction. For the inside of the refrigerator, nail on the studding,

prizes given at the Pan-American in the test of the ten breeds, it set me thinking. One prize is to be given for the estimated butter by the Babcock test, one for the actual butter churned, and a third for the total solids in the milk valued at 9 cts. per pound.

Now, I turned up C. C. James' book on agriculture, and I find that milk contains water, fat, casein, albumen, sugar and ash or mineral matter. Then, I know that when we make butter we take all the fat out of the milk, leaving nearly all the water and practically all the other solids. Then, I find that cheese contains 35 per cent. water, 33 per cent. butter-fat, 28 per cent. casein and albumen, and 4 per cent. mineral matter. That is, in making cheese we take out of the milk all the butter-fat, all the casein and albumen, and nearly all the mineral, leaving only water and sugar, besides some little of the solids which floats away with the whey. To some extent the Babcock test is used in cheese factories as well as butter factories, and the patrons are paid by the test for butter-fat.

At the Pan-American the report is that the Guernseys were leading for butter-fat, but the Holsteins had a long lead in the value of milk solids; or, the Guernseys will make the most butter, but the Holsteins are away ahead for cheese. From this I judge that although the high-testing milk of the Jerseys would make more butter than the milk of the Holsteins, yet the milk of the Holsteins, when leading in fat, casein, albumen and mineral, when taken collectively, would make much more cheese than the milk testing high with the Babcock test.

I also conclude that those patrons who have high-testing Jerseys, and are receiving a big percentage of the money, should receive even less money than the patrons having Holstein or Ayrshire cows, because it takes more Jersey milk to make a pound of cheese than of the milk of the Holsteins. I take for granted that as the test for butter-fat of any cow's milk remains fairly con-

of 75 degrees Fahrenheit, with 10 per cent. of un-pasteurized skim-milk starter, was ripened in about four hours after separating was completed, when it was cooled quickly to 50 degrees. The cream was churned when about 27 hours old, and when put in the churn its temperature was 46 degrees. The day was very warm, and I found when churning was finished that the temperature had risen to 50 degrees. The time of churning was 1 hour and 10 minutes. No coloring matter was used. I washed the butter once only, with water which was run over ice and which went on the butter at 41 degrees. This firmed it nicely. Three-quarters of an ounce of Windsor salt was used to the pound of butter, and worked on a Mason worker till when cut with a sharp ladle it presented a close, even face, without pin-holes and with a fine moisture breaking out over it. Three kinds of packages were used, 56-lb. and 10-lb. boxes, and 1-lb. prints. The boxes were packed with a square packer, and a wood scrape used to finish the top. The butter was all finished one week before it was to be judged in Toronto, and was all made out of one churning. I kept it in our factory storage at a temperature of 48 degrees for five days, and then shipped it to the exhibition two days before it had to be there. My reason for this was that in case it should get heated any on the road, it would have time to get firmed again in the refrigerator at the exhibition grounds. In making this butter, no special effort was put forth. No milk was selected for it. I used what happened to come the day I wanted to put it up. There is hardly any noticeable difference from day to day, as we only make the one grade of butter, and that is the best we can produce. This has always been my practice, and although it may not be a good one for exhibition purposes, I think it the fairest way, as you are thereby showing your standard quality, and not a special one-day brand to secure fame. J. C. Bell.

Perth Co., Ont.

Pan-American Model Dairy.

The week ending Sept. 24th was a little unusual from the advance in per cent. of fat made by most of the breeds without a corresponding loss in amount of milk such as one might expect at this stage of lactation. Thirty-four of the cows tested higher than the week before, seven the same, and nine lower. The highest composite test for a week for any cow during the test was this week credited to Primrose Park's Prude, the Jersey owned by Mr. W. E. H. Massey, Toronto. The test was 6.6. All the breeds have made quite a gain in average per cent. of fat with the advance of lactation period excepting the Dutch Belted and Brown Swiss, in which it seems to be least. I give below the average per cent. of fat in milk for the months of June and September with a few of the breeds: Shorthorn—June, 3.2; September, 3.66. Holstein—June, 3.05; September, 3.32. Ayrshire—June, 3.56; September, 3.79. Some strange variations in tests in consecutive milkings have been noted and commented on in previous papers, but the greatest variation yet found occurred in the case of a Polled Jersey cow, Ora, this week, when she was sick, "off her feed," and had high fever. Her record for two days was as follows: Tuesday night—milk 8.1 lbs., test 2.5%; Wednesday morning—milk 5 lbs., test 6.4%; Wednesday night—milk 1.6 lbs., test 16.2%.

The rules of the test awards prizes to the herds excelling in each of the four following particulars: 1st. The herd making the greatest profit on estimated butter at 25 cents a pound (85 lbs. of fat in milk representing 100 lbs. of butter, and feed charged at certain stated market prices).

2nd. The herd making the greatest profit on churned butter (modified, however, so that each herd's milk is churned but one day in each week, and the whole amount of possible churned butter estimated from this).

3rd. The herd making greatest profit on total solids in milk at 9 cents per pound, determined by lactometer and Babcock test.

4th. The herd showing greatest net profit on total solids in milk and gain or loss in live weight at 3 cents per pound, the latter to be added to or deducted from the value of solids as the animal lost or gained during the six months.

The results in brief of the test in these four particulars will no doubt be published in full in most of the more important agricultural papers. There are, however, other ways of figuring the profit of the individuals and herds in the test and making deductions which will be of value and interest if carefully and studiously worked out. It is to be hoped that the Exposition will publish the full report of the test in detail so that the facts may be obtained by any one interested, at a nominal sum.

It is a notable fact that the herd making the greatest profit in estimated butter falls considerably short of making the greatest profit in total solids. Since this price of 9 cents per pound on total solids was based on the average wholesale price of milk for city supply, the breed excelling in this particular will naturally be demonstrated as the city milkman's cow, if not so classed already. The Holsteins are far in the lead in this particular. The food cost has been calculated of 1 lb. of butter with each of the breeds for the week ending Sept. 17, and found to run as follows. I have added the cost per pound and returns for one dollar expended in food for the whole period from May 1 to Sept. 17, and included the whole in one table:

BREEDS IN ORDER OF ECONOMICAL PRODUCTION OF BUTTER.

BREED.	Food Cost of 1 lb. of Butter for 1 Week, Sept. 17.	Food Cost of 1 lb. of Butter from May 1 to Sept. 17.	Returns from \$1 invested in feed.
1. Guernsey	9.9	9	\$2.77
2. Jersey	10.3	9.2	2.72
3. Ayrshire	11.2	9.5	2.63
4. Polled Jersey	11.2	9.5	2.63
5. French-Canadian	9.77	9.7	2.58
6. Red Polled	10.7	9.9	2.52
7. Holstein	11.7	10.7	2.34
8. Brown Swiss	11.7	10.9	2.29
9. Shorthorn	12.5	11.8	2.11
10. Dutch Belted	13.7	13	1.92

It is interesting to compare the cost of one pound of butter for the whole period with the cost last week with the different breeds. The advance of lactation naturally increases the cost per pound, but French-Canadians furnish a fine example of persistency and economical production after six months of lactation.

Farmers visiting the Pan-American should not fail to study the U. S. Government "grass garden" located just across the canal from the Government building and south of the stock pavilions.

Here are about 100 plots of as many varieties of grass and other pasture and soiling crops. All are labeled with variety, location and special uses best adapted to, and date sown. Several plots show grasses especially adapted to alkali soils, these plots having been treated to a coat of alkali by way of demonstration.

Some of the varieties of most interest to the dairyman, and especially where soiling and silo crops are under investigation, are the cow pea, different varieties of vetch, soy bean, millet, milo-matze, Kafir corn, velvet bean, lupines, chick-pea, amber cane and alfalfa, besides several other known varieties probably of not much practical value except in certain soils and localities. Of the clovers there are represented common red, mammoth, alsike, white, crimson, Egyptian, Japanese, and some other

farage crops, as rape, and the ordinary pasture grasses.

One plot of alfalfa, sown July 27, stands from 18 inches to 2 feet high.

REPORT OF THE MODEL DAIRY, GIVING TOTALS OF EACH HERD FROM MAY 1ST UP TO AND INCLUDING THE WEEK ENDING OCTOBER 1ST.

BREED.	Milk, lbs.	Am't. of Butter, lbs.	Value at 25c. per lb.	Cost of Feed.	Profit.
Shorthorns	27838.9	1143.2	\$285.78	\$136.11	\$149.67
Holsteins	33590.8	1261.6	316.15	136.45	179.70
Ayrshires	28529.8	1224.3	306.07	117.79	188.28
Jerseys	23512.9	1240.4	310.11	115.67	194.44
Guernseys	23862.7	1269.4	317.35	115.92	201.43
Brown Swiss	27129.1	1139.2	284.79	125.10	159.69
Red Polls	25160.7	1159.7	289.91	116.43	173.48
Polled Jerseys	17754.9	860.3	210.06	92.40	117.66
Dutch Belted	21277.2	842.5	210.62	110.05	100.57
French-Canadian	21590.9	987.9	246.98	96.13	150.85

REPORT OF THE MODEL DAIRY HERDS FOR THE WEEK ENDING OCTOBER 1, 1901.

BREED AND COW.	Milk, lbs.	Am't. of Butter, lbs.	Value at 25c. per lb.	Cost of Feed.	Profit.
Shorthorns.					
Princess of Thule	184.9	9.13	\$2.28	\$1.24	\$1.04
Daisy D	194.4	9.42	2.35	1.26	1.09
Miss Molly 24556	242.7	11.70	2.92	1.27	1.65
Queen Bess 21786	198.	9.31	2.33	1.24	1.09
Rose 3rd 113205	191.1	8.76	2.19	1.24	.95
Total	1011.1	48.32	12.07	7.25	5.82
Holsteins.					
Meg	238.5	9.82	2.45	1.43	1.02
Tidy	253.8	10.74	2.68	1.33	1.35
Inka Mercedes	289.5	11.62	2.90	1.35	1.55
Hulda	287.2	12.50	3.12	1.33	1.79
Beauty	277.7	12.74	3.18	1.33	1.85
Total	1356.7	57.42	14.33	6.77	7.56
Ayrshires.					
Kirsty Wallace	241.4	11.36	2.84	1.10	1.74
Lady Flora	190.4	8.28	2.07	1.07	1.00
Alice 2nd	181.8	9.41	2.35	1.07	1.28
Betsy 1st	238.1	10.36	2.59	1.10	1.49
Pearl of Woodside	206.4	9.71	2.43	1.10	1.33
Total	1058.1	49.12	12.28	5.44	6.84
Jerseys.					
Gipsy	190.3	10.97	2.74	1.18	1.56
Primrose	141.2	10.96	2.74	1.15	1.59
Queen May	170.1	10.60	2.65	1.16	1.49
Rexina	196.9	9.49	2.37	1.09	1.28
Mossy	200.1	10.82	2.70	1.16	1.54
Total	898.6	52.84	13.20	5.74	7.46
Guernseys.					
Vega	160.5	9.44	2.36	1.07	1.29
Cassiopeia	163.1	10.36	2.59	1.02	1.57
Mary Marshall	178.3	12.27	3.07	1.14	1.93
Madora Fern	102.0	5.64	1.41	.90	.51
Procris	194.7	11.91	2.98	1.19	1.79
Total	789.6	49.62	12.41	5.32	7.09
French-Canadians.					
Liena Flory	172.2	8.71	2.18	.88	1.30
Rouen	155.6	7.41	1.85	.88	.97
Denise	172.3	9.12	2.28	.88	1.40
Luna	170.9	7.80	1.95	.88	1.07
La Bouchette	111.4	5.24	1.31	.61	.70
Total	781.5	38.28	9.57	5.03	5.44

A Farmers' Institute Library.

Owing to thrifty management, successful excursions to the O. A. C. and other points, and the Government aid received, many Ontario Farmers' Institutes have accumulated surpluses after meeting all their ordinary expenses. Out of these funds some of them are now beginning to encourage useful features at the local fall exhibitions, and most of them have rendered valuable service to their respective districts by encouraging the circulation of good agricultural periodicals like the "Farmer's Advocate." The North Bruce Farmers' Institute has gone a step further in promoting useful reading by the purchase of an excellent agricultural library, in the procuring of which the "Advocate" was enabled to render them some assistance. This library will, we presume, be in charge of the Secretary or some one centrally located and specially designated for the purpose. While the number of books chosen from lists which were able to furnish, together with those suggested by Prof. Reynolds' excellent leaflet on the subject, was not large, it is fairly comprehensive, and can readily be added to from time to time. As the library should be made as generally beneficial and interesting to the community as possible, we would suggest the propriety of adding a few volumes of more special value to the wives and daughters of the locality, such as works on various phases of domestic economy or home life. It is a most hopeful sign that the intelligent farmers of North Bruce should lead in a movement of this character, and it speaks hopefully for the agricultural future of that part of the country. It is a movement of a self-helpful character, based on the diffusion of useful knowledge—the safest of foundations. We hope to see the idea very generally adopted. Many so-called Mechanics' Institute libraries have been established in villages and small towns, to which farmers and their families have access, but we regret to say that a good many

of them are selected without much regard to literary merit or general excellence, and are filled with fiction of a very trashy character, the promiscuous and exclusive reading of which tends to impair the mental faculties and gives no good return for the time spent. It becomes simply a form of mental dissipation, which affords the reader no aid or benefit whatever in the business of life. If people would only make the trial, they would soon find that many volumes of a really useful character are quite as fascinating in their nature as works of fiction. It is very largely a matter of cultivation, and our North Bruce friends are on the right track. Their initial list of books is as follows:

Agriculture (three volumes).....Storer.
 Fertility of Land.....Roberts.
 Soil.....King.
 First Principles of Agriculture.....Vorhees.
 Agriculture.....James.
 Chemistry of the Farm.....Warrington.
 How the Farm Pays.....Henderson.
 Soiling, Ensilage, etc.....Peer.
 Horse Breeding.....Saunders.
 Light Horses.....Vinton Series.
 Heavy Horses.....
 Sheep.....
 Cattle.....
 Pigs.....
 Feeds and Feeding.....Henry.
 Cattle Breeding.....Warfield.
 Shepherd's Manual.....Stewart.
 Harris on the Pig.....Harris.
 Study of the Breeds.....Shaw.
 Veterinary Elements.....Hopkins.
 Farmer's Veterinary Adviser.....Law.
 American Dairying.....Gurler.
 Milk and Its Products.....Wing.
 Modern Dairy Practice.....Grotanfelt.
 Practical Poultry-keeping.....Wright.
 Poultry Manual.....Tilson.
 A B C of Beekeeping.....Root.
 Manual of Apiary.....Cook.
 Vegetable Gardening.....Green.
 Flowers and How to Grow Them.....Rexford.
 Principles of Fruit Growing.....Bailey.
 Bush Fruits.....Card.
 Spraying for Profit.....Weed.
 Hedges, Wind-breaks, etc.....Powell.
 Plum Culture.....Waugh.
 How to Make the Garden Pay.....Greener.
 Pruning Book.....Bailey.
 Bulbs, etc.....Allan.
 Landscape Gardening.....Maynard.
 Story of the Plants.....Allan.
 Insects.....Saunders.
 Diseases of Horses.....McIntosh.
 Land Draining.....Miles.
 Book on Silage.....Woll.
 Barn Building.....Saunders.
 Weeds.....Shaw.
 Fences, Gales, etc.....Terry.
 Winter Care of Horses.....Saunders.
 History of Shorthorn Cattle.....Hardin.
 Dairy Calf.....Biggle.
 Biggle's Cow Book.....Biggle.
 Poultry-keeping as an Industry, etc.....Brown.
 Success with Poultry.....Rankin.
 Rankin's Duck Culture.....Rankin.
 Injurious Insects.....Smith.
 Birds that Hunt and are Hunted.....
 Moths and Butterflies.....Dickerson.

[NOTE.—Having selected their list of books, the Institute Executive ordered them through this office.—Ed.]

Eggs in Winter.

Only a little profit can come from eggs produced by fowls unless they can be made to lay during the winter months, when fresh-laid eggs are most valuable. The fact that so many do succeed in securing a fair per cent. of egg-yield through the winter months, proves the possibility of a greater yield when it is learned more fully what is requisite. It is frequently seen in print, an easy-to-follow statement, "Keep the hens at work; make them dig in straw for all their grain"; yet how few do we find who follow these simple instructions? Many scatter the straw, but will feed their fowls on the bare ground or in troughs. The object to be desired is to make the hens hunt and dig continually for food that they may have plenty of exercise; exercise is what they need and must have or they will not lay.

Those who pay proper attention to these simple methods succeed, while those who disregard them do not. They bring assured success to those who follow them, but an assured loss if disregarded. Only those who follow the proper methods have any chance to succeed.—(From The Feather.)

Canada Butter at the Pan.

There were nearly 250 entries in the Pan-American butter competition, Minnesota, Wisconsin, New Hampshire and New York creamerymen being the heaviest exhibitors. The highest scores (97 points) were made by A. T. Radke, of Viola, Wis., and Roy H. Bent, Adams, N. Y., and the lowest by Irwin Nowlan, Toulon, Ill. (dairy butter), 86.25. Only two or three entries scored below 90. The Canadian competitors scored as follows:

(Creamery Butter)	Score
Dairy Dept., O. A. C., Guelph	93.75
Aaron Wenger, Avton	95.50
John McQuaker, Owen Sound	94.25
Jas. Ireland & Son, Beachville	92
J. C. Bell, Winchelsea	94.75
W. H. Brubacher, Ferris	94.75
Average	94.50

The system of buttermaking pursued by the above was described in the "Farmer's Advocate" for October 1st, with the exception of Mr. Bell's method, which appears in the present number.

Canadian Cheese Wins at Buffalo.

Ontario cheesemakers at the Pan-American won the only gold medal awarded for the best exhibit of cheese by any State or Province in Canada or the United States.

(Export Cheese.)

Table listing various cheese exporters and their prices, including J. E. N. Miller, Dairy Dept., O. A. C., Guelph, and others.

QUESTIONS AND ANSWERS.

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

Veterinary.

SORE TEAT AND MAMMITS IN SOW.

My sow had 15 pigs and lost them all but one. I attributed it to milk fever at the time. Her udder was caked and swollen, with scarcely any milk.

BOOK REVIEW.

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

date and clear in the manner of presentation of this very interesting subject. The subjects discussed take up some 30 chapters, which are as follows: Breeding live stock, a standard of excellence, the law that like produces like, the law of principle of variation, the law of atavism, hereditary normal, abnormal and acquired characters, heredity of disease, the law of correlation, prepotency, inbreeding, line breeding, fecundity, the relative influence of parents, the influence of a previous impregnation, influences, influences, influences, influences, influences, influences.

as an index of qualities, selection, cross breeding, improvement through grading, forming new breeds, the influence of environment, castration and spaying, mating animals. The price of the book is \$1.50, for which it will be sent, postpaid, from this office.

Miscellaneous.

ELEVATOR SCREENINGS.

Can I legally compel the elevator men who buy my wheat to return me the dockage for dirt? They say here that it is against the law.

Ans.—There is a provincial statute, both in Manitoba and the N.-W. T., prohibiting elevators from giving out any screenings containing the seeds of noxious weeds, and in the event of your screenings containing noxious-weed seeds, we fancy that it would be against the law for the elevator people to give them to you, but if they did not contain the seeds of noxious weeds, I do not see how they could refuse to give them back unless they paid for them.

Chicago Markets.

Oct. 17th.—Cattle.—Owing to reduced receipts, active demand and improved prices, sales for prime steers range up to \$6.80. A good many sales were made from \$6.25 to \$6.50, and most of the desirable fat steers sold at \$5.50 to \$6.00.

Montreal Markets.

Montreal, Oct. 17.—There were about 800 head of butchers' cattle, 30 calves and 300 sheep and lambs offered for sale at the East End abattoir.

FARM GOSSIP.

Horses for South Africa.

The Allan Line steamship Sicilian sailed from Montreal, Oct. 11th, for Cape Town, with a cargo of 818 horses, to be used in the cavalry service in South Africa.

Canadian Cattle Out.

An Associated Press despatch, dated Edinburgh, Oct. 9th says: "Replying to an influential delegation representing Scottish agricultural interests, the President of the Board of Agriculture, Mr. Hanbury, said to-day that so long as he was President of the Board he would never consent to the removal of the restrictions on the importation of Canadian cattle."

Russian Horses for the War.

A despatch to the Daily Mail (London, Eng.) from Vienna states that Russian horses are still being bought by the British War Office. Besides the 800 which have already reached Fiume, 2,000 more are expected shortly.

International Farmers' Institute Officers.

At the close of the recent meeting in Buffalo, as reported in last issue of the "Farmer's Advocate," the International Association of Farmers' Institute Workers elected the following officers for 1901-1902: President, W. L. Amos, Maryland; Vice-President, W. L. Hutchinson, Mississippi; Secretary-Treasurer, G. C. Creelman, Canada. Executive Committee—Franklin Dye, New Jersey; Clinton D. Smith, Michigan; M. F. Greely, South Dakota.

GOSSIP.

Prof. William Shaw, son of Prof. Thomas Shaw, of the Minnesota Agricultural College, has been elected Professor of Entomology and Biology of the Oregon State Agricultural School at Corvallis, Ore. He has gone west, accompanied by his wife. He was previously connected with the State University of Iowa.

Vol. XV. of the American Shropshire Sheep Record, through the courtesy of Mr. Mortimer Levering, Lafayette, Ind., secretary and editor has been received at this office. It is a bulky and well-bound volume, of 1,390 pages, containing the pedigree record of 15,778 animals, besides 125 pages of index, the whole well printed and systematically compiled, and following a volume of similar dimensions issued last year literally speaks volumes for the growing popularity of the breed on the American continent, no other stock register that we know of equalling its record.



A Scottish Sermon on Charity.

The congregation will noo be seated and gie their undivided attention to the followin' intimations. Some o' them are maist as important as the sermon, said the Rev. Tammis MacPherson, as he finished 'addressin' the throne of grace.

He was in his eightieth year, and had worn out five Bibles in beating the dust out of the pulpit desk of Auchterbirnie kirk during fifty-five years. His parishioners worshipped the ground on which he walked, and though he was practically penniless—for he gave most of his income to the poor—they saw to it that the minister lacked for nothing. Their old minister read the announcements, and then said:

"I hear that Widdy Tamson is in destitute circumstances. This mauna be. Name o' God's heritage maun suffer in the midst o' the guid folk o' Auchterbirnie. Think o' this on the way to yer hames. We have it in Holy Writ, that niver fails, that 'he that giveth to the poor lendeth to the Lord.' There is a blessed privilege. Think o' the farmers o' Auchterbirnie being lenders, and haein' the Lord for a customer! And nae need to foreclose to get back payment, for it'll be returned twenty, thirty, fifty and a hundred fold. Noo ye can a' raise fine craps o' wheat and corn, and tatties, as I can weel testify; for the Lord has moved yer bowels o' compassion, and ye hae been unco generous to me. Then see if ye canna raise guid craps o' britherly compassion, and bring the first fruits o' the harvest to puir Widdy Tamson.

"Sanders Grant 'll send her a load of firewood. Fine dae I ken that; I see't in Sanders' generous e'e. And fine kenlin he keeps, too, as I weel ken; for I'm burning some o't myself, thanks to Sanders' kindness." Sanders, sitting in his pew, the observed of all observers, was completely won over, and would gladly have given Widdy Tamson the earth, and the fulness thereof, had he owned it, at that moment.

"And Peter Michie 'll send her a pickle tea. Oh! but it 'll be sair missed out o' Peter's abundant store. Peter is behouden to the Lord for many things, and is a living example o' the niver-failin' truth o' the Holy Writ, 'The han' o' the diligent maketh rich.' Peter's a hard-workin' chiel, as we can a' testify." Peter, too, immediately fell into line.

"Jimmy Grant was tellin' me the ither day," continued the Reverend Tammis, "that he was millin' some fine meal the noo. I quite believe it. He is the only miller in Auchterbirnie, and there's no miller from Maidenkirk to John o' Groat's can compare wi' him. Better send a pickle to the widdy, Jimmy, and keep up yer account wi' the Master." Jimmy registered a full pock of best oatmeal in his own mind.

"Beaton Scott 'll send the widdy some o' the fine tatties I saw in his barn last Tuesday. I needna ask Beaton, for I ken fu' well he wouldna be backward in daeing a kind act to a deservin' widdy in Auchterbirnie.

"And oor guid friend, Wull Crapman, by the looks o' him, can hardly keep his seat, sae anxious is he to dae something to fill the widdy's pat.

"Nae fear of the widdy's starvin' when the Lord has put the saut o' the earth in the parish kirk o' Auchterbirnie. The Lord has promised to be a husband to the widdy, and He wants ye all to be brithers-in-law, and I'm glad ye respond so nobly. Ye're a gallant lookin' lot o' Christians, and yer hearts are as big as yer bodies. The Lord 'll reward yer work o' love. Noo let's praise His name for raisin' up in Auchterbirnie sae many who honor the faith." There was a lull all through the kirk, and then the minister's voice was raised in prayer.—(Family Friend.

Life's Mirror.

There are loyal hearts, there are spirits brave, There are souls that are pure and true; Then give to the world the best you have, And the best will come back to you.

Give love, and love to your life will flow, And strength in your utmost needs; Have faith, and a score of hearts will show Their faith in your work and deeds.

Give truth, and your gifts will be paid in kind, And song a song will meet, And the smile which is sweet will surely find A smile that is just as sweet.

Give pity and sorrow to those who mourn, You will gather in flowers again; The scattered seeds from your thought outhorne, Though the sowing seemed in vain.

For life is the mirror of king and slave, 'Tis just what we are and do; Then give to the world the best you have, And the best will come back to you. —Madeline S. Brigham.

More Kind Words from Subscribers.

One of our subscribers, from Port Perry, Ontario Co., writes: "I would be conferring a real benefit upon some of our neighbors by introducing them to the 'Farmer's Advocate.' We are taking it for the first time this year, and it is the best farmer's paper I have ever seen. It has a clear, broad outlook, and gives the farmer and his work their true place. The Home Magazine is of exceptional merit throughout. You are doing a good work in a field that needs it, by endeavoring to cultivate a taste for literature and art, by giving food to nourish and develop the higher, nobler qualities of mind and soul. 'Hope's 'Quiet Hour,' 'Ingle Nook Chats' and 'Marissy Ann's practical talks are all splendid. Your reproduction in last issue of Goldmān's picture, 'An Old Story,' is fine."

Another, from Ancaster: "I did so enjoy Mollie's last letter; indeed, they are most enjoyable."

THE QUIET HOUR.

The Master.

Have you really put yourself unreservedly into the Master's hands, to be fashioned into His likeness? If you have, then you are in duty bound to accept everything He sends, thankfully. Great troubles will surely be recognized by every true Christian as divinely sent, but each soul has also many little vexations to bear. We may honestly pray to be lifted nearer to God, even though it may be on a cross, and yet chafe and fret at the daily discipline which He sees fit to use in our case.

An old legend tells of two hermits who lived in the desert. Each planted an olive tree in front of his cell. One watched over his tree, day after day, with anxious care. At one time he thought it needed rain, so he prayed for rain; and it fell, to water the tree. Then he thought more sun would do it good, so he prayed again, and God sent sunshine. He thought the frost might make it hardy, and at his prayer the frost came. And yet, after all his carefulness and all his prayers, the tree drooped and died. Sad at heart, he went to visit the other hermit, and wondered to see his tree full of life and beauty. Having told his own tale, he enquired the cause. The other answered, "Brother, I too prayed to God every day for my tree, but I asked Him for such weather as He in His wisdom saw to be good for it."

This quaint old story teaches a truth which none of us would venture to deny—in theory at least—the truth that God knows better than we do what is really best for us. But how often do we talk as though we knew better than He the kind of treatment needed in our particular case. Every complaining word or thought seems to imply that we are badly treated. In theory we are quite willing to admit that sorrow and pain are good for people, but do we always think that the particular trouble we are called upon to endure to-day is just what we need?

Miss Havergal's beautiful little poem, "The Turned Lesson," makes this easier to understand. A child comes to repeat her lesson, and is disappointed to find that the teacher gives back the book with the mark set in the same place. "I thought I had learned it, quite," she says, complainingly; but the teacher, in truest kindness, makes her learn it thoroughly.

"Is it not often so, That we only learn in part? And the Master's testing-time may show That it was not quite 'by heart'? Then he gives, in his wise and patient grace, That lesson again, With the mark still set in the self-same place.

"Only stay by his side Till the page is really known, It may be we failed because we tried To learn it all alone, And now that He would not let us lose One lesson of love— (For He knows the loss)—can we refuse?"

"But oh! how could we dream That we knew it all so well! Reading so fluently, as we deem, What we could not even spell! And oh! how could we grieve once more That Patient One Who has turned so many a task before: "That waiting One, who now Is letting us try again; Watching us with the patient brow That bore the wreath of pain; Thoroughly teaching what He would teach, Line upon line, Thoroughly doing his work in each."

My dear friends, it is so easy for me to preach; but I know it is often very hard to keep sweet when everything gets into a muddle, when the children are troublesome, the work is behind-hand, and one's nerves are all on edge. The irritable tones seem to get into the voice even when the words are patient. Perhaps you, too, think you have been through all that often enough—that you have learned all the lessons it can teach you. If you can only get away for five minutes and find a quiet spot where you can be alone—"enter into your closet," in spirit at least, if it is impossible to retire bodily—you will be able to straighten the tangle out, I think. Try the plan of kneeling at the feet of the Master and putting your hands into His, trustingly as a little child. Tell Him that you want to learn the lessons He sees to be the best for you, and are ready to follow His plan for your education. Then go cheerfully back and do the task He has set, even though it may be a lesson you have had to do over and over again already. When He sees that it has been really mastered, never fear but that you will be promoted to higher and probably harder work. In the Great Master's School, as in other schools, a pupil who does his work well has more difficult tasks set him as a reward. Perhaps you think I talk too much about little cares and worries, scarcely touching at all on the great events of life. But if you can keep the golden thread of God's watchful providence always visible, every hour of every day, there is no fear that you will forget to look to Him when the great troubles or temptations come. Even when the mind is

occupied with necessary work, the glad consciousness of His presence should, like the sunshine, brighten everything. I speak to you who love the Master, and say, will you try to remember that you are learners in His school, and that He himself is training each of the pupils according to His need? Every complaint we make is really a complaint against Him. Shall we dare to say to our King and our God that He does not understand us, does not know as well as we do what lessons are most needful for us to learn? Even we ourselves are able to see, when we look back over our lives, or look at the lives of others, that it is not good for anybody to have too easy a time. Just because our Master loves us, He won't let us shirk the hard bits. Some lessons are only given once; if we fail to learn them then, it is our own irreparable loss. It is well to remember that, though similar lessons may be set, yet "we shall not pass this way again." Let us not neglect the opportunity, given to-day, of growing stronger and better.

"Say off of the years as they pass from sight: This is life with its golden store; I shall have it once, but it comes no more, Therefore I must work with my strength and might."

Sometimes we may say, despairingly, "The lesson is very hard, my Master." Then we can almost hear the quiet answer, "Yes, My child, but you can learn it for Me."

"Then let our hearts be still, Though our task is turned to-day; Oh let him teach us what He will, In his own gracious way, Till, sitting only at Jesus' feet, As we learn each line The hardest is found all clear and sweet." HOPE.

Use the Dining Room.

It would seem to be quite unnecessary to advise mistresses or homemakers to serve dinner in the dining-room every day were we not aware of the very strange and wide-spread custom which prevails in many Canadian and American homes, especially in the agricultural districts, namely, of making use of the kitchen for dining in, as well as breakfasting, and also for supper room. This seems still stranger when we reflect that it is not for want of other rooms or furnishings, as we find not only dining-rooms and drawing-rooms, but very frequently parlors, with commodious halls and bedrooms, all well furnished, and for what purpose? We confess our inability to explain, as they are usually in good order, but frequently with curtains and windows closed—we are told, to prevent the dust from getting in or the sun from fading or spoiling the curtains or carpets. It is evidently caused by a lack of knowledge of "domestic science," especially of the fifth department, namely, domestic economy, which could possibly permit such a waste of opportunities for civilization, not to speak of refinement—to build up "ideal Canadian homes" with people who are well fed, well read and well bred, and, as a result, thoroughbred.

As our first duty is towards the civilization of our own families, let us live as refined as our means permit, and if we have only three rooms, let one be a dining-room, which we will use three times a day, and have it clean, wholesome, bright and sunny.—(Ladies' Journal.

Opportunity.

In one of the old Greek cities there stood long ago a statue. Every trace of it has vanished now. But there is still in existence an epigram which gives us an excellent description of it, and as we read the words we can surely discover the lesson which these wise old Greeks meant that the statue should teach to every passer-by. The epigram is in the form of a conversation between a traveller and the statue:

"What is thy name, O Statue?" "I am called Opportunity." "Who made thee?" "Lysippus." "Why art thou on thy toes?" "To show that I stay but a moment." "Why hast thou wings on thy feet?" "To show how quickly I pass by." "But why is thy hair so long on thy forehead?" "That men may seize me when they meet me." "Why, then, is thy head so bald behind?" "To show that when I have once passed I cannot be caught."

"Can't you get it out, Mike?" inquired Barney anxiously, as he watched his friend endeavoring to draw the cork out of a bottle of water—strong. "Get it out! Be jabbers, I'll get it out if I have to shove it in."

A Sunday-school Superintendent, who happened to be a dry goods merchant, and who was teaching a class of very little tots, asked, when he had finished explaining the lesson: "Now, has any one a question to ask?" A very small girl raised her hand. "What is it, Martha?" asked the Superintendent. "Why, Mr. Brooks, how much are those little red parasols in your window?" said Martha.

A Study in Bees.

Romanes made a study of bees. So did Aristotle. So did Pliny. So did the late Empress Frederick. In the coming ages, no doubt, people will say, "So did Chrysolite." By that time, doubtless, the "Advocate" will have evolved into a periodical better known and more widely read than Webster's Unabridged. Very likely it will then have a gramophone attachment to save people the exertion of reading, and a microscope accompaniment to illustrate new methods of agriculture. However, I haven't made a study of bees, but the other day they succeeded in making quite an interesting study of me. I wonder if Romanes, or Aristotle, or Virgil, or any other of those ancient worthies, was ever stung by a bee? I suppose they could expound on all the fine points of difference between a hornet, a bumblebee, and a honeybee; but, generally speaking, people know a hornet when they see it, a bumblebee when they hear it, and a honeybee when they feel it. As the Highlander said regarding the bee, "She mak's music, but it's nae music; she's a nice wee bird, but she bites wi' her tail, an' it's sair a' day."

There is a boy in our house, named Habakkuk, who is considerable of an apiarist. He has a goodly number of hives, and, in some respects, they are beginning to prove themselves profitable. He hasn't had them very long, but somehow it seems a good while—counting by epochs. Here let me say that if any "Advocate" reader is thinking of starting a bee-garden, it behooveth him not to start it near the kitchen-door.

Well, a few days ago, said Habakkuk decided to extract honey. A young friend of mine was staying with us (we shall call her Prudence), and as she was unacquainted with bees, it was quite an interesting operation to her. Habakkuk cleaned the cans for receiving the honey, and arranged them beside the extractor in a building hard by, and hung a bunch of catnip at the door. Next, he put on a fire in an old stove to warm things up a bit—principally honey; and filled his "smoker" with coals and all the stray chips he could find, to cool things up a bit—principally bees. Then he donned a veil, bracelets and anklets—rather a primitive style of apparel for a gentleman of modern times, by the way, but it goes a long way with bees; at least, they will go a long way without it. The veil is a combination of wire netting and an old grenadine skirt; the bracelets and anklets are of binder twine. He finished off with gauntlets, and a plume of catnip in his hat. In some ways he reminded me of Galahad starting on the Quest, only the armor was somewhat different. Near-by stood the dog, watching operations. He is very fond of Habakkuk, and usually follows him about everywhere, but he draws the line at the apiary; he knows by experience that bees are "multum in parvo."

All things being ready, Habakkuk sallied forth on the Quest—for honey—carrying his "smoker," and a huge knife to loosen the combs. He lifted the lid from a hive, brought in the combs to the extractor, and went back for more. An angry hum rose from the apiary that was ominous to me as the tramp of the Jacobins to the French Royalists; added to this noise, Habakkuk wore a pair of very heavy boots, so, like the "old woman of Bambury Cross," he "had music wherever he went." It so happened that there was a hole in that veil, and, consequently, Habakkuk soon came rushing to the kitchen-door, with—

"An onion! Give me an onion, quick!"

I was busy in another part of the house, but Prudence was in the kitchen. Now, if there is one thing that she detests more than anything else, it is an onion.

"An onion!" she said, "what do you want it for?"

"Why, for these bee-stings, of course; is there one here?"

How can an onion possibly be any good for bee-stings? said Prudence. "What's the matter with you, anyway?"

Habakkuk said something with a d in it—it sounded like "daisy," but I don't think it was that—and ran to the garden to procure one for himself. Of course, Prudence, who always likes to know the "whys" and "wherefores," ran after him—she was unacquainted with bees, you must remember.

Then something happened—several things, in fact. First, the dog yelped, and went past the kitchen-door like a comet without a tail; he made a "bee line" for the barn, with a line of bees at his heels. The cats, who were busy pulling down the catnip, arched their backs and took refuge in the nearest tree and on the roof of the cook-house; while out near the apiary Prudence seemed to be trying some new exercises in Delsarte—rather violent ones. She waved her arms, she made curtsies, she described circles, she bolted off at tangents, she ran at right angles, and acute angles, and obtuse angles; but the principal thing she did was to call for me. I generally try to observe the Golden Rule, so I snatched up the nearest available weapons—viz., a dishcloth in one hand and a sun-bonnet in the other—and flew to her assistance, these immortal lines from Hohenlinden ringing in my ears:

"The combat deepens. On, ye brave,
Who rush to glory or the grave!
Wave, Munich, all thy banners wave,
And charge with all thy chivalry!"

The battle was short-lived. I explained to her, a little at a time, that it was imprudent to run towards the hives, so, turning in the opposite direction, we fled to a place of safety, which happened to be part way across a ten-acre field. Then we scraped the "thistles" from each other's physiognomies.



(From original painting by M. Thias Schmid.)

"THE FÊTE DAY."

That Habakkuk—well, I don't know what to say about him. I think he ought to be hung up by the heels to let sense run into his head. He seemed vastly amused about something or other, but Prudence and I didn't see anything funny about it—we hadn't time, for one reason. "When you had passed," he said afterwards, "it seemed like the ceasing of exquisite music."

However, when we came back to the house he met us with a bunch of onions, and Prudence has decided that the remedy was no worse than the disease.

We begin to look like rational beings once more. Prudence has lost that Cyclopean expression, and I can wear a stock-collar without inconvenience. We like honey just as well as we ever did, but we have no inclination to make "a study of bees."

CHRYSLITE.

While a drove of bullocks were being driven through a well-known market town, one of the animals suddenly stopped, and, notwithstanding all the efforts of the drover, would not move on its way. A chemist, who happened to see the affair, went up to the bullock, and injected a drug down its throat. The animal immediately careered down the street at a mad gallop. About five minutes afterwards the drover entered the chemist's shop, and, wiping the perspiration off his forehead, asked the chemist if he were the party who gave the bullock some medicine. "I am," said the chemist. "Well," said the drover, "I'll tak' a pennyworth o't, as I hae to follow the beast."

A Novel Fad.

The latest fad among schoolgirls is a book of confessions. It contains a number of small sheets of unruled linen paper, with a unique cover of rough paper ornamented with a pleasing design in water colors.

A very attractive one has brown-eyed Susans on the cover, while wild roses ornament another. On the first page are the following questions:

1. Favorite name for a woman?
2. Favorite name for a man?
3. Favorite qualities of a woman?
4. Favorite quality of a man?
5. Choice of blonde or brunette?
6. Choice of light or dark eyes?
7. Choice of musical instrument?
8. Favorite amusement?
9. Favorite song?
10. Favorite poet and poem?
11. Greatest dislike?
12. Greatest enjoyment?
13. Favorite flower?
14. Favorite beverage?
15. Favorite color?
16. Favorite motto?
17. Favorite book?
18. Favorite month?
19. Favorite gem?
20. Favorite game?

Schoolmates and friends are requested to write in this book and answer the various questions, always signing them at the bottom.

"The Fête Day."

Our picture gives us a quaint interior and a peep into a family circle at a moment evidently of supreme interest to it. It is the fête day of St. Francesca, after whom the daughter of the house is named, and the question before them evidently is how best to enjoy the day, and how best to honor the patron Saint? What gifts shall be laid upon her shrine? And what must Francesca herself sacrifice of her possessions to give adequate expression to her pious reverence? Must Chanticleer go to the market, and what will that handsome and much-cherished bird fetch when offered for sale? Chanticleer himself appears the least troubled of the party, lying quietly in Francesca's arms, unsuspecting of treachery. The father, razor in hand and with chin and lip all soap-besmirched, turns round enquiringly, and the mother stops in her task of adding still another patch to the already well-patched waistcoat, to hear what the friendly market-maiden may suggest and what Francesca shall decide. What will she decide? We venture to think—may, to hope—that a solution will be found to meet all requirements, that Chanticleer "may live" to crow if not "to fight another day," and that Franceses may have a happy "jour de fête" without any qualms of conscience to detract from her pleasure.

H. A. B.

The Gifts of God.

When God at first made man,
Having a glass of blessings standing by,
"Let us," said He, "pour on him all We can;
Let the World's riches, which dispersed lie,
Contract into a span."

So strength first made a way,
Then Beauty flowed, then Wisdom, Honor, Pleasure;
When almost all was out, God made a stay;
Perceiving that alone, of all His treasure,
Rest in the bottom lay.

"For if I should," said He,
He would adore my gifts instead of Me,
And rest in Nature, not the God of Nature;
So both should losers be.

"Yet let him keep the rest,
But keep them with repining restlessness;
Let him be sick and weary, that at least,
If Goodness lead him not, yet Weariness
May toss him to My breast."

—Herbert

THE CHILDREN'S CORNER.

Our Holiday Letter Competition.

The competitors in our holiday letter competition could not be classified according to age, as none of the younger ones tried this time.

The winners are Willa Harding, Thorndale, Ont., and K. C. McDiarmid, Ormond, Ont.

HOLIDAY LETTER I.

Dear Friend,—

Having a few spare moments, I will now answer your letter which I received last week. You asked me for an account of my vacation, so I am going to give you the best account I can. About three weeks after school stopped, the raspberries were ripe. You know where our berry-patch is, as you and I visited it last summer. Well, we went out there and picked and picked till we were tired. My aunt and two cousins from the city were here picking berries this year, and one of my cousins stayed a week after berry-picking was over. We had a wild time, and it was our delight to drive to the village, two miles distant, to get the mail and other necessities. One lovely afternoon we went at the river, paddling in the water, gathering shells and mosses along the shore. When we were tired, we all sat down beneath a shady tree and ate our lunch and lemonade. But oh, sad to relate, I spilt the lemonade! A lady was there and sketched us. She promised to show us the picture when it was finished. Then I spent two or three weeks at home. There were the plums and pears to pick, and my dear little baby brother to mind. Sometimes I rested in the hammock, where the green vines clustering around the veranda made a beautiful shade. The last week of holidays I and a couple of my cousins went to visit a friend. We rode on the train part of the way. It is wonderful the different scenes one gets as one flies past on the train. One place there was a pond right near the track. There were five or six little boys in bathing. They splashed just as hard as they could. When the train goes swiftly round the curve, the jar will make the people that are walking in the car almost fall on top of you. Another place we saw the fresh green clover and smelt the sweet fragrance of it; and going on a little farther, we came to a field where the stubble had been burnt, and we got a nasty burnt smell. But at last we had to get off the car. We had a ten-mile drive after this. We put in a wild time playing about the old farm. We used to go out and romp in the hay and play hide-and-seek. One day we went back to a woods where there had been a fire. A number of trees and about seventy yards of fence was burnt. We put in our time in such ways. We stayed for a week and then returned home on the train. Our holidays are over, and I am glad to get back to school again.

WILLA HARDING (aged 14).

HOLIDAY LETTER II.

My dear Cousin,—

I have just returned from a delightful holiday in the country. I had so much fun I really must write and tell you about it. I started for my Uncle Bob Markle's farm at Glendene on the tenth of June. That morning I wakened pretty early, but alas! it was raining. However, it cleared up somewhat before traintime, so I gathered up my belongings, said good-byes to everybody, and started. Uncle Bob came to meet me, but he was in a bad humor over the rain. Driving home through the drizzling rain, over a splashy road, I was feeling pretty blue. But when I arrived at my uncle's house, I was so cordially greeted by everybody—even the dog making friends with me at once—I forgot all about the discomforts of the journey, and began to take an interest in holidays again. Next morning I had a chance to see what camping out was like. They were putting a new floor in the kitchen, and put the stove and table out under the trees. They assured me affairs were serious the day before in the rain.

After breakfasting on new milk, fresh eggs, hot cream-biscuit and honey, a couple of my cousins and I started to water the horses. They rode them to the river, half a mile away. So we started off—riding clothes-pin fashion—for a jolly ride. All went well until we reached the place where they drink; but when the horses lowered their heads, I nearly slid over my horse's shoulder. My cousins, of course, were used to it, and laughed at me, but I did not find it at all pleasant. Going home, I noticed nuts on many trees, and asked my cousins to get me some, as I wanted some to take home. We went that afternoon to get some, as I thought they would be just as good green. When we found the bushes, the squirrels or something had taken nearly all the nuts. We found about half a dozen, and we were so vexed we sat down to eat them, but there was not one of them good—all little and worm-eaten. We had a lovely row on the river, and gathered some beautiful water lilies. When we had the boat nearly full of flowers, my

cousins thought we had better go home before we gathered enough to sink the boat. When they were drawing in hay, I thought I would go down and build loads. I think it is great fun riding home. It was all right on the load until the horses began to move, and then I began to bow gracefully, and then I sat down in too much haste to be graceful. I decided that riding home is the best part of drawing in-hay. Before I went home they made a party in my honor. It was a lovely evening, and the young folks scattered about the lawn in the moonlight made a pretty picture. The evening was spent in games and music, and everybody enjoyed it very much. Next morning, I wearily packed my trunk and came back to the dusty city again.

Yours sincerely,

K. C. McDIARMID (aged 15).

I have taken both spelling and writing into consideration in awarding the prizes. Both letters are very interesting, but Willa Harding's was much neater than the other. Look out for another competition next time.

COUSIN DOROTHY.

Travelling Notes.

This time my jottings date from Glasgow, and I will do my best to make them as coherent as I can. We both agreed that the man gave a most realistic description of his sensations who is reported to have said that upon his arrival "he was let down by a rope into a mine, and there he stayed as long as he remained in Glasgow," for you literally go through a long black tunnel so steep that a cable is attached to the train to hold it back, and also to pull it up again should you be travelling via Edinburgh. If the traveller who so graphically described his experiences reached his destination during one of Glasgow's fogs, it is no wonder that the whole city should appear to him as one dark mine.

We, however, were more fortunate, for the sun was shining, and we had some beautiful days in Glasgow, the second largest city on this side of the Atlantic. What crowds! What noise! What squalid misery in the crowded back streets, where the women are all barefooted and bare-headed and the children in filthy rags. Nothing lightens the dull, awful weight of the impression which the poor of London and the poor of Glasgow leave upon the heart; and yet there are countless forms of attempted relief in green openings into parks and gardens, in every form of charity known to refined human sympathy, and in missions, schools and friendly societies, and yet the conditions are still awful. Much of the great misery, of course, can be set down to intemperance, for men, women and children alike flock to the public-houses as soon as they earn or beg a penny, and know no other existence.

My first experience was the difficulty with the language in this land of cakes. I was quite conceited about my knowledge of Scotch, for had I not learned it from my own dear mother? But when I encountered it in its pure and unadulterated form it was a different thing. Upon landing in Glasgow, I, as usual, rushed to a policeman for information, and asked him to direct me to Sauchiehall street—pronounced Sockehall, which I did not then know. He replied: "I dinna ken what you min. Whareryogauntea?" (i. e., where are you going to?) Having at last made myself understood, he very politely directed me, and I thanked him and turned away but very little the wiser. Then the money—they tell you it is "hauf a croon," or "twa and sax," or "a bob and a tanner"—more puzzling than the "two bits" or "four bits" they talk about in the Western States. Tramways, as they call our electric or horse cars, with seats on the roof as well as inside, pass in every direction, and the charge of a penny or a half-penny seems ridiculously low. The shops are full of charming goods; it is interesting to stop and look at them. Prices of every kind of clothing are much lower than those to which we have been accustomed. The city is crowded. People have come from all parts of the world to visit the Exhibition, and all, apparently, go away delighted; for there are to be seen many of the finest specimens ever produced in art, needlework in silk, cotton and wool, as well as beautiful things in china, glass and silverware. It would be impossible to enumerate the different exhibits, for though one can get an idea of the extent and vastness of the Exhibition after spending three days at it, one does not begin to see half of the articles shown. It is not just to compare it with the World's Fair, where for situation, general effect of the buildings, statuary, lakes, etc., and artistically-planned harmony and beauty, the palm would have to be given to Chicago, but many of the exhibits are finer at Glasgow. The pictures, for instance, are all the choice paintings from the Royal Academy and other exhibitions for years and years, which have been purchased by the wealthy and loaned to this exhibition by their possessors. Most interesting, too, are the exhibits—French, German, Russian, and Japanese, as well as those from Morocco, Rhodesia, Australia, Ireland, and last, but by no means least, from our own dear Can-

ada. Canada makes a good exhibit, both in the large main building and in her own department. She sends samples of all kinds of wood, coal and other minerals, and all produce possible, from the Pacific to the Atlantic coast; Canadian buggies and canoes, machinery, ranges and stoves, fish, flesh and fur bearing animals. The forest wealth of Canada is enormous, and all the woods generally used are here to be seen, and beautiful they look. The samples of Canadian apples are greatly admired, the delicious smell pervading the whole building. Mr. Hamilton, who is in charge of the apple exhibit, is a thoroughly kind and genial Canadian, and I am sure this exhibit from Canada will do good in advertising and opening the eyes of those who believed that we could produce only ice and snow. It is astonishing the ignorance that prevails in this mother country, of the extent and advanced state of our fair Dominion. Just fancy, I was asked the other day "if that animal upon our Flag represented a skunk?" The gravity with which the question was put precluded all hope of my treating it as a joke, so I had to choke down my wrath as best I could, at the insult to Canada's emblem, our time-honored, beautiful beaver.

Upon reviewing our experiences, after we had taken our last trip to the Exhibition at Glasgow, we concluded that perhaps more might have been made of this great opportunity to enlighten the world as to the great resources and the growing wealth of the Colonies of the British Empire. It was an object lesson indeed, but one which stopped short of all it might have taught. Canada realized her opportunity best, but she could have demonstrated with far greater effect than she did, how up-to-date she really is in her great system of travel and general transportation, and how great have been her engineering feats in mastering what to an inferior intelligence and to a less progressive people would have been insurmountable natural obstacles. My next chat will probably still be dated from "bonnie, bonnie Scotland."

MOLLIE.

The Busy Man.

If you would get a favor done
By some obliging friend
And want it right away,
Go to the man who constantly
Works thirty hours a day.
He'll find a moment, sure, somewhere,
That has no other use,
And help you, while the idle man
Is framing an excuse.

The Nameless Hero.

(From the Denver News.)

There are countless heroes who live and die,
Of whom we have never heard;
For the great, big, brawling world goes by
With hardly a look or word;
And one of the bravest and best of all
Of whom the list can boast,
Is the man who falls on duty's call,
The man who dies at his post.

While his cheek is mantled with manhood's bloom,
And the pathway of life looks bright,
He is brought in a moment to face the gloom
Surrounding the final night,
He bravely sails o'er a sunlit sea,
And is dashed on an unseen coast—
Till the ship goes down, at the helm stands he—
The man who dies at his post.

Who follows the glorious tide of war
And falls in the midst of fight,
He knows that honor will hover o'er
And cover his name with light,
But he who passes unsung, unknown,
Who hears no applauding host,
Goes down in the dark to his fate, alone,
The man who dies at his post.

Who bears the disease while death draws near,
Who faces his fate each day,
Yet strives to comfort and help and cheer
His comrades along the way,
Who follows his work while he yet may do,
And smiles while he suffers most,
It seems to me is a hero true—
The man who dies at his post.

There are plenty to laud and crown with bays
The hero who falls in strife,
But few who offer a word of praise
To the crownless hero of life,
He does his duty, and makes no claim,
And to-night I propose a toast
To the silent martyr unknown to fame,
The man who dies at his post.

An Irishman was sitting in front of his house a few days ago pulling frantically at his pipe. He lighted a match, and pulled and puffed, threw the match away, and then lighted another. He continued the performance until the ground was strewn with burnt matches. "Come in to dinner, Pat," said his wife. "Faith, and I will in a minute, Biddy," said he. "Moike was telling me to-day that if O' shirked a piece of glass, O'd see an eclipse by the sun. O'dan know whether Moike's been foolin' me or whether O've got the wrong kind of glass."

Ingle Nook Chats.

My dear Guests.—Some of the competitors in the Camera Contest made the mistake of sending their work to me, instead of to the "Advocate" office as directed. I re-addressed them, however, and as soon as possible had them forwarded to Winnipeg, where I trust they arrived safely and in good time for the competition.

As it is now some time since we have had one of our old-time contests, I have not heard from many of the guests recently, and the absence of their cheery letters leaves quite a blank. Never mind, our "calling-day" is coming soon, and I hope the reception-room of the "Nook" will be crowded with faces familiar and new. I promised something easy and of interest to puzzle-lovers, and forthwith I attempt to redeem that pledge by offering

"A COPPER FOR YOUR THOUGHTS."

In other words, Contest XV. consists in taking an ordinary copper coin and finding thereon the list of things (or their equivalent) given below:

- | | |
|------------------------|------------------------------|
| 1. Well-known flowers. | 9. A beverage. |
| 2. Name of an animal. | 10. A useful organ. |
| 3. Name of a fruit. | 11. A cavalier. |
| 4. What we all love. | 12. A badge of royalty. |
| 5. A body of water. | 13. A foreign language. |
| 6. Place of worship. | 14. The victor's gaudium. |
| 7. A messenger. | 15. Part of a hill. |
| 8. A method of voting. | 16. What the postman brings. |

We offer three prizes for the three best sets of answers to the foregoing puzzle, which is simple enough for the veriest beginner, and yet may test the observational powers of many. Not all will have noticed so closely the make-up of our most common coin. This contest will be divided into three classes, to give the little folks a chance, and one prize will be given in each class. Class I. includes all over 18 years of age; Class II., 14 years and under 18 years; Class III., all under 14 years. Work for the contest must reach Pakenham by Nov. 20th. Address as given below. In case of a tie in any class, neatness, correct spelling, etc., will decide the winner.

Did any of you see the Royal visitors when on tour through our fair Province? The Royal train passed quite close to where your humble friend, "The Hostess," lives, but they never stopped to peep into the Ingle Nook. Just think what they missed! They did stop at several of the towns near by, for a few moments only, but long enough for the citizens to give evidence of their loyalty. In almost every case the parting guests were saluted with a universal cheer from crowds of lusty-throated school-children—Young Canada! What a day it was, for the little ones to see not only the son of our King, but the King-elect himself! I should like to have been present myself, but circumstances decreed otherwise, so I tried to practice what I have often preached, and did "the duty nearest" me. The long autumn evenings bring an increase of leisure on the farm, so I shall hope for a large influx to the cosy corner of our Ingle Nook. THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

PRIZE ESSAY—CLASS I.

Country versus City Life.

(By Mossback's Daughter, Port Perry, Ont.)

As I have always lived on the farm, I shall speak of country life as I find it. I know but very little of city life, so shall leave that side of the question to my city cousins.

The child born on the farm has a great advantage over the one born in the city, for laying the foundations of a strong, sound constitution, and an alert, inquiring mind. After he is able to run alone, his nursery is the door-yard, fields and woods. The children gather wild flowers, fruits and nuts, run to the farthest end of the farm before dinner to get a ride up on horseback, drive the horses for Papa as he loads the golden grain, or hunt the orchard through for the first ripe fruit. There is no need to tempt these children's appetites with dainties, they are ready for the plain, but fresh and nourishing, food prepared for them. Do they know that in this natural, free and vigorous child-life they are laying up great stores of strength for the strain and labor of future years? They are developing the sterling qualities of their future manhood and womanhood by furnishing their own amusement. The parents are too busy with their farm or household work to spend much time in amusing the children. Left largely to furnish it for themselves, they quickly learn to do so. When they tire of one thing, they take something else and make it serve their purpose, often inventing not only the play, but the things with which to play, for store toys are a luxury comparatively few country children know. The older ones help the younger to carry out some plan in which they cannot succeed alone. So in the happy hours of play, inventive skill, self-reliance, independence and mutual helpfulness are being built into their characters.

In the children's daily contact with the plant, animal, bird and insect life about them, in their work in field, garden and house, as they grow older, their powers of observation are being cultivated, their perceptive faculties are being trained to a nicety of distinction, to a search for the cause of an effect, that will be of inestimable value through life.

Farm life is real, busy and happy. It is real and happy because it is busy. From early morn till evening, there is work and plenty of it to do. And it must be done, necessity urges us to it. We farmers, sons and daughters, feel that in our work we are enjoying a real rest, for the farm could not be run successfully without it. We have a sense of independence and a pleasure in our work that does not pall. Then when the long winter evenings come, how we enjoy that. We sit and read our favorite authors,

make the acquaintance of new ones, or take up some branch of study.

When one member of the family takes a holiday, his or her share of the work has to be done by the others at home. It adds to their burdens, oftentimes already heavy, but they forget self in the pleasure and benefit afforded to the other. There is a law of life that has been hidden deep in human nature since the days of Adam—oftentimes hidden so deep that it is never found; and because it is not found, life never attains to its full and true measure of happiness. Jesus Christ enunciated it in these words, "The Son of Man came not to be ministered unto, but to minister." When we spend our lives laboring for those we love, the reflex action warms and fills our own hearts. That, I claim, is the secret of the true happiness so often found in humble farm homes, where all have to work hard and "pull together" to make both ends meet.

The social life too, in the country is real. I have no time to entertain a lot of mere society friends, or be entertained by them. I choose my friends not because they belong to a certain set of society, but because I see in them a true manhood or womanhood, find in them congenial tastes and an affinity that draws us together. I find a few—a very few—true kindred spirits. A force that is within us draws us closer and closer together, until we see and understand each other's inmost self. We each see life from the other's point of view; each gives the other needed sympathy, encouragement and help in hard places. In the genial atmosphere of such a friendship, one grows open, frank, true and strong.

A country boy is likely to have a larger measure of success in life than a city boy. It is a well-known fact, and one often wondered at, that so very large a proportion of the men who to-day stand in the front rank, the greatest of our statesmen, educators, preachers, and others, were born and brought up in the country. When we come to consider the qualities necessary for a successful career—physical endurance, tireless energy, will power strong enough to make things bend, intense application and concentration of all the powers to the end in view—we see that the conditions of life surrounding the country boy are more conducive to their growth. There are not many boys brought up on the farm but who know what it is to work from daylight to dark during the busy summer season, and often at work so hard that a few hours of it would make a city boy think he was nearly killed, as perhaps he would be. It is in just such rough, hard ways that physical endurance and tireless energy are gained. The quiet life of the country gives the innate trend of character in a boy a chance to show and develop itself. In the earlier stages of its growth, it might be lost in the rush and whirl of city life, but in the many hours on the farm while the hands are employed with work which still leaves the mind free, this germ begins to grow, gathers force and strength, until the boy, absorbed by his one purpose, bends all his energies to that end. In overcoming one difficulty he gathers strength for the next. By sheer strength of will, force of character and the genius of hard work, he pushes his way until he stands abreast with the foremost men of his day.

Country life develops in children a true love of beauty and a reverence for the sublime, with a power to enjoy it such as none can know but those whose souls have grown into harmony with it during the quiet hours scattered through the years. Though we look on the same scene every day, it is always new. The changing seasons make it a real panorama. The spring with its fresh, bright, living green; the summer with its darker foliage and waving golden grain; the autumn with its brown furrows as a relief for its forests of crimson and gold; the winter with its mantle of white so sensitive as to reflect the varying moods of the vaulted arch above it—all these make a scene which we never tire of watching, for even in the same day, between the morning and the evening light, a subtle change passes over the landscape. We look away to the farthest point of vision and see the beautiful hills, whose distance is measured by the depth of their blue. We snatch a minute to watch a beautiful sunrise dispel the shadows or pierce the mists of morning. Again a brilliant, glowing sunset thrills our entire being, and a quiet rest and calm steals over the soul as we watch the soft coloring and subtle, harmonious blending in the sky, whose beauty is repeated in the lake at our feet. It casts its spell over us and holds us until the stars come out one by one to keep us company. Sometimes we see old Luna dreamily sailing through the fleecy clouds, now hiding her face entirely behind a darker one, then the silvery light of its edges gradually increasing to a glow as she sails again into full view, only to partly hide herself behind another. It is impossible for any artist ever to put these pictures on his canvas.

Some clear, bright night I step outside to look at the heavens above me, studded with twinkling orbs. I see my childhood's friend, the polestar, with its circling constellations, the Great Bear and Cassiopeia. I see their brilliant stars, and the clouds of light in the Milky Way, and wonder what they are. I get a work in astronomy, and am carried far beyond this little earth, the sun, the solar system, into galaxy beyond galaxy of the infinite depths of space. And then my thought reaches out to God the Creator and Controller of all, and I stand in wonder and awe.

There is no place on this green earth better fitted for the development of a strong, vigorous, intelligent, true and noble manhood and womanhood, than in our Canadian country homes.

Camera Competition Awards.

Considerable interest was awakened by our Camera competition, marked evidences of skill being shown by several of the competitors both in the selection of subjects and the execution of the work. We trust that many of our readers will be induced to take up this delightful pastime, whereby so many beautiful home scenes and reminiscences of travel may be permanently preserved. Manitoba, the Northwest Territories and the State of Kansas were represented in the contest. Following is the list of awards:

- 1st. John Hendry, Virden. "A Glimpse of William Stephens' Farm."
- 2nd. J. W. Fearon, Pelisko, Alta. "Eden Valley Ranch, High River."
- 3rd. Jennie Ranton, Winnipeg. "Farmhouse near Snowfall, Man."
- 4th. H. E. Briggs, Olds, Alberta. "Eastslope Bonny House."
- 5th. Jennie MacFaden, Kansas City, Kan. "Maple Lane Farm."

Another Holiday Jotting.

Cambridge, Massachusetts, U. S. A.—Life is full of contrasts, as we all know, and it is well that it should be so. Even one's holidays are all the more enjoyable and beneficial when they afford variety and change of scene. It is good in every sense to widen one's horizon, to travel with one's eyes open and one's mind on the alert to profit by all one sees. My holiday this year has come to me somewhat sandwich-fashion: a fortnight of quiet Placidia, on Lake Huron, as the under slice of bread, then two months of simple home routine and ordinary duties, followed by a dainty, well-buttered upper slice provided by a fortnight's delightful visit to this land of enlightenment and culture, Boston and its neighborhood. My prescribed time is all too short to enable me to get more than a general or bird's-eye view of my surroundings. My friend's home is within a stone's throw of Harvard itself—i. e., the central buildings and the beautiful grounds which environ them. There is such a wealth of foliage everywhere, there are magnificent trees, well-kept grass and flower-beds; no neglected corners; everything, within and without, thorough. The strength of a chain is in its weakest link, they say, and to the outward eye, at least, no weak link is anywhere discernible at Harvard, for a most full and ample provision is made to turn even the dullest of boys into a learned man or to provide him with such training that it will be no one's fault but his own should his after-life become one of failure.

The Harvard "Agassiz Museum" is open to every one, and is, I believe, freely used by the teachers of the ordinary schools to illustrate any subject which they may be teaching. It is in an immense building, many stories high, and contains every possible specimen of the animal, vegetable and mineral world. I have seen many museums, but I cannot remember ever leaving any before with such reluctance as I left the Harvard Museum yesterday, as the hand of the clock pointed inexorably to the hour of closing. It has one exhibit unknown to any other collection in the world, and provided at immense cost, in the interests of the study of botany. It illustrates every form of floral life in natural or magnified size, with every tender, delicate tendril, seeds, pollen, etc., with their exact shade or shades of coloring, most exquisitely executed in glass. The invention and its secret is known only to one family, that of Blaschka, of Germany, and this secret is handed on from father to son, never to be revealed to others, or so I understood the story. No one could imagine the specimens to be anything but of the living plants themselves or actual sections of the same. The supposition that they were made of glass would never enter the mind of even the most imaginative, so perfect is the imitation.

Perhaps if there is one thing more than another which strikes the observer, on first coming to Cambridge, it is its air of quiet and dignified repose, its signs not only of well-to-do-ness everywhere, but of positive wealth. If there are any poor people, they keep their secret well. Wages are high, and that, of course, means a set-off against the heavy rentals, which sound appalling to the Canadian mind. The usual outcry for domestic help is heard here as elsewhere, and various methods for its substitute, or to do without it altogether, are under consideration at Boston and Cambridge, as in Canada. The need of training, both for mistress and maid, is fully recognized and provided for. Amongst the most interesting places I have been privileged to visit were the cooking classes at the Cambridge High School, and the school of housekeeping under the auspices of the Women's Educational and Industrial Union. The course is most comprehensive, including a knowledge of housework in every branch, as well as providing, as a basis for the same, a thorough knowledge of sociology, sanitation, chemistry of food, etc., etc. In a community where claims of the intellect appear at first sight to be paramount, it is good to see that due recognition is given to some of life's greatest essentials. If a college is founded, supported, and gives equal privileges for study and obtaining degrees by the women as by the men students at Harvard, so also is training provided which may—nay, *must*—add to the happiness of the future homes of both. In illustration of this I add a clipping from a "Boston Transcript" of last week:

"Miss Nannie Vickroy, a teacher, of Macon County, Mo., is the author of a unique answer to the question, 'Who is the greatest woman in all history?' which was put to 200 school teachers. Miss Vickroy passed over Queen Victoria, Frances Willard, Helen Gould and other women whose names were the most popular, and declared: 'The wife of the Missouri farmer of moderate means, who does her own cooking, washing and ironing, brings up a large family of girls and boys to be useful members of society, and finds time for her own intellectual and moral improvement is "the greatest woman in all history." She was awarded a prize for the originality of her answer.'

With this message as consolation and encouragement to many a tired wife and mother in a Canadian farm homestead, I somewhat reluctantly close my little record of a pleasant holiday in Massachusetts, leaving very much untold which might also have an interest for the readers of our Home Department.

H. A. B.

GOSSIP.

Chas. Strachan, of McKenzie, Man., has gone east to attend the Ontario Agricultural College, Guelph.

S. Maclean, Franklin, works his stallions, and thus renders them more docile and none the less sure foal-getters.

The illustration of Bob Kirk and some of his get, which appeared in the "Advocate" some time ago, will be remembered by our readers. This noted sire is also a race horse, winning good races on the Pacific racing circuit in fast time, and on one occasion lowering his record to 2.23 1/2. The Stewart mare, Marjory, won several heats at Whatcom, Wash., winning the .25 pace in three straight heats.

It is with regret that we learn that owing to poor health, Mr. J. E. Marples, of Poplar Grove Farm, Deleau, Man., announces a dispersion sale of his entire herd of Hereford cattle. The herd now consists of over 100 head. The foundation of this herd were selected with care from the best stock in the country, and high-priced bulls of the choicest breeding have been in service. The farm is in many respects an ideal one for the raising of pure-bred stock. The herd has been maintained under natural conditions—no forcing or pampering even for the show-ring—and yet the many high honors won by representatives of this herd at the big fairs attest the high character of the stock. As Mr. Marples is determined to dispose of the entire herd by private sale, the opportunity offered buyers is an unprecedented one. Herefords, owing to their superior ranching qualities, are in strong demand, and intending buyers should lose no time in securing the first choice. Deleau is on the Pipestone branch, easily reached from all parts of the Province or Territories.

Mrs. E. M. Jones, of Brockville, Ont., in a note referring to her fine herd of Jersey cattle, writes us, under recent date: "Last winter you drew attention to my having sold to Mr. Matthews, of Scranton, Pa., two magnificent Jersey cows, which, as I remarked at the time, should never have left Canada. They were Bella and Louise, half-sisters. I have lately heard from Mr. Matthews, as follows: 'Louise and Bella both have heifer calves, and Louise gave twenty-six quarts of milk per day when she was fresh. I think they are two of the best cows in my herd. This is all the more gratifying because, although I did not breed these cows, they were descendants of some of the best stock I ever brought into this country, and I bought quite a number of them back and they have more than justified my expectations. Several Canadian breeders wanted Bella and Louise, but would not pay my price, but Mr. Matthews cheerfully paid it, and bought the cows without seeing them, and I am very proud of his success with them.'

NOTICES.

C. P. R. CHANGE OF TIME.—The change in the C. P. R.'s train service took effect on the 15th of October. The east train now leaves Winnipeg at 4 p. m. daily. In addition to the daily service, the Company has arranged a tri-weekly special train to Toronto for the accommodation of the returning harvesters. This train will run every Tuesday, Thursday and Saturday, leaving Winnipeg at 6 p. m.

BRANDON COLLEGE opened the educational season in the new building on October 1st. The successes of students attending this institution is proving a strong attraction to young people of the farm who are desirous of getting an education. The new college is well built, and has all the modern conveniences. There is accommodation for 75 resident pupils and 200 day pupils. The teaching staff are all men of learning and acknowledged teaching ability. Write Rev. Dr. McDiarmid for a catalogue.

TWINE FACTORY. W. A. Elliot, architect, of Brandon, has just completed the plans for the new binder twine factory. The factory is to be 45x200 feet; boiler and engine room to be 30x30 feet. The building is to be of brick with stone foundation, and the walls are to be 15 feet high. The roof is to be supported on trestle work, leaving the floor space clear of all obstructions. The main building is to be floored with maple and heated with steam, and when complete will be one of the most modern and up-to-date plants of its kind in America.

The warehouse is to be 50x150 feet; 16 feet high, and is to be of frame construction and covered with metallic siding on the outside. The promoters have applied for their charter, and it is their intention to push the work through as rapidly as possible.—(Brandon Times).

DR. BARNARDO'S HOME.

The managers of these institutions invite applications from farmers and others for boys and youths, who are being sent out periodically, after careful training in English homes. The older boys remain for a period of one year at the Farm Home at Russell, during which time they receive practical instruction in general farm work before being placed in situations. Boys from eleven to thirteen are placed from the distributing home in Winnipeg. Applications for younger boys should be addressed to the Resident Superintendent, 115 Pacific Avenue, Winnipeg, or P. O. Box 970; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Brandon, Man.



Often Imitated, Never Equalled. Every Stove Warranted. Best Cookers, Strongest Heaters. Last Longest, Use Least Fuel. Made only by The BURROW, STEWART & MILNE CO., Limited, HAMILTON, ONTARIO.

INSPECTION INVITED.

CAN BE HAD FROM ANDERSON & THOMAS, HARDWARE MERCHANTS, 538 MAIN ST., WINNIPEG, MAN.

Mr. J. A. W. Fraser, of Jumping Pond, Alta., has recently imported a Suffolk Punch stallion from England.

J. G. Washington, Ninga, has purchased a Clydesdale stallion and two Clydesdale fillies from J. A. S. Macmillan, Brandon. This stock is of exceptional merit and prizewinning ability, which they will continue to develop in the hands of Mr. Washington.

Peter Robertson, a sheep rancher, of Medicine Hat district, recently purchased 40 Rambouillet bucks from Strode & Dorsey, Montana, breeders of this variety of Merinos. T. P. Strode, of the above firm, made a small exhibit of Rambouillets at the Medicine Hat fair, this being the first time the breed has been introduced into this part of the Territories.

Dr. Cecil French, D. V. S., Washington, D. C., inserts an advertisement in this issue calling for live Columbian swans, also live white American cranes. Any of our readers having any of these to dispose of, please read the advertisement elsewhere in this issue and correspond with Dr. French, 718 12th Street, N. W., Washington, D. C.

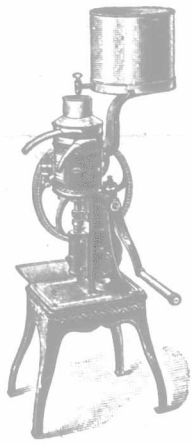
Dan Hamilton, Neepawa, recently shipped 400 head of fat cattle to Toronto. He complains that the cattle fed by the farmers are not finished; do not carry enough flesh, due, doubtless, to an insufficiency of good feed during the fattening season, and also to the lack of heavy-fleshing tendencies, which are only to be got from the use of pure-bred bulls possessing the quality of easy keeping and easy feeding. The moral is obvious: Alter all the scrub bulls! and use a pure-bred with heavy-fleshing tendencies.

In this issue appears the advertisement of A. A. Titus, of Riveredge Farm, Napinka. Mr. Titus is a young breeder of Shorthorns and Standard-bred horses, whose persistence in raising only the best blood obtainable is bound to tell in the end. His stock is raised under natural and, therefore, the healthiest conditions, never being pampered for show, a point to be remembered by the farmer who is desirous of investing in pure-bred stock. The cows are of the useful, money-making sort, and have in them the blood of Windsor (Imp.), Sittytan Stamp (Imp.), a winner at Toronto, a few years ago, is now at the head of the herd, in which there are now some good young things from his service. Flaxmont (Standard) has left some nice colts in the Titus stud, and any person wanting such stock would do well to write or call on A. A. Titus.

The eastern representatives of the Shorthorn herd of the Hon. Thos. Greenway were seen resting comfortably in their stalls at Prairie Home, after their eventful trip to the Toronto and Pan-American Expositions. Six head were sold at good prices down East, which, together with the prizes won, will impress it on our cousins to the south that Manitoba does more than grow wheat. The large threshing outfit was at work at the time of our visit, industriously pounding out the grain. Mr. Greenway will install a system of electric lighting into his barns at an early date. The lord of the harem, the noted Judge, is attending to his stud duties, and has in the barns a quartette of young calves which show his ability as a sire of right good ones.

THE WESTERN FARMER'S LIVE STOCK INSURANCE CO.

D. PRITCHARD, PRESIDENT. H. S. PATTERSON, SECRETARY, P. O. Box 1382. The best insurance is when risk is greatest. Claims paid for six months ending June 1st, 1901, \$3,000.00. Write for particulars. LOCAL AGENTS WANTED.



DE LAVAL CREAM SEPARATORS

SKIM CLOSER, RUN LIGHTER, CLEAN EASIER, and WEAR BETTER

Than any would-be competing machine. Hence their overwhelming supremacy in every feature of separator practicability.

The De Laval Separator Co'y.

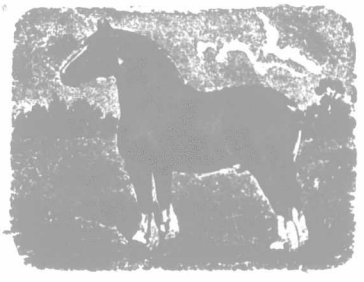
Western Canadian Offices, Stores and Shops:

248 McDermott Avenue, Winnipeg, Manitoba.

CHICAGO. NEW YORK. MONTREAL.

Word puzzle: O O O T T R N, E E Q C B U, S T N O S H J. \$200 IN CASH, FREE. We will give the above reward to any person who will correctly arrange the above letters to spell the names of three Canadian cities. Use each letter but once. Try it. We will positively give the money away, and you may be the fortunate person. Should there be more than 1 set of correct answers, the money will be divided equally. For instance should 5 persons send in correct answers, each will receive \$40; should 10 persons send in correct answers, each will receive \$20; twenty persons, \$10 each. We do this to introduce our firm and goods we handle as quickly as possible. SEND NO MONEY WITH YOUR ANSWER. This is a FREE contest. A post card will do. Those who have not received anything from other contests, try this one. EMPIRE SUPPLY CO., ORILLIA, CANADA.

Alex. Galbraith, of Janesville, Wisconsin, offers for sale



AT THE BEAUBIER STABLES, BRANDON, MAN., An extra superior lot of imported Clydesdale Stallions. Also a few choice Hackneys, Yorkshire Coachers and Percherons. Every horse in the lot, without exception, is a prizewinner, and all thoroughly guaranteed. If interested, call and examine this superb lot of horses, or write for particulars at once to—

JAMES SMITH, AGENT, BRANDON, MAN.

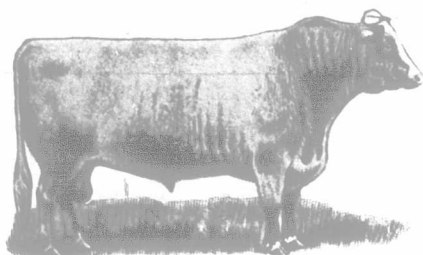
FARM HORSES SOMERVILLE & CO.

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



Steam Marble and Granite Works, BRANDON. Dealers in Marble and Manitoba Granite. MONUMENTS, HEADSTONES, MANTELPieces, CEMETERY FENCING TABLETS, ETC.

ROSSER AVE., BRANDON, MANITOBA. Represented by W. Somerville, W. C. Stewart, A. W. Thomson, E. Patterson. WHEN WRITING MENTION THIS PAPER.

PRAIRIE HOME STOCK FARM

CLYDESDALES, SHORTHORNS, SHROPSHIRE,
BERKSHIRES and YORKSHIRES.

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

THOMAS GREENWAY, PROPRIETOR,
Jas. Yule, Manager. Crystal City, Man.

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

**SCOTCH SHORTHORNS**

Of the celebrated Glenythan family. Prince Alpine (imp.) and Baronet (imp.) at head of herd.

80 HEAD TO SELECT FROM.

Offers for sale 5 young bulls, and cows and heifers of all ages, of the most approved breeding. Farm seven miles north of Winnipeg. Telephone connection

STRONZA FARM For Sale: Clydesdales, Shorthorns.

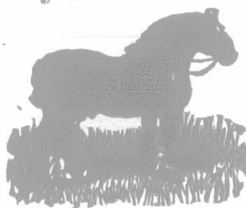
Shorthorn bull calf for sale. Good individual, and bred in the purple.

D. ALLISON, - ROLAND, MAN.

GALLOWAYS.

BULLS AND HEIFERS FOR SALE. APPLY TO

T. M. CAMPBELL, St. Jean Baptiste,
"Hope Farm," Manitoba.

Clydesdales and Shorthorns.

Young stallions, bulls, and heifers.

Herd headed by Best Yet—14371—and Mint-horn—24084—bulls bred by Hon. Joh Dryden and H. Cargill & Son.

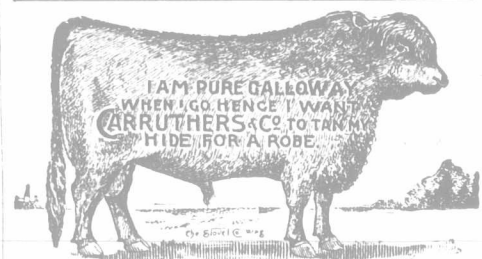
PRICES ON APPLICATION.

D. McBeth,
Oak Lake, Manitoba

PLEASE MENTION FARMER'S ADVOCATE

For Sale: Clydesdales, Shorthorns.

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



"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.,
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The KELSEY Burns

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The KELSEY gives a large volume of mild, healthful WARM AIR—Not Hot Air.

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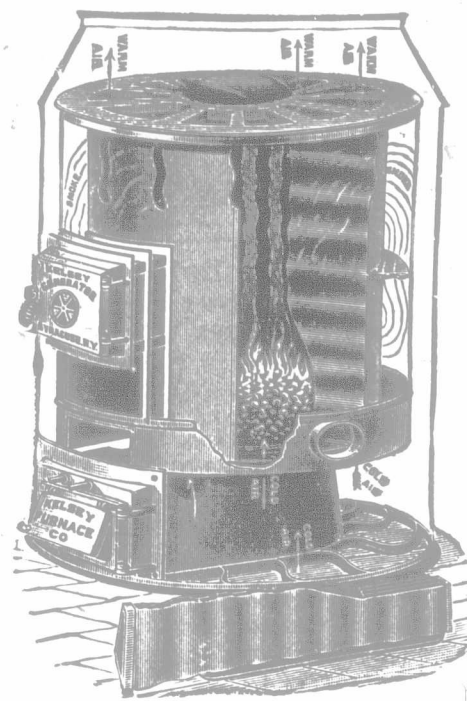
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SOURIS, MAN., July 11th, 1901.

THE JAS. SMART MFG. CO.:

Gentlemen,—Last fall I got your agents, Messrs Currie & Mitchell, to put one of your No. 21 "Kelsey" Warm Air Generators in my hotel, and I have found it very satisfactory as to saving of coal, and heating my entire hotel (and the house was never as well heated before, although it had a furnace and a stove). I highly recommend the "Kelsey" to any intending purchasers. Yours truly,

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WILL HOLD AN AUCTION SALE IN

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GLYDESDALES

SHORTHORNS AND SHROPSHIRE

AT

BRANDON.

For particulars of individuals, pedigrees, and date, see later issues.

FARM BOOKS.

The farmer's home without an Agricultural Library is lacking in one of the chief aids to pleasure and success. We have gone over the available first-class works on agricultural subjects, and have selected the best. See below for prices and how to obtain.

SOIL AND CROP.

- THE FERTILITY OF THE LAND.—*Roberts*. 372 pages. \$1.25.
- A BOOK ON SILAGE.—*Woll*. 185 pages. \$1.00.
- SOILS AND CROPS.—*Morrow & Hunt*. \$1.00.
- FORAGE CROPS.—*Thos. Shaw*. \$1.00.
- SOILING, ENSILAGE, AND BARN CONSTRUCTION.—*F. S. Peer*. 247 pages. \$1.00.

LIVE STOCK.

- VETERINARY ELEMENTS.—*A. G. Hopkins, B. Agr., D. V. M.* \$1.50. A practical book for stockmen and agricultural students.
- THE STUDY OF BREEDS (CATTLE, SHEEP, AND SWINE).—*Prof. Shaw*. 400 pages; 60 engravings. \$1.50.
- HORSE BREEDING.—*Sanders*. 422 pages. \$1.50.
- LIGHT HORSES—BREEDS AND MANAGEMENT. 226 pages. \$1.00.
- HEAVY HORSES—BREEDS AND MANAGEMENT. 219 pages. \$1.00.
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- SHEEP—BREEDS AND MANAGEMENT. 232 pages. \$1.00.
- CATTLE BREEDING.—*Warfield*. 386 pages. \$2.00.
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- ARTIFICIAL INCUBATING AND BROODING.—*Cypher*. 146 pages. 50 cents.
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No. 19.	Nickel, small size.....	9
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No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

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

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

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

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

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

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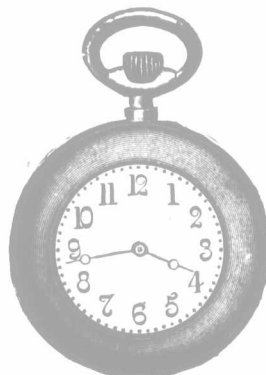
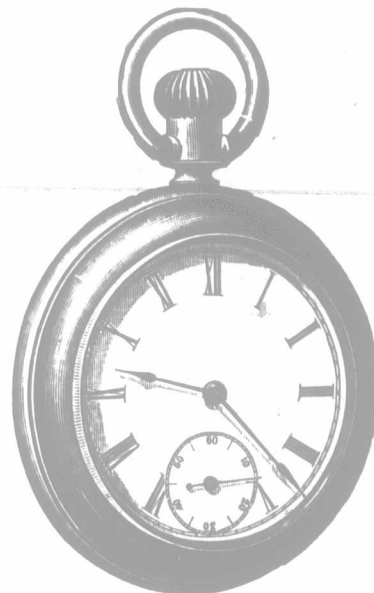
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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

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

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

The WM. WELD CO., Ltd., Winnipeg, Manitoba.



GOSSIP.

W. D. FLATT'S CHICAGO SALE.

Eminently successful as have been Mr. Flatt's former Shorthorn sales, the one advertised to take place at Dexter Park, Chicago, on Nov. 7th, promises to eclipse them all, as, indeed, may reasonably be expected since the offering will include, besides the whole of the magnificent show string which has made such an unprecedented record in prize winning at the leading shows in Canada and the United States this season, all, save one bull, of the large importation of choice animals now in quarantine at Quebec. To set out to win the first herd prize and the male and female championship awards on such a circuit of shows as the Toronto Industrial, the Pan-American, the New York and Illinois State Fairs was a bold and brave undertaking, and that he succeeded in accomplishing all this, with the single exception of the female sweepstakes at Springfield, which most good judges admit might, without injustice, have been granted him, was a phenomenal performance, evidencing judgment and generalship unique in its character, considering the very strong competition he had to meet and the fact that it was the first season he had ever exhibited Shorthorns.

The crying need of the cattle business in Canada and the United States has been that of more good bulls, and no man has tried harder or risked more to supply that want than Mr. Flatt. He has succeeded in putting on the show circuit this year three bulls, each good enough to win a championship in competition with each other and with the best bulls brought out at the leading cattle shows of the continent, and this by the ruling of competent judges in every case. These three great bulls, as well as the first-prize yearling at Syracuse and Buffalo, are to be included in the Chicago sale, and while it is regrettable that the probability is that none of them will return to Canada, it speaks well for the enterprise of Mr. Flatt and for his courage and confidence in the popularity of the breed that he is willing to risk placing such valuable animals as these, and the grand females included in the sale, on the public market. It goes without saying that he would gladly keep the most of these splendid animals in his own herd, and it must give a wrench to his feelings to part with some of them, but he is considering the interests of the breed as well as his own, and deems it important that the standard of prices for high-class Shorthorns in America shall be kept advancing and higher than for any other breed, and while it can hardly be expected that these animals will bring him what they have cost him, for it is known that he paid very high prices for the best that could be bought in Britain, yet he evidently considers that the advertisement they have given him and the breed, by their show record, and will give in the sale record, justifies him in making the offering at this time.

The animals included in the show lot have been so fully described in our reports of the various fairs that we need here only briefly refer to them and their record. The typical roan 4-year-old bull, Valiant, champion at Toronto and Springfield, is a son of Abbotford and Vanity, both first-prize Toronto winners, and the sire a champion. The imported 3-year-old Speculation, first and champion at the Pan-American and head of the first-prize herd, also won many prizes in England previous to importation. He is one of the straightest, smoothest bulls seen out this year, and has superb quality of flesh, skin and hair. It is indeed hard to find a fault or a flaw in his entire make-up. Lord Banff, the roan 2-year-old Scotch-bred son of Cap-a-Pie, out of roan Bessie, by Sittyton Sort, was first all round the circuit and champion at Syracuse. He is a typical Aberdeenshire Shorthorn, full of character and quality, and will doubtless be a favorite number in the sale list. The roan yearling, Knight Errant, first at Syracuse and the Pan-American, a son of British Knight and Mary Leslie, by Imp Knight of Lancaster, is a sappy, blocky bull, built on the plan of the champion, Moneyfuffel Lad, and like him in quality of flesh and hair. We shall not be surprised to see him develop into a champion.

Cicely, the pride of her owner, has won the admiration of cattlemen on two continents and the highest honors of each, the championship of the Royal Show of England, the Pan-Canadian and the Pan-American, and is the highest type of the modern Shorthorn. Forward in calf to a high-class sire, she should prove a good investment at any reasonable price. Empress 12th, Cicely's closest rival in all her victories, the reserve number for the Royal championship last year, where she won first prize as a 3-year-old cow, soon did with her second calf, is, without doubt, the best mature Shorthorn cow in America to-day. She is practically faultless in conformation and quality, and has ample scale withal. Imported from Toronto, bred by Her late Majesty the Queen, was second only to Cicely in the 3-year-old section at Toronto, and fourth at the Pan-American, defeating the second prize cow at Toronto. She is a wealthy-fleshed cow of large size and excellent quality. Imported Lady Waterloo B, a rich roan 2-year-old of true type and finest character, was second at the Royal Show last year and also second at Toronto and Syracuse this year, and her companion, Imp Ascot Mayflower, third at Buffalo and Springfield, is a big, substantial, thick-fleshed heifer. She was a successful prizewinner at several prominent English shows last year. Lady Hamilton, sired by the grand imported Duthie-bred Missie bull, Marquis of Zenda, by Wanderer, has had a very successful career, having won second prize as under a year at the Chicago International last year, first and the junior championship at Toronto as a yearling this year. Best at Syracuse, and second at the Pan-American. She is a wide, deep and wealthy-fleshed heifer of fine character. Pine Grove Mildred 3rd, by the same sire, a big, straight, smooth, red yearling of the Kinellar Mina tribe, is also one that will be admired and appreciated when she comes into the sale ring. Fame's Matchless, a handsome daughter of Imp Golden Fame, winner of third prize in a grand class of score of heifer calves at Toronto, will also be found a very attractive number.

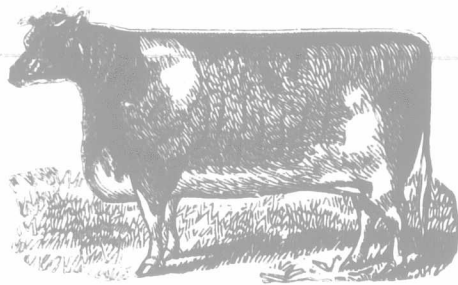
In addition to these named, we learn from the catalogue, received since writing the above, that the whole of the latest importation (31 head), with the exception of one bull, will be included in the sale. These comprise, besides the roan yearling Xapireil bull, Nestor of Dalmer, bred by Lord Rosberry and sired by the Duthie-bred Scottish Sailor, a

choice lot of a score and a half of Scotch-bred cows and heifers, most of them well along in calf to noted stock bulls, and some with calves at foot to go with them. Among these are animals selected from the herds of such noted breeders as Duthie, Marr, Earl of Roseberry, Sir John Gilmour, Deane Willis and others who have long been breeding on similar lines, and comprising representatives of such popular families as Princess Royals, Lavenders, Missies, Secrets, Clippers, Mayflowers, Rosebuds, Augustas, Lustres, Roan Ladies, Orange Blossoms, Victorias, Brawith Buds, Butterflies, Minas, Claras, etc., and sired by such noted bulls as Wanderer, Silver Plate, Scottish Archer and his son, Prince of Fashion, the Princess Royal Prince Victor, Count Lavender, Brave Archer, British Flag, by William of Orange, and the 1000-guinea Lovat Champion. Such a combination of good blood cannot fail to exert a splendid influence wherever it goes, and such an opportunity has never before been offered for selection from the best collection of individual animals that good judgment and breeding has ever brought together for a public offering on this continent. We only hope that the breeders of America will mark their appreciation of such enterprise by taking the animals at a fair valuation, as we confidently believe they will. Canadian breeders cannot afford to let all this superior blood and all these high-class cattle go out of the country, and it is expected that they will be present in good force to claim a fair share of the plums.

MAPLE GROVE STOCK FARM.

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SHORTHORNS

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of Scotch breeding, seven bulls and forty cows and heifers, mostly all in calf or calf at foot. A few Clydesdales of both sexes.

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S. LING, WINNIPEG, MAN.

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

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

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SIX SHORTHORN BULLS FOR SALE—2 year-old, 4 calves—two of them prizewinners. Write for breeding and prices. Terms easy. **F. MARTINDALE & SON, YORK, ONT.**

AN EFFECTIVE DIP.—Owners of all classes of live stock will be interested in the announcement of W. W. Stephen & Co., of Meaford, Ont., agents, for the Dominion, of Kemp's Instantaneous Dipping Fluid. Read their announcement re the cheap and thorough destruction of ticks, lice, etc.

THE MILWAUKEE HARVESTER.—With the object of thoroughly testing some important improvements recently introduced, the Milwaukee Harvester Co. has had one of its machines at work on the farm of Sir William Van Horne, at East Selkirk. Manager Barber sent the machine to work in a field of oats, and she went off without a hitch. Mr. A. J. Inglis, from the head office of the Company at Milwaukee, and an expert machinist were present to superintend the test. The harvesters made by any of the well-known companies will nowadays do excellent work, and the chief point of rivalry between them is in the draft and convenience of handling. This Milwaukee machine, the first of the make operated in Manitoba, was light in draft and entirely free from side draft. The attachment to the trucks which are provided for conveying the machine from place to place is very simple, and there are a number of ingenious innovations on the machine that add to its simplicity and convenience in handling.

GOSSIP.

The results of the sheep judging at the Pan-American, as officially reported to the Department of Agriculture, show that Canadian exhibitors secured \$2,152 in prizes to \$1,300 received by United States breeders.

The prize list of the Ontario Provincial Winter Fair to be held at Guelph, Dec. 10th to 13th, is now ready and many have had an application to Mr. A. P. Westervelt, Parliament Buildings, Toronto. The prizes offered are liberal and varied in all classes of cattle, sheep, and swine, also in the milking test for dairy cows. The Ontario Provincial Poultry Show will also be held in the same building at the same time.

The following is the amount of total solids produced by each herd in the Pan-American dairy test up to October 1st: Holsteins, 439,677; Ayrshires, 339,23; Shorthorns, 339,07; Brown Swiss, 343,39; Red Polled, 323,73; Guernsey, 323,21; Jersey, 325,65; French-Canadian, 283,23; Dutch Belted, 261,62; Polled Jersey, 216,68.

The large flock of imported and home-bred Shropshire sheep owned by Hon. John Dryden, of Brooklin, Ont., are in fine form; in fact, many of them are in condition fit for the show-ring. They are an exceptionally good lot, and show a covering that could scarcely be improved on. This season's crop of ram lambs, which are for sale, are an ideal lot, very even throughout, graced with a perfect covering, and sired by an imported Mansell-bred ram.

Mr. G. A. Brodie, of Bethesda, Ont., is showing visitors a splendid lot of Mansell-bred Shropshire sheep imported by Robert Miller, of Stouffville. They are a large, even, well-covered flock, standing up well on the best of legs. This season's crop of ram lambs, sired by an imported ram, are extra good ones. Parties requiring anything in that line should communicate with Mr. Brodie, as lambs of this quality will not be long unsold.

Among the winnings by Canadian horses at Buffalo, a fuller report of which will be given in next issue, are the following: Standard-breds.—Stallion, 3 years and over—F. A. Hyslop, Appleby, Ont., won 2nd prize with Pavilion. Stallion, 1 year—Geo. W. Kennedy, Iderton, Ont., won 1st with Sir Cashmere. Filly, 2 years—Milton Strong, Willowdale, Ont., won 3rd prize with Minnie Ada and 2nd place for mare with foal at foot, with Flute. Thoroughbreds.—The Telfer & Climie Co., Montreal, 1st in stallions 3 years and over, with Rothervale; W. W. Fleming, Exeter, Ont., 2nd with Dermot; A. Frank & Son, The Grange, Ont., 3rd with Terremont; The Telfer & Climie Co., 4th with Dracula. Hackneys.—Stallions, 3 years and over—Robt. Beith won 2nd with Robt. in Adair. Mare, 3 years and over—same owner, 3rd with Hermia, and 2nd with Titania in 2-year-old fillies. In Clydesdales.—Stallions, 3 years or over—Graham Bros., Claremont, 1st with Burnbrae; Robt. Ness, Howick, 3rd and 4th with Copyright and Merchiston. Two-year-old stallion—Graham Bros., 1st. Thos. Skinner, Mitchell, 2nd; Robt. Ness, 3rd. In Shires.—Bawden & McDonnell, of Exeter, Ont., won 1st, 2nd and 3rd in stallions 3 years and over, and 1st for brood mare with foal at foot. In Cleveland Bays.—Albert Hewson, Grahamsville, Ont., won 1st in stallions 3 years and over.

A cable message from Mr. Duthie to Mr. W. D. Platt, re the Collynie and Uppermill Short-horn bull calf sale on Oct. 8th, reads: "Great sale. Averages—Collynie, £160; Uppermill, £120. No. 28 (Duthie's Royal Scotsman, by Scottish Champion) made \$880. Your only purchase, No. 8, price, \$326." No. 8 is Mr. Marr's Republican, red, calved Jan., 1901; sire Lavender Victor; dam Missie 153rd, by Wanderer. Mr. Marr states that the dam of No. 8 is the best Missie cow alive.

Thorn Villa Stock Farm, the property of Mr. W. G. Howden, whose P. O. is Columbus, Ont., is situated in the County of Ontario, about seven miles north of the town of Oshawa, and is the home of a large herd of Fashion and Lavinia-bred Shorthorn cattle topped by first-class Scotch-bred bulls. Mr. Howden has been associated with the breeding and management of pure-bred cattle from boyhood, and being of an ambitious and inquisitive turn of mind, has thoroughly mastered the qualities and peculiarities of his favorite breed, and, as a result, is competent to judge the true form of a perfect animal, and in the selection of sires has always called that judgment into active operation, with the happy result that his herd is composed of a splendid lot of big, square, broad-backed females, which are exceptionally heavy milkers. The present stock bull is Golden Robe 20386, sired by Imp. Knight of St. John 17012, bred by Mr. Duthie, and a 1st-prize winner at Toronto, dam Imp. Golden Bue 23015, by Moonstone 63922. He belongs to the favorite Scotch-bred Rose of Autumn family, is a rich roan, weighs 2,500 lbs., and is quality from the ground up. A number of young ones sired by him, of both sexes, are already showing grand form, and from present indications should develop into something above the average. Prominent among the dams is Fashion's Power 19537, sired by Imp. Duke of Lavender 123, dam Fashion's Maid 15839, by Imp. Vengarth 1309. She is a typical Shorthorn, having length, depth and width in fine combination, on short, well-placed legs. Another extra good one is a daughter of hers, Fashion's Power 2nd, sired by Imp. Lord Roseberry 271. Fashion Maid 2nd 30009 is another of more than ordinary merit, by the same sire, out of Fashion Maid described above. The herd is nearly all bred in the lines above mentioned, and the heifers are of the right sort, being deep, heavy, well-formed animals. There are also four young bulls, ranging in age from six to eleven months, sired by Lavender King 23916, by Sittytan Stamp (imp.) 18963, dam Imp. Lavinia 24829.

CURED THREE SPAVINS USING HIT HALF BOTTLE CAUSTIC BALSAM. Fort Wayne, Ind., May 15, 1901. Lawrence-Williams Co., Cleveland, Ohio. A former agent of yours called upon us in the interest of an agricultural paper. During our conversation we drifted upon the subject of spavin. About twenty-two years ago we bought a bottle of your Gombault's Caustic Balsam and cured the horse attended. The next horse that became spavined was cured also. The present family horse, about seventeen years ago, was spavined and in turn was cured, and we still have fully one-half of the bottle left. Yours truly, J. M. PIERCE.

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.

U. S. Separator advertisement featuring an image of the separator and text: 'Do You Want the Best? then buy the U. S. Separator that is the kind that GETS ALL THE CREAM PLEASES Its USERS INCREASES the PROFITS Reduces the Expenses'.

Wm. Scott, 206 PACIFIC AVENUE, Winnipeg, Agent for Manitoba and N.-W. T.

4 Imp. Clydesdale Stallions

31 Imported Shorthorn Cows and Heifers, 7 Canadian-bred Cows and Heifers, 3 Imported Shorthorn Bulls, 5 Canadian-bred Bulls.

Geo. ISAAC & BROS., BOMANTON, ONT. COBURG STATION, G. T. R.

Wm. Brash, Ashburn, Ont., BREEDER OF CLYDESDALE HORSES and SHORTHORN CATTLE.

SHORTHORNS FOR SALE.

Seven choice young bulls, from 9 to 12 months old. Also a few choice heifers, in calf to the grandly bred Marr bull, Spicy Marquis (imp.). JAS. GIBB, Brookside, Ont.

STOCK AT B. C. PROVINCIAL FAIR.

The prize list of the Provincial Fair of British Columbia, held at New Westminster the first week in October, shows that in Shorthorn cattle Mr. W. H. Ladner, Ladner's, was the principal winner, capturing first awards on three-year-old bull, two-year-old bull, cow, heifer calf, senior herd, and breeders' young herd; also sweepstakes for best bull and for best female any age. Other exhibitors were: Herbert Wright, Guelph, Ont., who won a number of prizes; Alex. Ewen, who had the first-prize yearling bull and two-year-old heifer; J. Paterson, J. H. Harris, and Paul Murray, who each shared in the winnings. Hereford were shown by the Kirkland Estate, J. Merryfield & Sons, and H. Wright; Polled Angus by Maynard & Bailey and James Bailey; Holsteins by H. F. Page, W. P. Newlands, and J. Hollinshead; Shannon Bros., Cloverdale, had the first-prize three-year-old Jersey bull; A. C. Wells & Son, Chilliwack, the first-prize two-year-old and sweepstakes bull and first-prize two-year-old heifer. The herd prize in Jerseys went to A. J. Street, Chilliwack. A. C. Wells & Son won most of the prizes in Ayrshires, including the herd prize and sweepstakes for best bull and female. Guernseys were shown by G. W. Beebe, Jas. McAlloch and W. F. Stewart, who had the sweepstakes female in his first-prize two-year-old heifer.

In swine, Shannon Bros. and A. C. Wells & Son were the principal winners, the former winning first for yearling boar, aged sow, yearling sow, boar over six and under twelve months, sow under six months, the championship for best boar and best sow any age, and the herd prize. In Poland Chinas, F. E. Page and W. E. Butler were the winners; in Duroc Jerseys, E. A. Kipp; in Chester Whites, Jos. Thompson and W. R. Austin; in Yorkshires, F. E. Page and H. J. Ford; in Essex and Suffolks, J. S. Maynard. For the best pen of bacon hogs, E. A. Kipp was first; Shelton Knight second. The winners in Leicester sheep were G. W. Beebe, J. C. Whyte, and W. E. Butler. Beebe had the champion ewe and ram; A. C. Wells & Son won the prizes in Lanesbys, J. T. Wilkinson in South Downs, J. T. Maynard in Dorsets, E. A. Kipp in Shropshires, and Shannon Bros. and Butler in Oxford.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Messrs. R. Reid & Co., Hintonburg, Ont., near Ottawa, who advertise Ayrshire cattle and Tamworth and Berkshire hogs in this paper, write: "We are just finishing an addition to our pig house, 40 by 28, to meet the growing requirements of our trade, and have on hand the finest lot of young pigs we ever raised, particularly the young boars. They are the long, deep fellows of real bacon type. Our fall litters are doing well."

At the combination sale at Louisville, Ky., during the Interstate Fair, Sept. 24, 25, W. H. Curtice's 17-months Hereford bull, Beau Donald 3rd, sold for \$2,000, to H. C. Huxley, Paragon, Ind., and W. H. Giltner's Earl of Claremont 4th, 11 months, to F. W. Sargent, Nugent, Ky., for \$1,025. Seventeen bulls averaged \$341. Shorthorns sold for disappointing prices, the 37 head disposed of averaging only \$182. The highest price was \$610 for the 6-year-old cow, Lady Abbotsburn, by Young Abbotsburn, bought by Geo. Harding & Son, Wisconsin. The top price for a bull was \$325 for J. H. Garlaugh's Marston. The Hardings bought 9 head.

Very high prices were paid at the final sale of Thoroughbred horses of the estate of the late Marcus Daly, at Sheephead Bay, October 1st, 41 horses fetching an average of over \$5,000 each. August Belmont paid \$25,000, the highest price of the day, for a yearling filly by St. Simon; James R. Keene, \$18,500 for an English brood mare and \$11,000 for Lady Reel, the dam of Hamburg; Mr. Belmont, \$17,000 for Lucy Cross, by St. Simon, dam Verdigris; J. E. Madden, \$17,000 for Pocahontas; and J. B. Haggin, \$15,000 for a chestnut colt by Ayrshire, out of L'Esclave.

Messrs. Alex. Hume & Co., Menie, Ont., in ordering change in their advertisement of Ayrshires, write: "The two bulls advertised—Bobs and White Cloud—aresired by our famous stock-getter, White Chief of St. Anne's, and are light colored; the last, as name indicates, is almost white. The bull calf is sired by the great breeding bull, Caspian of St. Anne's (imp.). The heifers, which are a choice lot, sired by White Chief of St. Anne's, are also prizewinners, and ere this reaches the public will all be served by Prince of Barcheskie (imp.). We will be crowded for stable room for winter, so offer these at low prices, which is a genuine offer which we trust that intending purchasers will embrace. We have sold several head through the advertisement in your valuable paper. All stock will go into winter quarters in splendid condition."

It was a battle royal at the Illinois State Fair for the female Shorthorn championship, between Mr. Platt's three-year-old Cicely and Messrs. Robbins' two-year-old Ruberta, by St. Valentine. Cicely won the championship at the Royal (English) Show at Maidstone as a yearling in 1899. She repeated that record at the Pan-Canadian Exposition at Buffalo this year, as well as at the New York State Fair. It was expected that the strongest show of Shorthorns in the United States this year would be that at Springfield, Illinois, and all who know of Robbins' Ruberta and her history had been waiting with much interest for the news of the result of the meeting of these two champion heifers for the first time there. Cicely won the first award in the class for cows three years and over, and Ruberta the first in the section for two-year-old heifers. When they were pitted against each other for the championship, breeders present were divided in opinion as to which should win, but the coveted honor was finally awarded to the American-bred heifer, a decision to which many good judges decline to subscribe, considering as they do that Cicely's true nature, her wonderful hair-girth, spring of ribs, thickness of flesh and sweetness of character should have carried her to the top, notwithstanding that she is not so perfect in her rumps as her rival, who is a grand heifer, well furnished in all her parts, though possibly lacking a little in cow character. The ruling, it is acknowledged, was a disappointment to Mr. Platt and to Canadians generally, but no fears, we are glad to know, are entertained that the decision will lead to international unpleasantness or to strained relations between neighboring nations, and Mr. Platt cheerfully acknowledges that he has been courteously and kindly treated by our cousins across the line in this his first campaign of the shows in their country, and all Canada heaves a sigh of relief now that the agony is over. We may add, however, that there is some consolation in the knowledge that it took a Canadian-bred bull to beget the American champion Shorthorn female.

SHORTHORNS AT ILLINOIS STATE FAIR.

The strongest show of Shorthorns in America up to date this year was that at Springfield, Ill., the first week in October. Mr. W. D. Platt, Hamilton, Ont., even in this contest was exceedingly successful, winning the first herd prize, the first prize for bull three years and over with Valiant, first with Lord Banff in two-year-old class, the senior male championship with Valiant, and first and second for cows over three years old with Cicely and Empress 12th; Robbins' Young Matchless being 4th, leaving Boland's Lady Sharon and Earl's May Blossom out of the money. Harding's Golden Victor was placed second in aged bulls, and Robbins' Lad-for-Me third. C. E. Rice's Red Lad was the second prize two-year-old bull. The first-prize yearling bull was Nonpareil of Clover Blossom, shown by T. H. Rothwell, Nettleton, Mo., and N. H. Gentry, Sedalia, Mo., had the first-prize bull calf, a son of his stock bull, Victorious. The sweepstakes for best female was given to Robbins' first-prize two-year-old heifer, Ruberta, Harding's Rose of Antrim being second to her in her class, and Flat's Asot Mayflower third. In yearling heifers, Robbins' Charissa was first, Harding's Golden Fames Belle second, and Boland's Snowball third. Robbins' Lad's Goldie was first-prize heifer calf. Robbins' had the second-prize aged herd and first-prize breeders' young herd; Hathwell second. Mr. Thomas Clark, Hereford breeder, was the judge, and gave general satisfaction.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

The genuine without the signature of The Lawrence-Williams Co. Sole Importers & Preparer for the U. S. & CANADA. CLEVELAND, O.

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

For Sale or to Rent.

200-Acre Farm.—Parts of Lots 6 and 7 of Blenheim, 2 1/2 miles from Drumbo, 2 miles from Wolverton, 1 1/2 miles from Richwood. Church, school and post office; good brick house, large bank barn, well fenced, well watered, good orchard. Apply to DALZELL & BARRIE, Real Estate, GALT.

"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.

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, pig pens. 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; P. C. Platt & Son, Millgrove; H. J. Davis, Woodstock; Ontario Agricultural College, Guelph; also James Holden, Graham Bros., Newton & Gosh, J. A. McDonald, J. P. Conley. Prices, \$10 to \$45. Took first premium at Toronto and London fairs. Catalogue and prices mailed free. Address: RIPPLEY HARDWARE COMPANY, BOX 215, LONDON, ONT. U. S. Factory: Grafton, Ill.

Clydesdales and Ayrshires

Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry. ROBERT NESS & SONS, Howick, Que.

WM. SMITH, COLUMBUS, ONT., Importer and Breeder of Clydesdale Horses & Shorthorn Cattle

CLYDE SHIRE HORSES SCOTCH SHORTHORNS, LEICESTER SHEEP.

Stock of different ages and sexes for sale. Two stallions, colts, and a few young bulls now ready. Also choice rams and ewes. Our flock won 1st prize at Toronto, Ottawa and Chicago in 1900. Write for what you want. My motto: The best is none too good. J. M. GARDHOUSE, Posedale Stock Farm, Malton, G.T.R.; Weston, C.P.R. Highfield, Ont.

FOR SALE.

CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD, Richmond P. O., Ont.

R. R. Station, Stittsville, C.P.R.

Shires, Shorthorns, and Leicesters.

Young stock of both sexes for sale. Imported Prince Louis 32082 heads the herd. Write for prices or come and see them. John Gardhouse, Highfield P. O., Weston, G. T. R. and C. P. R.

Choice Ayrshires

NOW that the shows are over, and it taken before the herd goes into the stables, we will sell at bargain prices the following bulls: "Bobs," dropped July, 1899, winner of three first and one second prize. "White Cloud," dropped July, 1899, winner of two first and two second prizes. "Duke of Cornwall," dropped March, 1901, winner of two first and two second prizes. Also a few yearling heifers just served by Imp. bull.

ALEX. HUME & CO., MENIE P. O., ONT. IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

Dangerous to Life.

Surgical Operations For Piles Dangerous and Unnecessary.

The failure of ointments, salves and pills to permanently cure piles has led many to believe the only cure to be a surgical operation.

But surgical operations are dangerous to life, and, moreover, are often unsuccessful, and at this time are no longer used by the best physicians nor recommended by them.

The safest and surest way to cure any case of piles, whether itching, bleeding or protruding, is to use the Pyramid Pile Cure, composed of vegetable oils and acids, healing and soothing to the inflamed parts, and containing no opium or other narcotic.

Dr. Williams, a prominent official surgeon, says: "It is the duty of every surgeon to avoid an operation if possible to cure in any other way, most popular from Maine to California. Every physician and druggist knows it and what it will do."

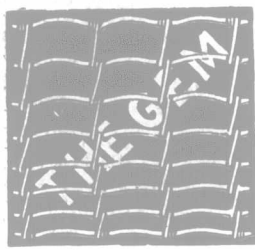
The harmless acids and oils contained in it cause the blood vessels to contract to a natural condition, and the tumors are absorbed and the cure is made without pain, inconvenience or detention from business.

In bleeding and itching piles the Pyramid is equally valuable. In some cases a single package of the Pyramid has cured long-standing cases. Being in suppository form, it is always ready for use, and can be carried in the pocket when travelling; it is applied at night, and does not interfere with the daily occupation.

The Pyramid Pile Cure is not only the safest and surest remedy for piles, but it is the best known and most popular from Maine to California. Every physician and druggist knows it and what it will do.

The Pyramid Pile Cure can be found at all drug stores, at 50c. for full-sized treatment.

A little book on cause and cure of piles, mailed free, by addressing the Pyramid Drug Co., Marshall, Mich.—Advt.



The GEM holds the record—120 rods of 10-bar fence, cross-wires 15 inches apart, woven in 10 hrs. Beat this who can.

Counted and other fence wire for sale at lowest prices. om

McGregor, Banwell & Co.,

BOX 23, WINDSOR, ONT.

AGENTS WANTED.



90 HEAD

High quality, Early-maturing

Herefords

Prizewinners.

Young bulls, cows, heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. om

H. D. SMITH, COMPTON, QUE.

HEREFORDS FOR SALE.

THE HERD of upwards of 90 head of registered animals contains the blood of the best English herds, with imported True Briton and Likely Lad at the head. Stock of both sexes and all ages for sale. Correspondence or a personal visit invited.

A. S. HUNTER, DURHAM, ONT.

W. G. PETTIT & SON,

FREEMAN R. 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.

Agents Wanted

for the New Pictorial Stock Doctor and Live Stock Encyclopedia, 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.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Mr. J. R. Harvie, whose farm lies a short distance west of Orillia, which is his P. O. and R. R. station, is just now showing something nice in Shorthorns. The heifers which he is offering for sale, as per advertisement, sired by Indian Duke, by Imp. Indian Chief, and out of Crimson Flower dams, are good ones and should not stay long at the price asked. There are also four young bulls, sired by Ashburn Duke, that, from present indications, should develop into grand individuals. The cows, a number of which are sired by Nonpareil and Indian Chief, are of the right sort. The stock bull, Guinea Stamp, sired by Riverside Stamp, is a splendid type of animal, evenly formed, and meat from the ground up.

At the dispersion sale of Lord Verlam's Shire horses, last month, 43 animals sold for an average of \$405. The highest price was \$2,000, for the yearling filly, Childwick Youno.

Mr. William Willis, Newmarket, Ont., advertises in this issue Jersey bulls and Cotswold sheep. Included in his offering is the richly-bred three-year-old stock bull, Count of Pine Ridge 53662, who is offered only to avoid inbreeding to his daughters. He is a grandson of the noted cow, Adalaine of St. Lambert, who holds the record as the heaviest-milking Jersey for a day or a month, having given 824 lbs. in a day and 2,005½ lbs. in 30 days, or twice her weight of milk in a month. This bull is said to be quiet and very sure, his get so far being mostly heifers. The two young bulls, a year old, are sired by him, one from a daughter of 100 Per Cent, Lively of St. Lambert, who has made 15 lbs. butter in 7 days on pasture alone; the other from Brownie of Pine Ridge, a cow with a model udder, that gave from 40 to 45 lbs. per day; she was by Canada's John Bull 5th. A few heifers from Count and from good cows could also be spared. The Cotswolds are claimed to be good specimens of the breed; shearing rams, ram lambs, shearing ewes and ewe lambs. Parties looking for such stock should write Mr. Willis for particulars.

The fifth annual meeting of the Continental Dorset Club was held at the Pan-American Exposition, Buffalo, on Sept. 24th, 1901. There was a representative attendance. Members from Canada, from the East, South and West of the U. S., were there. The secretary reported a year of unusual activity in his office, a large number of registries and transfers having been made, and a number of new members being received, among them the Hon. John A. McGillivray, Canada's largest breeder and a famous showman and importer. The second volume of the Record is in the hands of the printer, and the finances of the club are in a satisfactory condition. J. Fremont Hickman, who has served faithfully as president for four years, declined reelection, and Jas. L. Henderson, of Washington, Pa., was made President. J. E. Wing, Mechanicsburg, Ohio, was re-elected Secretary and Treasurer. John Hunter, Wyoming, Ontario, and W. G. Appleby, Bennington, Vt., were added to the executive committee. The following additional Vice-presidents were chosen: Samuel Drumheller, Walla Walla, Wash.; S. B. Wright, Santa Rosa, Cal.; G. S. Lindenkohl, Keswick, Ont.; John A. McGillivray, Uxbridge, Ont.; and Chas. G. McLain, Ringold, Pa.

The Carriage stallion, Auctioneer (illustrated in this issue), was the first-prize three-year-old Carriage stallion and second sweepstakes for the best Carriage stallion of any age at the Western Fair, London, 1901. He was bred by and is owned by Mr. W. G. Brown, Meadowvale, Ont. Auctioneer is a direct descendant of a family of prizewinners from 1868 down to the present year. He was sired by Prince George, bred by his present owner, W. C. Brown, and who has been the winner of four firsts and two silver medals at the Toronto Industrial Exhibition. Prince George, by Prince Victor, who was twice a winner at Toronto, he by Prince Alexander 903, Cleveland Bay Studbook, the winner of three firsts and one silver medal at the Industrial. Auctioneer's dam was Princess Royal, the winner of five firsts and three silver medals for the best mare of any age at Toronto Industrial. She was sired by Prince Alexander 903, Cleveland Bay Studbook (noted above). She was the first-prize brood mare and the first sweepstakes winner at the Western Fair, London; her dam, Paulina 2nd, was the winner of seven firsts and was twice the sweepstakes winner at Toronto Industrial, and was the first Carriage mare that ever beat her mother, Paulina, by Imported Coachman. Prince George's dam was Hattie Bell, by Fairfield, the winner of one first, one second and one third for aged Carriage stallion at the Industrial. Fairfield's dam was Paulina 2nd (as noted above).

SHORTHORNS.

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

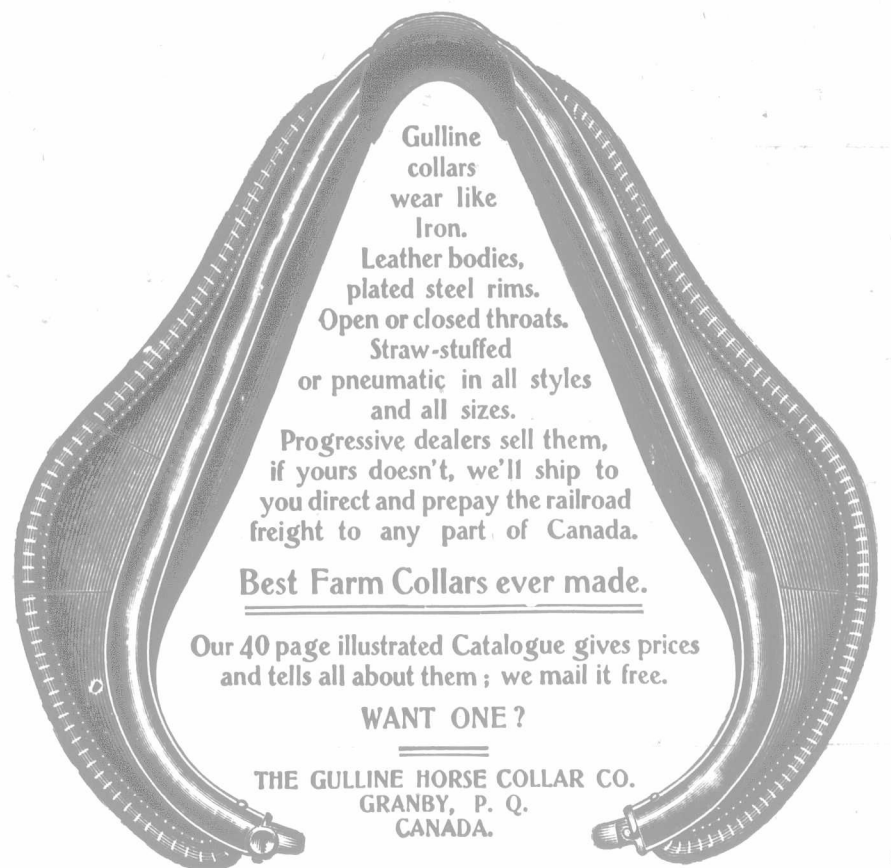
H. PARKER, Durham P. O. and Station.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON,

DENFIELD, ONT.



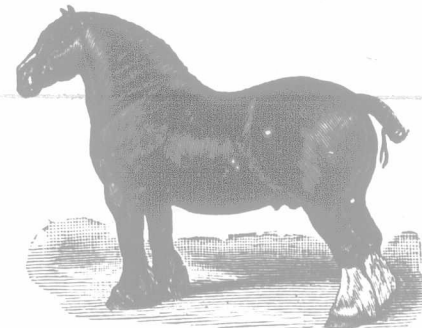
Gulline collars wear like Iron. Leather bodies, plated steel rims. Open or closed throats. Straw-stuffed or pneumatic in all styles and all sizes. Progressive dealers sell them, if yours doesn't, we'll ship to you direct and prepay the railroad freight to any part of Canada. Best Farm Collars ever made.

Our 40 page illustrated Catalogue gives prices and tells all about them; we mail it free.

WANT ONE?

THE GULLINE HORSE COLLAR CO. GRANBY, P. Q. CANADA.

IMPORTED GLYDESDALES FOR SALE.



A grand lot of

GLYDESDALES

just landed in good condition. They will be at Black Horse Hotel, Toronto, on Sept. 24th, 1901, and for one week following; then at London stables.

DALGETY BROS., London, Ontario.



We beg to call your attention to a new and indispensable article in

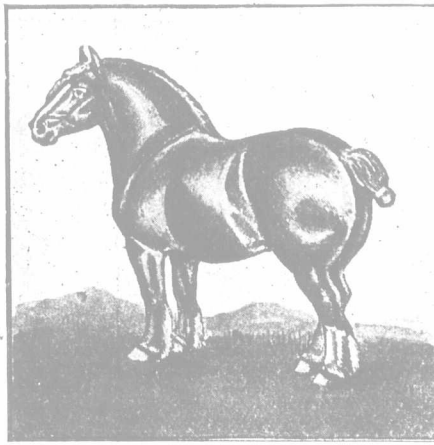
Barclay's Patent Attachment

FOR THE CURB OF

BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.



LATELY IMPORTED A FRESH LOT OF

Glydesdale Stallions,

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

Prices consistent with quality. om

ROBERT GRAHAM, Ringwood P. O., Ont.

Stouffville Station, G. T. R., and telegraph office.

GOSSIP.

At a sale last month, of the Wolferton stud, of pedigree Hackneys and harness horses, the property of His Majesty King Edward VII., the 125 head sold averaged \$173, the highest price being 110 guineas, for a three-year-old filly.

Mr. James Anderson, of Guelph, Ont., the well-known poultry specialist, having given up farming, makes an offering of pure-bred Toulouse geese, elsewhere in this issue, that should attract the prompt attention of any engaged in breeding this class of fowls. It is an exceptionally favorable opportunity to secure improved birds.

At the Kelso ram sales, Border Leicesters were forward in greatest force, and met a very good trade. The best price of the day was £122 paid by Messrs. Smith, Galahaw, for the best of Mr. A. Smith's (of Leaston) lot. This, however, was not sufficient to give this year the best average of the day for ten sold by Mr. Hume, Barrowwell, made an average of £30 13s., which is the best made in Scotland this year. The highest-priced ram in Mr. Hume's offering brought £80.

A small herd of registered Holstein cattle are advertised for sale by private contract by Mr. Thomas Dempster, Gananoque, Ont., who has disposed of his farm and has no further use for them. Note the announcement in this issue.

At a draft sale of Jerseys from the herd of the Duke of Marlborough, last month, the 36 head sold averaged \$222, the highest price, \$600, being paid by Lord Winchester for the cow, Charley's Bride. Another cow sold for \$575, to the same buyer.

On Sept. 18th, Messrs. John Thornton & Co., London, England, conducted a sale of Shorthorns drafted from the herds of Messrs. Wm. Arkell, Fenford, Gloucestershire; D. Arkell and A. Iles, at which 66 head made an average of \$135. The highest price was 50 guineas.

Drafts from the Jersey herds owned by Col. McCalmont, M. P., at Bishopwood, and Gen. H. P. de Bathe, Bart., were sold at Newmarket, England, on Sept. 18th, by Messrs. John Thornton & Co. Prices ranged up to 71 gu., paid by Mr. Joicey for Col. McCalmont's Swift 3rd.

SHORTHORNS

SCOTCH IMPORTED.

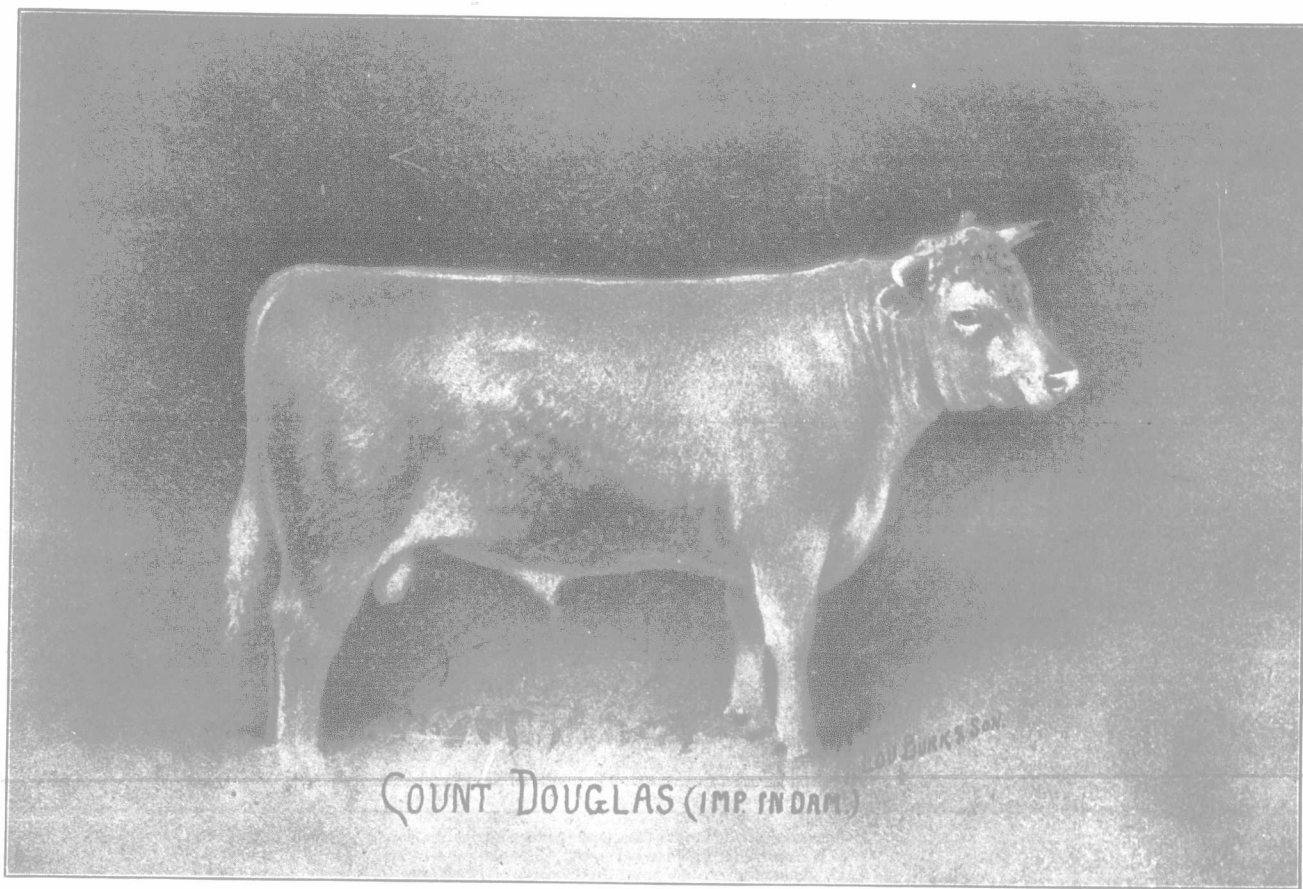
160 HEAD.

Young imported cows with calves at foot for sale. A number of the calves are imported in dam.

Some of the families represented in the herd are as follows:

- AUGUSTAS
- CLARAS
- NECTARS
- GOLDIES
- JENNY LINDS
- VICTORIAS
- MATILDAS
- BESSIES
- CROCUSSES
- ROSEBUDS
- BRAWITH BUDS
- LANCASTERS
- MAYFLOWERS
- AMARANTHS
- BUTTERFLYS
- CLIPPERS
- EMMAS
- BROADHOOKS
- MEDORAS
- MINAS
- VILLAGE MAIDS
- BEAUTYS
- MISS RAMSDENS
- FLORAS
- RAGLANS
- LUSTRES
- GEMS OF THE VALE

Herd headed by the imported bulls, GOLD-EN DROP VICTOR and PRINCE BOSQUET.



IF INTERESTED, COME AND SEE US. OR WRITE

H. CARGILL & SON, CARGILL, ONTARIO, CANADA.

CATALOGUE FREE.

GREAT DISPERSION SALE

AYRSHIRES,

OCTOBER 23, 1901.

We will offer our herd of over fifty Ayrshires at public auction, at our farm, two miles east of Rockton, twelve miles from Galt, seven miles from Dundas, the macadamized road from Dundas to Galt crossing the farm. Teams will be at Copetown station on the Grand Trunk Railway the morning of the sale, to convey intending buyers to the farm. Sale to start at 12 o'clock sharp.

TERMS:—Fifty dollars and under, cash; over that amount, 11 months' credit on approved joint notes. Six per cent, per annum off for cash on all sums entitled to credit. Catalogues ready after Oct. 1st, and will be mailed on application.

THOS. INGRAM,
Auctioneer, GUELPH.

JAMES McCORMACK & SON,
ROCKTON, ONTARIO.

DISPERSION SALE OF

Shorthorn Cattle

24 FEMALES 6 BULLS

OXFORD SHEEP

TUESDAY, NOVEMBER 12, 1901.

The herd, of Scotch breeding throughout, consists of imported and home-bred animals, the latter sired by such bulls as Lavender Victor = 12329 =, Warfare = 6152 = (imp.), Royal George = 17101 =, Scotland Yet = 2337 = and Blue Ribbon = 17095 = (imp.). Young stock sired by Blue Ribbon and cows forward in calf to him. Twenty head of choice pure-bred Oxford sheep.

Farm near Iona on M. C. R. and L. E. & D. R. Ry., 12 miles west of St. Thomas, Ont., and 1 mile from Lawrence station on Wabash line. Rigs will meet morning trains. Lunch at 11 o'clock. Sale at 1. Send for catalogue. See "Gossip" in this issue.

CAPT. T. E. ROBSON, M. P. P.,
Auctioneer.

A. & D. BROWN,
IONA, ONT.

HILLHURST SHORTHORNS

THREE COLLYNIE-BRED BULLS IN SERVICE:

Scottish Hero, Joy of Morning, Scottish Beau,
By Scottish Archer. By Pride of Morning. By Silver Plate.

The herd comprises straight Scotch, Cumberland, Gloucestershire, and Canadian strains; bred to produce the best and most economical MEAT and MILK MAKERS.

Shropshire and Hampshire Down Sheep.

M. H. COCHRANE, COMPTON CO., P. Q.,

G. T. R., 117 MILES EAST OF MONTREAL.

HILLHURST STATION.

SHORTHORNS (imported)

3 BULLS: 1 two-year-old, 2 one-year-olds. A few cows and heifers
THOS. RUSSELL, EXETER P. O.

LAIDLAW'S CONCENTRATED TOBACCO POWDER



Sheep Dip.

THISTLE BRAND.

Contains correct proportion of sulphur, all mixed and ready for bath. For thirty years Laidlaw's Tobacco Powder Dip has had steadily increasing sale. Many hundred millions of sheep have been dipped with it. Non-poisonous; no injury possible to sheep or wool. For full particulars and prices, write—

ROBERT MARR,
WALKERTON, ONT.

Sole manufacturers: Laidlaw, Mackill & Co., Limited, Richmond, Va.

ARTHUR JOHNSTON

Greenwood, Ontario, Canada.

HIGH-CLASS

SCOTCH SHORTHORNS

(First-Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE

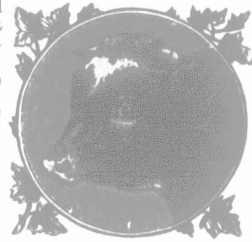
- 40 Imported Cows and Heifers,
- 40 Home-bred Cows and Heifers,
- 11 Imported Bulls and Bull Calves,
- 13 Home-bred Bulls and Bull Calves.

Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application.

PLEASE MENTION FARMER'S ADVOCATE.

SPRING GROVE STOCK FARM

Shorthorn cattle and Lincoln sheep. Herd prize and sweepstake 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 Brawith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply



T. E. ROBSON, ILBERTON, ONT.

SHORTHORN BULLS AND HEIFERS FOR SALE.

Choice quality and best Scotch breeding. Imported and home bred. Imported Knuckle Duster (72793) and imp. Royal Prince head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years. Catalogues on application.

H. SMITH, HAY, ONT.

Exeter Station on G. T. R., half a mile from farm

For Sale: 3 Shorthorn bulls of first-class Scotland's Fame (imp.) and Bold Britain, bred by John Isaac, Markham. Also some choice cows and heifers. F. A. GARDNER, Britannia, Ont. PERK COUNTY.

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.

ROBT. GLEN, Owen Sound, Ontario.

Shorthorns, Berkshires, Leicesters

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

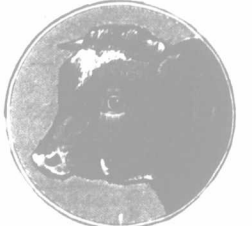
ISRAEL GROFF, ALMA, ONTARIO.

SPRINGFIELD FARM

HERD OF Shorthorns, Oxfords, AND Berkshires.

Young bulls and Heifers on hand. Also a few choice Berkshires.

CHAS. RANKIN, Wyebridge, Ont. SIMCOE CO.



PLEASE MENTION FARMER'S ADVOCATE.

Its True Character.

Catarrh is Not a Local Disease.

Although physicians have known for years that catarrh was not a local disease, yet the mass of the people still continue to believe it is simply a local trouble, and try to cure it with purely local remedies, like powders, snuffs, ointments and inhalers.

These local remedies, if they accomplish anything at all, simply give a very temporary relief, and it is doubtful if a permanent cure of catarrh has ever been accomplished by local sprays, washes and inhalers. They may clear the mucous membrane from the excessive secretion, but it returns in a few hours as bad as ever, and the result can hardly be otherwise, because the blood is loaded with catarrhal poison, and it requires no argument to convince anyone that local washes and sprays have absolutely no effect on the blood.

Dr. Ainsworth says: "I have long since discontinued the use of sprays and washes for catarrh of head and throat, because they simply relieve, and do not cure."

"For some time past I have used only one treatment for all forms of catarrh, and the results have been uniformly good. The remedy I use and recommend is Stuart's Catarrh Tablets, a pleasant and harmless preparation sold by druggists at 50c., but my experience has proven one package of Stuart's Catarrh Tablets to be worth a dozen local treatments."

"The tablets are composed of Hydrastin, Sanguinaria, Red Gum, Guaiacol, and other safe antiseptics, and any catarrh sufferer can use them with full assurance that they contain no poisonous opiates, and that they are the most reasonable and successful treatment for radical cure of catarrh at present known to the profession."

Stuart's Catarrh Tablets are large, pleasant-tasting 20-grain lozenges, to be dissolved in the mouth and reach the delicate membranes of throat and trachea; and immediately relieve any irritation, while their final action on the blood removes the catarrhal poison from the whole system. All druggists sell them, at 50c. for complete treatment.—Advt.

To Rid STOCK of Flies, Lice, AND ALL SKIN DISEASES, USE

West's Fluid

WHICH IS ALSO A SURE CURE OF CONTAGIOUS ABORTION Standard Sheep Dip is Good, also Cheap.

Manufacturers: The West Chemical Company, TORONTO, ONT. Pedigree forms free to customers.

Agt. for Manitoba: W. E. ROWAN, 132 Princess St., Winnipeg.

SHORTHORNS (IMPORTED).

Five choice young bulls, from 6 to 10 months old, by Imp. Capt. Mayfly, out of Indian Chief dams.

JAMES A. CRERAR, om Shakespeare P. O. and Station, G. T. R.

Hawthorn Herd of Deep-Milking Shorthorns

Stock for sale of both sexes. Herd headed by the Isabella bull, Golden Eagle =36943=, by Golden Measure.

Wm. Grainger & Son, Londesboro, Ont.

LAKE VIEW STOCK FARM.

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

Meaford Station, JAMES BOWES, G. T. R. North om Strathalbyn P. O.

High-Class Shorthorns and YORKSHIRE PIGS.

GRAND show bulls, 16 months old, by Imp. Sirius; 8 bulls from 8 months old up; low-down, thick, fleshy fellows; all bulls of great substance. A few cows and heifers in calf, Yorkshires—A lot of young pigs 3 months old and down.

JAS. McARTHUR, Goble's, Ontario.

SHORTHORNS.

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

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

FOR SALE:

Three Scotch Shorthorn bulls, 13, 16 and 21 months old, and eight from 6 to 11 months—right good ones, at right prices. Also females of various ages.

DAVID MILNE, ETHEL, ONT.

SHORTHORNS, COTSWOLDS AND BERKSHIRES FOR SALE.

One yearling bull; 9 bull calves; cows, heifers and heifer calves; 7 yearling rams; 20 ram lambs; ewes and ewe lambs; young pigs, from 6 weeks to 2 months old.

F. BONNYCASTLE & SONS, Campbellford P. O., Ont.

GOSSIP.

At a sale of Aberdeen-Angus cattle from the herd of Messrs. Whyte and others, at Hatton of Eassie, Scotland, the 52 head sold made an average price of \$251. The best prices for cows were from 72 guineas to 120 guineas.

Mr. John Tudre, Duxmoor, Salop, England, has cabled his acceptance of Mr. C. A. Jamison's purchase of the 2½-year-old Hereford bull, Albany, at £1,200, for exportation to Kansas. Albany is one of the numerous prize-winning sons of the many-times champion, Albion, and has never failed to take a first prize at any show. In fact, he has taken three championships, and been first at the Royal, Bath and West of England Royal Counties, Shropshire and West Midland, and other exhibitions where entered.

Mr. Kirkland B. Armour, President of the Armour Packing Company, Chicago, and an enthusiastic breeder of Hereford cattle, died Sept. 27th, of Bright's disease, after an illness of several months, at the age of 57 years. His father, Mr. Philip D. Armour, former president and founder of the Armour Company, died in January last. These men will be greatly missed. They were not only great and good business men, but men of fine character in private life, and liberal in their support of charitable institutions and enterprises.

Mr. James A. Cochrane, Hillhurst, Que., writes: "Scottish Beau, the first of the Silver Plates (in America), is perhaps first in the field with the second generation of descendants of Deane Willis' famous bull, having two nice roan calves just dropped at Hillhurst, both as vigorous and hairy as Esau—a bull calf from Lady Strathallan Hillhurst 3rd, and a cow calf from Fancy Lady, the sweepstakes female at Ottawa last year, whose dam Mr. Duthie bought at the recent Mains of Water-ton sale for the Collynie herd."

The annual meeting of the American Oxford Down Record Association was held at the Pan-American Exposition on the 24th, a brief meeting, but with satisfactory results. George McKerrrow, Sussex, Wis., was elected president, and W. A. Shafer, Hamilton, O., secretary and treasurer. Very favorable reports were made. The membership list shows 60 additions and many new registries. There is now \$1,300 in the treasury, although it will require about \$600 of this to get the new record books. The next meeting will be held at Guelph, Ont., during the fat-stock show.

THE BROWN SHORTHORN AND OXFORD SALE.

On Nov. 12th, at their farm, as per advertisement in this issue, will be sold by auction the entire herd of Shorthorn cattle belonging to Messrs. A. & D. Brown, Iona, Ont., consisting of 24 females, 6 bulls, these cattle are bred straight from first-class Scotch tribes, and good bulls, imported or bred from imported stock, have been used ever since the establishment of the herd, as enumerated on page 59 of our Oct. 5th issue. The stock bull at present in service is Imp. Blue Ribbon, and most of the young things are sired by him and many of the older females in calf to him. They are principally of the excellent Miss Synn and Cruickshank Cecelia families, the former of which has produced probably more prizewinners than any other in Canada, and the latter one of the most richly bred of the Sittlyton tribes. A nice young imported cow and her heifer calf (imp. in dam) are also included in the sale. The remainder are of sound families that have proved valuable breeders of good feeding and milking stock. The two handsome heifer calves illustrated in this number fairly represent the younger portion of the herd. A nice lot of 20 pure-bred Oxford Down sheep will also be sold. See the advertisement and send for catalogue.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS—FROM JULY 29 TO SEPT. 30, 1901.

During this period thirty-two reports have been received. Eight were of full-age cows, averaging: Age 7 years 6 months 20 days; 26 days after calving; milk 429.2 lbs.; butter-fat 14.340 lbs., equivalent to 17 lbs. 14.8 ozs. butter 80 per cent. fat or 16 lbs. 11.7 ozs. 85.7 per cent. fat. Four were of the four-year-old class, averaging: Age 4 years 8 months 6 days; 35 days after calving; milk 349.3 lbs.; butter-fat 12.176 lbs., equivalent to 15 lbs. 3.5 ozs. butter 80 per cent. fat or 14 lbs. 0.8 ozs. 85.7 per cent. fat. Seven were of the three-year-old class, averaging: Age 3 years 4 months 14 days; 21 days after calving; milk 360.1 lbs.; butter-fat 11.533 lbs., equivalent to 14 lbs. 6.7 ozs. butter 80 per cent. fat or 13 lbs. 7.3 ozs. 85.7 per cent. fat. Thirteen classed as two-year-olds, averaging: Age 2 years 3 months 8 days; 48 days after calving; milk 261 lbs.; butter-fat 9.377 lbs., equivalent to 11 lbs. 11.5 ozs. butter 80 per cent. fat or 10 lbs. 15 ozs. 85.7 per cent. fat.

It should be borne in mind that this class of records are made under the authorities of Agricultural Colleges and Experiment Stations, at the homes of the cows. Every process is conducted under careful circumspection and by scientific methods. Where there may arise a shadow of a doubt as to the reliability of the results, the cow is re-tested and watched night and day until such results are disproved or confirmed—S. Hoxie, Supt. Advanced Registry.

Famous Feed Boilers



For Stock Raisers, Poultrymen and Dairymen.

Can also be used for boiling sap.

Made in four different styles and eleven sizes, and sold at as many prices.

No farmer should be without one. Stock can be fattened in half the time and at half the expense of the ordinary way.

Write for FREE PAMPHLET.

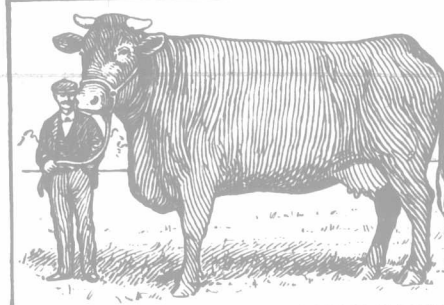
MADE ONLY BY

The McClary Manuf'g Co'y.

London, Toronto, Montreal, Winnipeg, Vancouver; St. John, N. B.

LARGEST COW IN THE WORLD.

WEIGHT 2970 LBS. AGE 8 YEARS, SHORTHORN.



MADE FROM PHOTO ENG. DEPT. INT. FOOD CO.

THE EATS "INTERNATIONAL STOCK FOOD" EVERY DAY AND IS OWNED BY INTERNATIONAL STOCK CO., MINNEAPOLIS, MINN., U.S.A. "INTERNATIONAL STOCK FOOD" causes Cattle, Horses, Sheep and Hogs to grow very rapidly and makes them Big, Fat and Healthy. It is used and strongly endorsed by over 500,000 Farmers. 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, Fattening or Milking. 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 3 FEEDS FOR ONE CENT. Ask your dealer for "INTERNATIONAL STOCK FOOD" 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.

A \$3000.00 STOCK BOOK FREE

MAILED TO EVERY READER OF THIS PAPER.

This Book Contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., and of this Cow. It cost us \$3000 to have our artists and engravers make them. 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.

THIS BOOK FREE, Postage Prepaid, if You Write Us a Postal Card and Answer 3 Questions: 1st—Name this paper. 2nd—How many head of stock do you own? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs. The Editor of this Paper will tell you that you ought to have a copy of "INTERNATIONAL STOCK BOOK" for reference. The information is practical and right to the point and the book is Absolutely Free. We will give you \$14 worth of "INTERNATIONAL STOCK FOOD" if book is not exactly as represented. Answer the 3 Questions and write us at once for Book.

Largest Stock Food Factory in the World. Capital Paid in \$300,000.00. INTERNATIONAL FOOD CO., MINNEAPOLIS, MINN., U. S. A.

J. & W. B. WATT, SALEM, ONTARIO,

BREEDERS OF

(POST AND TELEGRAPH OFFICE)

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

OUR herd contains such families as Matchless, English Ladies, Mildreds, Village Buds, Missies, Stamfords, Clarets, and Marthas. Royal Wonder =34682=, junior champion of 1901, now heads the herd. A choice lot of young bulls and a few females for sale. We offer our whole flock of Leicesters for sale—thirty-five ewes and ewe lambs and fifteen rams.

FARMS 2 MILES FROM ELORA STN., G.T.R. and C.P.R.; 15 MILES NORTH OF GUELPH.

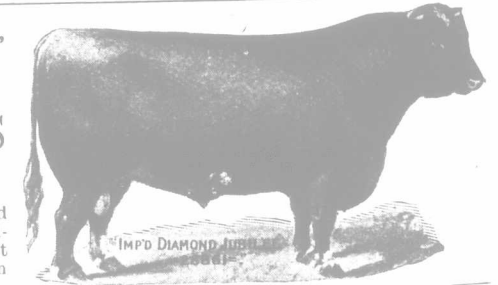
T. DOUGLAS & SONS, STRATHROY, ONT.,

BREEDERS OF

Scotch Shorthorns

100 HEAD TO SELECT FROM.

Offer for sale 20 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee =28861=, at head of herd. Farm one mile north of town.



Rapids Farm Ayrshires.

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

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices.

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

Robert Hunter, Manager

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

HIGH PARK STOCK FARM.

GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited. A. M. & ROBERT SHAW, P. O. Box 294, Brantford, Ont.

Live Stock Labels

Send for circular and price list. R. W. James, Bowmanville, Ont.

Maple Lodge Stock Farm

ESTABLISHED 1854.

SHORTHORNS.—First-prize milking strains, and best Scotch breeding. Imp. Knuckle Duster and Imp. Sir Wilfred in service. **LEICESTERS.**—Thirty choice shearing rams and 100 ewes and ram lambs for sale.

ALEX. W. SMITH,
MAPLE LODGE P. O., ONT.

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

Clover Leaf Lodge HERD OF SHORTHORNS
A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited. **R. CORLEY, Belgrave P. O., Ont., and G. T. R.;** Wingham, C.P.R.

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. **W. G. HOWDEN,** COLUMBUS P. O.

JOHN DRYDEN,
BROOKLIN, ONTARIO.

BREEDER OF
CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

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

HOLSTEINS FOR SALE.

Having disposed of my farm, I now offer for sale my herd of registered Holstein cattle, comprising three cows, one two-year-old bull, two yearling heifers, and two bull calves, all from excellent milking strains. These cattle will be sold cheap, considering the breeding. For further particulars write: **THOS. DEMPSTER, Gananoque Junct. P. O.,** Farm 1/2 mile from station, G.T.R.

Jerseys and Cotswolds. For sale, three-year-old stock bull, Count of Pine Ridge 53662, a grandson of Adelaide of St. Lambert, that gave 82 1/2 lbs. milk in a day, and 2,054 lbs. in a month. Also two of his sons—one year old, and a few daughters; and a useful lot of Cotswold rams and ewes. For particulars and price write: **WILLIAM WILLIS, Newmarket, Ontario.**

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.

SUCCESS WITH HOLSTEINS
depends on starting right. Brookside has furnished foundation stock for some of the best herds in the country. We have 250 head, and if you want to establish or strengthen a herd, can supply you with animals of the right sort. We have 50 young bulls on hand, and females bred to the best sires living. Let us know just what you want. Catalogue of bulls now ready. We also have six fine thoroughbred Jersey Red boys, 6 months old, for sale, \$9 to \$10 each.

HENRY STEVENS & SONS,
LAONA, OSWEGO CO., N. Y.

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

Maple Glen Stock Farm.
EXHIBITION OFFERING: Two bull calves under 1 year. Also a Sylvia and an Abbekirk bull calf, with spring and fall heifer calves of Sylvia breeding, bred from winners and ones that will make winners. Prices according to quality.

C. J. GILROY & SON,
Brookville, on C.P.R. and G.T.R., Glen Buell, Ont.

UNADILLA FARM.

F. L. GREEN, GREENWOOD, ONTARIO,
BREEDER OF

St. Lambert Jersey Cattle and Yorkshire Pigs.

My Jerseys are bred for business. Both sexes for sale. I offer an extra choice bull, dropped Feb. 27th, 1901, for sale, a son of Queen May of Greenwood, who made 18 lbs. butter in 7 days, and is at Pan-American now. A lot of very choice Yorkshires on hand. Also Barred Rocks, Light Brahmas, and Bronze turkeys. Prices right.

SPLENDID Jerseys for Sale.

Two bull calves and two heifer calves that will equal anything I know of; age, 1 to 3 months; price, \$30 to \$60. One yearling heifer, blood of old Massena, 900 pounds butter one year, \$100. One yearling bull, extra breeding, \$80. All registered. Crated and put on express car.

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

JERSEYS FOR SALE.
Two choice bull calves of the highest breeding and of true dairy type, at moderate prices.

W. W. EVERITT, Chatham, Ont.,
DUNDEE PARK FARM, P. O. BOX 552.

BRAMPTON JERSEY HERD

For sale: 2 yearling bulls; 8 bull calves, sired by Brampton's Monarch (imp.), and out of first-class cows. A number of cows and heifers in calf. Also some unregistered cows and heifers, fresh-calved and springers—grand family cows. **B. H. BULL & SON, BRAMPTON, ONT.**

CHOICE AYRSHIRE BULLS.

OFFER: Five bull calves, one dropped in each of the months of August, November, December, January, and April. Good individuals, and from deep-milking strains.

W. W. BALLANTYNE,
STRAFORD, ONT.
"Neidpath Farm" adjoins city, on main line G. T. R.

Water Basins.



EIGHT REASONS FOR ADOPTING THE Woodward Water Basin.

1st. They have solved scientifically the problem of watering stock Economically and Simply.

(For 2nd reason see our ad. next issue.)

Ont. Wind Engine & Pump Co., Ltd.,
TORONTO.

TREDINNOCK AYRSHIRES

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchrain, 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, G.T.R. & C.P.R., 20 miles west of Montreal.

Ayrshire Bulls: Write to **J. YULL & SONS,** Carleton Place, for special prices on Ayrshire bulls from 1 1/2 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. **B. P. ROCKS,**

Maple Cliff Dairy and Stock Farm.
BREEDERS OF
AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.
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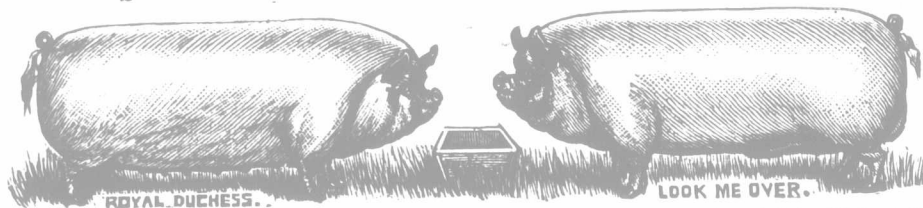
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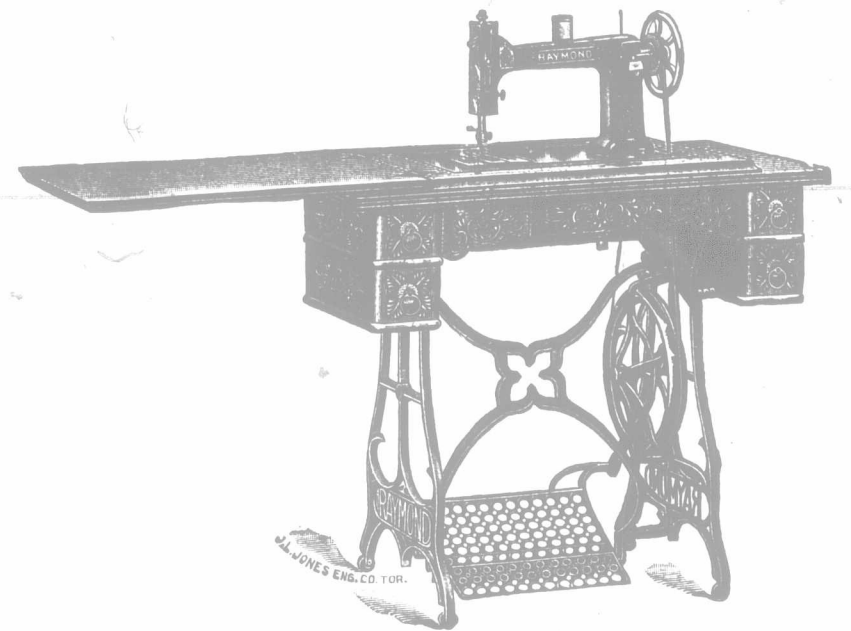
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