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AND HOME MAGAZINE

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Vol. XXXVI. WINNIPEG. MAY 6, 1901. MANITOBA. No. 525

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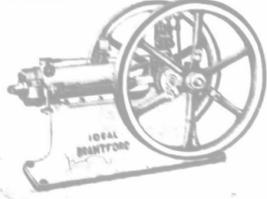
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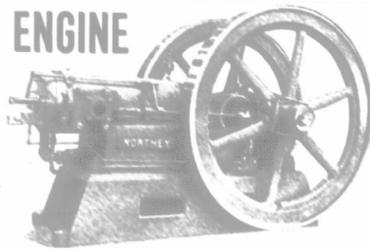
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Vol. XXXVI.

WINNIPEG, MANITOBA, MAY 6, 1901.

No. 525

The Commission on Agricultural Education.

The decision by the Government to appoint a commission on agricultural education has been prompted largely by the steady demand from our best farmers upon the Government for an agricultural college which will enable their sons to keep up with the procession of progressive agriculturists. The appointment of this commission is evidence of an intention to do something along the lines indicated, and should be a matter of congratulation to the whole farming community, and, for that matter, to the country at large. Whether the work of the commission will be beneficial to the farmer or not will, however, depend largely upon its make up, as to whether the members are in touch with the various phases of agriculture in the Province and with the people making their living by it.

The personnel of such a commission might include representatives from among the most capable and successful agriculturists, who are themselves ardent students of up-to-date agricultural literature, and who realize the necessity for technical training, also from among those now engaged to a greater or less degree in the spread of agricultural knowledge, and from among those engaged in the supervision of teaching methods, as, for example, district school inspectors.

From the announcement of the Minister of Agriculture, this commission will be expected to formulate a workable plan for the guidance of the Government, looking to the advancement of agricultural education and the establishment of an agricultural college.

For the scheme to commend itself to the farmers it must be self-evident that it is a practical one from a dollars-and-cents standpoint, by insuring a more enjoyable life and larger profits than now obtained for the labor and energy expended, as unless the course provided so commends itself to the farmer, students will be few in number. It will be an easy matter to set up a high standard of education, the object of which will be to elevate the profession of agriculture. The idea of elevating or raising the profession is based on the false premise that manual labor is more or less debasing, a fallacy believed in, unfortunately, by some farmers. High standards of education, some people would have us believe are only maintained at universities. An agricultural course could be attached to the university by the endowment of a chair of agriculture. However, it must not be forgotten that the students in agricultural colleges calculated to help, first of all, are young men from the farms of our own Province. These young men have had to help on the farms, and owing to the difficulties of pioneering, have had little opportunity for schooling; consequently, university lectures would be away above their heads.

It is acknowledged that specially-trained teachers are required in normal schools, it being considered impracticable to utilize the university courses in the training of teachers. Much more would be impracticable to utilize such courses in connection with a college of agriculture. The argument is used that it would be a saving to have the laboratories, etc., that are provided by the university utilized by the agricultural students. Chemical laboratory methods and even the study of general chemistry are of little practical use to the farmer, but a knowledge of the fundamental principles of all that he needs and all that he can hope to accomplish in the time at his disposal. Laboratory work in agricultural chemistry is the field of the specialist.

It must not be forgotten that there is a marked difference looking at the matter from the farmer's standpoint, between the investment of money for a medical or legal education and an agricultural education. The person taking up medicine as a profession, his study is, as a general rule, devoted to knowledge on the subject, even the fundamental principles,

consequently, a four or five years' course, and its accompanying expenses of time and money, is recognized as essential. With the agricultural student it is different. He comes, or should come, with a knowledge of farm practice to a greater or less degree; consequently, as an investment, a long course of study loaded with geology, chemistry, mathematics, languages, etc., would not be profitable, and, therefore, would not commend itself to the farmer. Essentials come first, non-essentials only when time will allow. From what knowledge we possess of the science of agriculture and the farmer's conditions, we submit that the time available for college studies, only short at the best, should be used for technical work with which is blended the principles underlying practice.

It will be noticed that the teaching of live-stock husbandry is referred to as an essential in the plan for a provincial school of agriculture outlined in our issue of March 5th. The reason for considering this subject of such importance is, that farming, to be permanently successful, must include live-stock husbandry. Stock-raising tends to conserve the fertility of the soil, concentrate the products of the farm, thus saving transportation charges, besides avoiding competition with products of unskilled labor in the markets of the world. Conditions in Manitoba are very different to those in Ontario or the Old Country, where, owing to mixed farming being the rule rather than the exception, young men have grown up familiar with the care and management of live stock, whereas in this country, where wheat-growing has been so exclusively followed, the boys who have grown up on the farms have had little or no opportunity to learn anything of the principles of live-stock husbandry.

Why Not a Judging Institute?

The 1901 Farmers' Institute summer series will soon be on, and the providing of suitable speakers and suitable subjects for discussion will engage the attention of the Department of Agriculture.

The consensus of opinion is always in favor of a judge explaining his awards, so that people may know the reasons for his decisions. A few years ago, a professor of animal husbandry judged cattle at the Industrial, and gave explanatory talks on the awards, a procedure which gave a great deal of satisfaction at the time; in fact, several noted breeders of this Province have repeatedly stated that they learned a great deal about stock, in the way of points, etc., from those explanations. South of the boundary, last year, a new departure was made, namely, the holding of judging institutes, in most cases being held at the close of an agricultural show. The keenest interest was shown, and a repetition of the programme desired in future years. Even had we an agricultural college at which live-stock judging would be taught, numbers would be unable to avail themselves of the instruction. Such could, however, be reached very effectively through the institute.

Many people seem able to pick out a good animal, but if questioned why and wherefore, are stumped.

While no course, either at a college or an institute, will make expert judges, live-stock judging classes will undoubtedly put many persons on the right path so that they may go ahead for themselves.

A few months ago, a two weeks' judging school was held at the Iowa State Agricultural College, for farmers, of whom over 380 registered, 320 being in attendance. Some noted stock men took the course, such men as Converse, the Red Poll man, and W. A. McHenry, the Angus breeder. If such a course was beneficial to such breeders, and they state it was, how much greater would be the value of similar elementary instruction to our farmers!

The requirements for a judging institute are not many, a building, skating rink, for example, two or three head of stock, and a man that understands the work and can make other people understand, would be all that is necessary. The institution of such meetings would undoubtedly tend to increase the rapidly growing interest in institute meetings.

Farm Siftings.

The seeding once over, those barn plans will be used, and the material gathered during the winter or previous months will be placed in position and made to take shape in some form or other, either as basement barn, hogpen, horse stable, poultry pen, dairy house, or what not. Building calls for the exercise of considerable thought. Such things as the lighting, ventilation and convenience should all be thought of, in addition to the cost, location and general outline. In these days of germs, the farmer should not overlook the importance of that anti-germ—sunlight. Don't have your stables like dungeons. In some basement stables you see nothing but black darkness the first few minutes you are in them. A little later, after your optics gets accustomed to the gloom, you are able to see the outlines of the interior dimly. One cannot reasonably expect growing animals to thrive in such a place. Put potatoes there, and when they sprout, notice the washy appearance of the growth; the effect will be even more detrimental to animals. Put window lights along the whole south side of barn, and a few on the other side. Let the south windows be large ones. The ventilation of stables in Manitoba requires considerable thought and attention before satisfactory systems are obtained. The ADVOCATE columns have contained descriptions of several; look them over before installing any system. A noted authority says "one of the surest indications of an improperly ventilated stable is the condensation of moisture on the walls, ceiling and floors. It is sometimes remarked that cement floors and stone basements draw moisture; the truth is, the ventilation is insufficient."

One frequently sees what would be funny things, if they were not bound to be disastrous, in horse-breeding. A case in point: In a livery barn one day there happened to be two stallions—one, a trotting horse, a Nutwood, so his driver said. If the statement was correct, that noted old sire would, I am certain, neigh in disgust at his light-limbed, shallow-middled, lath-like descendant. It is doubtful if this degenerate had a record; anyhow, it's dollars to doughnuts that one mile would suit him better than three or more. The other stallion was a Hackney, well put up, a thick fellow, and a pretty good actor. The third party was a little broncho mare, ewe-necked, with a scary look, a fair middle, and a drooped, peaked rump; but such was the irony of fate, that the mare was bred to the Nutwood degenerate instead of to the shapely horse, and one chance, however small, of improving the broncho stock was forever lost. It does not, however, follow that all Standard-bred stallions are bad sires, or that all Hackney stallions are good ones. Conformation, as well as breeding, must be taken into consideration.

Sore shoulders are common nowadays. Watch the harness, that it fits the animal wearing it. You might bathe the shoulders with cold water in which some salt has been dissolved, or a dram of tannic acid to the pint of rain water.

Go easy with that colt on the harrows or seeder. The work doubtless is a great aid in breaking it in. Be very careful that this beginner walks and draws straight in the collar, or you may have to call your veterinarian to treat a case of shoulder-slip or sweeney.

We do not expect a dry summer; still, it is just as well to be prepared; so would it not be a good idea to sow some corn and millet? A few mangels or sugar beets will be just the thing for the milch cows next winter.

Look closely after the foals as soon as born, and if dropped in the loose box, dress the navels with some antiseptic daily carbolic solution or even a powder of iodoform and boracic acid, equal parts; except for that, don't give medicines to the foals unless under the directions of a competent man.

A common deformity in hand-fed calves is potbelliedness, due to the milk fed them being cold or sour. The use of the cream separator (not the aquatic or dilution take) will tend to dispose of the first cause; clean pails, in place of swill buckets, will aid in overcoming the second cause.

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Avoid Extremes.

The attention of horsemen is frequently called to the importance of breeding horses with long pasterns, but that this good quality may be overdone is emphasized in the following extract from the *Farmers' Gazette*:

"Length of pastern is a point to which great importance is attached by some Clydesdale breeders. It is thought that long pasterns impart to the animals possessing them a better style of action and freer movement than is displayed by animals with shorter 'connecting links' between the arm and the hoof. The craze for long pasterns is not without its disadvantages. In the course of a paper on 'Bog spavin,' which he read at a recent meeting of the South Durham Veterinary Association, Mr. J. G. Deans, M.R.C.V.S., of Bishop Auckland, made special references to the great liability of Clydesdales as at present bred to suffer from this disease. Mr. Deans said: 'In trying to produce a type of animal to suit the tastes of Clydesdale fanciers who require great length of pastern, breeders have rendered their horses far more liable to bog spavin than they otherwise would be. There is a medium in all things, and although I am partial to the Clydesdale breed of horses, I most thoroughly condemn this excessive length of pasterns which has been aimed at. When you get those long pastern joints, you as a consequence find that the position of the joints of the hind limbs are all altered, and that you in conjunction with the above find straight hocks, which I assert is the cause of bog spavin in 60 per cent. of the cases to be found in young animals. Some other cases are produced by want of exercise, but when caused in this way they are only temporary, and can be removed without surgical treatment.'

Summer Fair Dates.

Edmonton Summer Fair	July 1 to 8
Calgary Summer Fair	July 10 to 13
Winnipeg Summer Fair	July 15
Brandon Summer Fair	July 18 and 19
Regina Summer Fair	July 18 and 19
St. Paul Summer Fair	July 23 to 25
Fort Assiniboia Summer Fair	July 23 to 26
Winnipeg Summer Fair	July 29 to Aug. 3
New York Summer Fair	Aug. 4 and 7
W. April	Aug. 7 and 8
Regina	Aug. 13 and 14

Western Stock Growers' Association.

Following the conventions of the pure-bred cattle breeders and the horse-breeders in Calgary, April 9th and 10th, respectively, the stock-growers' meeting brought together men representing a large proportion of the cattle wealth of the Canadian West. The ranch centurion, with his hundred head of steers, and the Midaslike fellow, with herds which range the thousand hills of Alberta, were there, and, as a consequence, a businesslike atmosphere prevailed. One feature of the meeting was the concise report of the Secretary. The chair was ably filled by D. H. Andrews, Manager of the Canadian Land & Ranch Co., Crane Lake, Assa., President of the Association. The President's address referred to the benefits of membership in the Association and the proposed increase in wolf bounties. The Association had met the C. P. R. officials re damages for animals killed on the track, the increased amount now allowed being more reasonable and therefore acceptable to the Association. Bulls killed on the railroad track will not be compensated for at any increase. An interesting fact referred to by the President was the gradual disappearance of mange from the range, so that as far as the herds were concerned, it might also be termed non-existent. The Executive brought to the notice of the members the fact of American cattle being rounded up north of the boundary line, and further, that Canadian cattle with brands similar to those from the South were also rounded-up along with these American cattle and were taken south, objections on the part of the Northerners being overruled, redress so far being unavailable.

One hundred and seventy-seven members were reported by the Secretary, the assessment being at the rate of 1 1/2 cents per head of stock owned. Exports were increasing, shipments of stock since April, 1900, amounting to 47,515 head. The officers of 1900 were re-elected to serve for 1901, and are as follows: President, D. H. Andrews, Crane Lake, Assa.; First Vice-President, A. R. Springett, New Oxley; Second Vice-President, F. W. Cochrane, Macleod; Secretary-Treasurer, R. G. Matthews, Macleod. Directors—Bow River, W. R. Hull; Medicine Hat, J. H. V. Bray; Pincher Creek, R. Duthie; High River, H. Smith and J. H. Brown; Lethbridge, Howe Harris; Maple Creek, W. J. Wiley; Sheep Creek, J. A. Turner; Willow Creek, A. B. McDonald and George Lane.

The live question of leases, squatting on the water rights and reserves was taken up and debated thoroughly, the resolutions introduced showing the tenor of the debate.

A resolution was passed that, as many new settlers are coming into the country and squatting on the springs reserved for stock, the W. S. A. desire that these newcomers should not be allowed to squat, and that those at present squatting be removed, and that the land agents be advised to warn incomers against squatting. A further recommendation, that such reserves be not open to free entry, but be sold at auction, similarly to school lands, with an upset price of \$5 per acre, no more than one reserve being sold to any company or corporation. It was stated that the objection to reserving water privileges is raised by new arrivals who have not the interests of the country at heart. [Why should not new settlers have as deep an interest in the country's welfare as some of the older settlers?—Ed.] Mr. Stewart, of Macleod, was heard as a vigorous champion of the small rancher and new settler, claiming that the resolutions were for the purpose of shutting out the small owner for the benefit of the large one, stating further that the ranchers have not fulfilled the terms called for in their leases, the number of cattle not being up to the limit.

A motion to memorialize the Dominion Government, regarding the N.-W. M. P., carried, the motion indicating the appreciation in which the force was held, and also desiring that it be kept up to its full strength.

A motion, that "no butcher or his employee be eligible for the position of stock inspector," was passed; also one requiring that "the hide of any animal killed by any other than a butcher shall be exhibited at the time of sale, the hide to be punched and the brand recorded by a stock inspector." The above motion was passed with a view of stopping the nefarious practice of slaughtering animals from off the range without the knowledge of their owners. By resolution, badly blotted or unbranded stock will in future be gathered by the captains of the round-ups or inspectors, the said animals to be sold, the proceeds to go to the Association, unless ownership is proven, when the proceeds will be paid to him.

The question of chutes and squeezers at shipping points was brought up, and was effectively disposed of by Mr. Shaw, C. P. R., who stated that chutes or squeezers would be put in at points applied for by the Association.

A motion to raise the bounty on coyotes was lost; also one to authorize the selling of stray fat cattle for beef, the Association to take the proceeds and forward the moneys to the respective owners.

A motion was passed to memorialize the Department of the Interior to cause to be posted in post offices all applications for leases, said leases to state whether they are to be granted for horses, cattle or sheep.

The proceedings ended with a few speeches relative to Col. Dent's horse-buying tour, a strong appeal being made to bring out as many horses properly trained as possible. Some speakers made a strong plea for the avoidance of questionable tactics in the

matter of selling to the British purchasing officer, claiming that indulgence in such reprehensible practices would spoil any chance of future markets. In view of the fact that the purchasing officer is considered to be an expert on horses, and that a veterinarian will aid him, the plea to deal gently with the young man, Absalom, was, to say the least, a mirth-provoking one.

The next annual meeting will be held at Macleod.

The Forestry Department Starts Work.

The Department of the Interior at Ottawa has taken up the questions of forest preservation and tree-planting, and has organized a Forestry Department, with Mr. E. Stewart as superintendent. The effort of this Department is to supervise the work of forest preservation on the timber reserves controlled by the Dominion Government, and assist those desirous of planting trees for forest or shelter purposes. The latter part of the work will naturally be carried on principally in Manitoba and the West. The scheme, as already outlined in the *ADVOCATE*, is to have experts personally visit every applicant for aid in this direction and advise as to the best location of the desired shelter-belts, give instructions regarding the preparation of the land, and, when all is in readiness, supply seedling trees or tree seeds, which are to be taken care of under the supervision of the expert forester. The recipient is to undertake the work required for the successful growth of his plantation and allow the Government whatever cuttings, seeds, etc., they may require in the future. In these plantations the Department will provide nothing less than 1,500 seedlings, or seed sufficient for the planting of half an acre.

Mr. Norman M. Ross, a graduate of the Ontario Agricultural College, who has taken up special work in forestry both at the college and subsequently at the Biltmore estate, North Carolina, and also in Germany, has been appointed assistant to Mr. Stewart.

Mr. A. P. Stevenson, who has done such splendid work in horticulture at his nurseries at Nelson, Man., has also been engaged to assist in the supervision of the work. Mr. Ross takes charge of the Territories, and Mr. Stevenson of Manitoba.

The agreement published below gives very fully conditions under which this Government assistance is to be given.

THE AGREEMENT.

The following is the tree-planting agreement to be subscribed to by the owners of lands and the Department:

DEPARTMENT OF THE INTERIOR,
TREE-PLANTING AGREEMENT.

Ottawa, 1901

The Department of the Interior of Canada and A. B., of, mutually agree as follows:

1. The Department of the Interior, in order to disseminate a knowledge of improved ways of planting and developing forest plantations, wood-lots, shelter-belts, and wind-breaks, shall, after personal study on the ground by its agents, prepare a plan for planting and caring for a forest plantation, wood-lot, shelter-belt or wind-break, on acres of land of the said A. B., situated and described as follows:

2. The said plan shall be prepared for the purpose of promoting and increasing the present value and usefulness of said land to its owner and to develop and perpetuate a plantation of forest trees upon it.

3. Upon the completion of the said plan and its acceptance by the said A. B., the Department of the Interior shall supervise the execution thereof so far as may be necessary.

4. The Department of the Interior will, as far as the means at its disposal permit, furnish seed and plant material for the purpose of planting the said forest plantation, wood-lot, shelter-belt or wind-break, but the preparation of the soil and the planting and care of the above-named forest plantation, wood-lot, shelter belt or wind-break, shall be attended to by the said A. B.

5. The Department of the Interior shall render all services under this agreement wholly without charge to the said A. B.

6. The Department of the Interior shall have the right to take from the said plantation, wood-lot, shelter-belt or wind-break, for use on other land, any of the young trees removed in the necessary thinning of the said plantation, wood-lot, shelter-belt or wind-break, which are not required on the above-named lot. The Department of the Interior shall also have the right to take seed from the said plantation, wood-lot, shelter-belt or wind-break.

7. The Department of the Interior shall have the right to publish and distribute the said plan and its results for the information of farmers and others whom it may concern.

(Signed)
Owner

(Signed)
Superintendent of Forestry

Post Office Date

The working plan, above mentioned, being completed, is now accepted, and will be carried out under the conditions of the above agreement.

(Signed)
Owner

'Quality' as Applied to Live Stock.

There has been an increasing tendency during late years to coin words expressive of the various attributes of live stock. So much is now written by those who report at agricultural and other shows, and in describing the animals which appear in competition, and at sales, that it is only natural that writers are sometimes hard pressed to find words which will adequately convey to their readers their points of excellence or the opposite, so that a correct idea may be formed by those who have not had the opportunity of seeing the animals themselves. One of the most difficult expressions, or, rather, one of the most difficult characteristics to describe on paper is "quality." All good judges and breeders know what that is, and can apply it

bred appearance: it is the absence of all coarseness and under-bred character which marks their quality, and without this no feeder or breeder is judicious if he attempts to keep them in his possession longer than can be possibly avoided. "Quality" means money, and without it no sort of live stock is worth encouraging, as it will leave no profit to the breeder. - Live Stock Journal.

Some Facts About Pig Feeding.

Where feeding tests have been conducted, it has been shown that under good conditions from 4 to 5 pounds of suitable grain has produced 1 pound of live pig. But the question has frequently arisen whether by any combination of foods, or by the adoption of some materials with foods which have not been commonly employed, the quantity of food consumed by a pig to make a pound of live weight might not be diminished. Prof. Henry has ascertained a fact which is apparently of the prime importance to the pig-feeder, and if it is confirmed in everyday practice, it will prove enormously advantageous to the producer of pork. It is well known that the pig has a taste for ashes, and it was noticed that where corn was largely used the animals consumed a quantity of the ashes produced by burning hard wood. Evidently there was some cause for this, and that some material was required which was not provided in the corn in sufficient abundance. Some three different lots of pigs were fed in consequence, in the hope of ascertaining what result would follow by the supply of ashes and of bone meal, which contains mineral matter in part found in ashes. Some of the animals received corn without either ashes or bone meal. The last-named failed to develop so well as the others; they neither possessed bone nor size, consequently growth was slow, although fat was laid on plentifully. For every pound of gain in weight, only 4.87 pounds of corn meal were required, when used in conjunction with bone meal; when used in conjunction with ashes, 4.9 pounds of corn meal were required; but when neither wood ashes nor bone meal were employed, 6.29 pounds of corn meal were consumed. Here, then, we get at the secret of the difference in the cost. There is method even in the preference shown by the pig for a material so apparently useless as ashes. Practically speaking, 25 per cent. more food was required to make the same quantity of pork, or, to put it more correctly, live pig, where no ashes were employed.



HON. WILLIAM I. BUCHANAN, Director-General, Pan-American Exposition.

equally to whatever class of animal may be under review. It is, however, a perfectly distinct feature in different breeds, and here comes in the difficulty of using the word in the description of all breeds alike. At the same time, we do not think it is possible to substitute any other word which would convey to our minds the same meaning and all the vast importance to the live-stock interest which it contains. First let us consider the word as applied to light horses, inclusive of ponies. It may be taken for granted that "quality" in its first meaning is understood to mean high birth and good breeding. Not only is this so with reference to animals, but it is also applied to men and women. "The Quality," or "Quality folks," is a frequent expression in country districts when speaking of the "Upper Ten," and it is from this idea that Whyte-Melville, no doubt, gets his beautiful simile when he describes the Thoroughbred hunter:

"A head like a snake, and a skin like a mouse; An eye like a woman: bright, gentle, and brown; With loins and a back that would carry a horse; And quarters to lift him smack over a town."

No words could possibly draw a more eloquent picture, one that seems to speak to you, as it were, with such reality that it is easy to see in your mind's eye the lovely creature he so vividly portrays. With this idea to work upon, it is not difficult to carry the thought through the other breeds, and judge individual representatives on the same principle. It was mentioned in these columns recently by an able contributor that "quality" carried with it the impression of light bone and want of substance. There is no doubt a great deal of truth in this; but it is altogether a wrong notion. The general belief, more or less founded on fact, that Thoroughbred horses are deficient in bone is the origin of this supposition; and that when a horse is spoken of as being full of quality, or showing considerable quality, it is intended to imply that it is of such conformation. When speaking of other light horses, such as Hackneys, hunters, or ponies, by describing them by the same term "quality," people have been educated to think of the flesh or "touch." It is by handling a beast that you can at once discern its quality, the aptitude to feed and to assimilate most economically the food it is supplied with—whether for the production of beef or dairy purposes. That well-known authority on Shorthorn matters, the late Rev. W. Holt-Beever ("Pimpernel"), used to describe the "touch" of the Shorthorn as that of the sea otter. Good touch need not necessarily be a thin skin—you want something more than this, or it would only be a sign of delicacy. The skin should be covered with soft hair with just the sort of tender touch which fills the hand like the skin of a sea otter. Nobody can really put the feeling on paper, but whatever it is when you feel it, it means "quality."

Sleep, and pigs too, may be judged by their well-

Pedigree is the foundation and performance is the superstructure of the good cow. As the best of foundations is useless without a superstructure, so the best of superstructures is of only temporary value without a lasting foundation. When the two are rightly combined the edifice is complete. So it is with a combination of pedigree and performance: The best of pedigrees without performance is of no practical value, and the best of performance with no pedigree is of only temporary value. It gives no assurance of continuation of inheritance. - Jersey Bulletin

Weaning Pigs.

The common method is to let the sows go out in the pasture and shut up the pigs. Then the music begins. This is the way I used to do. The sows hang around there the whole day, and then the udder would get caked, and we would have trouble with them, and sometimes an excellent brood sow ruined. I don't do that now. I have a feeding floor adjoining my hog-house. The feeding is all done on this floor, the sows are shut in on this floor, and the pigs allowed every access to them. I feed the sows all the oats they will eat; give them all the water they can drink. The pigs are fed all the shelled corn they will take. They go up there, eat, and get to the sows. By the end of the week these sows are dry, and the pigs get so disgusted going up there and finding nothing, that they just quit. Absolutely, at the end of one week not a pig will go near its mother. You can turn the sows right out in the pasture with the pigs, and there is no more trouble. Now, this is not a theory. I have done that way for years, and I never had pigs suck the sows again. It is a very easy thing to dry a sow that way. Feed them nothing but oats, and let them drink water, on a dry floor. It is not always convenient to have so many different pastures, sows in one and pigs in another. In this way you can utilize one for both. - Swine Breeders' Journal.

Scour in Calves.

Scour is prevalent in calves at certain seasons of the year. It is interesting to observe how breeders treat it. The volume published under the auspices of the English Jersey Cattle Society gives particulars of several methods, a few of which we reproduce. Mr. Ernest Mathews uses two tablespoonfuls of flour, one tablespoonful powdered ginger, mixed to a paste with whiskey, and made into small balls, and given every two or three hours. This is particularly useful in the earlier stages of the complaint. Mr. W. Milward-Jones recommends a dose of castor oil and ginger, given at once as soon as scouring is observed, followed by pills of butter and bicarbonate of soda (1 lb. butter, with teaspoonful of soda, well mixed). In Earl Cadogan's herd, a small dose of linseed oil is given, followed by two tablespoonfuls of a powder, consisting of prepared chalk, 2 ozs.; powdered catechu, 1 oz.; ginger, 1/2 oz.; opium, 1 dr.; peppermint and water, 1 pint. Fresh eggs (shell included) are also given. Lime water, and old beans, are recommended. A piece of chalk put where the calves can lick it is also recommended.

Tubercular Infection.

A correspondent recently called attention to the fact that the dangers of contagion from tuberculous



FRANK A. CONVERSE, Live Stock Superintendent, Pan-American Exposition.

patients through breathing was being greatly exaggerated. In this connection we notice, by the report of the Pennsylvania Agricultural Department, experiments were conducted with guinea pigs, which were kept in a compartment in the lower end of nosebags attached to tuberculous cows. The guinea pigs were thus forced to breathe the air expired by the tuberculous animals. Twelve guinea pigs were used in these experiments, and were exposed for periods varying from 2 1/2 to 2 3/4 hours. None of them became infected. Two lots of guinea pigs inoculated with tuberculous were kept in light and dark boxes, respectively. One lot was placed in a box with a glass front and the top and back made of wire netting, covered with white cloth. The other lot was placed in a box of equal size, made of wood, painted black inside, and a wire-netting back, covered with black cloth. The guinea pigs in the light box lived from 5 1/2 to 6 days longer than those in the black box. This experiment indicates the effect of light in checking the development of tuberculosis.

Stock Raising Essential to Successful Farming.

BY A. R. BOMPAS, WOLSELEY, ASSA.

When I say that stock-raising is essential to successful farming, I do not for a moment infer that the wheat-grower does not make money; in fact, in this district those who have been engaged almost exclusively in wheat-growing appear to have made more money than those who have been engaged in mixed farming. But there is something more in success than making money. To be successful we must make the best possible use of our circumstances, whatever they may be. If that is right, the man who wastes any product of his farm that might be converted into beef, pork or butter, or anything that is marketable, cannot be considered altogether successful, even though he may be accumulating wealth.

There is another point which must be considered. If we are continually taking from our land and putting nothing back, we shall soon decrease the fertility, no matter how rich it may be. The early pioneers of Manitoba who settled along the banks of the Red and the Assiniboine rivers continued year after year to crop their small fields, or parks as they called them, till from a decrease in the yield, or an increase in weeds, they considered the land needed a rest. Then the fence would be hauled in for fuel and the land allowed to grow up again to grass, while another old field which had been rested in that way for a number of years was broken up again for cropping. This was rather a primitive method of farming, but land was plentiful, and it really answered the purpose that the modern farmer is endeavoring to attain by a systematic rotation of crops and seeding down to cultivated grasses. While good land was cheap and plentiful there was little apparent object in spending time or money on the preservation of its productive powers. Land now, however, is becoming valuable, making it vastly more important to keep it in the best possible condition. That our neighbors in Manitoba are realizing this fact is apparent. In the spring of 1888 there were over 15,000 pounds of Brome grass sown in the Province, 8,000 pounds of native rye, and a considerable area of timothy.

The Experimental Farms have done good service by introducing grasses suitable to the country. The root-fiber, or humus, one of the most important elements in soil fertility, will be supplied first by the growing grass and then by the decaying sod when it is again broken up. In addition to this, there will be hay and pasture for stock, enabling the farmer to return again to the soil, in the form of manure, still more plant-food to increase the fertility, thereby increasing the yield of grain, which in turn will enable the farmer to keep more stock. And this is the point I wish to make clear—that the larger the acreage of grain, the more stock should be fed—everything in just the right proportion, that there be no waste. One of the speakers at a convention of the various breeders' associations held in Winnipeg two years ago stated that he had the year before between 500 and 600 acres of crop, and had used all the straw. I have heard it said you can't feed cattle on wheat straw, which is very true, and I am sure that the speaker referred to never intended anyone to believe that he fed his cattle on nothing but straw, for he has one of the finest herds of pure-bred Shorthorns in the Province of Manitoba.

It is, nevertheless, quite true that we can use a large percentage of wheat straw to make up a ration for almost any of the cattle we may be wintering. I say almost any, because I make an exception in the case of milch cows and calves every time. Nothing is too good for a cow or calf in the way of fodder. Now, it must be plain to all that if we haven't the stock to feed our straw to, the straw must be wasted, and where there is waste there is loss, and the loss not only affects the individual, but the whole country.

This brings me to the point of my argument, that stock-raising is essential to successful farming. Another point worth taking into consideration is that on the grain farm there is a considerable loss of time by the lack of occupation during the winter months. I have heard men say they did not want to work all the year round. I suppose that's all right if a man can afford to take it easy in the winter, but that's no reason why they should not give employment to one or two men, for there are generally plenty of men who would be glad to work through the winter if they were paid for it. As for myself, I have not made more money than I have found use for, even though I did work twelve months in a year. Men of other trades, occupations and professions expect to work the year round, and the farmer is certainly as able to stand it as any other. I should like some competent person to make a calculation of what would be the increase to the exports of the country, Manitoba and the Territories, if all the grain crops kept as much stock, as they are now, as they are now kept. I say in all kinds of grain crops, not only wheat, but also in all kinds of other crops.

In this regard, it is generally, we don't raise

near enough horses to supply our own market. Year after year we see horses by the carload brought in from the east and sold at good paying prices, when we could raise those same horses ourselves at a much less cost than they were raised in Ontario. Much the same may be said of hogs. I suppose we all agree that a certain number of hogs can be fed on the farm very profitably. The number in proportion to the amount of coarse grain raised is, as I should put it, in proportion to the number of cows kept, for although we may fatten one hog without milk, I don't think we can raise young pigs successfully without it.

There is another point I wish to make plain, that there is a certain proportion which will give the best results financially. For instance, supposing I raise 200 acres of wheat, I ought, in order to carry out my theory, raise 100 acres of oats and barley, 5 or 6 acres of roots, and about the same of fodder corn; then, with 10 to 50 acres of cultivated grass, I could keep, in addition to the horses required for work and driving, 20 to 25 cows, which means 60 to 70 head of cattle, 20 hogs, with say 200 fowls. To work a farm on this plan it is absolutely necessary to have all your land fenced, and fenced into fields, in order that parts of your farm which are not in crop may be pastured. Fencing is a problem we have not quite solved as yet. Cedar posts are too expensive for the ordinary farmer; willow is good, and cheap at present, but when fencing becomes general there will not be enough to supply the demand unless they can be brought by rail from the unsettled country to the north of us.

Grasses in Manitoba.

[Contributed by G. S. McGregor, Mekiwin, Man., to the Pure-bred Cattle Breeders' convention.]

We have tried several kinds of grasses here, but have come to the conclusion that "Bromus inermis" is the grass for the farmers, and from the testimony of farmers elsewhere, as well as what I



GROUP OF IMPORTED SHORTHORN FEMALES.

OWNED BY W. S. LISTER, MIDDLEBURY, ILL. MAN. (SEE GOSSIP, PAGE 26.)

have seen in my own wanderings through the Province, I am strongly of the opinion that it is the grass for Manitoba. Of course, where timothy and Western rye grass are giving good satisfaction to the growers, I would certainly advise them to stick to them and to seed much more land with them. From my own practical experience, I prefer the Brome grass, for, in the first place, it starts growing early in the spring, and is green long before any other grass that we have growing in the open fields; then it gives a heavier crop of hay than any other variety we have grown, and the aftermath is very heavy and provides the very best of pasture until covered with snow. It may even be cut a second time for hay if not wanted for pasture. We have grown some good crops of timothy and clover (lucerne and alsike), and always have some patches of them, but the Brome grass is a long way ahead of them for crop and pasture.

When there is plenty of Brome grass pasture in the country, we will soon find a great difference in our beef, in both quality and quantity. In the fall of the year, when the stock go to the butchers or into the feed stalls, they will be rolling fat, and something like the size cattle used to be in the early days in this country before the high, dry land was plowed up to grow No. 1 hard.

The land on which we grew the best crop of Brome grass is clay loam with clay subsoil, after a crop of wheat and one of oats and potatoes. We plowed the land in the fall, in the winter gave it a coating of manure, and in June we plowed it again and harrowed it well. In the second week of July we harrowed it again and sowed about 12 pounds of Brome grass seed per acre, adding a few handfuls of clover seed. We then harrowed it lightly and rolled it. In August ran the mower over it, cutting down all weeds and grass, leaving them as a mulch on the ground. By the middle of September we had a growth of about 20 inches high, and fairly thick on the ground. This was pastured by

calves and sheep until snow came. Next spring the grass started early, and the sheep kept cropping it until seeding was finished, when they were kept off it. In July we mowed it for hay, and had four big loads per acre of splendid hay, and then we allowed the stock to pasture on the field all fall, which gave them fine feed.

We prefer to sow the Brome grass without any nurse crop, as we got the best returns from this system.

Cream Starters.

The following extracts are from an address by G. L. McKay, Professor of Dairying at the Iowa Agricultural College, who judged the dairy products at the Winnipeg Industrial in 1880:

What is termed a natural starter is easily obtained during the summer months. Take a number of samples of your best milk in sterilized pint jars and keep them at a temperature of about 70 until they sour. When you find a sample that has coagulated solid without any pinholes and has a sharp but pleasant acid taste, you may know that you have the right fermentation present to give the best kind of a flavor. Then pasteurize some of your best milk and inoculate with this good starter. In pasteurizing, the milk should be heated to 180 and kept at that temperature for 20 minutes. If it possesses a little cooked taste it will do no particular harm. We find that about 3% starter is sufficient to propagate the new starter with, so that it will be ready in 24 hours. A good temperature to ripen a starter to is 75 Fahrenheit, and during the summer 65. A few degrees either way will not make much difference. A starter is usually at its best for using when it contains about 15 to 50 by the Mann's test or .8 or .9 of 1% by the Farrington test. Where the milk is received every other day it is advisable to use a smaller per cent. of starter in propagating the new starter, and ripen at a low temperature, preferably 65.

After spending a month, during our short dairy course in our starter-room where we carried forward daily about 20 starters, I found that when a starter goes beyond 50 it assumes astringent or bitter taste, and new starters propagated from this would always have the same taste. I cannot emphasize too strongly the importance of cleanliness in everything pertaining to a starter. I strongly discourage the use of cloths or papers for covering the starter cans.

The Cooley cream cans without the glass have been giving us the best results as starter cans, as they have a sloping cover which permits a passage of air and at the same time prevents dust from falling into the cans. These cans can be placed in a tank of hot water, and the milk pasteurized with very little trouble. They are easily handled and the temperature can be controlled without difficulty.

The per cent. of starter used in the cream depends on the season of the year. This may range from 10% to 30%. In June when the atmosphere is pure and the climate usually moist, and nature has done everything to make the air lovely and sweet, very little starter will be required, if any, if patrons observe moderate care in cleanliness. But during the extreme hot weather, and again in the winter months, starters should be freely used. I would not hesitate to use 10% of a good starter if necessary these months.

Do not understand me to recommend using a 40-per-cent. starter at all times. I would use as high as 10 per cent. only if the milk is tainted. In that case you can use a heavy starter with good results.

During the short winter course which has just closed, a little discussion arose as to the effect of a starter on milk two days old when brought to the creamery. I had our men turn in the cream screws and skim a 62 cream. We took 100 pounds of cream and placed it in a small vat. To this we added 50 pounds of nice morning's milk, which seemed free from taint, and 33 pounds of good starter, thus giving us about a 25% mixture, including cream, milk and starter. The ripening was carried to about 10°. The butter scored 11 out of a possible 15 on flavor; some eight days later gave it a score of 12½ on flavor. This was a practical demonstration for our students of the theories given in the class-room.

Now, if these conditions can be brought about at Ames, in the dairy school, is it not possible to obtain the same results in most any creamery in the land by observing the same rules?

The importance of starters and cream ripening is attracting the attention of the leading dairymen of the land more than they ever did before. The great Hazelwood Company has engaged two of the best men we had during the past year, to prepare starters and attend to cream ripening, paying them \$1,200 per year each, and we have just furnished them the third man at a little less salary. The dairy schools have not overstocked the market with first-class men. Prospects were never brighter than now for up-to-date, wide-awake, intelligent butter-makers.

Our Scottish Letter.

The past three weeks have been chiefly occupied attending shows. The weather has been very changeable, and it is far from pleasant standing out in an exposed show-yard during the time of judging. There are far too many shows in April, but, although almost everybody admits this and regards the situation as capable of amendment, no one seems able to decide who should begin. The centers where shows have been held during the past three weeks have been Castle Douglas, Kilmarnock, and Glasgow, in Scotland, and Dublin and Belfast across the Channel. But many local and parish shows have also been held, especially in Ayrshire. The backward weather has militated against the success of the shows, as a good day naturally suggests to a



ELSIE 2ND, BY STAR OF MORNING.

OWNED BY W. S. LISTER, MIDDLEBURGH, MAN. (SEE GOSSIP, PAGE 22.)

farmer that he should stay at home and attend to his sowing and planting. On the other hand, if a show is to be a success it must have a good day, and none of those that are past are likely to leave a big profit to their managers.

So far, Ayrshires have made most stir in the show-fields, and quite a large number of first-rate animals of that breed have been exhibited, while two high prices have been paid for three-year-old queys in calf, but not due for some weeks yet. One of these, Mary II. of Burnhouses, was sold by her breeder, Mr. Wm. Howie, Burnhouses, Galston, to Mr. Andrew Mitchell, Barcheskie, Kircudbright, for £100, and so far she has been first at Castle Douglas, Kilmarnock, and Glasgow. She is a brown and white quey, showing great style and carriage and promise of a tight vessel. She is not popular with some farmers, as they regard her as a bit too strong in the bone, and there may be some basis for the criticism. She was champion female of the breed at Glasgow, and reserve at Kilmarnock, being there beaten by another cow from Burnhouses, the grandly-framed White Rose, which won the championship at the Highland last year. The other dear quey of the season is Lady Margaret, not unlike Mary II. of Burnhouses in outline, but finer in the bone. She was sold by her breeder, Mr. Charles Duncan, Little Kilmony, Rothesay, to Mrs. Myles, Paisley, for £60, and was second at Glasgow in the Derby. Mr. Wm. Kerr, Old Graitney, Greta, and Mr. John McAlister, Ardyne, Toward, are notable exhibitors who this season have made their mark with Ayrshires in milk or calf; while Mr. Matthew Hunter, Adamhill, Craigie, is exhibiting a trio of three-year-old queys of his own breeding, whose sire was the Burnhouses bull, Flora's Chief. The dam of this bull, Flora of Burnhouses, was unquestionably the grandest Ayrshire cow exhibited during the past ten years, but, curiously enough, Mr. Hunter's queys, while showing first-rate vessels and teats, lack the scale and substance of their grandam. In the other section of Ayrshires, what is called the old section, Mr. James Howie, Hillhouse, Kilmarnock, a brother of the tenant of Burnhouses, and his neighbor, Mr. Thomas Barr, Montland, Kilmarnock, are well-nigh invincible. A strong exhibitor of bulls this year is Mr. Robert Osborne, Wynholm, Lockerbie, who has long been known as a breeder of high-class stock. His bull, Gigantic Stunner, was champion male at Glasgow. One of the best young Ayrshires of the season was bred by Mr. James Robb, Hindward, Old Cumnock. She has been bought by Mr. James Howie, and so far has had an unbroken career of victory.

The Dublin and Belfast Shows are strong in Shorthorns and Aberdeen-Angus cattle, and in both show yards very fine animals of both breeds were in evidence. Scottish-bred Shorthorns made the running at Dublin, and the champion at Belfast, a prime bull, named Caledon Stamp, from the Countess of Caledon's herd in County Tyrone, is full of Scottish blood. He was reserve champion at Dublin to the Scottish-bred bull, Inspector, whose breeder was Mr. Alexander Crombie, Summerhill, Aberdeen. This is a great, fleshy, wealthy bull, but there is much to be said for the theory that Caledon Stamp is a better one. I understand he has been hired by Mr. Duthie for next season. He was purchased last year for exportation to South America, but the Argentine ports were closed to British cattle before he was sent off, so he remains in this country meanwhile. We don't suppose the Argentine men will leave him here altogether. Aberdeen Angus cattle are making good progress in Ireland, especially in the north and east, but they will not take very well

in the West, where the rainfall is so heavy. Galloways do better there; indeed, no breed does as well as Galloways in a wet, exposed region. Ireland boasts at present a very fine A.-A. bull, Baron Inca. He is owned by Mr. Coey, Larne, and it takes a very good one to get past him. He has been three times in succession first and champion at Dublin and Belfast. Mr. Arthur Owen, Shanvaghey, Queen's County, has a fine herd of these black cattle, and with animals out of it he took a fair share of the prizes at Dublin. Mrs. Carnbridge Grubb has a good herd at Dummurry, near Belfast. She owned the first-prize cow at both places. This cow was bred by Mr. A. R. Stuart, Inverfiddich, Dufftown. The Government is spending money lavishly in Ireland these times, and breeders are having rather a good time. They are getting 1,000 premiums, of £12 each, divided amongst them for bulls to be planted out amongst the smaller tenant-farmers, and the Royal Dublin Society is going one better and giving a large number of premiums, of £15 each, for the same purpose. All this should, in the end, improve the general store stock of Ireland, and thus materially further the best interests of feeders everywhere. It is generally admitted that Irish cattle have greatly improved during the past twenty years, and these new schemes should accelerate the ratio of advance.

Clydesdales are looking well this season, and the shows that have passed have shown a large number of first-class young stock. Baron's Pride 9122 remains the most successful sire, almost all the leading winners in the younger classes, of both sexes, being got by him, and at Glasgow the champion mare, Mr. Alexander Guild's Lady Margaret, and other two of the first-prize winners in the female section were got by his sire, Sir Everard 5353. Mr. Guild, who is an Edinburgh solicitor, with a farm at Aberlady Mains, in East Lothian, was also owner of the first three-year-old mare at Glasgow, named Topsy Pride. She is a very handsome black, got by Baron's Pride 9122, and both as a yearling and a two-year-old has had a wonderful career. At Castle Douglas and Kilmarnock, Mr. Thomas Smith, Blaon Point, Chester, showed a fine three-year-old mare named Cedric Princess, which gained first prize, and two yearling fillies, rare beauties, all of them got by Baron's Pride. At the same shows, the Messrs. Montgomery, Netherhall, Kirkcudbright, showed several choice animals got by this sire, but there can be no doubt of the pre-eminence over all of their yearling colt which won at Kilmarnock. He has rather much white about his face and legs for a Canadian's taste, but he is the biggest, most handsome and best-moving colt of his age seen for many a day. Mr. James Kilpatrick, Craigie Mains, Kilmarnock, has a capital two-year-old colt named Lord Dundonald, which last year was unbeaten, and this year it seems as if he would repeat the performance. He has been first both at Kilmarnock and the two Glasgow shows. At the April show, held this week, the male championship went, without any hesitation, to Mr. Matthew Manhall's Marcellus, a magnificent horse, which won in February; he was got by the renowned champion horse, Hiawatha 10067, and is undoubtedly a superior animal.

Two Canadian buyers of Clydesdales have been here this season. Mr. Paterson, Millbrook, Ont., sailed first with a first-class colt named Sir Hedderwick (10645), bought from Mr. Wm. Taylor, Park Mains, Renfrew. He is a big, straight, useful horse, this, and he should make a big season in Canada. Mr. John Duff, Everton, Ont., a veteran importer, is sailing to-day with a pair of good young horses, bought from Messrs. Montgomery. One is the four-year-old Fickle Prince 10341, and the other the two-year-old Auldgrith 10062. The former makes his second trip across the Atlantic, as he was bred by Colonel Holloway, Alexis, Ill., by an imported sire, from an imported dam. Both are uncommonly well bred, the sire, Cedric 1087, being one of the best breeding horses on either side of the ocean, and the dam, Fickle Fortune, is one of the best-bred mares in the Studbook. Her sire was the big Darnley horse, Knight o' Lothian 4189. The two-year-old Auldgrith is own brother to Palmerston, which gained first prize both at the Royal English Show at York and at the recent Chicago show. Fickle Prince was good enough to win the Auchtermuchty district premium last season.

"SCOTLAND YET."

Silage, Sugar Beets and Mangels as Dairy Foods.

At the Pennsylvania Experiment Station a feeding trial with 3 lots of 3 cows each, and covering 3 thirty-day periods, is reported. During the entire test all the cows were fed daily 7 lbs. of mixed grain and 6 lbs. of field-cured corn stover. During periods 1 and 3 all the cows received in addition silage, sugar beets and mangels, each in quantities furnishing 2 lbs. of digestible dry matter. During period 2, in addition to the grain and stover, lot 1 received 6 lbs. of digestible dry matter in silage; lot 2, 6 lbs. in sugar beets; and lot 3, 6 lbs. in mangels. The results of the test showed a slight increase in the amount of butter, and percentages of fat and solids not fat in changing from the mixed ration of silage, sugar beets and mangels to silage alone, and a slight decrease in changing from the mixed ration to either sugar beets or mangels alone. They are considered, however, as showing no practical difference in the effect of silage and roots upon the yield and quality of milk, but the mixture of silage and roots is considered slightly better than the same quantity of either fed separately.

The Tale of the Rings.

BY HERMAN H. CHAPMAN.

HOW A FOREST RECORDS ITS HISTORY IN ITS TREE TRUNKS, TO BE REVEALED WHEN THE TREES ARE FELLED.

Every tree has its life-history securely locked up in its heart. Each year of its growth a thin ring of wood is formed next to the bark, and a corresponding layer of bark adjoining it. As the tree swells and swells, the bark is forced outward, and splits into wide fissures. Much of it falls off altogether, but each ring of wood remains a faithful record of the year in which it was formed. When the axe or saw of the woodman ends the life of the tree, and brings its body crashing to the earth, this record is unrolled before us, and by it we can determine almost every incident in the life and growth of the tree.

Trees, as well as human beings, have their period of struggle and hardship, their prosperous times, their terrible misfortunes and hair-breadth escapes, their injuries and recovery, or their complete submergence in a struggle in which the odds were too great for their feeble strength to cope with.

Here is a sturdy oak, whose tale revealed is that of steady perseverance in the face of difficulties—a slow, gradual growth, never checked, never daunted, till the final goal is reached, and it stands supreme, literally monarch of all it surveys.

Here is a mighty spruce, which has a tale of perseverance, but of a different sort. The oak conquers by force of character, by its fighting qualities. The spruce succeeds by its ability to endure. It is like the patient Jew, frugal, living on what would be starvation to others, till, when their day of strength is past, and sudden disaster overtakes them, he enters into his inheritance and prospers amazingly.

See the record of this spruce: Fifty, sixty, seventy years, each represented by a ring so small that it takes great care to distinguish them at all, and the whole seventy do not occupy the space of three inches at the heart of the tree. What a tale of hardship this sets forth. Other trees have pre-empted the light on which the existence of a tree depends. The poor spruce must be content with the twilight that filters through the branches of its enemies, the poplar, birch and pine. But it is content. It knows that if the young poplars or pines spring up beside it in the shade, they could not endure, but would quickly die. It knows that the time will come when old age or disease will weaken the poplars, or perhaps a heavy wind will lay them low, and the spruce, old in years, but insignificant in stature, will escape injury, and still young in vitality, will soon spring ahead in the race.

Now, see its rings. It has made as much growth in ten years as in the preceding seventy, and soon becomes a large tree.

What does the stump of this old white pine teach us? Evidently something extraordinary has happened to it, for away in near the heart a black scarrun around the edge of one of the annual rings for nearly one-fourth of its circumference, and outside of this the rings are no longer complete, but have their edges turned in against the face of the scar. Each subsequent ring reaches further across it. By the time they have met in the center many years have elapsed, and there is a deep fissure where the scar once existed. But the later rings have bridged the gap, and, growing thicker in the depression, soon fill up the circumference of the tree to its natural roundness, leaving no sign of the old wound. What happened to the tree? While it was still young, its mortal enemy, the forest fire, swept through the



CLARET JUG (IMP.), BY MARSHFIELD.

OWNED BY W. S. LISTER, MIDDLEBURGH, MAN. (SEE GOSSIP, PAGE 22.)

woods, destroying most of its companions, and burning a large strip of the tender bark on its exposed side, so that the bark died and fell off. But being better protected than the others, and having still three-fourths of its bark left uninjured, it soon recovered, and its stump reveals how successfully it strove to heal the wound, and grew to maturity, to perpetuate its species.

But as it takes many swallows to make the summer, so it takes many trees to make a forest, and the forest has almost as much individuality as the tree itself. Though each tree and each species struggle with each other for life and supremacy, yet, in a sense, they are helpful to each other, and protect each other from their common enemies.

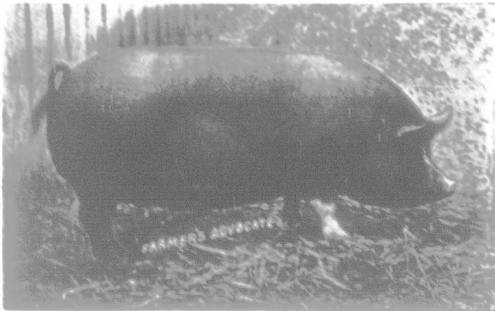
The enemies of the forest—the wind and the fire. Other enemies there are, such as insects and disease, and sometimes the forest suffers so severely that its whole aspect is changed, and new species come in and replace the old. Much of this history the rings

will reveal to us, as is the case in some of the following actual examples from studies recently made in the pine forests of Northern Minnesota:

In one locality, where rather small Norway pine stood very close together, making a thick stand, it was found that almost without exception the trees were of the same age—138 years. No matter how large or how tender the tree, it was just as old as its neighbor.

The rings on all these trees were very large at the heart, but as fifty or sixty years went by, they got narrower and narrower, until some of the smaller trees seemed hardly to grow at all. The reason was plain—there were too many trees—and as none would give up the struggle, all suffered alike.

But they were not the only sufferers. Here and



TYPICAL BERKSHIRE SOW.
First at Toronto Industrial Exhibition, 1900.

there we see a slender, struggling white pine making a vain attempt to capture its share of sun and rain. Count reveals that these white pines are also all of the same age, but, unfortunately, only 126 years old. The Norways had 12 years the start of them, and the delay was fatal.

How did it happen that these trees came in so thickly, and all the same year? Perhaps further study will help us to find out. So we go to another cutting, over a mile from the first. Here we find many trees about the size of those we have left, and counting the rings, we find them to be of the same age—138 years. But here there is something more. In a secluded nook stands a group of immense white and Norway trees, perhaps a dozen. These prove to be very old, but, remarkably enough, also of even age—each stump showing 315 rings. Where is the rest of this patriarchal forest? Close about the few remaining may be seen the forms of many more, stretched upon the ground and slowly decaying. These have evidently been blown down, possibly after being killed by fire. Their fate give us the clue to the disappearance of the others. It is plain that some time before 1763 a great disaster overtook the pine forest in this place. Most of it was wiped out of existence, either by fire or wind. But here and there a clump remains, and from them, in a favorable seed year, came the seed which started the new and thriving crop of Norway pine.

To find out, if possible, whether this conflagration or blowdown was more than local, we go to a cutting some ten miles from our first, and here again the oldest and largest of the stand, which is all rather small, prove to be 138 years old. Whatever the cause, then, it must have operated over a large area. But this is not a thick stand; in fact, there are many gaps, and much of the timber is limby and knotty, a sure sign that it has not been grown very close together, and soon we find that many—in fact, most—of the trees are but 101 years old, there being two distinct age classes.

How did this come about? Let us look at the older trees. Here upon one of them is a fire scar, made when the tree was 18 years of age. Upon another we find a similar scar, made in the same year. And on close examination, we can hardly find one of the older trees free from the marks of this fire. How plain it is, that this fire, occurring just 120 years ago, or in the year 1781, when the young forest was 18 years of age, killed nearly all the young pine, and gave the forest a blow from which, in this place at least, it never fully recovered. But it did the best it could, for the age of the second class of trees, 101 years, shows that the young survivors of the fire grew rapidly, until at the age of 38 years they were enabled to produce a crop of seeds, or possibly the old trees from which the first ones came were still living, and seeded down the ground a second time, so that a fairly good stand of trees was finally produced.

These studies lead us to infer that pines reproduce themselves as forests, generally under exceptional or unusual circumstances, and that that is their natural way of maintaining themselves as species. The young white and Norway pine, especially the latter, cannot endure much shade when small, and could not possibly grow up as a thick forest under their own shade or the shade of other trees, yet we nearly always find them in dense groups. The rings tell us the secret. In the long run, a forest of 200 years during which the pines are killed by fire or wind becomes a certain amount of open ground, and the forest is laid low or scattered, and the young trees start ready to grow again. The wind, the fire, and the death of the old trees are the causes. But nature's methods

are so perfectly harmonized that but little is needed to throw them out of balance.

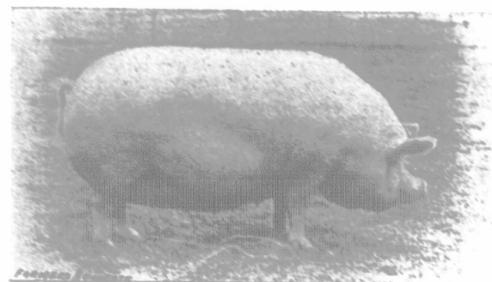
Nature clears in strips and dashes seed there, and fires are rare and far apart. Man clears over wide areas, and fires of his origin sweep repeatedly over his slashings. The young pines spring up even after the second and third fires, but by perseverance the fires finally destroy them all, and what nature intended to be the young pine forest becomes a barren wilderness.

Grand Rapids, Minn.

A Cattle Tick.

To the Editor FARMER'S ADVOCATE:

SIR.—The specimens sent with your letter of 16th inst. are, as you surmise, true ticks. The finding of these on a horse at Chilliwack, in the Fraser River Valley, British Columbia, must, I think, be an unusual occurrence. From the crushed specimens, it is not possible to be positive of their exact identity, but I think there is hardly a doubt that they are the well-known cattle tick of the Southern States, *Boophilus boris*. This has been found occasionally on cattle and horses in the West, and it would be interesting to learn if the animal upon which these were found had been recently imported, or had been running recently with animals imported into British Columbia from the Northern States. In Texas and some others of the Southern United States, the cattle tick is a serious pest. When, as is frequently the case, it is very abundant, it rapidly reduces the condition of animals upon which it occurs; but its worst injuries are due to the fact that it is the immediate means of conveying infection of the Texas cattle fever. These ticks have the power to fast for a very long time—several weeks—and after gorging themselves on an animal, they drop to the ground, and then, after a considerable period, climb up on to grasses or bushes and attach themselves to any passing animal. When they have bitten an animal suffering from cattle fever, they convey the infection to the next animal they attach themselves to. Of course, in districts where there is no fever, they cannot convey the infection to animals they bite. I do not think there is any likelihood that this



ENGLISH YORKSHIRE SOW.
First at Royal Counties Show, 1900.

tick will develop into a serious pest at Chilliwack or in British Columbia. Specimens have been occasionally sent to me from various places in the Northwest and British Columbia; but they have never been very abundant except upon an occasional animal which was in poor health.

In our country it is not a very difficult matter, as a rule, to free animals of this parasite. Several applications have been found effective. Almost any greasy or oily substance applied to the parts affected will destroy the ticks. A mixture of lard and sulphur, 1 of sulphur in 1 lb. lard, or sulphur and kerosene, will kill them. The ticks, as a rule, are found on those parts of the animal where the skin is thin. When the parasites are numerous, washing, brushing, spraying or sponging the animals with one of the several well-known commercial sheep dips gives the greatest satisfaction. They are efficient, cheap, easily applied, and are not poisonous or irritating either to the skin or eyes. If these are not obtainable, the ordinary kerosene emulsion will answer. On a few animals they may be applied with sponges, mops, brushes, or a syringe.

J. FLETCHER, Entomologist,
Central Experimental Farm.

Iron Roofing is O. K.

I have used two makes of felt roofing, common stovepipe-iron roofing (Canada plate), and Pedlar metal shingles. Felt roofings, I say, are no good to the average farmer. Perhaps by regular and frequent application of tar they might stand, but the farmer has not always time for that job. I have been well satisfied with metal roofing, but I would use tar paper on any barn or stable under metal, because the steam from cattle is apt to produce rust if it penetrates the cracks in the sheeting. I also used raw linseed oil on lower side of stovepipe-iron roof. Pedlar shingles are already painted both sides. The painting of a metal roof is only a very small job, requiring little material and easily applied. On a low-frame sheep-house roof, pitched one in twelve, I laid stovepipe iron on tar paper nine years ago. That roof is sound yet. I could give very different results from felt roofings at same and steeper pitch.

Mariapolis, Man.

The Feeding Value of Lamb's-quarter (*Chenopodium album*).

To the Editor FARMER'S ADVOCATE:

I am desired by a correspondent to send you a note on the above subject for publication, so that farmers in the Northwest may have the matter brought to their attention.

Two years ago we received several samples of the seed of this weed from Manitoba, with a request for an analysis and report as to its feeding value. Information accompanying the samples stated that in several districts large quantities were being obtained at the threshing of the grain, and also that many were feeding it with apparently good results. Our analysis gave the following data:

Moisture	9.82
Fat or oil	6.78
Protein or albuminoids	11.19
Carbohydrates	63.91
Fiber	1.27
Ash or mineral matter	1.03
Total	100.00

These figures denote a high feeding value—the percentages of the two most important nutrients, fat and protein, being quite equal to those of many concentrated feed-stuffs. Weight for weight, it should prove superior to corn meal and quite the equal of bran.

Since these seeds are very small, and possess a somewhat hard integument, it seems most probable that if fed without being ground or boiled, the greater number of them might pass through the animal undigested, in which case not only would they be of no food value, but harm would be done by their dissemination over the farm in the resulting manure.

FRANK T. SHUTT,
Chemist, Experimental Farms.

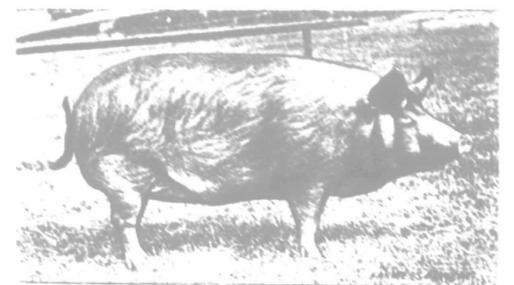
Berkshire-Tamworth Cross for First-rate Bacon Hogs Cheaply Produced.

In the Ingersoll, Ont., district, the merits of the Tamworth are pretty well understood, as they have been bred there for the Ingersoll Packing Company for a number of years; in fact, ever since the Company introduced a shipment of boars of that breed from England several years ago. Crosses, rather than pure-breds, are favored, because they are believed to be more economical feeders, and to produce these the

TAMWORTH DAM IS PREFERRED.

This is the conclusion arrived at by Mr. David Lawrence, whose farm we visited just at the commencement of seeding. Mr. Lawrence usually keeps from four to five brood sows busy producing material for bacon that is readily purchased by the Ingersoll Company when they are ready, usually at about eight months old. He also keeps a pure-bred Berkshire boar (Fig. 11.) to sire his own pigs, as well as many of his neighbors'. The Tamworth sows (represented in Fig. 1.) are invariably good mothers, producing strong, even litters, large enough to raise well. The sows are, as a rule, tractable, and careful with their young, seldom injuring a piglet, even though it be weak and helpless. Of course, the sows are intelligently fed and cared for previous to and at farrowing, so as to have them active and kind at the critical time. Mr. Lawrence has a model hogpen, but that is used chiefly for growing and fattening pigs, the sows being allowed to farrow in quiet box stalls in the basement of the main barn.

Mr. Lawrence has tried Berkshire dams and Tamworth sires, but the sows usually had small or uneven litters, and were often cross and bad to manage at farrowing time. The Tamworth dams give the offspring long, deep sides, almost solid



TYPICAL TAMWORTH SOW.
First at Royal Counties Show, 1900.

Tamworth color, while the Berkshire sire gives thickness, thrift and early maturity, which is facilitated by their being contented, but good feeders.

Economy in feeding is studied, but grain is not withheld from sows suckling big, hungry litters, from young weaned pigs not thriving well, or pigs at the finishing period. Sows in pig usually get their living on grass in summer and roots (sugar beets) in winter, with one feed each day of slops, with a little chop added. They are housed two weeks before farrowing, where they are to have their litters, and are fed better, so as to strengthen them to raise their offspring well. They are petted and scratched occasionally to accustom them to being handled afterwards if necessary. The pen is cleaned out every day and bedded with dry cut straw, which is given in limited quantity, especially

WHEN THE PIGS ARE FARROWED.

The pen is provided with a railing on the wall, about ten inches up from the floor, under which the young pigs can escape to avoid being crushed by the dam. The sows are sparingly fed for the first week, and get little more than a warm drink of thin

till the fourth or fifth day after the pigs are weaned. She is then allowed to rustle on cheap feed until time to put her in for farrowing again. She is always in good vigor, but never fat nor approaching it, so that she is always in first rate form for her maternal duties.

THE GROWING PIGS.

At all stages of the proceedings, the chief aim is to keep the pigs contented and happy. A discontented pig is not being properly treated in some

A LITTLE DUROC BLOOD.

Mr. Lawrence's neighbor, J. E. Bartlett, raises bacon pigs from Mr. Lawrence's boar and a very good type of Tamworth sow. She is not pure-bred, however, for her pedigree contains a cross of Duroc-

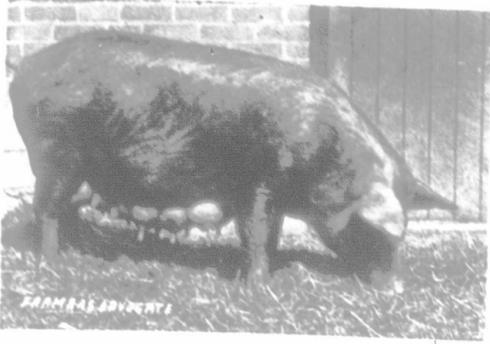


FIG. I. Tamworth sow in working form, the dam of David Lawrence's ideal bacon pigs.

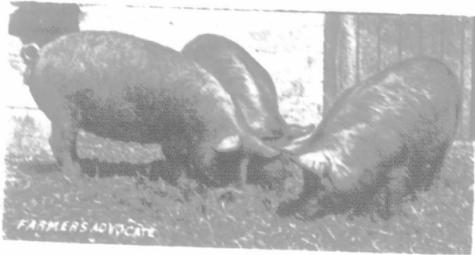


FIG. III. David Lawrence's Berkshire-Tamworth cross-bred bacon hogs, almost ready for the packers.



FIG. IV. Berkshire-Tamworth bacon hogs of good form, but a trifle too fat.

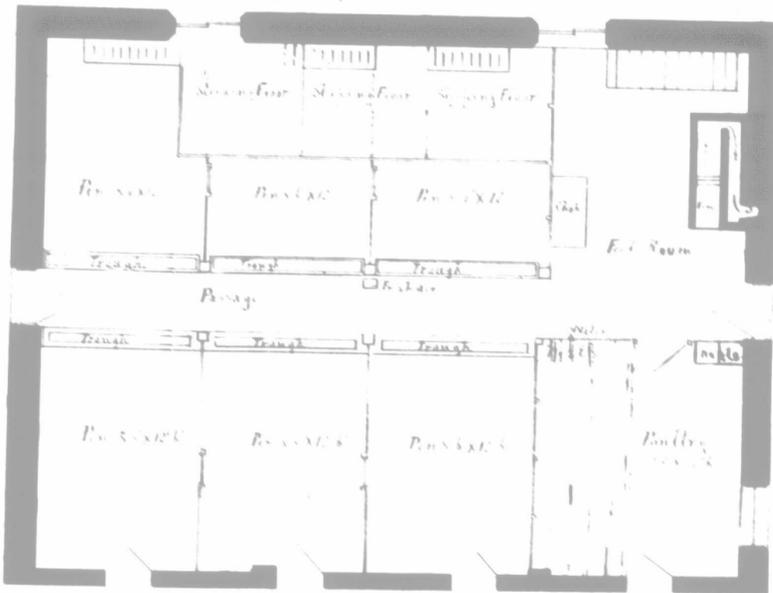
slop for the first three days. When the pigs are ten days old the sow's ration is improved and increased, but she is not heavily fed until the litter is approaching three weeks, when they need a deal of milk, and the sow must be well nourished or she will fail rapidly in condition. Sugar beets or other roots form the basis of her ration, to which chop is added in increasing quantities as the pigs increase in age. She is allowed an hour's run each fine day can eat they are entertained with some milk, chop, boiled small potatoes or the like. When they have learned to eat well they are given separate apartments, which they can enter away from the dam, and given such foods as milk and slops. The males are castrated at about four weeks old, when they seldom notice the operation. At six weeks they are usually ready to wean, and are, as a rule, eating so well that they go right on thriving the same as before. The sow is turned in with them twice after weaning commences, to draw off her milk and to give them a much appreciated meal.

FEEDING WEANED LITTERS.

As a rule, it seldom pays to do much boiling of feed for pigs, but Mr. Lawrence finds boiled potatoes, milk, whey, shorts and mixed chops a good diet for newly-weaned litters. It is given them warm until they are about two to three months old, according to the season of the year. When only a small quantity of feed is required, it is cooked on the house stove, but Mr. Lawrence's hogpen, a plan of which is herewith given, contains a boiling vat that cooks feed with economy of fuel. It consists of a plank box with sheet-iron bottom, set on a brick fireplace. The vat is six feet long, about three feet wide and two feet deep, and holding from eighteen to twenty bushels at a time. The fireplace, which is about fourteen inches wide along under half the width of vat, is so arranged that the smoke and fire have to pass back and return to the front of the vat by another flue before escaping into the chimney. Mr. Lawrence does not believe in boiling turnips, mangels or beets for pigs, but pumpkins and potatoes should always be cooked before feeding. When the feed

respects, and his condition should be looked into and improved if he is to thrive satisfactorily. They are therefore divided into small lots (seven or eight) of nearly one size. They have comfortable quarters, including elevated sleeping beds, and each pig has a stall at feeding time. This is contrived by planks fastened edgewise to the swinging front over the trough, about a foot apart. This prevents crowding and the pigs from standing in the trough.

Jersey. Figs. IV. and V. represent a litter of ten that Mr. Bartlett had sold to go to the Ingersoll Packing Company the day after they were photographed. They are about seven months old, and weigh about 220 pounds each. They have been very hearty feeders ever since being weaned, and have been fed well on oat and barley chops and corn. While the highest price for the day was paid for the lot, they were considerably fatter than packers have repeatedly pointed out to us as being ideal for bacon. Both lots are of nice smooth type, but Fig. IV. is a lot shorter than packers prefer.



PLAN of PIG PEN

OWNED BY DAVID LAWRENCE.

On the day of our visit we saw the pigs receive two meals, and this is how it was done: The swinging fronts of all the pens were swung in so as to keep the pigs back and to allow the feed to be put in from the passage. The troughs were first cleaned out of all straw or other material, and freshly-pulped sugar beets distributed along at the rate of about one bushel to fourteen half-grown pigs. On this was poured two pails of rather thin slop, consisting of mixed chop soaked in water. The pen has a tap in the passage supplied with well water by the windmill that pulps the roots and grinds the grain. Mr. Lawrence does not believe in keeping pigs fat while growing, as he finds for best satisfaction to the packer they should be allowed to grow as well as fatten. He therefore feeds little grain until they are about six months old, when they weigh probably 120 pounds each. At that age they are packer's models in form, but need more growth and finishing to reach the weights required. From this time forward the grain is gradually increased, but the hogs are not deprived of exercise, which is allowed almost every day throughout the growing and fattening periods. They are usually

skill; and but for the existence of pure breeds, the effort to produce the type wanted would end in chaos and confusion. Crossing, to average minds, probably means breeding from grades showing more or less of the distinctive characteristics of the breeds of whose blood they have partaken, and these grades bred together never can be depended upon to produce a uniform type. In this issue we reproduce illustrations of representative specimens of some of the breeds which have proved potential in producing the bacon type of hogs, and any one



FIG. II. Berkshire boar, sire of David Lawrence's ideal bacon pigs.

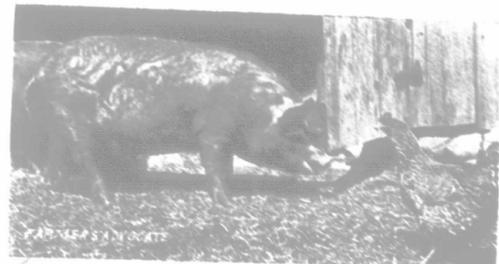


FIG. V. Berkshire-Tamworth bacon hog, same as Fig. IV.

is almost cooked, a bag or two of barley or other chop is mixed in with it, and constitutes a palatable ration.

BREEDING THE SOWS AGAIN.

Mr. Lawrence once tried breeding a sow four days after farrowing, but the results were unsatisfactory, and since then he does not have her bred

at about eight months old, when they weigh from 180 to 220 pounds, at which time they are ready for the packers, and the packers are ready for them. At no time are they fed pure grain, but roots in winter, and grass, green rye or clover in summer, form the filling portion of the ration, along with sweet whey, water and mixed chops. Pigs fed in this way seldom go wrong in their digestive organs, but in addition to this they occasionally get wood ashes and charcoal, which they seem to relish, and which no doubt goes far to prevent stomach worms or other internal parasites.

who has watched the history of the breeds will see that, even in the memory of comparatively young men, great changes and improvements have been wrought in the type of the most approved specimens of these breeds, and this fact only the more strongly emphasizes the importance of maintaining the purity of the breeds, and of continuing to improve them by judicious mating and selection.

As Others See the Ontario Live Stock Sales.

"For some reason, live stock sales in Ontario are not really successful. The reference here is to combination sales of a public character. They never have succeeded there, though they have been tried on several occasions. At the recent sale held at Guelph, more than 125 Shorthorns were sold. The average price was \$80.00. This contrasts rather strangely with sales on this side, where averages run all the way from \$200.00 to \$800.00, as at the Flatt sale in Chicago last autumn. Some of the Canadian papers have been referring to the sale as a great success. If an average of \$80.00 is a great success for pedigreed Shorthorns, our neighbors over there have set pretty low the mark which indicates a great success. It seems strange indeed that such sales are invariably a failure in that country. In Great Britain they are a success. On our side of the line they are a success. Why should they be a failure in Ontario? It cannot be that good stock is scarce there, for our neighbors over there have good animals, especially in the line of Shorthorns. Can our Canadian friends explain why they fail to make a success of a combination sale, even when patronized by a minister of agriculture?"—*The Farmer, St. Paul, Minn.*

Our contemporary evidently confuses auction sales held by individual breeders with those conducted by an association, or, as in the case of the Ontario sales referred to, under the supervision and direction of a Government official. In the one case, the breeder is responsible for the character of the stock offered and for the honorable conduct of the sale; in the other, nobody is really held accountable for either, and hence it is not surprising that there is a lack of confidence, an element which handicaps a sale from the start, and a feeling that grows with the age of institution. This, at least, has been the experience in Ontario each time the system has been tried. There is a deal of British spirit in Canadians, and our Minnesota contemporary should understand that the costly paternalism connected with governments undertaking to run the business and work of the breeders does not commend itself. It has been found in the past that such efforts not only "come high," but the results were lamentable. As far as the recent Government sales were concerned, no press authority competent to judge has ventured to designate them a success.

Auction sales by individual Canadian breeders have been quite as successful as those of the same class made by United States breeders. It is only four months since Mr. John Isaac's sale of Shorthorns at Markham made an average of \$122 per head. Mr. Flatt's sale at Hamilton, in December, 1896, figured an average of \$100, and his sale at Chicago in August last, referred to in the above quotation, and which was not a combination but an individual one, scored an average of over \$80, the record sale of cattle of any breed on this continent in the last decade. The secret of success in these instances lay in the fact that the stock was good and the public had confidence in the men at the back of them, and when these elements are in evidence the combination is pretty sure to bring success. Auction sales throughout Ontario in the last few years, where the stock has been fairly good and in fair condition, have been almost invariably successful, the animals, on the whole, selling for about all they were worth; and a lot of stock was not left unsold, either. There is no reason why two or more responsible breeders may not combine to hold a joint sale at the same time and place successfully. The degree of success will depend largely upon the character of the stock and the men, and the manner of conducting the disposal. Such sales have been and will be successful when the conditions above indicated are satisfactory, but when either are lacking, success is, to say the least, doubtful.

In this connection we desire to say that we resent the subsidized insinuation by an anonymous writer that the FARMER'S ADVOCATE, in declining to follow the hounds in this hunt, has shown a lack of public spirit and willingness to work for the extension of the pure-bred stock trade. The record of this paper, in its continuous history of nearly forty years without change of name or ownership, as an advocate of advancement in the improvement and distribution of superior stock, as the public well know, gives the lie to any such aspersion, and the attempt in certain quarters to hold us responsible for introducing politics into the business is equally unfair. Those who have read and followed our course in this connection know right well that the FARMER'S ADVOCATE was the first to sound a note of warning against the mixing of stock sales with politics, and if an unsavory scandal has already gained credence as to disreputable tactics alleged to have been resorted to at the second Ontario sale to raise the reported average above the low level of the first, the FARMER'S ADVOCATE is not responsible for it, whoever is; but we are not surprised to hear of such abuses growing out of this system of sales, as it was ever thus in this country, though we confess we were hardly prepared for its clumsily cropping up at so early a stage in the game. About a year ago if we remember aright, a correspondent wrote the FARMER'S ADVOCATE, facetiously suggesting that at the opening of new fields for the employment of the Dominion Minister of Agriculture, the FARMER'S ADVOCATE should be the first to sound a note of warning against the mixing of politics with agriculture. The warning was not only timely, but it was a more serious one than that which was given in the old

Irish adage that "a wink is as good as a nod to a blind horse." It is safe to say, however, that this sort of juggling quickly and effectively seals the fate of such sales, no matter what the rank of their patrons or of those participating, either actively or passively, in such misleading, unbusinesslike and discreditable proceedings, which in the end must prove detrimental both to the interests of breeders and farmers.

Arbor Day.

For the Province of Manitoba, May 10th has been set apart for the observance of Arbor Day. The day is proclaimed a public holiday, and the original intention in establishing it was to give a stimulus to tree-planting. When the holiday was extended to the schools it was expected that one day of the year, at least, should be devoted to giving the children some useful information on the important subject of forestry. When Arbor Day was first proclaimed there was some effort made to observe it, but as these spasmodic efforts at tree-planting in the school yards were as conspicuous failures as most of those of the settlers themselves, the enthusiasm very quickly died out, and of late years Arbor Day has degenerated into a mere holiday. An effort is now being made to revive interest and to encourage its observance along the lines it was originally intended to serve.

The Department of Education of Manitoba and the Dominion Forestry Department are distributing to all the schools of the West a little booklet prepared by the Winnipeg Forestry Association, giving in an interesting way much valuable information on tree-planting on the prairies. It is to be hoped every teacher will utilize this little book and the suggestions therein offered for the observance of Arbor Day, and thus inculcate in the children a love for and knowledge of trees and the best methods of planting them.

It very frequently happens that the stress of farm work during the early part of May makes it almost impossible to devote any time to the planting of trees, and without the sacrifice of some little time there is absolutely no hope of making a success of tree-growing. To root a five- or six-year-old tree out of the woods or from along the river bottoms and stick it in a hole dug out of the hard sod is to invite failure. The average farmer is far more likely to succeed with a half-mile of belt planted with seed or seedlings than with a half-dozen isolated trees. With a shelter-belt, the ground can be prepared by horse power and ordinary farm tools. The cultivation so essential to the growth of trees can also be done by horse power. The amount of labor required will be small and can readily be supplied. The resultant benefits are much greater from the planting of a shelter-belt than from the planting of isolated specimens. Once shelter-belts are provided, it will be an easy matter to grow individual trees of other varieties, thus adding symmetry and beauty to the grounds. First grow the wind-breaks and shelter-belts, using the more easily secured and faster-growing varieties, such as the native maple and Russian poplar. Care should also be taken to set the tree belts far enough away from the buildings—on the open prairie, 80 to 100 ft. to prevent the snow from drifting into the yards and holding an excess of moisture about the farm steadings.

The Pan-American Exposition.

The Pan-American Exposition opened at Buffalo, N. Y., May 1st.

Of live stock, only the cows entering for the six-months dairy test will be required to put in an appearance before September. The dairy test commenced with the opening of the Show, and continues till the close, on November 1st. Five Canadian cows of each of the following breeds have been selected to take part in the test, viz., Shorthorn, Jersey, Ayrshire, Holstein-Friesian, and French-Canadian. The decision of our authorities, that only Canadian-bred cows should be accepted, has somewhat narrowed the field for selection. The fact that most of our best cows are bred to come fresh in August, in order that they may be in best form for the fall shows, has still further restricted our field for the selection of fresh cows to enter the test at this time, so that the consignment can by no means be regarded as a fair representation of the best cows that our country can produce. However, it is perhaps the best that could be done under the circumstances, and we can only trust that they will be so handled in the feeding and care they may receive during the time of the test that they may make a record that will be fairly creditable to our dairy cattle.

The Horse Hoe for Grain Crops.

English farmers horse-hoe their grain crops as well as their root crops. The implement used for the purpose takes the same number of rows as the seed drill, the blades of the hoes having a cutting width of about 5 inches for wheat, and when they get somewhat worn they answer well for barley. The two outside blades are narrower than the others, as the rows they work in are likely to be narrow in places if the drill has not been guided particularly well. If hoeing be good for roots and corn, why not for grain? We need not be surprised to find this principle extended in the culture of Canadian farm crops in the not distant future.

The Wolf Hound.

(Read by Wm. Wallace, Niverville, at the Sheep and Swine Breeders' convention.)

There is no subject that could more fitly engage the attention of this Association than the present condition of the sheep industry in the Province. All other branches of agriculture are making satisfactory progress. The acreage under crop is showing a steady annual increase, dairying is taking a firmer hold, while cattle- and hog-raising are assuming their proper place as important factors in a system of successful mixed farming. The sheep industry alone is languishing, or, rather, retrograding. There has been practically no increase in the number of sheep during the past two years, while the latest Government bulletin shows a decrease of some 5,000 from the previous year, the number of sheep in the Province being now 25,000. When we consider that in England, with a similar area, there are 27,000,000, or 1,000 for every one we have here, we can realize the insignificance of our sheep industry. I believe, however, that the number as well as quality of the pure-bred flocks is showing improvement, but unless the commercial or butchers' sheep increase largely in numbers, breeders of pedigree stock cannot expect a good market for their rams. The inference one naturally draws from this state of matters is either that Manitoba is not a good country for sheep or that there isn't a good market for mutton here. Neither of these inferences would be right. The climate, the soil and its produce are all favorable for sheep-farming. In no other country are flock more free from the diseases to which sheep are liable. As to a good market, the price of lamb and mutton for some time has been higher, relatively, than the price of other butcher meat, and if it pays the Ontario farmer to send mutton to Winnipeg, there should be a good profit to farmers here, who have cheaper feed and a market at their door.

This brings us to the question, Why is sheep-farming lagging behind the general advance of agriculture in Manitoba? I have no hesitation in saying that the wolf pest is the chief cause. Many farmers who kept sheep have sold out, and others who would have gone in for them have been deterred for this reason. A dozen years ago my brother and I started with a flock of sixty ewes. For some years we were not troubled with wolves, but after that they began to increase in numbers and boldness, and killed a few sheep and lambs, until latterly our annual loss has been between twenty and thirty. A few wolves were shot with the rifle, but this had little effect in keeping them at bay. About fourteen months ago my nephew bought a couple of wolf hounds (dog and bitch) from Mr. Harvey, Miami, who had been hunting wolves with them in that district. They were at once tried on the Niverville wolves, and have done good work, having killed twenty-three of them, and six foxes in addition. Wolves are now rarely seen in the immediate neighborhood, although they are numerous a few miles distant. They have killed only one of our lambs since the hounds were got, and are evidently pretty well scared from the district. The hounds catch up with a wolf after a run of a mile or two. He generally puts up a good fight for his life, and if he is a well-grown, strong animal, the hounds need the assistance of the hunter, who, of course, is mounted, and by a blow on the head with a stout stick, gives the wolf his quietus. There can be no doubt that these hounds are valuable in keeping down the number of wolves and scaring them from districts where sheep are kept. Where the country is covered with bush and scrub, other measures must be taken if they are to be exterminated. This can only be done by giving a sufficient inducement in the shape of an increased bounty, so that a man may earn a fair wage in hunting, shooting and trapping them.

Look Out for Weed Seeds in Argentine Flax.

The following clipping from the *Oil, Paint and Drug Reporter*, of New York, will be of interest, as the flaxseed referred to is the same as is offered in Manitoba:

Those who have carefully examined a sample of this season's Argentine flax may have noticed it contains a large number of triangular reddish-brown seeds about 1-16th inch long, only distinguishable by close examination from the round seed of brown mustard. Of a number of samples of Argentine examined, all were found to contain this impurity. A number of the weed seeds were selected from an Argentine sample in the writer's possession and forwarded by Flax Inspector Stevens to the Division of Botany, United States Department of Agriculture, for an opinion. The Department, under date of April 13th, writes: "We are not thoroughly familiar with the weeds of Argentina, but this weed is either the seed of the common curly dock, *Rumex crispus*, or that of some species of *Rumex* so closely related to *crispus* as to be indistinguishable from it." There is no weed which the agriculturist has a greater prejudice against than dock, and it is exterminated wherever found, the farmer fearing the result of its spreading. Its presence in Argentine flax, and the difficulty of clearing the flax of it, make it incumbent on the farmer experimenting with Argentine seed to use the greatest precaution against fouling his land with this pernicious weed.

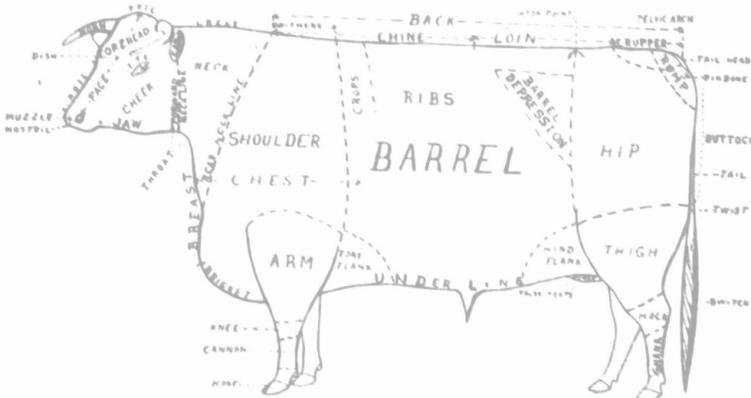
Points for Judging Beef and Dairy Types of Cattle.

[A correspondent and subscriber asks for the publication, in the ADVOCATE, of the points for judging cattle of both beef and dairy types.]

To describe at length the various points by which the two types are judged would require considerable space, and even then the lesson would be incomplete, as it is impossible in words to give a description that will convey to the mind of another the ideal type in either class. It is a study that is best prosecuted by means of object lessons and the comparison of animals in real life. The next best means is perhaps by comparison and study of pictures, taken from life, of first-class animals. In this regard the pages of the FARMER'S ADVOCATE

long, wide and level. The hook points should not be broad or prominent, especially in the bull; they may be broader in the cow, but extreme width at that point is objectionable; a smoothly-turned form, without patchiness or prominences, being the ideal. The tail-head should be broad, level and neat fitting; the thighs broad, full and long, tapering gradually toward the hock; the buttocks and twist full and far down, especially in the bull. Good handling qualities of hair, hide and flesh are very important, as they are indicative of that indescribable property known as *quality*, which is a clear index of thrift, of a good feeder, and of first-class beef-making propensities. Good handling means a soft, mellow hide; not thin and papery, but rather thick and pliant, filling the hand well when grasped, and there is felt underneath it a peculiar softness even in lean animals, which is pleasant to the mind, and which, like charity, covers many faults. In this virtue the hair is abundant, soft and of fine texture, and there is sometimes found an under or second coat, of velvet-like feel, which it is pleasant to touch and not easy to forget. Other important points are the head and legs. The head should be of medium size, inclining to short rather than long, clean cut, broad between the eyes, and slightly dished; the horns mod-

erately short, flat and slightly incurving and drooping; the neck short, thick and strong in the bull, with a strongly-muscled crest; a large, full and clear eye, indicating masculinity, courage, spirit and vigor, without any tendency to viciousness. In the female: the neck longer and finer, the eye placid and gentle, and the expression of countenance full of feminine character. The legs should be medium to short, straight, standing firmly under the body, a fair distance apart, and the bone below the knee fine, flat and of good texture. The carriage and general appearance should be easy, active, sprightly, and a nicely-balanced development of all parts, perhaps best described by the word symmetry, should characterize the animal as a whole. Other things being equal, a shape-ly and well-developed udder on a cow of the beef breeds adds much to her appearance and usefulness, and should receive no small degree of credit.



ILLUSTRATING POINTS OF ANIMAL FORM.

from time to time afford helpful material by the reproduction of photographs of representative animals of the different breeds and types. The April 20th issue, without any premeditated provision for the purpose, contains good representations of the beef and dairy types in the photo-engravings of a Shorthorn and an Ayrshire cow. Of books treating upon the subject, "The Study of Breeds," by Prof. Shaw, included in our "Farmer's Library," is the most up-to-date, and is a valuable contribution to the available literature on the subject. Each of these classes is mainly designed in breeding and trained in practice and treatment for a special purpose: the one for the production principally of the largest quantity of high class meat in moderate superficies; the other for the largest quantity of milk of high-class quality. In the former the object is to convert the food consumed mainly into meat; in the latter, mainly into milk. In both types an essential qualification is a strong and vigorous constitution, which calls for a broad chest and sufficient depth and spring of ribs to afford ample room for the play of the vital organs the heart and lungs—which play so important a part in the maintenance of health in making plenty of pure blood, sending it in sufficient supply and vigor throughout the whole system, and in appropriating and assimilating food to the best advantage, giving a profitable return for what is consumed.

It may seem at first sight somewhat difficult to reconcile the indications of constitution in the two types, beef and dairy, from the fact that in the former we demand a broad breast, withers and chine, and full crops and foreflank, as among the principal requirements for robustness and vigor; while, on the other hand, the theory of a wedge-shaped, and even "a triple wedge shape," form for a dairy cow has been in some quarters preached with such extreme persistency that to combat or deny *in toto* the soundness of that doctrine of certain schools, and of a section of the dairy press, would doubtless be regarded as unpardonable heresy. An extreme view of that form would possibly lead one to fear a lack of constitutional vigor, as it seems to call for narrowness in the front quarters where the vital organs are situated, but if it is understood to mean not narrow before, but broader behind, it becomes acceptable and even defensible. Thinness or sharpness of withers in a dairy animal may be and is desirable when accompanied by good width through the heart, and good length or depth of ribs, affording ample room for the free working of the internal organs.

In judging beef breeds the following general rules are important and tolerably safe: Look for a compact form, wide and deep, and but moderately long in coupling; a good back, wide all the way from neck to tail and thickly fleshed, especially on the loin and upper ribs where the most valuable cuts of meat are found; wide and deep front quarters; smooth shoulder points; the neck vein and shoulder blade well covered with flesh; the shoulders, especially in the female, sloping back gradually, and thinner where they join the crops. Mr. Carr described a heifer at Warlaby as having "shoulders like a salmon," which well indicates the ideal formation. The chine and top of shoulders should be broad, especially in the bull, and the crops, the part just behind the shoulders, should be full and as nearly level with the shoulders and ribs as possible; the ribs should be well sprung, rounding out well from the spine—long, deep, close spaced, and coming well forward and backward; the foreflank full and deep; the hindflank deep, full and thick, making a straight underline, or nearly so, and the girth around the heart and hind-flank nearly equal. The hind quarters should be

erately short, flat and slightly incurving and drooping; the neck short, thick and strong in the bull, with a strongly-muscled crest; a large, full and clear eye, indicating masculinity, courage, spirit and vigor, without any tendency to viciousness. In the female: the neck longer and finer, the eye placid and gentle, and the expression of countenance full of feminine character. The legs should be medium to short, straight, standing firmly under the body, a fair distance apart, and the bone below the knee fine, flat and of good texture.

The carriage and general appearance should be easy, active, sprightly, and a nicely-balanced development of all parts, perhaps best described by the word symmetry, should characterize the animal as a whole. Other things being equal, a shape-ly and well-developed udder on a cow of the beef breeds adds much to her appearance and usefulness, and should receive no small degree of credit.

THE DAIRY TYPE.

*All the dairy breeds have certain features in common, though differing in breed character and peculiarities, and the ideal formation is becoming more generally accepted, approved and uniform, as it is becoming more generally acknowledged that utility and beauty are not incompatible in the dairy cow. The more important features of dairy form and function are much length and depth of barrel or coupling, indicating a capacity for large consumption and utilization of food; fineness of withers, thighs and limbs; width and openness of ribs, which should be long, with a deep downward and outward spring, and good space between the last rib and the hook point; a large spinal column, well defined and open spaced; the fore quarters lighter than the hind quarters, and spare, not fleshy; the back narrow at the withers, broad at the loin, and moderately so at the hooks; hind quarters long, broad and level; a straight back being preferred, other things being equal; thighs inclining to light, thin and more or less incurved, leaving room for the development of the udder, one of the most important features in the cow. In the scale of points adopted for the different dairy breeds, from 30 to 35 per cent. is credited to udder and teats, about three times as much as for any other feature. The ideal udder is well-balanced—that is, long, broad and deep, running well forward, and well up behind—evenly quartered, level on the sole, and not fleshy nor pendulous, and the skin should hang in loose folds behind when the udder is empty, and be fine, elastic and pliant; the hair on the udder should be soft, and the color of the skin a creamy yellow; the teats a good medium size and length, and squarely placed, well apart and pointing slightly outward; milk veins well branched and tortuous, and entering the abdominal wall well forward and through large orifices or milk wells. The milk veins increase in size with age, and are not a sure indication of deep-milking propensities, as they may be torpid, while in others the veins less prominent may be more active. The

Favors Co-operation.

To the Editor FARMER'S ADVOCATE:

The letter of Mr. Jas. Speakman, in your issue of March 20th, raises a point that is of vital interest to all farmers, namely, co operation. If the farmers would only combine, for their own protection, more than they do at the present, they would certainly reap the benefit. The low price of live hogs this season is an instance. Why cannot the farmers of this Province combine and build a co-operative packing-house at Winnipeg? There is no reason why it should not pay with proper management. The shares should be bought by farmers, who would then be personally interested in keeping up a supply of live hogs; they would also realize top prices for their stock. There is a factory like this at Brantford, Ont., which has been a great success.

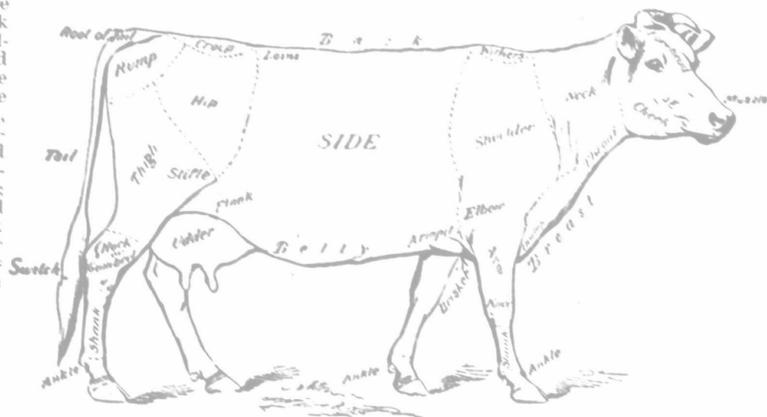
The same with binder twine. One year with another, Manitoba uses enough twine to keep quite a large mill busy. There is a farmers' twine factory at Brantford, Ont., that has paid its shareholders enormous dividends the last few years. Last year something like 200 per cent profit, and the year before, 1899, I am sure a factory like this would pay in Winnipeg, as Manitoba surely uses more twine than Ontario.

There has been quite a discussion about hail insurance. I enclose a cutting describing how the hailstorms are conquered in France and Austria, which I think will be of general interest.

Oakland Municipality, Man.

O. K.

[NOTE.—The clippings enclosed by O. K. describe at considerable length experiments conducted in Austria and France to prevent hailstorms by the use of explosives thrown into the upper air. It would certainly add greatly to the vocation of the agriculturist if he had a number of specially-constructed 100-ton guns located at strategic points on his homestead, with which, upon the approach of a hailstorm, he would open a fierce bombardment of the clouds. Of course, fireproof magazines pro-



ILLUSTRATING POINTS OF ANIMAL FORM.

vided with the latest improved combination locks would also have to be constructed for the safe-keeping of the explosives, or else the small boys would experiment on many phases of the effects of these high explosives as rain-makers, frost-averters, hired man awakens, dinner calls, etc.

The Brantford packing-house has been running only a very short time—too short to decide whether or not it is a success. On April 11th, many hogs were bought on the Brantford, Ont., market by outside firms at fifty cents per cwt. more than the Farmers' Packing Co. could afford to pay.

The Brantford twine factory has been a profitable concern, but has never paid anything like 200 per cent dividend. In 1898 they paid 60 per cent.; in 1899, 100 per cent.; and 1900, 90 per cent. Ed. F. A.]

Summer Feeding Trials.

One test was made at the Utah Experiment Station each year for four years, to compare soiling and pasturing. In all, nine cows were pastured for about 16 weeks, and nine were fed in the stable on soiling crops for the same time. The pasture-fed cows produced on the average more milk and fat and made a greater gain in live weight than the cows fed in the stable. The flow of milk, however,



KAPANGA.

First-prize mature Thoroughbred stallion at Canadian Horse Show, 1901.
OWNED BY DR. ANDREW SMITH, TORONTO.

was not so evenly maintained during the whole period.

A comparison was made, in five experiments, of the results obtained from one acre of land, when the crop was pastured and when it was soiled:

"One acre of soiling crops furnished feed for two cows for 108 days; produced 3,145 lbs. of milk and 147.9 lbs. of butter-fat, valued at \$23.67. One acre of pasture furnished feed for two cows for 102 days, and produced 4,047 lbs. of milk and 189.8 lbs. of butter-fat, valued at \$30.37. This shows an advantage of \$6.50 in favor of the acre of land used as a pasture, compared with the same area used for soiling crops. These results are not conclusive, however, for the soiling crops."

The effect of feeding grain to cows on pasture was studied during four years. In all, 28 cows were used in the tests, 14 of which were fed 4 lbs. of grain per head daily. The records of the cows fed grain were compared with those of the cows on pasture alone, for the four months each summer during which the grain was fed, and also for the four months following, during which all the cows were fed alike:

"The cows which received grain while on pasture produced more milk and butter-fat than those not receiving grain, yet not enough extra to pay for the grain fed. The cows fed the grain on pasture maintained their flow of milk better throughout the milking season than did those not receiving grain, and thus during the fall months they produced considerably more than the cows not fed grain—enough more to more than pay for the grain fed."

The Cow and Her Milk.

Professor Clinton D. Smith, after five years' investigation of the milk question, publishes the following conclusions: "First—A cow yields as rich milk as a heifer as she will as a mature cow. Second—The milk is as rich in the first month of the period of lactation as it will be later, except perhaps during the last few weeks of the milk flow, when the cow is rapidly drying off. Third—There is little difference in seasons as to the quality of the milk. While the cows are at pasture the milk is neither richer nor poorer, on the average, than the milk yielded when the cows were on winter feed. Fourth—The milk of a fair-sized dairy herd varies little in composition from day to day, and radical variations in this respect should be viewed with suspicion."

Delighted with the Bible.

DEAR SIR, I am a young girl, living at home. My father takes your valuable paper and we are always anxious to get it; my father would not like to be without it. As you are aware, I sent you the name of a few subscribers, for which I chose as my gift, a copy of the Bible. I received it lately in good time, and I am very glad to say it is a good one. I am very glad to see it. Hoping I may be able to send you some more names in the future.

The Military Tournament and Toronto Horse Show.

HELD APRIL 21ST TO 27TH, 1901.

It was first horse show, then it became horse show and military tournament, and now it is military tournament and horse show. When it was horse show it engaged one day, and was confined almost entirely to breeding and young stock, and was held and conducted as a farmers and breeders' exhibition, at a season when that class could attend, and also take their stock from home without interfering with operations on the farm and in the stud. Horse shows, however, took a turn, both on this side and beyond the lines, when the saddle and harness horse demanded and received more special attention, with the result that a remarkable work of improvement in these classes took place, until we see in competition from a score upwards in many classes, both in leather and under the pigskin. This is the outgrowth of a demand, and it is doing much to stimulate improvement in the breeding and fitting of this class of horse that moneyed folk want and will have. But the military tournament well, that spirit is in the air, and people want it; yes, and the very class who delight in good horses and owning them too, are by it drawn, with the result that the market

is improved and enlarged for these horses. So that whether we fall in with the turn of affairs or not, it is doing the horse interests a valuable service that will grow as it goes, and delay the age of the automobile, that sometimes stands as a bugaboo to half-hearted horsemen who have never experienced the thrill of holding the ribbons over an intelligent "actor" in a well-appointed conveyance. It now takes four days of three full sessions each to carry out the well-arranged programme of tournament and show, that is felt to be a real success when it is all over. The first day was designated farmers' day, when the chief classes of weight-pullers were gone through with. There was not, however, a crowded house of "horny-handed sons of toil" present, but a fair attendance of stockmen, who breed horses, and who seldom fail to attend functions of this nature. The classes were not large, but choice.

In Shires, there were only three stallions and three mares forward. Of the former, the unbeaten (in Canada) Belshazzar, owned by Bawden & McDonell, Exeter, Ont., won, while the best mare was found in J. M. Gardhouse's (Highfield) black filly, Victoria, foaled in June, '99.

There were some twenty Clydesdales, outside of teams, forward, not a big entry, but lacking nothing in quality. J. M. Gardhouse, Highfield, went to the top with King of the Clydes, the winner here a year ago, and in the fall, at the Industrial, as a three-year-old. Mr. O. Sorby's Sonsie Lass, forward in foal, was best mare.

The Hackney class was light, as were the Standard breeds, Coachers, and Thoroughbreds, although the last-named presented three newcomers, selected in England by Col. Dent, as qualified to get suitable remounts. It was one of these that captured the award for best stallion qualified to improve the breed of saddle horses and hunters.

There were the usual large classes of horses in harness, of high-class form and action, numbering

over a score of entries in several instances, and the saddle classes were sufficiently well sustained both in numbers and Thoroughbred form to show that a keen interest is taken in riding. The same was true of hunters and jumpers. Roadsters and ponies were not strong in numbers, but well bred and fitted.

The attendance was the largest in the history of the show, and well sustained throughout the afternoons and evenings, taxing the spacious Armories, outside the horse-ring, to the limit of its capacity each evening, and some of the afternoons, when considerably more than half the time was engaged with military displays and competitions that were inspiring and much enjoyed because the movements were exceedingly well executed, and not foreentertainment merely, but each exercise, whether tug-of-war, tent pegging, lance-and-bayonet, sabre-and-sabre, heads-and-posts, naval drill, or what not, represented actual military operations, and were conducted with that vigor and command that all admire. Good horses and well-developed men lent charm to this part of the programme, and when one wearies of the performances in the ring, well-attired ladies could be admired in the boxes, where there was evidently a rivalry for admiration in no slight degree. The scenes and events were pretty and pleasing, and much more elevating than the platform programmes known as special attractions presented at the autumn exhibitions.

CLYDESDALES.

A good entry of this class was expected, but only in three-year-old stallions was there a big section. Some six entries were made in mature stallions, but four were all that came forward. Messrs. Graham Bros. were absent and missed, but they have found it difficult to retain horses good enough for this show this season of lively demand. The four forward were the following: Cloth of Gold, exhibited by O. Sorby, Guelph; King of the Clydes, by J. M. Gardhouse, Highfield; Grandeur 2nd, by I. Devitt & Sons, Freeman; and Harmony, by Robt. Graham, Ringwood. They were not as uniform as we have seen, but they were all good in their own particular way, and might have been placed differently by other good judges. The decisions were made by Messrs. Jas. Henderson, Belton, and Geo. Cockburn, Baltimore. The competition for first place lay between King of the Clydes and Cloth of Gold, both four-year-olds. The first named, a big horse weighing 50 pounds over a ton, in nice form, has proved a wise choice for Mr. Gardhouse, who selected him as a thin colt just off the boat as a two-year-old. That was in the fall of '99. He was a sort of "diamond in the rough," and it needed only a winter's wise care to bring out some of his brilliance, as he won as a three-year-old the following spring, again turning down his rivals last autumn at the Toronto Industrial, and now goes to the top among the seniors. He is possessed of much Clyde character in ends, middle and timber, and he goes well at all gaits demanded of such a horse. He was imported by Dalgety Bros., London, Ont., and sired by Ringleader. Cloth of Gold was bred by Col. R. Holloway, Ill., and is a son of Mr. Sorby's Lord Charming, whom he closely resembles in



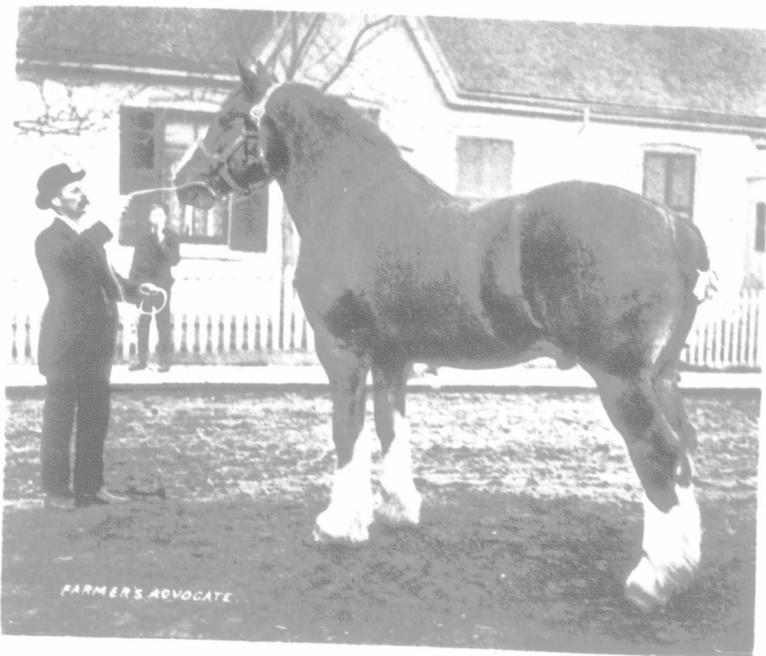
COUNTESS JOSEPHINE.

Two-year-old Hackney filly, from imported sire and dam, winner of Hackney Horse Society of Great Britain silver medal, Canadian Horse Show.

BRED AND OWNED BY H. N. CROSSLEY, ROSSETT, ONT.

form, but is chestnut in color. His dam was by that good horse, Cedric. Cloth of Gold weighs 1,950 pounds, and could spare some of his quality and still be a good one. He is not a big-boned horse, and he has lost much of his feather, which further apparently reduces the size of his timber, but legs of better quality, or pasterns of more desirable character, would be hard to find. His quarters and

thighs are of the bulging sort, his fore-end matches up, and his back and barrel leave little to be desired, and he goes with a force and dash that pleases. Harmony is a Scotch-bred four-year-old horse, by that good sire, Prince of Carruchan. He is not a big one, but very nice in all his parts, particularly so at the ground, and possesses a depth of chest that indicates a great constitution. He was



KING OF THE CLYDES [2569] (IMP.).

First-prize mature Clydesdale stallion at Canadian Horse Show, 1901.
OWNED BY J. M. GARDIHOUS-K. HIGHFIELD, ONT.

placed third, leaving Messrs. Devitt's massive son of Sorby's old Grandeur in fourth place. This is the largest horse in the lot, weighing about 2,200 pounds, and he is not rough; in fact, he is well proportioned and of good quality.

The three-year-old class was a particularly strong one of eight entries, from the studs of Robert Ness, Howick, Que.; Robert Graham, Ringwood; Robert Davies, Toronto; T. H. Hassard, Millbrook; Bawden & McDonnell, Exeter; and H. G. Boag, Churchill. The great Baron's Pride, that has sired so many Scottish winners since his stock has come to a showing age, was represented in two beautiful colts owned by Robert Ness. They are of the thick, filled-out sort that attracts the eye at once, and bigger than they appear. It was one of these (Copyright, a brown, with characteristic white on hind legs and in face) that won the 1st award. He was a good one last autumn, but he has gone forward well since then, and his victory was popular and deserving. A more upstanding colt, Lyon Stewart, shown by H. G. Boag, won second. He is by Lassudie Rover. He too was before the public last autumn, when he defeated Copyright at London. He is a flash colt, nice in all his parts and gaits, and will be a hard nut to crack when matured. Robert Graham's Sir Redvers, bred by Marquis of Londonderry, Seaham Harbor, Eng., and sired by Knight of Cowal, was the next choice of the judges. He is a very sweet, compact colt, of genuine Clydesdale character. Bawden & McDonnell's Lipton, by the great St. Everard, wore away the reserve ribbon. He is a big colt, with quality, and of the upstanding type, and is full of promise, being one that will continue to develop along desirable lines. After the show he was purchased by one of the judges, Mr. Henderson, in whose hands and in whose district he will do much good.

Three colts foaled in 1890 competed, all bred in Canada, and all good ones. Mr. O. Sorby's Charming Lad, by Lord Charming, would have won had he not favored a hind quarter, the result of a temporary strain, as he trotted. He is fine and well developed, possessing the sort of pasterns for which his sire is noted. J. W. Cowie's Bay Chief, by Lord Wellington, was placed at the front. He is a blocky fellow, of good type. Mr. Ness showed Laurentian, by Lawrence Again, here winning second. He is a particularly neat colt, of the tidy sort. Just one colt showed in the class for Canadian-bred Clydesdales, a two-year-old son of Erskine Macgregor, exhibited by D. Carstairs. He is a stylish fellow, that could have stood competition.

The remainder of our report will appear in next issue.

Out of the Fullness of His Heart.

SIR, I have only been taking ADVOCATE since 1st January, 1901, and am delighted with it, and think you have information in every number that every farmer ought to read.

W. W. SCOTT.

It will be wisdom to sow some mixed oats and peas on patches for soiling the cows in the stable in the heat of the dog days, when pastures fail and flies torment them, causing them to shrink in their milk.

The Little Chickens.

SPECIAL CARE FOR THE YOUNGSTERS.

The hatching season being now well forward, as the spring advances the farmer's wife is anxiously awaiting the results of her egg-hatching. As yet, comparatively few of us use incubators, but rely on the faithful (not always) old hen. She is usually faithful if you are equally so, but don't expect her to do it all. Of course, sometimes a hen will hide her nest away and bring out a healthy brood, but this is not a safe enough thing to depend on. I have usually good success with little chickens, but as yet this spring my hens are all laying, and not even the old "cluckers" seem inclined to sit. However, I am watching them, and shall do as I have done for a few years, improving in any way I have learned by observation or by reading during the past year. I am not at all anxious to have little chickens before the 1st of May, because April is such an uncertain month, and we are so busy, as a rule, with housecleaning and other spring work that if the little twitterers are around then they are liable to be neglected, and if a chicken is neglected during the first five weeks of its existence, it has a neglected look until the end of the chapter.

When I notice a hen setting, I let her sit a few days on china eggs, to be sure she will make a sitter. Before I set her for good, I take the box I wish her to sit in and wash it thoroughly, and if lice are around or have been, I paint it inside and out with liquid lice-killer or dust with insect powder, then some fine straw, and on top of the sod so the hen can step down easily, and not have to give a jump every time she gets on. Not that a jump would hurt the old hen, but often the little, tiny chickens that are to be completely ruined by these repeated jerkings. Before putting the hen on the eggs, I dust insect powder among her feathers and rub grease around her head. Some may say this is a lot of trouble, but I would far rather do it than bother with the young brood. On each day they should hatch, and in due time I get ready for the new family, and this is the way I do it:

A few days before, while the hen is off for her daily feed, I remove the eggs and wash them in lukewarm water, put in fresh straw, and sprinkle it with insect powder, if necessary. Of course, the eggs must be handled carefully. I always have a better hatch when I use moisture.

I do not believe in letting the chicks run wherever they will. I have lost too many from the depredations of cats, dogs, pigs, etc., and my losses have taught me a far better way, and one I would not willingly give up. I have frames made some ten by twenty feet or six by twelve feet, and higher at the north side. I do not like it too high, for the lower it is the warmer for the chicks. Over the top I tack cotton, and paint it well with linseed oil. This lets the heat and light in, and keeps the rain out. In one end of this runway coop I place the brood coop, made the same as I always have made them—A shape or half a barrel. The shape of the brood coop is immaterial. Do not let the chicks get cold and damp in the night, for by this one mistake whole broods die off or else they don't thrive as they should. I never set the coop on the ground; always have boarded floor, and on cold nights I put

down clean straw, but as the nights get warm I don't bother with the straw.

If I have a brood house for the hen and no coop runway as described above, I always cover the front of the coop with an old piece of carpet at night and on cold days or during a rain or wind storm. A windstorm hurts the downy little things almost as much as rain. Keep the little coops clean. I clean mine every day if I can possibly do so. I have heard some women say that little chickens did not need water, but that's a mistake. They need fresh, clean water every day, and on hot days twice a day. Fresh water kept in a shady spot will help them to grow fast.

Feed often, but feed only a little at a time, is the rule for young chicks—five times a day for the first six weeks. Don't leave food around for them to trample on; it only sours, and this causes bowel complaint. Bread crumbs moistened (not sloppy) is the best feed for a few days. Oatmeal porridge just the same as we eat for breakfast is the ideal food, and is not expensive chicken feed if one buys it by the barrel. This porridge fed alternately with the bread crumbs, and occasionally a little meat and eggs, and the rapid growth of the chicks will fairly astonish you. I often mix sand in their food, as I think even baby chicks need grit in their little gizzards to grind up the food. Lawn clippings are excellent green food for them, and it is an easy matter to sow lettuce broadcast over almost everywhere, as old hens as well as chicks relish lettuce.

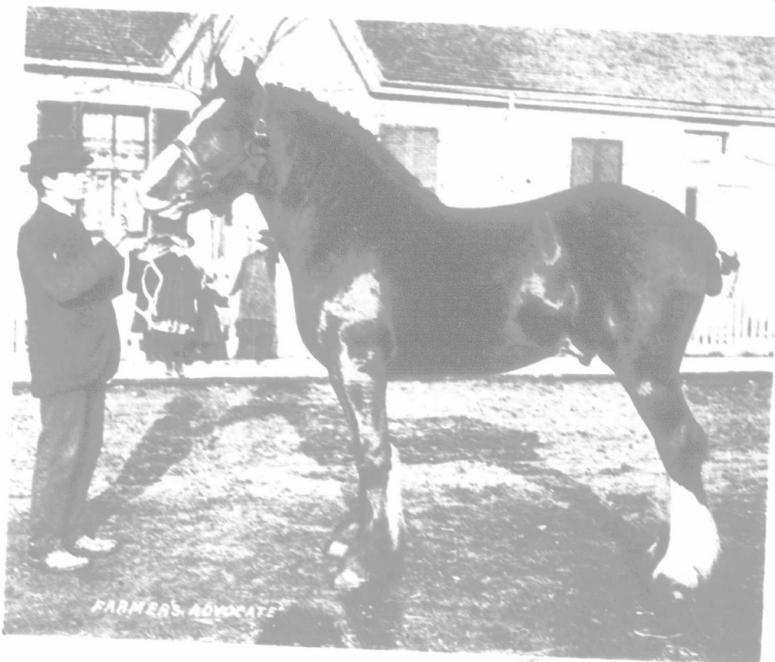
When six weeks old, the dangers of chickenhood are past, and then begins the feeding either for market or the laying stock.

I forgot to mention that often the last few days that a hen sits she gets restless, and I have found it a good plan to hang up something dark before her, and she seems to enjoy "cuddling" her coming brood in the dark. I never meddle with the eggs until all are hatched. I do not remove the chickens as they appear. They do nicely without anything to eat the first day or so. I always give the mother hen a generous meal of corn before shutting her up in the brood pen.

CARRIE HOLMES.

Lice: Their Work, and Remedy.

Two years ago I made my first attempt at poultry-raising. I bought eight dozen pure-bred Brown Leghorn eggs, and set them under hens the last week in April. The hens were set in the barn, away from the other fowls, and food and water kept before them always. All the eggs hatched but nine. Imagine how proud I was of my chicks. But, lo, it was to have a terrible fall. When my chicks were not yet two weeks old, they began to die, not by ones and twos, but by the dozen. They seemed stupid, their little wings drooped, they would not eat, and soon died. I was at a loss to find the cause, and went to a neighbor and described the case. He immediately said: "Lice." I came home and applied lard and coal oil (mixed) to the chicks' heads, and, sure, the lice began to crawl out. I only managed to save twelve—five roosters and seven pullets. The following summer I raised fifty chickens from the eggs the seven laid, and have now a flock of thirty fine Leghorn hens, which have averaged twenty eggs a day for the past month. I have learned several lessons from experience on raising



COPYRIGHT [2739] (IMP.).

First-prize three-year-old Clydesdale stallion at Canadian Horse Show, 1901.
OWNED BY ROBT. NESS & SONS, HOWICK, QUE.

poultry, but the hardest was losing so many chicks from lice. It is two years ago that my hens were so lousy. I at once fixed a dust bath for them, putting in occasionally a handful of sulphur; greased their heads with coal oil and lard every two weeks; thoroughly cleaned the henhouse, burned brimstone in it, then whitewashed every crack and

corner. The lice soon disappeared, and have not bothered since. I keep it as clean as I know how, and believe it is the secret of keeping away lice, and find prevention far easier than cure. I write this thinking it may be a benefit to some new beginners.

VINA.

Setting the Hen.

As a rule it is not wise to make a hen sit where she does not want to, because you may not only lose the eggs, but also a good deal of your patience. It is best to have the hens as tame as possible before setting. If the hen is in an out-of-the-way place when she becomes broody, it is well to allow her to hatch a clutch of chickens where she is. If it is necessary to move her, allow her to sit on the nest she chooses for a few days before moving her. Then move her to where she is to sit, at night, and she will not notice the change so much. A good nest for a sitting hen is a small or medium-sized box placed on end, with a narrow board nailed across the bottom of the front to keep the nesting material in. Then strips are nailed up and down across the front so the hen can be confined or released at will. In the bottom of the nest place a layer of earth or sod nicely hollowed out at the center. On this place a little chaff or cut straw. Do not have it (the straw) too short nor too long.

In selecting the eggs for hatching, use only those that are well shaped, rejecting all of abnormal size or with any deformity whatever. In order to secure a uniform hatch, endeavor to get the freshest eggs possible, those laid as near one date as convenient. In order to have them all come out about the same time, get those which are laid about the same time.

Many amateurs, in ordering eggs from a distance, do not seem to understand that in order to get a satisfactory hatch, such eggs should not be set immediately on their arrival. Turn the package top-side down, and let them remain that way for at least 12 hours. An oversight on this point has been the cause of many a breeder being denounced as a swindler, when, in fact, the whole blame rested on the purchaser.

Give the hen and nest a thorough dusting with insect powder before she is given the eggs. At night, when she has become accustomed to the nest, give her about thirteen eggs, more or less, according to the hen. It is well to set her in a cool, quiet place, where she will not be disturbed. Keep fresh water before her at all times, and feed her on whole grain, peas or corn. S. H. W.

Selecting Good Layers.

That the majority of hens are capable of producing many more eggs than they usually do, is undoubted. The head of a good layer is finer and not so thick or coarse and heavy looking as the inferior layer. The eyes are brighter and bolder, and the combs, as a rule, are larger. It is considered that cocks that have been bred from a good laying strain can be distinguished. They are more precocious when cockerels, they begin to crow much sooner, and they do not grow very large. There are very few poultry-keepers, however, let their experience of fowls be ever so considerable, who could select their birds from such characteristics. A more satisfactory method is to take note of those hens that are busy ranging about the field or runs late in the evenings when most of the others have gone to roost, or those that are the first out in the morning. These are most invariably free layers. There is no doubt that the faculty of laying is to a large extent hereditary, and that pullets hatched from eggs laid by prolific layers will themselves be good layers. The eggs, again, of these pullets, particularly if they are mated with male birds bred from free layers, will produce chickens that should again inherit this tendency. The average number of eggs laid by the flock after two or three years of this selection will be largely increased. Poultry-keepers who wish to become possessed of hens that are really first-rate layers should take the trouble to notice those hens that pay most frequent visits to the nest. When these hens have laid, their eggs should be marked, and only those eggs retained for setting purposes. Another method by which the egg supply can be increased is to weed out annually all the old hens that have laid for two seasons. Where there are a large number of fowls, it is easy to recognize the age of the hens by marking all the young pullets by placing a ring on their legs. If these rings are varied every year, either in thickness or in some other way, the ages can be told at once on catching the bird when roosting. And if all hens not required for setting are removed from the rest directly they show signs of broodiness, and placed in a light cage with some food and water, they will quickly begin to lay again, instead of wasting many of their eggs on the ground.

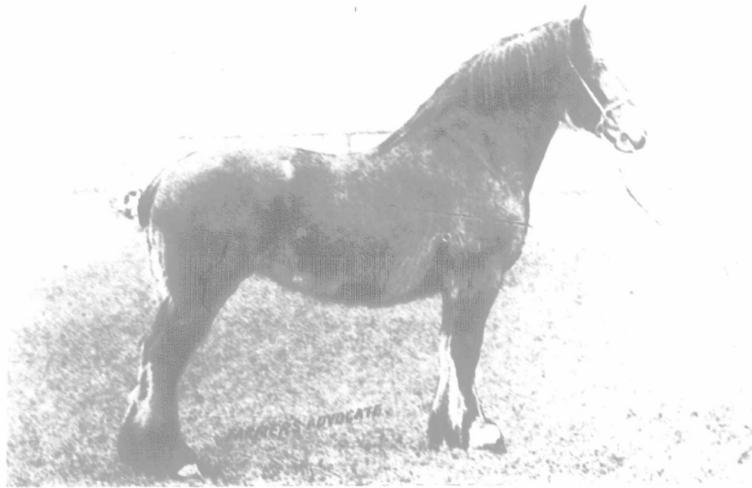
When the eggs are laid, it is well to let them come to the nest for a few days before they are set. After they are set, the sitting process is done in the usual way.

Weak Colonies in Spring --- When to Unite Them.

When colonies of bees come out weak in the spring, it may be beneficial to put two or more of these weak colonies together, so that one strong colony may be made from several weak ones. Some suppose that if any uniting of weak colonies is to be done, the earlier in the spring it is accomplished the better the results will be, but from years of experience along this line I am positive that such early uniting is a mistake. If these colonies are left to themselves, the best we can hope is that they will become strong enough in bees and honey for winter; while by uniting just before the honey harvest I secure a good yield of honey from the united colony and get the two in good condition for winter. My plan of work in uniting, and looking toward this end, is as follows:

As early in the spring as the bees can be looked over, all of the weaker colonies are shut on as few combs as they have brood, by using a division-board to contract the hive. They are now left till warm weather comes, being sure that all have stores enough where they can conveniently reach them to carry them until this period. They are now built up as rapidly as possible by reversing the brood, etc., so that by June 1st the best of them will have five frames of brood, others four, and so on down to one for the very weakest. As soon as the best has its five frames filled with brood, down to the very bottom corners, a frame of hatching brood is given to one having but four frames, and an empty comb put in its place.

In taking a frame of hatching brood in this way I generally take all the bees there are on it right along, only being sure that I do not get the queen, so that all the young bees on this comb help to give strength to the weaker, as the younger bees will not return to their old home.



MOSS ROSE.

A champion Clydesdale mare of Scotland, dam of imp, Montrave Matchless. PROPERTY OF LEVIE S. ROWLES, SPRINGVILLE, ONT. (SEE GOSSIP, PAGE 253)

In a few days a frame of brood and bees are taken from each of these two five-frame colonies, and given to the one having but three frames, and so I keep taking till all have five frames each.

Do not make the mistake some do and try to strengthen the very weakest first, for by so doing from one-half to two-thirds of the brood will be liable to perish with some cool spell, as these last colonies have at this time all the brood they can properly care for.

By the above plan we are always safe, and advancing warm weather is in our favor also. In a few days after all have five frames of brood, we are ready to unite, and if all has been done as it should be, the uniting will be done about the time white clover begins to yield honey nicely.

To unite: Go to No. 1 and look the frames over till the queen is found, when this frame having the queen on it is set outside the hive. Now spread the frames apart in No. 2, when the brood, bees and all, from No. 1 are carried and placed in each alternate space between the frames of No. 2, closing the hive. Return the frame having the queen on it to No. 1, placing beside it an empty comb; adjust the division-board and the work is done. In two or three days, put the sections on the hive No. 2, and see what a pile of honey they will store up. At the same time place an empty frame, having only a starter in it, between the two filled ones in No. 1 and in a few days you will have a frame filled with as nice worker-comb as you ever saw, which is much cheaper than to buy foundation. Nearly all the old bees carried to No. 2 will have returned by this time, so that No. 1 is a splendid nucleus, just right for building straight worker-comb, and by giving empty frames as needed, this colony will be in good condition for winter, while No. 2 will have given three times the honey the two would have done if left to themselves, or had they been united in early spring. — G. M. Doolittle, in the *American Bee Journal*.

The Grain Values of the Past Century: Especially Since 1845.

It was in 1845 that the great disaster of the Irish famine passed over the land. There are many who have ever considered and kept the year as the beginning of a new era of prosperity, not alone in agriculture, but in everything which goes to make up the world's progress and the advancement of mankind. Like many other events in the history of the beautiful Isle of the Sea, it came as a blessing in disguise, and who can now estimate the enormous advantages to the world at large from that great "trek," if I may so speak, which resulted in the English language and the Irish race overrunning the world. This is, however, by the way, and we shall now glance at the effect produced on agriculture by the crisis in Ireland. It is generally conceded that the repeal of the corn laws was the direct result of the conditions brought about by the famine. No doubt the country had been for some years passing through great changes of opinion concerning the tariff regulations, but it required a national calamity to bring the people face to face with the stern necessity for opening their ports once and for all to the foodstuffs of the world. To Sir Robert Peel and Lord John Russell belong the honor of getting this great measure passed by Parliament.

It was introduced in January, 1846, and passed on June 25th of the same year, and, contrary to the general expectation, the price of grain did not for some time recede very seriously. The owners of land had grants given them by the Government for improvements on their estates, such as draining, etc., and the rentals were well maintained. The discovery of gold in Australia, and the great expansion in the foreign trade of the country, along with the extension of the railway and telegraph lines at home, continued to produce a period of great prosperity. Under the above conditions the price of grain continued steady for some years, as is seen from the fact that some nine years after the repeal, or in 1855, the price of wheat reached the high-water mark of 74s. per qr. of 8 bushels — about \$2.25 per bushel.

Since then, however, the price of wheat has been steadily declining, until in the last week of September, 1891, the weekly average for the above grain was returned at 19s. 6d. per qr. — a memorable incident in the history of grain values.

It may be of some interest to your numerous readers to give a glance at the grain values during the first half of the century now closed, to compare or contrast them with present rates on cereals. In the opening years we find extremely high prices prevalent for the three staple grains, in 1800 wheat being quoted at 113s. 10d., barley at 59s. 10d., and oats at 38s. 1d. per qr. of 8 bushels. These extraordinary prices were, however, exceeded in the dark year of 1812, when wheat rose to the record price of 126s. 6d.; barley, 68s. 9d., and oats, 44s. 6d. per qr. To compare these figures with the present price of those grains, we may take the Imperial average price returned for the week ending Feb. 28th of the present year: Wheat, 26s. 1d.; barley, 25s., and oats, 17s. 7d. It will be observed by the above that there is a fall in the price of wheat of \$25 a qr.

since 1812, and it is interesting to note that the two grains, wheat and barley, in tumbling together have entirely lost their relative values. It was generally considered that the price of barley kept close to half the price of wheat, and oats one-third of the average quotations for the latter grain. This was their old-time proportion to each other, but we now find that they have settled into a groove, out of which it is very doubtful they will ever move — at least in an upward direction. The wheat-grower (outside of the Argentine or the virgin prairies of the Northwest) has certainly a poor lookout as things stand at the present. The writer has a distinct recollection of the effect produced on intelligent Old Country farmers when wheat from abroad was delivered in London at \$1.25 per bushel. This price left them without any profit in growing, and the fall since that time only indicates their loss in the production. In our own beautiful Ontario, where so much can be made of our natural fertility, it is surprising (at least, to an Old Country man) that there should be so much wheat grown in the Province. This grain, for one reason or another, gets spirited out of the country, carrying with it the fertility of our land, besides a great part of our live-stock products, which might easily be produced at home if the great export of wheat was sent over *only as flour* and the by-product fed to our stock. As things are, a poor man can't afford to buy either bran or shorts. Even with the splendid prices paid for hogs, I do not believe one could profitably buy either of those products, which are yearly sent out of the country in enormous quantities by the exportation of our wheat. In conclusion, I may say that our best efforts must be directed to the *building up of our live stock*, for which our fair Dominion is so well adapted, and which will be found, after all, to be our mainstay and sheet-anchor in the years to come.

J. G. DAVIDSON.

HORTICULTURE.

The Farm Garden.

I will take up the cultivation of celery first, as it is the first to be sown. Having secured a packet, or ounce, of "Giant White" seed, secure a few boxes four inches deep, as wide and as long as you wish. Get the very best and richest of well-pulverized earth, and place in box about three inches; over the top of this, about half inch of sand. Before placing earth in box, it is well to thoroughly heat the earth in oven: it will kill any insects that may be lurking in the earth to destroy the plants. About the last week in February sow the seed: keep warm and well watered. The plants remain in boxes till the hotbed is ready, then transplant in hotbed in rows, each plant separated so they can be easily lifted out to be placed in trench after. If the spring is early and the trenches can be made, the plants may be taken from box to trench, and the trench covered nights and cold days till the plants are well started. I have tried planting on level ground, the deep, narrow trench, the shallow trench, and the deep wide trench, and in every case the deep wide trench gives the best satisfaction. Take horse and plow and throw out as much of the trench as possible, then dig to the depth of about two feet, and about the same in width. In bottom of trench place about six inches of well-rotted manure, and over it put about three inches of soil from top of trench. Leave the center a few inches higher than sides. Plant celery in center of ridge, and when watering be sure and pour the water along the sides. By having a ridge in center of trench, it keeps the water from touching the plants. Have a few boards to lay over the top. Do not let too much sun or too much water get on the plants. Now, this seems a lot of work, but you can grow an immense lot of celery in a very small piece of ground. It will well repay you for all the trouble, and will be found the best tonic for nervous diseases. The next on the programme is the tomato. The same kind of boxes and earth will do. Sow no later than first week in March. Give as much sunlight as possible. When the hotbed is ready, in the part you wish to transplant tomatoes put at least six inches of very stiff clay. Transplant the plants about four to six inches apart. Let them remain in hotbed till safe from June frosts; by that time the plants will be in bloom. Do not have the ground too rich for tomatoes; the lighter and drier the better. Make your holes about three feet apart. With a trowel or knife cut out a square piece of earth each side of the tomato plant. Lift out the plant carefully, so as not to disturb the roots, and place in hole, clay and all. By so doing the plant will not notice the removal, and will continue to grow right along as if nothing had happened. Give the plants a good watering once or, at most, twice, and keep well cultivated. The plants will be the better for a protection from heavy rains and hail: old sacks fastened to sticks answer very well. In a very short time nice large, luscious fruit can be gathered. I have gathered twenty-one pails from fifty plants or vines.

Cabbage is third on the list. In this list is included cauliflowers, Brussel's sprouts, broccoli, etc. If a few very early heads of the above are wanted, sow in boxes about the middle of March, but for the main crop sow in hotbed and transplant to open ground about the last of May or first of June. For cabbage worm I use plenty of salt: it causes the heads to grow rapidly and harden.

Cucumbers, pumpkins, squash, etc.—Take a few turnips, scoop out the center, fill with earth, plant a few seeds in each turnip in hotbed, and when safe from frost plant in open ground well prepared and rich. Be sure and take up the turnips and not disturb the roots, and bury the turnip, leaving two or three plants in each.

Beans and corn.—I plant in hills and keep well hoed. I may say just here that weeds should never be allowed to grow in garden. I keep the harrows going where I intend planting the beans, corn, etc., planting near each other the variety of vegetables that need planting or sowing early.

For peas, make a trench, either with spade or plow, about a foot deep and wide; fill in about half foot with well-rotted manure; cover up level with dirt: sow two rows to each trench, and you will be surprised at results, especially if you use McLean's Little Gem.

Beets. For early beets sow as early as the ground can be worked, and continue to sow every two weeks till the 1st of July. Sow thick, and thin out for greens—nothing better.

Onions.—My greatest difficulty has been to get the ground hard enough. I like a garden long and narrow. I plow the ends first, and when plowing the rest of the garden I get the ends well packed in turning, and use the ends, or end, for onions. Plow the ground deep, pack hard, and keep about an inch well worked and loose: the results will be marvelous.

Radishes.—I sow between trenches of celery, and have splendid success.

I have never used the horse hoe in garden: have always used the hand hoe, and always keep clean of weeds.

Assonboia.

J. B. POWELL.

Adorn the Home Surroundings.

At a meeting of the Western Horticultural Society, held in Winnipeg on April 16th, Mr. Bedford spoke on the laying out of the grounds of a village or city lot. Many of the good points brought out were as applicable to the farm home as to the town or city one.

He recommended that the grounds be laid out so as to show the house to best advantage, and to give an artistic, pleasing and homelike appearance. He would have a clear space for a lawn directly in front of the house, with a gracefully curved approach or driveway coming in from the side. To screen the vegetable garden or the back yard from view, a hedge serves best. For this purpose the native maple answers well, using small plants, planted one foot apart, and cut back severely. Hedges should be cut back three or four times during the season, but not later than early August. Hedges will not thrive under shade, and the ground must be kept thoroughly cultivated for three or four feet on both sides of them to insure rapid, healthy growth. The caragana or Siberian pea also makes a good hedge plant. The Asiatic maple is perfectly hardy, and makes a very handsome hedge, while the snow-berry is best for a small border hedge.

In setting out trees and shrubs, place the larger varieties in the background, and group them in clumps, using a number of varieties with foliage of different shades, in order to get better effects. In the borders, use curved rather than straight lines. With trees and shrubs for a background, perennials in great variety may be used most effectively along the edge of the borders.

At the Brandon farm they now have between 350 and 400 varieties of trees and shrubs, 300 of which are now classed as perfectly hardy. Of the larger trees suitable for a background, the Russian poplar was specially worthy of a place. It is perfectly hardy, and makes a clean, handsome tree. It should not be pruned from the trunk, as it is liable to sun-scald. The birch is another tree that is recommended. There are three varieties of it native to the Province. The birch is very easy to transplant, but one of the most difficult to grow from seed.

Of shrubs, the following varieties are specially adapted for planting, being hardy, easily obtained, and giving very satisfactory effects. They may be set out in clumps, or as best may suit the location: Caraganas, over a dozen varieties; Tartarian honeysuckle, 4 varieties; lilacs, in variety of which the Charles X. is by all odds the best. There are also several natives worthy of attention: The Potentilla, a yellow flowering shrub that continues in bloom throughout the season; Spiraea, High-bush cranberry, and also the Douglas Spiraea, which is a free bloomer with brilliant red blooms. Rosa Rugosa, or rough-leaved roses, very handsome single blossoms. The hardiest of these are Baron Prevost, Madam Plantier, Stevenson's Rose, and Gem of the Prairie. It was pointed out that roses require a very firm soil. Mr. Bedford also mentioned a number of hardy perennials, and indicated briefly the best methods of cultivation. Of these, the Iris, Larkspur, *Lychnis Hybrids* or Scarlet Lightning, Chinese Bell-flower, Gas Plant, Angels Breath, and a number of others were specially recommended. The peonies, of which there are now an immense variety, are one of the most gratifying perennials, being free bloomers and perfectly hardy.

For seeding down a lawn, he recommended the following mixture: Native ryegrass seed (*Agropyrum tenerum*), 50; Canadian blue grass, 25; and Kentucky blue grass, 25. The ryegrass comes away quickly, and serves as a shelter for the more tender blue grasses, which will eventually choke out the ryegrass and make a fine, rich-colored sward.

Timely Suggestions.

Those who are growing flowering plants in hotbeds this season, should now have their transplanting well under way. If the seedlings are transferred to boxes, and set out about two inches apart each way, much stronger plants will be in evidence when the time arrives for planting in permanent location. The practice of thinning out in the seed-box is not to be recommended.

Herbaceous perennial flowers will require to be stripped of their old stems, and a light digging (not deep enough to disturb the roots) will materially enhance their vigor. Should any removals be necessary, they may be safely accomplished now.

In the vegetable garden, lettuce and parsnips should soon need thinning. It is very essential that the latter be thinned when very small, as the operation is difficult after any size has been attained. A sowing of raddish will now be in order, and peas, beets and carrots may be sown with safety. Do not forget to plant a quantity of yellow Dutch onion sets, as they proved specially valuable last year, on account of the total failure of seed onions. The asparagus-beds will be benefited by a light spading, and a liberal dose of salt, sown just previous to rain, will add much to the productiveness of this vegetable.

QUESTIONS AND ANSWERS.

1st. Questions asked by bona-fide subscribers to the Farmer's Advocate are answered in this department free.
2nd. Our purpose is to give help in real difficulties; therefore we reserve the right to discard enquiries not of general interest or which appear to be asked out of mere curiosity.
3rd. Questions should be clearly stated and plainly written, on our side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.
4th. In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

A SEQUEL TO CASTRATION.

I castrated a colt about fourteen days ago. That night he swelled badly, and has continued to do so. What seems to be water has formed between the skin and the flesh. I thought at the time that it was due to leaving him outside at nights, which are cold. The swelling is now over the whole belly, and gives an offensive smell. The cutting was done with a string, the skin over the testicle being cut off and not scraped back. I think he will die. What medicine could have been used to advantage?
Alta.

E. FANKHAND.

[The symptoms submitted point to germ infection. The proper treatment would be to puncture the swelling at the point of the sheath and let the watery material drain off; also reopen the scrotum, so that any pus present can escape. Clean fingers, dipped in some antiseptic, such as a carbolic solution, 1 to 50 parts of warm water, should make the opening, and some of the antiseptic be used to wash out the parts. The colt should not have been left out over night, but should have plenty of exercise on fine days.]

PROBABLY HEMATURIA IN HEIFER.

Please prescribe for bloody murrain in a yearling heifer. Is it likely to occur again? She is fed on hay, oats and mangolds?
N. T.

[You probably mean bloody urine (haematuria). I have never heard of bloody murrain. In European countries there is a contagious disease called foot-and-mouth disease, or murrain, but it has never been seen in this country, and it is not probable your heifer has anything of that kind. You should give symptoms when you are asking for advice. I have, on different occasions, called the attention of subscribers to the necessity of giving minute symptoms when asking for advice for sick or injured animals. You give no particulars at all, simply ask for a cure for a disease that does not exist. I expect you mean bloody urine. The treatment for this is to keep the heifer quiet, in a comfortable box stall; feed liberally on nutritive food. If the bowels are constipated, give about 1½ pints of raw linseed oil. Give 1 ounce tincture of iron, mixed with ½ pint water, as a drench, three times daily until blood ceases to pass in the urine. This disease is liable to be confounded with red water. In haematuria, you can see the little blood clots in the urine; in red water, no clots are formed. Of course, there is a liability to a recurrence of the disease.
VKT.

NOTE.—"Bloody murrain" is a term we have heard for many years. Dr. James Law classifies it under black-quarter, sometimes called anthrax, with extensive engorgement of a shoulder, quarter, neck, breast, or side. It is most frequent in young and rapidly-thriving stock, and runs its course so quickly that animals are usually found dead in the field as the first indication of disease. The first symptoms are fever, plethora, stiffness, tenderness, swelling, followed by yellow or bloody oozings. Recoveries are the exception, and often slow and tedious.—ED.]

REPEATED ATTACKS OF INDIGESTION IN MARE.

I have a mare, ten years old, that aborted two years ago. Since then she occasionally gets attacks of colic. When working, perhaps an hour after noon, she shows signs of pain, and will want to lie down in harness. When taken to the stable, she will lie down and roll as if in acute pain, repeating this every few minutes till relieved by raw linseed oil, laudanum and sweet nitre. She is carefully fed on good hay, a few roots at noon, and oat chop in moderate quantities, according to her work, three times a day. She is always in moderate condition, and never worked very hard. How and what should I feed this mare to prevent these attacks, and what should I give her should an attack occur, and what drugs should she have after an attack to tone her up?
D. L.

[Your mare has weak digestive organs. In order to prevent attacks of colic or indigestion, she should be very carefully fed on food of first-class quality. Feed in small quantities. Give hay only twice daily, morning and night, and only in limited quantities. Feed grain four times daily, giving only the same amount in four feeds that you usually do in three: water before meals, not allowing any water after. Do not work or drive soon after meals, nor give grain shortly after a long drive. Feed a little ground ginger, say a teaspoonful, in her feed once daily. This will aid digestion by increasing the secretion of digestive juices. The treatment you mention is all right in case of an attack. If this fails to give relief, repeat in one and a half hours, and if this should also fail, you had better send for your veterinarian, as the disease will then require treatment according to complications.]

WORMS IN COLT LYMPHANGITIS.

1. I have a colt, twenty months old, which passes worms about an inch long. He is in fairly good order, but is not growing much. When he is let out he will eat the dirty straw that is around the yard. What will clean him out?

2. About a month and a half ago, one of my horses took a sore leg. He was all right the night before, but in the morning one of his hind legs was swollen twice its natural size, and so sore that he could not put his weight on it for three days; it then got better, but the swelling did not come all out, although I bathed it with hot water and rubbed it well with spirits of camphor. Three weeks after the first attack, he took the same thing again, and was lame for three days. He is not lame now, but the leg is still swollen. What shall I do for it?

J. W. M.

[1. If the worms are about the size of a knitting-needle, pointed at one end, and from 1 to 1½ inches long, they are pinworms, and confine themselves to the rectum or back bowel. Horses affected with this rub their tails, and generally show a white slimy substance around the anus. Give a physic of Barbadoes aloes, 8 drams, and one teaspoonful each of baking soda and ginger, mixed in a pint of warm water as a drench. Now give an injection of warm water to clean out the bowel, and follow it with one of salt and water, one ounce of salt to two quarts of water, or a decoction made by boiling half a pound of quassia chips in one gallon of water. The eating of dirty straw indicates indigestion, for which the colt should have, after the above physic has operated, soft food three times a day, to which has been added a teaspoonful of the following mixture: Ground gentian root, baking soda, ginger and sulphate of iron. It would be well to get a quarter pound of each thoroughly mixed, which should be enough to tone up his system. If the colt passes any long, round worms, give after the physic and before the tonic, raw linseed oil one half pint, mixed with one ounce of spirits of turpentine.

2. The swollen and sore condition of the legs points to lymphangitis, big leg, or weed, due generally to overfeeding, lack of exercise, or sudden changes from work to idleness, or from a poor to a rich diet. A horse once attacked is liable to have the trouble recur, and, as a consequence, a chronic enlargement or thickening of the limb. The treatment should consist of limiting the feed and giving a purge. Give Barbadoes aloes, 8 to 10 drams, and ginger, 1 tablespoonful, in a pint of warm water. Bathe the leg for an hour with hot water in which the hand can be borne, rub thoroughly and bandage. A teaspoonful three times a day of saltpetre sulphur and gentian, for two weeks, will improve the condition of the blood.]

CHRONIC CONSTIPATION IN COW.

I have a well bred Jersey heifer, three years old, which had her first calf three weeks ago. She seems to have trouble to pass her manure, strains, and forces her parts out very much while straining. What she does pass comes away in small quantities, and often. I noticed it first last fall just before she went into the stable for winter. She then seemed constipated. We have fed her ground oil-cake and ground flax at times with her chop and cut corn-stalks and oat straw, with some hay. Her hair has not looked right all winter, and since she has started milking, she is coming down in flesh. She eats fairly well, and gives about twelve quarts of milk per day, which all goes to the calf. Could you suggest a remedy? Her skin seems tight, especially across her loins. She gives promise of being a valuable dairy cow.

A. C. M.

[Your cow has chronic constipation. I would advise the following treatment: Give one pound Epsom salts, dissolved in one and one-half pints of warm water, and given as a drench. Feed nothing but a little bran for twenty-four hours after giving drench. Then get the following mixture: sulphate of iron, powdered gentian, powdered ginger, bicarbonate of soda, of each three ounces; powdered nuxvomica, two ounces. Mix, and make into twenty-four powders. Give a powder every night and morning. If she will eat them in her dampened food, it will be all right; but if she will not take them that way, you will have to shake one up with one-half pint cold water and give as a drench. It will be better to repeat the prescription. If at any time the feces become dry and harder than normal, give a dose of Epsom salts, say about one-half pound.]

SKIN DISEASE IN MARE.

Please give information about a mare ten years old. She seems to be in good condition, but as soon as warm weather comes she begins to rub and bite herself, and gets scaly all over body and neck. I feed her two pounds of oat chop and hay three times daily.

F. K.

[Your mare is predisposed to eczema. As a preventive, give her a purgative of eight drs. aloes, two drs. ginger. After the bowels have regained their normal action, give two ozs. Fowler's solution of arsenic, mixed up with one half pint cold water as a drench, and morning for some weeks. If the itching should repeat, wash the parts with a solution of salicylic acid, and then apply a solution of salicylic acid, twice daily: one part salicylic acid to three parts water.]

LAME MARE.

I have a nice Standard bred mare, 6 years old, that is lame in the left fore foot or leg. About two years ago she got lame in the right foot or leg, and was taken to the best vets. convenient, but none of them could locate the lameness. She was blistered from shoulder to foot without any apparent benefit, but she finally got better, and is now sound in that foot. About six months ago she got lame in the left foot. I had her shoes taken off, and she got better, but limped a little occasionally, and sometimes appeared altogether well. About three weeks ago I got her shod, and have been driving her some, and she has been getting more lame every time I drive her. I drove her a few miles last night. She was pretty lame when she started, but got over it after driving a mile or two, but this morning she is very lame. It appears to be difficult for her to put her foot ahead, and the muscles of her neck, from the point of the shoulder up, raise out as large as a man's arm when she steps. The temperature of that foot is about the same as the other, and unless she is very lame she stands as firmly on that foot as on the other. There does not appear to be any soreness or swelling. She is in foal.

R. H. HAWLEY.

[From symptoms given, I think your mare has navicular disease, and a cure, in all probability, cannot be effected. Repeated blistering around the coronet, and a long rest, will help her, and possibly effect a cure. If she become so lame that she is useless, you can get a veterinarian to perform neurotomy (removing the nerves of the foot). This will cure the lameness, but not the disease, and she will be liable at any time after the operation to become entirely useless, while, on the other hand, she may last for years.]

LAME STALLION, ETC.

I have a seven-year-old stallion, one of whose fore knees has a lump on it that is just as hard as the bone itself, and he is lame when he trots. What can I do for this? I have also a mare, seven years old, that is very dull. When she was five, she was smart and lively, but now is slow and dilatory. She only had one foal, and is with foal this year. One of her hind legs swells up in the fetlock, and will stay swollen for a week at a time. What can I do for her? She keeps her head down to the ground, and can hardly be made to trot.

Can a male pig be drugged so as not to breed, as I bought one and can raise no stock?

H. M.

[1st. From symptoms given, I would say that your stallion has an inflammatory disease of the knee, which causes an exudation of soft material which is becoming converted into bone and joining some of the bones of the joint together. It is possible the lameness might be cured by firing and blistering the joint, which should be done by a veterinarian.

2nd. There may be something wrong with your mare's teeth which prevents her eating enough to give her the spirits you desire. Have her mouth examined, and if the teeth require dressing have them attended to, but you should remember that a pregnant mare becomes more and more sluggish as pregnancy advances. Regular exercise and bandaging the leg while in the stable will prevent the swelling.

3rd. No.]

LAMPAS IN FILLY.

I have a fine young mare, rising three years, due to drop her foal in June. She is in good condition, but since a few days ago does not eat her hay well. My blacksmith says she has lampas; the gums are swollen out past the upper front teeth. What is the cause and cure for this disease? I receive your valuable paper, the ADVOCATE, and should like to see it in the hands of every farmer in this country where agriculture is so much neglected and less understood.

WM. MACKINTOSH.

[The filly has lampas, which is not a disease, but simply a swelling of the gums just inside the upper front teeth, caused by the shedding of the first teeth and the introduction of the new ones. Some authorities claim to believe it is a provision of nature to protect the young teeth from injury. The frequent treatment administered by blacksmiths and others, of cutting the affected parts roughly or burning them with a hot iron, is barbarous and useless. The feeding of corn, peas or whole roots as a treatment to break down the swelling is also cruel and useless. Ordinary cases need no treatment, as a cure will come of its own accord when the new teeth are well grown out. When the swelling projects below the table of the teeth, incisions may be made close to the teeth in order to relieve the congestion. An incision made back in the roof of the mouth is liable to dangerous results by opening a large artery in that position. After scarifying the swelling slightly, apply, a couple of times a day, alum water alum two teaspoonfuls to a pint of water. The food should be soft and of a nutritious character.]

LUMP ON PASTER OF HORSE.

I have a four-year-old very clean-limbed horse that has a very slight enlargement about half way between hoof and fetlock on each side, not in front or like ringbone, not low enough for sidebone, I think. They can be felt, but barely distinguished by sight. No lameness. Is it likely to grow, or would you advise treatment? If you do, kindly give directions.

F. M.

[We believe the enlargements to be the natural articulations of the os suffraginis and os coronae, the two bones between the fetlock and hoof. They are therefore not diseased conditions, so that no treatment is necessary.]

WEAKNESS OF FORWARD ANKLES IN THREE-YEAR-OLD ROADSTER.

I have a road colt, rising three years old, that knuckles over in the front fetlock joints. He has done so ever since he was foaled. He appears to be worse when he is backed up; but can trot along, and you would never know that there was anything wrong with him, and can stand perfectly well. Would you advise getting leather leggings made for him that would fit tight around his legs? Would getting him shod with a high calk in front and none at all behind do him any good? Please let me know what would be best to do, and if he can be cured?

W. S. F.

[Congenital weakness of the ankles that continues until the colt is three years old is a condition very hard to improve. It is due to a weakness of the extensor muscles, those on the anterior portion of the forearm, the tendons of which extend down, one being attached to the bone just below the fetlock joint and the other extending to the bone of the foot. The flexor muscles, those on the posterior portion of the forearm, are abnormally strong, and by their strength cause flexion of the fetlock, which should be counteracted by the anterior muscles. Do not shoe the colt as mentioned; it will do harm, by placing the foot in an abnormal position. Leggings such as you suggest, if nicely made, so as to not scarify, may benefit the case. A blister repeatedly applied to the anterior muscles mentioned will also do good.]

Miscellaneous.

THICK AND THIN CREAM.

1. I should like some light as to the effect of leaving say a half-inch of the skim milk immediately under the layer of cream, where creamer cans are used, and drawing it off with the cream. The idea is not to lose any butter-fat in skimming, or in case a separator is used, adjusting the machine so as to run out what is called "thin" rather than "thick" cream. What will be the effect in the ripening process, and on the quantity and quality of the butter made? Some say it has a tendency to cause "streaky" butter, or butter with white spots in it.

2. In selling or buying cream, is there any standard of quality? What percentage of skim milk is allowable, or what percentage of butter fat should good average cream contain? Some city customers contend there must be some rule or standard to govern cream. With deep-setting cans, or a separator, respectively, how will the dairyman produce a fair average cream? Some sell two brands, one at 20c, and the other at 30c, per quart. MILKMAID.

[In answer to Milkmaid's question No. 1, I should say that if one-half an inch of skim milk next to the cream line is left, there is less danger of losing butter-fat in skimming, but this skim milk tends to make the cream thinner, and it is consequently more labor to handle it, and it is more difficult to churn. If the milk stands for 12 hours only, then I would say it would be advisable to leave from one-quarter to one-half an inch of skim milk next to the cream, if close skimming is required and thin cream is not a disadvantage. If it stands 24 or 36 hours, then it is not necessary, and the skim milk may be drawn close to the cream line. In the case of a separator, it is advisable to adjust the machine so as to take off rather thick cream. Cream should test from 25 to 30 per cent. fat in order to give the best results in churning. The effect on the ripening process of having the cream thin, is that it tends to hasten ripening, and also probably to give a higher flavor to the butter; but there is danger, if the milk be tainted, of developing bad flavors; and, on the whole, we would prefer thick cream to thin cream, as there is less loss of fat in churning. I do not think that there is any greater tendency to cause "streaky" butter, or butter with "white specks" in it, if the cream is thin, unless it is put into the churn without straining, in which case there would be more curdy matter in the cream, and a greater tendency for white streaks in the butter.

2. There is no legal standard of quality for cream. Good commercial cream should contain about 20 per cent. fat; and it is customary, where different qualities of cream are supplied, to charge according to the percentage of fat which each contains. At the present time there is a demand in cities for very rich or thick cream, testing 30 to 40 per cent. fat. Then dealers are able to dilute it to the desired thickness, and they are thus saved so great an expense for freight. With deep-setting cans, richer cream, or cream containing a higher percentage of fat, may be obtained by allowing the cream to stand for a greater number of hours. For a separator, it is an easy matter to obtain thick cream or thin cream by adjusting the skim-milk screw or cream screw, whichever method is adopted by the manufacturers of the separator. If it is a skim-milk screw, to make the cream thicker turn the screw out, which allows a larger proportion of the whole milk to come from the separator as skim milk, and consequently there is a smaller proportion of cream which is richer. With a cream screw, to obtain richer cream turn the screw in, which forces a larger volume of the whole milk out as skim milk, and a less volume in the form of cream, thus making it richer, or containing a higher percentage of fat. So long as a separator is not taking less than ten or 12 per cent. of the volume of the whole milk in the form of cream, there is little or no danger of extra loss of fat in the skim milk, if the speed, feed and temperature are correct.]

GRADING FLOUR.

Is there any reason why millers should not be compelled by law to sell their flour according to a guaranteed quality or grade? At present a man may buy a sack of flour stamped Strong Bakers, and when he comes to use it, finds it about the quality of XXXX. Of course, a good deal is all right, a great deal is anything but right. There are certainly some notable exceptions, such as Ogilvie's flour, or Lake of the Woods.

Can a man go to an elevator with a load of No. 3 wheat, and demand the price of No. 1 hard? Yet some of these millers will buy your No. 3 wheat, or your frozen wheat, and put it into sacks, after grinding into flour, branded Patent or Strong Bakers. Why should not all the flour be properly graded and inspected now and again by a Government-paid expert?

Flour being a manufactured product, varying in quality according to the individual skill and equipment of the manufacturer, we do not see how it could well be graded under Government inspection. The millers—the larger ones, at least—have their own brands, which they register, and it is their lookout to have each brand of flour run as uniform as possible, in order to hold the trade of the various markets for which they cater. The larger the concern the more uniform the product should be, as it is possible for them to carry larger supplies of wheat—even from season to season—and thus to make a uniform blend of wheat for the production of uniform flour. In buying flour, any reputable dealer should be able to give a guarantee with the higher grades at least, and if one grade or make does not suit, try another. If a miller finds that his product will not suit the market, on account of poor or uneven quality, he will be obliged to do better or quit.

SPELT AND THE BIBLE.

In reading your issue of Feb. 20th, I noticed, on page 117, an article by Wm. Saunders, Director Experimental Farms, in regard to spelt. In said article he mentioned that there were three references made to spelt in the Bible, but they are not at places mentioned. Kindly explain in your next issue.

The references to spelt wheat in the revised version of the Bible read as follows: Exodus ix.: 31, "but the wheat and the spelt were not smitten, for they were not grown up." Isaiah xxviii.: 25, "and put in the wheat in rows, and the barley in the appointed place and the spelt in the border thereof." Ezekiel iv.: 9, "Take thou also unto thee wheat and barley and beans and lentils and millet and spelt and put them in one vessel and make the bread thereof."

The word translated spelt in the revised Bible is given as rye in the older authorized version in Exodus ix.: 31. In the quotation from Isaiah the same word is similarly rendered, but in the marginal references it is given as spelt. In Ezekiel iv.: 9, the same word is rendered "fitches," while the marginal notes give it as spelt. It is now generally held that spelt is the correct rendering in these verses.

In Smith's "Dictionary of the Bible," p. 1,061, under the article "rye," reference is made to these three quotations. The author says: "Celsus has shown that in all probability spelt is here intended, and this opinion is supported by the LXX. and the Vulg. in Exod. ix.: 32, and by the Syriac versions. Rye is for the most part a northern plant, and was probably not cultivated in Egypt or Palestine in early times, whereas spelt has long been cultivated in the East." "This cereal was sown in Palestine, as mentioned in Isaiah, on the margins or 'headlands' of the fields, and was used for mixing with wheat, barley, etc., in making bread." WM. SAUNDERS.]

SEEDING DOWN A SANDY KNOLL.

I have a very light piece of sandy land on a knoll which has been cultivated for ten or fifteen years, and the soil drifts badly. I am very anxious to seed this down to Bromegrass, but I am afraid that both seed and soil will blow away if the seed is sown broadcast on the surface, and simply harrowed in. What plan would you suggest?

[Thirteen acres of similar soil on the Experimental Farm was successfully seeded down last year with Bromegrass by the following plan: The seed was sown broadcast on the surface with a Thompson wheelbarrow seeder, and immediately plowed under with a three-furrow Ontario gang plow to a depth of about two inches, and the surface was left rough. We had an excellent catch, and grass at this date, April 25th, is three or four inches high, and the cattle are pasturing on it. S. A. BEDFORD, Brandon.]

ANGORA GOATS WANTED CREAM-EQUIVALENT FOR CALVES.

1. Are there any Angora goats kept in Canada? If not, where is the nearest place they could be obtained, and at about what price?
2. Is cream-equivalent profitable to feed calves? If so, would it do to feed if they were getting no milk?
3. The only Angora goats we know of in Canada are owned by Jas. Bray, Longburn, and Jos. B. Dickling, Carman. Either of these gentlemen will quote prices and furnish other desired information on application.
4. Cream-equivalent is a good substitute for new milk, and can be fed to calves, with good effect and profit, with little or no milk.

STANDARD BARRED PLYMOUTH ROCKS.

1. Please give standard of perfection for Barred Plymouth Rocks.

2. In exhibiting a cock or cockerel, is it necessary that they should be of standard color? Might they not be medium or even light?

3. In showing a pen of Barred Rocks, can they be either a cockerel mating, a pullet mating, or a mixture of both?

[1. American Standard of Perfection:
STANDARD WEIGHTS: Cock, 9½ lbs. Cockerel, 8 lbs. Hen, 7½ lbs. Pullet, 6½ lbs.

The Male—HEAD: Of medium size and carried well up. BEAK, short, stout, regularly curved, yellow. EYES, large, clear, bright, bay. FACE, bright red.

COMB: Single, medium in size, in proportion to the specimen, perfectly straight and upright, free from side sprigs, with five or six even and well-defined serrations, those in front and rear smaller than those in the center, fine in texture, bright red.

WATTLE AND EAR-LOBES: WATTLES, of medium size, equal length, moderately rounded, bright red. EAR-LOBES, of medium size, bright red.

NECK: Of medium length, well arched, tapering, with abundant hackle.

BACK: Broad, of medium length, flat at the shoulders, and rising with a slight concave sweep to the tail. SADDLE FEATHERS, long and abundant.

BREAST: Broad, deep, full.
BODY AND FLUFF: BODY, broad, deep, full, compact. FLUFF, moderately full.

WINGS: Of medium size, well folded, the wing bows and points well covered by the breast and saddle feathers.

TAIL: Of medium length, spread at the base, carried moderately upright. SICKLES, fairly developed, spreading laterally beyond the tail proper. LESSER SICKLES and TAIL COVERTS, well developed and well curved.

LEGS AND TOES: THIGHS, large, strong, well covered with soft feathers. SHANKS, of medium length, stout in bone, well apart, yellow. TOES, straight, strong, well spread, of medium length, yellow.

COLOR OF PLUMAGE: Body color grayish-white, each feather regularly crossed with parallel bars of blue-black, the barring also showing in the down or under-color of the feathers. The barring on neck and saddle-hackle, narrower and closer, and running the entire length of the feather.

The Female—HEAD: Of medium size and carried well up. BEAK, short, stout, regularly curved, yellow. EYES, large, clear, bright, bay. FACE, bright red.

COMB: Single, small, perfectly straight and upright, free from side sprigs, with five or six even and well-defined serrations, those in front and rear smaller than those in the center, fine in texture, bright red.

WATTLE AND EAR-LOBES: WATTLES, of medium size, equal length, well-rounded, bright red. EAR-LOBES, of medium size, bright red.

NECK: Of medium length, comparatively small at the head, nicely curved, with hackle flowing well over the shoulders.

BACK: Broad, of medium length, with slight incline from the base of the neck to the tail, or slightly cushioned.

BREAST: Broad, full, round.
BODY AND FLUFF: BODY, broad, deep, full, compact. FLUFF, moderately full.

WINGS: Of medium size, well-folded.

TAIL: Of medium length, spread at the base, carried moderately upright. TAIL COVERTS, fairly developed.

LEGS AND TOES. THIGHS, of medium size and well covered with soft feathers. SHANKS, of medium length, fine in bone, well apart, yellow, which in hens may shade to light straw-color. TOES, straight, well-spread, of medium length, and in color the same as the shanks.

COLOR OF PLUMAGE: The same as described for the male.

2. There is nothing in the rules of poultry shows to prevent one showing fowls not standard in color, but birds that are off-color are not likely to win prizes, provided better ones are shown against them.

3. Before making entries for any poultry show, one should read carefully the rules and regulations governing the show, and be guided by them in making up pens, etc. For a breeding pen it is well to put in half the birds for pullet and half for cockerel mating. For an exhibition pen the birds selected should all be as near perfection as possible.

DOES GREEN RYE FLAVOR MILK?

Will you, or any of your readers, kindly answer through your valuable paper whether rye fed in a green state will taint milk unfavorably for cheese or butter?

[If rye is cut and allowed to wilt for one day before feeding, and then fed in moderate quantity, it will not taint the milk perceptibly. Cows should not, however, be allowed to pasture on green rye, nor should green rye be fed at all after it becomes woody, which is after it commences to come out in head, else it will impart an objectionable flavor to the milk.]

GADFLY GRUB IN THE HEAD.

I have lost three sheep with grub in the head, and as there appears to be no cure, I would like you to publish a history of the fly in all its stages. I caused the last sheep I lost to inhale the fumes of burning sulphur, which caused her to cough up at least one grub. She appeared better for 24 hours, during which time I continued to use the sulphur. She got worse, and I injected into her nostrils a solution of turpentine and milk, as advised in the FARMER'S ADVOCATE of April, 1900, and as a last resource, drenched her through the nostrils with coal oil. After her death I examined her head, and found 27 grubs, in different stages of maturity, and four more in her windpipe, down near the lungs. How is the species perpetuated? If there is any other remedy besides those I have used, I would be obliged if you would publish it, as I have two or three more apparently indisposed, possibly by this disease. Any information on this subject will be acceptable to a number of your subscribers in this section, as we appear to have an epidemic about here.

R. M. ANDERSON.

[The grubs are the larvæ of the gadfly, a dull-colored insect, resembling a large house fly. The female deposits not the eggs, but the young larvæ, within the nostrils of the sheep, few only being placed on any one animal at one time, owing to the agitation and violent movements of the sheep on the approach of the fly. These small grubs proceed to crawl up the nostrils, investing the frontal and maxillary sinuses of the head, where they remain and grow to about three-quarters of an inch long, when they escape from the nostrils of the sheep to the ground, where they immediately hide by boring down under the surface. It remains in the ground from one to two months, developing into a fly, when it emerges, and is soon ready to deposit its larvæ in a sheep's nostril, thus reproducing itself.

We would point out that these larvæ do not enter the brain cavity, but the sinuses or spaces in the skull in front and below the brain. These sinuses connect with the nostrils. The larvæ reaching the superior maxillary sinuses grow in size, but never escape from their location, finally dying and undergoing degeneration. Those that reach the frontal sinuses, on reaching maturity find their way back to the nasal chamber, and are voided to the ground. As the larvæ grow in size in the sheep's head, the animal becomes affected with a catarrhal discharge. This is clear at first, but becomes thick with mucus. The animal will lie down and hold the nose pointed in the air, gradually turning its head round and backwards. The eyes become red and watery; the sheep moves with nose close to the ground, stepping high with the hind feet. They may be seized with giddiness and stagger. In extreme cases, the animal becomes dull, emaciated, and dies of nervous exhaustion.

There are two kinds of treatment, preventive and surgical. The preventive treatment consists of smearing the noses of the flock with tar and grease, equal parts, once a week during June and July. When the flock is large, salt the sheep in large auger-holes in logs, and keep the edges of the holes smeared with tar. The writer's practice has always been to mix tar with the salt till it became a brown color. This is believed to maintain the flock in good health, as well as to keep off the gadfly. The surgical operation consists in trepanning the skull at the frontal sinus and extracting the larvæ by forceps; also inject benzine, moderately diluted with water, to destroy others. The flap of skin is then cleaned, applied to the opening, and sewed to the adjoining skin. The whole is then covered with a turpentine-coated leather plaster.]

CORN SPOILING IN THE SILO.

Would you please tell me the reason that some people have corn spoil in the silo, as I intend building one this summer?

[To have good silage, several conditions are necessary. The silo must be practically air-tight, the corn must be put in just at the glazing stage, soon after being cut, and very firmly packed, either by its own weight or by pressure in some other way. It should be well tramped around the edges of the silo. When corn is cut up and put in just right, it at once commences to heat up, reaching a temperature of 130 degrees Fahr. in a few days. This seems to cook the corn, stopping all decomposing fermentation, provided there is no further admission of air. It is here that a tight silo counts in preserving the corn, similar to the preservation of fruit by the canning process. If air is admitted in any considerable quantity, the silage molds or becomes sour. Sour silage is also due to the corn being too green when put in, by reason of its not having heated up sufficiently to destroy the acid fermentation organisms. Moldy ensilage is frequently due to the corn being overripe or too dry when put in, which prevents it from packing sufficiently close to exclude the air. Corn in this condition should be moistened with water as the filling is in progress. There is seldom any complaint of silage spoiling in a round silo, in which the settling and pressure is uniform. It is in the corners of square silos that spoiled silage is generally found, the result of insufficient pressure.]

TICKS ON HORSE.

I enclose specimens of ticks found on a horse here. Please inform me what it is, its history, habits, etc., and best treatment to get rid of it?

Sumas, B. C. E. A. W.
[The ticks sent us were forwarded to Dr. Fletcher, of the Central Experimental Farm, Ottawa, whose reply to this question will be found in another column, under the head of Entomology.]

HEIFER AND COW FAILING TO BREED.

We have a registered Shorthorn heifer, two years old, which we cannot get in calf. She comes in regular every three weeks, and we have bred her every time. Whenever she is served she seems to be in pain, for she presses and sometimes passes bloody liquid. We would like to know cause and cure? We have also a cow which we bought from a reliable breeder last spring. She was guaranteed to be in calf. About three months before her time was due we noticed her urinating very often, but did not pay much attention to her. When her time was due she came in and we bred her. She came back, and we bred her four or five times. We were then advised to feed some medicine about six weeks before we took her away to the bull. She came in once more, but we did not breed her. She has not come in now for two months. We would like you to advise us in regard to this?

AN OLD SUBSCRIBER.

[It is very doubtful whether the heifer will ever breed. It is rarely that one does in such case. It is probable that the os, or neck, of the womb is closed and calloused. The only hope is an operation by a veterinarian when the heifer is in heat and before service. Sometimes this is effected without the use of the knife, by a continued rotary motion of the forefinger in the os until first one finger and then another is introduced. Smearing the part with belladonna an hour or two before the operation may be helpful. If an opening cannot be made by this means, a closed knife may be introduced, having a spring by which the blades are opened, and in drawing it out an opening is made, when a piece of sponge is placed in the passage until healing takes place. It is claimed that success has in some instances attended such operation. It is better to use a young bull in such case.

The case of the cow looks quite as hopeless, unless she may have been with a bull unknown to the owner, and may now be in calf. We have known cows to come in season when far advanced in pregnancy, and, on the other hand, we have known young cows cease to come in heat, and prove hopelessly barren after producing one or two calves, and we know not how to account for it.]

SHEEP PEN—CEMENT FLOOR—BOILING FEED.

Last year I built a stone foundation under my barn, intending the stabling for pigs and sheep. The building is 30x100 feet.

1. Would it be a proper place for sheep, say one-half the basement, if well ventilated and boarded tightly from pigs?

2. Would you put small stones under grouting for cement under pigs? I have a good clay bottom.

3. How many barrels of cement would I require to complete one-half of basement, say 28x35 feet inside?

4. Could I have a cooking kettle in connection with pigs, to have one end outside for steamer, if fire could be made secure; or does it pay, counting all expenses? Would the results be nearly as good by pulping roots and putting dry chop on? E. R.

[1. If the pen were well ventilated and lighted, and has wide doors on the south side, which should be left open to allow the sheep access to the yards at all times, they would take no hurt in the stone basement. In the judgment of many successful sheepmen, the most satisfactory sheep house consists of a roomy board shed, made draft-proof, with constant access to a yard, but so arranged that a portion of the pen can be enclosed separately and made warm for the ewes at lambing time.

2. It is not necessary to put small stones for a foundation for a cement floor. From one to two inches of sand or gravel, well rammed down, is much better. Cover this with three inches of rough concrete, ram it solid, and put on a finishing coat one inch thick, of two parts clean, coarse, sharp sand to one part cement; also rammed well while the lower concrete is still soft.

3. A floor 28x35 feet would require about 15 barrels of Queenston or Thorold cement.

4. Repeated tests between cooked and uncooked feed for hogs have shown there is little or no advantage in the boiling. If one has a lot of potatoes to feed, it will pay to cook them; or if the hogs have a cold pen, it will pay to warm their feed in very cold weather. But apart from these instances, it does not pay for the work and fuel to cook feed for hogs. Mixing chop with pulped roots 12 hours before feeding will give first-rate satisfaction in hog-feeding.]

LIABILITY UNDER CHATTEL MORTGAGE.

A bought a team of horses from B, and one of them (which was said to be a good horse, only a little poor, but which never was fit to do a day's work) died. B had a mortgage for his money on several articles and also on the horses. When the horse died, B came and took the remaining horse, and all that he had a mortgage on, as A was not able to pay him just then, but he would not give up the note. Can B seize on A's crop or wheat in the granary next fall? He has already got many times the value of the horse.

O. W.

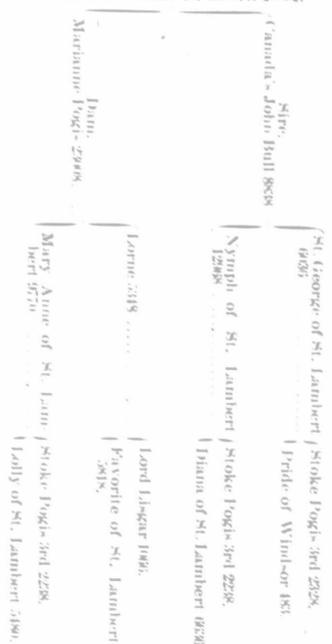
[If B falsely guaranteed the horse to be sound, A would have a right of action against B. In any case, B, after seizing under the mortgage, should render A an account of the proceeds realized by the sale of the horse, and if the amount realized did not cover the amount of the mortgage, he would have a claim against A for the balance. He would not have the right to seize A's crop or wheat, without getting judgment thereon, and the mortgagee would not get judgment thereon.]

TO TRACE PEDIGREE.

1. In writing a pedigree for registration, which is the proper way to trace ancestors, through sire or dam? Would you please give an example pedigree of offspring of two pedigree animals, by giving imaginary pedigrees of two animals and copying pedigree of their offspring therefrom? H. F.

[If the sire and dam are registered in the herd-book, studbook or record you wish to register the offspring in, all that is necessary to do in making application for such registration is to give, on the form of application supplied by the secretary, the name and address of the breeder and owner of the offspring; the name, color, and date of birth of the youngster; and the name and herdbook number of the sire and dam. Thus: Edward 7th—White; born April 15th, 1901; bred by B. B. Blank, Blankton, Que.; owned by C. C. Clark, Clarkson, Que.; sire Adam Bede 27652; dam Eve Evergreen 18762. If Adam and Eve are registered in the proper record, under numbers assigned them, the above should be all that is required to have the offspring registered. If the sire and dam are not registered in that book, of course they must be registered there before the offspring can be recorded. In most of the Canadian registers the pedigree is traced only through the dam, the name and number only of the sires being given. This is clearly a one sided and incomplete pedigree, and it is strange that breeders have so long been content with such a record and such a showing of the pedigrees of their stock. The family tree or pedigree chart illustrated below, and which is adopted by several of the American Breeders' Associations, is the only complete, up-to-date and wholly satisfactory form of registration—showing at a glance the whole genealogy. In the example given the pedigree is only extended to three generations, but the system is capable of indefinite expansion:

CANADA'S JOHN BULL 3TH 2002.



Blank forms for this style of pedigree are furnished free by the West Chemical Fluid Company, Toronto.

ABOUT CREAM SEPARATORS AND CALF RAISING.

As we are thinking of buying a cream separator, first, which kind would you recommend, or which make, and how long would one last?

Do you think calves could be raised on separator milk alone, or what should they be fed with it?

JOHN R. SHERWIN.

[There are several kinds of cream separators advertised in our columns, and we believe they are all first-rate machines, differing somewhat in minor points, but much the same in durability and work done by them. They are all substantially made, and will last for many years with proper care. Occasionally small parts will give out and need replacing, but they will, as a rule, cost very little.

Calves will do fairly well on warm milk fresh from the separator as soon as they are able to eat a little chop and hay. Better calves can be made, however, by feeding along with the milk one or other of the calf meals prepared by good firms, such as those advertising in our columns, or by adding to the milk a small quantity of boiled flaxseed, the seed being first soaked for twelve hours in water and then slowly boiled, when it forms a jelly, which is both nourishing and wholesome if given in moderation. Whole milk fresh from the cow should be fed in limited quantity until the calf is three or four weeks old.]

POTATOES OR CARROTS FOR HORSES.

Are potatoes good for horses? Are they as good as carrots for horses? Should potatoes be cooked for hogs?

J. R. D.

[It is not considered that potatoes are suitable feed for horses. If washed clean and fed in small quantity they are wholesome, but by no means equal to carrots as food for horses. Potatoes should be cooked for hogs. They are little use as hog-feed uncooked.]

MUSHROOM CULTURE.

Can you give me any information regarding mushrooms? I have a suitable place to grow them, which is not used for anything. Please give me all the information from start to finish, as I know nothing about them.

E. FRENCH.

[The cultivation of the mushroom is often attended with uncertainty. It is, however, being grown on an increasingly larger scale, and the demand for it constantly increases. The conditions essential to success in growing it are a rich soil and a steady temperature of from 50 to 75 degrees. It is for the purpose of securing this latter requisite that cellars and old caves are often utilized in its culture, as light is not necessary. Horse manure is a practically indispensable material for the growth of mushrooms. If possible, it should be from animals fed on rich, nitrogenous food, and as free from straw or other litter as it can be obtained. This should be thoroughly mixed with a fourth or fifth part of good garden soil, and is then ready to go into the beds. Care should be taken that the beds are in a well drained, damp place. They may be of any size or shape desired, but should be about 10 inches deep. Some of the largest growers use tiers of shelves or boxes, each one of which is 8 or 10 inches deep, into which they put the soil. Whatever the shape of the beds, the soil should be packed into them firmly and evenly and be left smooth on the outside. A thermometer should then be inserted in the center of the mass. As soon as fermentation sets in, the temperature will rise until probably over 100 degrees will be indicated, and when it falls to 80 degrees, the bed is ready to receive the spawn. This may sometimes be obtained from old mushroom beds, but it is best to depend on that sold by seedsmen, as it is more certain to be free from other fungi. The operation of spawning consists in putting pieces of the spawn bricks, the size of small hens' eggs, in holes, made about 2 inches deep and 10 or 12 inches apart. Afterwards, the holes should be filled with the soil and the surface firmed and smoothed off. If the work has been well done and the conditions are favorable, the spawn should commence to grow in seven or eight days; at the end of that time it should be examined, and any pieces that have not started should be removed and be replaced by fresh spawn. A failure in germination is indicated by the absence of white threads in the manure around the spawn. When the spawn has nicely started and begins to show itself on the surface, the bed should be covered with a layer, one inch thick, of fine, slightly moist soil, which should be pressed down smoothly and firmly. In damp cellars, mushroom beds do not need water, but if the surface gets dry, they should be watered with tepid water, from a fine rose watering pot. The mushrooms should show in from five to eight weeks, and the bed continue to yield for two or three months.]

A Letter from Scotland.

I again enclose another year's subscription price for the ADVOCATE. It always reaches here in good regularity, and brings always something fresh for everybody about the farm. Your Christmas number was splendid and I think is getting better every year. I have shown it to many of my neighbors, and they are greatly taken with it. I find great pleasure in looking over its contents, and I see advertised land for everybody. Farming in this country is getting terribly depressed. The rents are high and will not come down. Wages are getting very high, but the price of oats and cattle are not nearly in proportion to the outlay, so farms are changing hands freely. But still about the old rents are maintained. I wish every success to the ADVOCATE in future.

JOHN ALLAN.

Slydie Chung, Aberdeenshire, Scotland.

Chicago Markets.

Chicago, April 25. **Cattle.** Receipts, 2,000; good to prime steers, \$5 to \$6; poor to medium, \$3.50 to \$4.50; stockers and feeders firm, \$2.50 to \$4.50; heifers, \$2.75 to \$4.50; bulls strong, \$2.50 to \$4.50; calves firm, \$1 to \$3.25; Texas-fed steers, \$1.25 to \$3.10; Texas-fed grass steers, \$3.50 to \$4; Texas-fed bulls, \$2.75 to \$4.

Hogs.—Receipts, 25,000; mixed and butchers', \$3.75 to \$6; good to choice heavy, \$3.80 to \$6.00; rough heavy, \$3.65 to \$3.75; light, \$3.75 to \$3.95; bulk of sales, \$3.50 to \$3.95.

Sheep.—Receipts, 8,000; good to choice wethers, \$1.65 to \$4.50; fair to choice mixed, \$1.30 to \$1.65; western sheep, \$1.65 to \$4.50; yearlings, \$1.65 to \$4.50; native lambs, \$1.50 to \$3.50; western lambs, \$1.70 to \$3.50.

Results of Systematic Effort with Horses.

Two instances of remarkable development of horses within the century may be mentioned—the American trotter and the Kentucky-gaited saddle. In the former instance, the unnatural trot and pace, by selection, breeding, development and training, have acquired the speed rate of a mile in 2 (03) and 1.30) seconds, respectively, with a long list of performers of miles faster than 2.10. The perfection of a breed of horses taking each of five different gaits at a word from their riders, which every Kentucky-gaited saddle must do, is another monument to the agricultural skill of the age.

Western Manitoba's Big Fair, Brandon.

The prize list is now completed and is being distributed. Those not receiving copies by May 15th should write the manager. This early publishing of the prize list will give exhibitors a good chance to prepare. Several changes and rearrangements have been made, and additional prizes to many of the classes.

The date of the fair this year is July 23rd to 28th, a week earlier than last year.

The programme of sports and speeding events has been so arranged this year that each day will be equally enjoyable, and the platform attractions will be the best seen at the fair. As usual, further extensions will be made this year for the accommodation of exhibits and the comfort of visitors, including a large building for permanent exhibits from the Experimental Farms of the Dominion.



A Message from Cromarty.

For its share in the kindly comments of an Old Subscriber, the Home Department returns many thanks. Such a message should be as beneficent in its results as the bright sunshine and soft spring showers which will soon be falling upon the pretty gardens in which the busy hands of our farm daughters are even now planting the seeds, for their labor in which we would wish them also a rich reward. The matter of the photograph must rest between "Uncle Tom" and our correspondent.

"We have taken the ADVOCATE for years and years; in fact, almost since its first edition. It has become like a friend of the family, and to stop taking it would seem almost like slighting that friend. We congratulate you upon the excellency of your paper in all its departments. As an agricultural magazine, it ranks first amongst such, whilst the department for the home is very good; every article of excellent merit, showing the earnest endeavor to give that only which will uplift and purify. We were great lovers of Uncle Tom, and were so sorry when he dropped out of the staff. His successor is very good, and writes with good purpose."

The writer asks for an engraving of "Uncle Tom" in the ADVOCATE, and would like to make his personal acquaintance.

"God does not send us strange flowers every year; When the south wind blows o'er the sunny places; The same dear things lift up the same dear faces; The violet is here. So after death, winter it will be; God will not set strange signs in heavenly places; The old love will look out from the old faces; Vellehen? I shall have thee!"

A Bit of Our Everyday Life.

I've just been thinking what a good idea it would be if we were to set up a woman-ruled republic in one quarter of this globe, such as Aristophanes feigned, or the imagined world in Tennyson's "Princess," where no male can enter—just to make us, generally, and the men, particularly, understand that we cannot possibly get along without one another, and perhaps some of these crooked ideas which have crept into our farming world lately would straighten out. I can quite imagine about the end of the first week peace negotiations would come flying into our realm, and the men not only willing, but anxious, to accede to any code of laws which it might be our pleasure to draw up. And can you not fancy, too, the flag of truce flying full-mast above our fortifications!—for we should be getting so tired out about that time. The first week our energy would know no bounds. Then our backs would begin to ache, and our accounts would be so tangled; and only the women who were brave enough in the old life to lead trump first hand in what would be enterprising enough to buy our pigs and potatoes.

Admitting, then, that men are necessary, there is another way I can suggest in which we can "lick them into shape," and may prove a future benefit. That is by forming a Mothers' Club—not to bring forth a panacea for teething babies, or various remedies for whooping-cough, chicken-pox, etc., but to ask the mothers not to allow their love and pride for their fine strong boys to crowd out the fact that their girls are physically weaker; and it should be a brother's proud privilege to protect his sisters with tender care, and always be courteous, kind and considerate. As a brother, so will he be as a husband. I think nothing makes us love Hawthorne more than his wife's story of his tender care of her, helping her to prepare the meals when she was without servants. I wonder how many wives nowadays can ever remember one single instance of their husbands' magnificent head bent over the potato pot. Then, too, there's a power of philosophy in that bit of slang, "It depends on the way it's done." Doesn't it? Why, if we are sufficiently courageous, we can ignore our stubbed fingers and roughened palms, and look upon cooking, sweeping and scouring as fine arts, and blacken the kitchen stove with as high a moral purpose as ever inspired Maria Theresa. "It depends on the way it's taken, too." The other day I met a girl out driving. She was so angry before I got near her she said: "Don't keep me; I'm only allowed twenty minutes to go to the village for groceries. They want this horse for cultivating. I'm going to cultivate too," she added, sarcastically—"cast-iron feelings. Look at this stupid, forlorn-looking beast of a horse, and the harness tagged up with rope! I feel like Noah's dove, sent out into the world with nothing substantial to rely on."

"Why, what's the matter? What are you so angry about?" I laughed. "The horse is all right, and I can't see any rope."

"They always warn me, when I go out, to be careful about the cars, as Dick is such an 'awful slyer'; to watch the tugs up hill and the breeching down hill. Then, to kind of finish off with, and make things pleasant, I'm warned to look out and not get my neck broken."

"Now, your father never once hinted that it was an impossibility for you to manage a horse and come home whole?"

"Well, but it was the way father said it."

"Not altogether, my dear; it was the way you took it."

"Such a heap of chiefly nonsense, from

ONE OF THE GIRLS.

Humorous.

A dealer in stuffed animals, who also kept a few live creatures for sale, gave his shop-boy, who was permitted to sell the stuffed specimens, orders to call him when anyone asked for any of the living animals. One day a gentleman called, and demanded a monkey. "Any of these?" asked the boy, who was in charge, as he pointed to the stuffed specimens. "No, I want a live monkey," said the customer. The boy stepped to the door of the back shop, and shouted to his employer, "You're wanted, sir."

"To my (to teacher)?" "Can a feller get punished for some thing, if he has not done it?" "Certainly not," said the teacher. "Tommy?" "Then I want to tell you that I haven't done no exercise for to-day."

"Rory?" "Do you know, Tennyson's poems carry me completely away." "Miss Pert?" "Really? I'm awfully sorry well, I'll get a volume in the home."

A COSTLY AFFAIR.

The new mistress of that brand-new house on Park Avenue was tripping down the softly carpeted Queen Anne stairway to her first breakfast in her own home. She had hurried down before her new husband (bless me, what spick-and-spanness) to see that everything was in order; opening the door of the breakfast-room, first; giving a loving, dainty touch to its shining array of bridal silver, and then hastening on to the library. This was the coziest room of all. True, there wasn't much library about it yet, for all Mr. Winston's books and all of hers could not be made to fill many shelves. But there was her pretty, tall escritoire, and Mr. Winston's writing table, and the amusingly new dictionary on its jaunty stand, and—oh, there was library enough, and it was a dear, pretty room, with a friendly little coal fire glowing out a warm welcome to her. The bride looked smilingly content, and yet a trifle anxious too; else, why that pucker between the pretty brows? And what image of some queer old heathen idol for a handle. She opens the door and tinkles the bell sharply in the hall, while her color comes and goes. Almost immediately her domestic appears, having clapped a clean white apron on top of a checked gingham one of less immaculate character.

"Sit down, Martha," says the lady, still nervously. "Frank—I mean Mr. Winston, will be down directly and we will have prayers."

But Martha was nervous too; she took her seat on the edge of a chair that never was meant—I think—to be sat on, and edged this chair so close to the wall as to endanger seriously the stamped leather paper. Then she pulled one finger after another, until she had cracked all her joints. Still Mr. Winston did not appear.

"I'll just tell you the truth, Mis' Winston," she burst out at last: "I don't like this thing of comin' to prayers. I'm a first-class cook, and I know I can give satisfaction in my meats and fancy breads, but I haven't been brought up religious, and I don't take to it. Why, I ain't seen the inside of a church this five year, and for prayers, none of my families ever asked it of me before."

"But would you have us take God's good gifts like dumb brutes, Martha," said the new house-mistress, her voice trembling with the effort it cost her, "and give Him no thanks?"

"Oh, I ain't raisin' any objections to prayers," answered the cook with the free-and-easy tone of an American-born servant; "fact is, I wouldn't think as much of you if you didn't have 'em; quality folks mostly do; but I feel queer, and like a fish out of water, when I ain't in my own kitchen."

"Very well," said the new mistress a little hurriedly, for she had Frank shut the chamber door up-stairs. "I only ask you to try it for a week; after that you may do as you choose."

"Good morning, Martha," said the gentleman gaily as he came in. "Well, Mrs. W., is my congregation ready?"

His tone was rather light, perhaps, but the new duty embarrassed him, and he took this altogether masculine way of hiding his embarrassment. When Letty had first proposed setting up a family altar, Mr. Winston had demurred, laughed at her a little, asked why their individual prayers wouldn't do, called her a superstitious child, but finally yielded to her entreaty that their new home might be placed under the shadow of the sweet sanctities belonging to both old homes. And having yielded the point, he made up his mind to be gracious about it, and do the thing in the best possible style. That was part of his nature. Frank Winston never knowingly made anyone uncomfortable, though he was a careless fellow on the whole. Martha, for her part, was much impressed with his rich, sonorous voice as he read with faultless elocution the story of the child Jesus, and still more so by the fervent and far-reaching petitions; that both tone and words were conventional, unconscious imitation, she could not possibly know.

But there was never a word more about her staying away from morning prayers; she allowed no domestic exigency to keep her away, and her keen, though undeveloped, intelligence was aroused to a lively interest in the reading and prayers, which was to prove a surprise to both master and mistress. One of the newnesses enjoyed by the young wife was the shining condition of her kitchen. Coming from the South, where the negro cooks held absolute sway in their domains, and where the old pots and pans had done service for a lifetime, Mrs. Winston had not imagined that a kitchen could be such a thing of beauty. She was always making the excuse of "trying a new recipe," to spend a morning hour with Martha, and Martha, being essentially sociable, was well pleased with her company.

"Who is sick, Mis' Winston?" she inquired on one of these occasions when mistress and maid were sitting together, their knees under the white oilcloth covered table.

"Sick? I don't know, I'm sure; why do you think anybody is sick, Martha?"

"Didn't Mr. Winston pray for him this morning?" asked the domestic in reproachful surprise. "I thought he seemed mighty sort o' anxious about the Lord raisin' him up off his sick bed."

"Yes, yes," agreed the mistress hastily, "so he did." But she had a secret, shamefaced consciousness that Frank hadn't meant anything in particular by that well-rounded sentence about the "sick and afflicted."

"I wish you'd please ask Mr. Frank who it is, Mis' Winston," was Martha's next startling request, "cause this is my calf for you, it's more'n you all is going to eat, for you're tired of it, and that prayer has been runnin' in my head all day; seems as if I wanted to do something for the poor fellow myself."

Mrs. Winston told her husband when he came home to lunch, and they joked over it a little, but with some constraint.

"Your maid takes morning prayers with uncomfortable literalness," said the young man; "perhaps it would be better if we did the same. Oh, by the way, there is a sick man in our congregation; I stepped into Mr. Stuart's office to engage half of new sixty-four for us, the one opposite the window, you know, and I had to wait a few minutes while he and a brother deacon consulted about giving help from the church fund to a man named Brooks, who broke his leg yesterday."

"Oh, well, that will satisfy Martha," said Mrs. Winston eagerly; "I hated her to think—to know, that is—"

"Yes; it would be a pity for her to know how little we think or feel what we say at prayers," agreed the husband hastily.

So Brooks the carpenter stopped this gap very well. Martha told him that he was prayed for at her house, and told Mr. Winston that she had told him, and this time they joked still more faintly about it, and the gentleman said they had Brooks' faith on their consciences now; Brooks wouldn't believe in their prayers unless they followed them up by more tangible help. Of course the help followed, and the connection with the Brooks' established a sort of domestic mission between the new house on Park Avenue and the rickety tenement on Tanner street. And now Mr. Winston began to have a livelier consciousness of what he did mean when he came with his morning petitions to the Almighty. But careful as he set himself to be, Martha's next innocent bomb exploded in the heart of his affairs. The new house on Park Avenue was getting ready for what its master called "a blow-out," which sadly slang phrase seemed to mean a large entertainment; large, to judge from the days the mistress and maid spent stoning raisins and cutting up citron for fruit-cake. Martha entered heartily into the festive spirit of the occasion, and as she attacked the last green sugary lobe, she proffered the request that the blinds in the back parlor should be left up, "just a teensy mite," enough for her to see the assembled company.

"Of course you shall see the people," agreed her mistress gleefully, "if I have to walk them all around by the back windows myself."

"I specially wants to see Mr. Frank's brother and his wife," confessed Martha. "Susan Parks has been 'lowing to me that they beat my folks for looks, and I've been 'lowing they don't. So now 'my chance to get even with Susan."

But what was this? Mrs. Winston's face flushed an angry color, her eyes looked forbidding, and the pleasant smile vanished from her lips as if a whirlwind had caught it.

"Mr. Winston's brother will not be here, Martha, she said stiltily; nor his wife; they have both behaved very badly to us, and we never expect to invite them to the house."

Martha dropped the citron and the knife and her hands and her under jaw; it looked for a minute as if she meant to drop her mistress's acquaintance, from the stillness of surprise that came over her. Then she shut her eyes and repeated, in a clear imitation of Mr. Winston's resonant tone, "Forgive us our offences, O Lord, this day, even as we, obeying Thy command and following Thy blessed example, do this day strive to forgive all who may have offended or injured us."

Martha opened her eyes when she had finished her quotation, and fell upon her citron vengeance. But she opened her lips no more that day, except in answer to a question. And when the little silver bell rang for prayers the next morning, no Martha appeared. Mr. Winston waited a few minutes and looked inquiringly at his wife.

"We'll have prayers without Martha this morning," she said hesitatingly, "I'll see about it another time."

"Is it one of her practical jokes on us?" asked the gentleman.

But when inquiry was made, the domestic declined to come to prayers any more, and also declined to give her reason. Then Mrs. Winston confessed, with considerable trepidation, what had passed between them over the kitchen table. What if Frank should fly into a rage and order Martha off on the spot! Just before the party, too, Mr. Winston looked red enough in the face when he heard the quotation from himself to have done even such a desperate thing as that, but he tried to meet it in his old, light way.

"See here, Letty," he said, "We've either got to get rid of this woman, or—his voice suddenly lost its banter, and he spoke with great feeling, "or we've got to set about living nearer to our prayers!"

It was the evening of the entertainment at the new house on Park Avenue. Mrs. Winston came shimmering into the kitchen with her pretty white satin gown and slippers on. Why not? There wasn't a cleaner floor in her house. "Martha," she said shamefacedly, "I have left the blinds up in the back parlor, and Mr. and Mrs. Ross Winston have promised to come early, so don't miss seeing them."

"Lord, bless you, honey," said the cook, her grumness disappearing like a snow wreath in April. The hired waiters from "Bonsacks" stood around in their high-and-mightiness, and wondered what it all meant; but Martha knew, and the guardian angels of the new home, who had come unbidden to the feast, knew, and the reconciled kindred—though they had not heard the story then—knew how sweet and pleasant it was beginning to be for brethren to dwell together in peace and unity. The family were a little late in coming down to prayers the next morning after the "blow-out," and when the husband and wife opened the library door, there sat Martha waiting for them against the wall, in a white apron and a radiant smile, and something like tears in her old eyes.

Travelling Notes.

How often the unexpected happens. When we set sail from New York for London, we fully expected rough seas and bad days, instead of which we had most beautiful weather and no waves to speak of, with, consequently, no excuse for being ill, so we were well, happy and jolly all those thirteen days at sea. By preference, we had selected a slow steamer, and a slow steamer has many advantages to compensate for its lack of speed. In a long voyage you are cut off from all the world and its interruptions, its vexations and pretty worries. They may exist for you elsewhere, but they cannot reach you at sea, and so the weary brain finds rest. A lady passenger told us that she had been ordered by her doctor to take this particular boat, because it was slow, and, consequently, "so good for the nerves." Apropos of her remark, another lady told us of an experience she had had on one of these quiet, easy-go-lucky kind of steamers, which she, too, had chosen as being so "good for her nerves." One morning the steward came up and said, "Do you know the snake is out?" "What snake?" she shrieked. "Do you mean to tell me that there is a live snake on this boat?" "Yes, madam, the snake we are carrying to England got out of her cage and we can't find her. She is about eight feet long. There are fourteen monkeys and a zebra on board, too." "Mercy," exclaimed the lady, "an eight-foot snake foraging loose around the ship and a whole menagerie in cages, and I'm taking this pleasure trip to quiet my nerves!"

But Fan and I have had no such excitement on this voyage, although we had four funerals—all horses—not many, after all, out of the eight hundred horses and cattle we had down below. There is little to mark the calendar days at sea, one day is so much like another. The ladies went to bed early, the men yarned till midnight. Then the lights were put out, and the vessel crept through the waters silently, with her green eye on the starboard side, and her red eye on the port side, while the bells rang out every half hour and told the stars the time.

Fan is a grand travelling companion. She enjoys everything, never gets excited, is always sweet-tempered, and never fails to see the humorous side of things.

We have been in "Old Smoky" only a week as yet. We find it as grand, and old, and substantial as ever. Arriving on the day before Good Friday, everything was practically dead. All the large shops closed until the following Tuesday. Still there was quite stir enough for us. The weather ever since our arrival has been fairly bright, some days lovely and warm, buds hursting and spring flowers all out. "And, pray, where did you see them?" you probably ask. Well, in London, in the baskets of the flower-girls as they offer their gathered bunches upon the curbstones, and also at Tunbridge Wells and Enfield, at both of which places I have already paid a hurried visit. Flowers, yes, flowers everywhere. But our London sight-seeing is still to come, and about that you shall hear from time to time, if you care to do so, from MOLLY.

In Memoriam.—"I presume you carry a memento of some kind in that locket of yours?" "Precisely; it is a lock of my husband's hair." "But your husband is still alive." "Yes; but his hair is all gone."

THE CHILDREN'S CORNER.

How Queen Victoria Won the Love of Her People.

The prize essays on this subject were exceedingly good, but as the writers were nearly all 11 or 15 years old, we could not divide them into classes. Four prizes have been awarded, the names of the winners being: Pearl Shepherd (aged 15), Waterdown, Ont.; Hazel P. Flewelling (aged 14), Oak Point, King's Co., New Brunswick; Mary Colhoun (aged 15), Alvinston, Ont.; Edna Shaver (aged 15), Ancaster, Ont.

I must congratulate you all on your splendid essays, which well deserve a place in our columns, and I hope you will be pleased with the prizes sent you. Those deserving honorable mention are Lulu M. Meadows, Janet Waterman, Wilhelmina L. Willson, Effie Letson, Charles MacKenzie, and Fanny Newman.

Look out for another competition in our next. I was glad to receive dispatches from Captain Bowman and Captain Matchett. Why didn't you send an essay, Jemmie, after suggesting the subject?

COUSIN DOROTHY.

FIRST-PRIZE ESSAY.

We must remember that the Queen's goodness and wisdom did not make the demons of discontent disappear suddenly. At the time of her accession the prejudice against royalty was strong. But by degrees men learnt, as Lord Melbourne, her first Prime Minister, did, that instead of being a weak woman, with no opinions of her own, or else obstinate and self-willed, Victoria was a wise, clear-headed young lady, with amazing appetite for work, and absolutely conscientious in performing it. They found too, that the Queen, though a constitutional monarch, could be a useful check on over-powerful and ambitious ministers, and that her influence was being exerted in the cause of liberty and reform rather than against them. They found that although, like every human being, she made mistakes, she had an honest desire to make her subjects lives happier, and that behind dignity and queenliness there was true womanliness. It was this true womanliness, which first conquered, and then held captive for over sixty years, the hearts of the British people.

It is not easy to say which of all our dead Sovereign Lady's virtues won our hearts most thoroughly. I am inclined to think that while her readiness to take her people into her confidence, and to rely on their support, gained her immense popularity, that her large-hearted sympathy for all classes was the main source of her power. She had "a heart at leisure from itself." Tender in her sympathy, true in her friendship, faithful in her love, caring always for the welfare of her subjects—no wonder she was so loved, no wonder she is so honored. From the very first, people were touched, and touched deeply, by stories of her regard for the weak and suffering, of her consideration for the aged and helpless, of her remembrance of kindness shown to her before she became queen, or some delicate attention to the widowed and fatherless.

All of these things have marked her life, and there never was a great national sorrow or rejoicing which the Queen did not share. A railway or colliery disaster, a famine, a war, or the loss of life in shipwrecks or floods, always touched her womanly heart to the quick, and her tender messages of grief and sympathy, or of praise and congratulation, often penned by her own hand, are among the nation's most precious possessions. PEARL SHEPHERD.

SECOND-PRIZE ESSAY.

I think our late dearly-beloved Queen, "Victoria the Good," as she is justly called, won the love of her people when she came to the throne, by her very youth, being then only eighteen. She was so young to bear on her shoulders the responsibility of so great an Empire. The love which was formed then grew stronger through every year of her reign, and she never committed an act to lessen it in the least degree.

One great reason that her people loved her so, was her own love for them.

She thought only of their interests, and the countless acts of kindness which she always showed endeared her to our hearts more and more. Who has not read of that graceful act of hers at her coronation, when one peer, old and almost blind, while going up the steps of the homage throne to greet her, stumbled and fell; Victoria rose, helped him up, and shook hands with him. This act, though small, showed what a kind, gracious Queen had just been crowned, and all her life was made up of acts like this. Ever kind and sympathetic to her people, she showed a lively interest in all they did, and her love for them was repaid a thousand fold by their love for her. The English Nation has grown greater and more powerful under her hand, and if for no other reason, we would have loved her for the gentle rule to which she has subjected us—never grinding the country down under hard laws, as was done so frequently before she came to the throne. And now, without forgetting her memory, let us give to her son, King Edward VII., who now reigns over us, the love we gave her.

Let us sing "God Save the King" as heartily as we sang "God Save the Queen," and pray that King Edward may walk in his mother's footsteps. HAZEL P. FLEWELLING.

"Queen of the May."

Who can look at my May-day picture without instantly bringing to mind Tennyson's familiar poem with its glad some refrain.

"For I'm to be Queen of the May, mother,
I'm to be Queen of the May."

Let us hope that the little Queen in the picture which the *Advocate* offers you to-day, as she stands by the Maypole, shyly waiting to be crowned with "gathered knots of flowers and buds and garlands gay," is quite as glad-hearted as her prototype, but, unlike her, with many a happy May-day still in store for her.

These days of rapid developments and new inventions, and the constant risk of losing sight not only of ourselves, but of the significance of the things we do, make it difficult to convey to you the simple beauty of the old May-day picture. The flowers are never flowers

by the meadow trenches, or the wild marsh-mari-gold shining like fire in swamps and hollows gray, but if it be wisely and happily ordained for us in Canada that for time immemorial "The Queen's Birthday" is never to be without its loyal recognition, might not the Maypole dance and the crowning of the May Queen in the playgrounds of our city and village schools serve to perpetuate her honored memory, and be an ever-living source of delight to the rising generation of the Dominion? We commend the thought, which, we hope, may be crystallized into action by some, at least, of the readers of our Home Magazine in the more remote regions, where each center has to provide its own festivities and arrange its own loyal celebrations.

H. A. B.

"We'll All Go a-Hunting To-Day."

What a bright hunting day! 'Tis as balmy as May;
And the hounds to the village will come;
Every friend will be there, and all trouble and care
Will be left far behind them at home.
See servants and studs on their way,
And sportsmen their scarlet display,
So we'll join the glad throng that goes laughing along
And we'll all go a-hunting to-day.

(Chorus.)

We'll all go a-hunting to-day,
All nature is smiling and gay,
We'll join the glad throng that goes laughing along,
And we'll all go a-hunting to-day.

Farmer Hodge to his dame says, "I'm fifty, and lame,
Times are hard and my rent I must pay;
But I don't care a jot if I raise it or not,
For I mean to go hunting to-day.
There's a fox in the spiny, they say,
We'll find him and get him away;
I'll be first in the rush, and ride hard for his brush,
For I mean to go hunting to-day."

There's a doctor in boots, with a breakfast that suits
Him, of old English beer and good beef,
And his patients in pain say, "We've come once again
To consult you in hope of relief."
To the poor he advice gave away,
For the rich he prescribed and took pay;
But to each one he said, "You will quickly be dead,
If you don't go a-hunting to-day."



"QUEEN OF THE MAY."

Now the village bells chime, there's a wedding at nine,
And the parson unites the fond pair;
But he hears the sweet sound of the horn and the hound,
And he knows it is time to be there.
Says he, "For your welfare I pray,
And regret I no longer can stay;
Now you're safely made one, I must quickly be gone,
For I mean to go hunting to-day."

As the Judge sits in Court, he gets wind of the sport,
And the lawyers apply to adjourn;
For no witness come, there are none found at home,
They have followed the sound of the horn.
Says his Worship, "Great fines they must pay,
If they will not our summons obey,
But it's very fine sport, so we'll break up the Court,
And we'll all go a-hunting to-day."

There is only one cure for all malady sure,
Which reaches the heart to its core;
'Tis the sound of the horn on a fine hunting morn—
And where is the heart that needs more?
It turneth the grave into gay, makes pain unto pleasure give
way,
Makes the old become young, and the weak become strong;
So we'll all go a-hunting to-day.

Recipes.

BOSTON BROWN BREAD.

Half pint corn meal, half pint rye, one cup Graham flour, two teaspoonfuls salt, and mix well; one cup molasses, one and a half cups sour milk. Mix well, all together, turn into a mould, steam two hours and bake in the oven thirty minutes.

GRAHAM BREAD.

One pint milk, one pint hot water, add sufficient Graham flour to make a batter, add one cup hop yeast, or, if desired, one yeast cake dissolved in warm water; beat thoroughly, and stand aside in a warm place two and a half hours; add enough ordinary flour to make a soft dough; knead and make into loaves at once; stand in a warm place one hour, then bake forty-five minutes.

Why Some Women Do Not Get Married.

During a round-table talk upon home topics some suggestive remarks were made which are, by permission, handed on to the readers of the *Advocate* by the "Chield among them takin' notes." The question as to "why some women do not get married?" evoked many replies. Here are some of them:

Because their lovers have turned out false or unworthy.

Because they see so many unhappy marriages around about them.

Because some women prefer helping an aged father and mother to getting married.

Because they think their chance is past (often by their own fault), and it will never come again.

Because it would hinder their sphere of usefulness to their relatives or to the public.

Because some men like to be their own masters, and so some women like to be their own mistresses.

Because they can't help it.

Because probably the right man has not turned up yet.

Or, perhaps, because death has stepped in and severed the tie which bound two faithful hearts—the one taken, the other left.

One bright young girl, earning a fair salary as a bookkeeper and accountant, looked up somewhat quizzingly, and said: "Why, there are more women than men in the world, so it goes without saying that all of us cannot be married, even if we wished to be. I, for one, frankly confess that for me a life of single blessedness is not without its compensations. Anyway, unless I could give my whole heart with my hand, I would a thousand times rather have to earn my own bread than marry a man whom I could not thoroughly respect for the mere sake of a home or to avoid the stigma of 'old maid.' Mind, I do not say that if the ideal husband and the ideal home were to be offered to me that I should not accept them, and thus be a far happier woman than I can hope to be if my whole life is to be spent under its present more limited conditions, but we cannot all draw prizes in the matrimonial lottery, and I, for one, do not mean to worry if none of them come my way."

Another girl remarked that "perhaps some of us who remain unmarried do so from a keen sense of the responsibilities entailed by marriage, and a fear lest we should fall short of the duties it would entail upon us. I read once," she said, "that 'marriage is a partnership where the woman is responsible for the happiness of both; that there are few marriages where the wife does not have to laugh at things which do not amuse her, and where the husband does not have to sympathize with grievances and griefs which do not appeal to his masculine sense of justice.' I should fall short there." "Oh! my dear," said the president, "it is evident that you have not had the discipline of many brothers, and also that you have not as yet been really in love. Love works miracles, and although the most perfect union of hearts will not be proof against the growing discovery, on both sides, of limitations which characterize all human intercourse, yet the reward will come to those who care so intensely for the happiness of others that they lose sight of self in promoting it.

Don't be afraid to enter upon your woman's trucking-dom when the right opportunity to do so is offered to you, for the very fact that you recognize its duties will make you wise, tactful and happy in their fulfillment, especially if you rely upon a strength greater than your own."

Jeannie, a bonnie lassie from a country home not a hundred miles from the office of the *Advocate*, here looked up and said, "I am afraid you will have no respect for my scruples when I tell you how prosaic and commonplace they are. I suppose if ever I do marry, my husband will be a farmer, and I am certain that I should fall short of the virtues of Lucindy, whose husband was able proudly to reply to the question, 'Is marriage a failure?'—'No, indeed, I should say *not!* Why, there's Lucindy, gits up in the mornin', milks six cows, gits breakfast, starts four children to skewl, looks after the other three, feeds the hens, likewise the hogs, likewise some motherless sheep, skims twenty pans of milk, washes the clothes, gits dinner, et cetera, et cetera. Think I could hire anybody to do it for what she gits? Not much. Marriage, sir, is a success—a great success." As the laugh went round the table, Jeannie added, "Lucindy and her appreciative husband lived in Oregon, where, perhaps, the women are made of cast-iron, and never grow tired, and maybe she never existed at all; but, all the same, I don't feel like taking any chances, even in Ontario."

But, "all the same," no one seemed to take Jeannie seriously, nor did any one doubt her will or capacity to fulfil faithfully any duties which might become hers in "any station of life to which it might please God to call her."

A sweet-voiced, gray-haired matron spoke next, quoting from a short article upon the "Art of living together," an art which, she said, lay at the

very root of domestic happiness. "In order to live happily together we must not insist that there is only one way of doing things our way. If we would avoid friction and irritation, which at last may lead to positive alienation of affection, let each make some concession to the other. 'It is the little pebbles which hurt the feet, and the tiny grain of sand which inflames the eye.' If love begets love, so contention begets contention, and we all know the aphorism, 'It takes two to make a quarrel.'"

"I, too, have my apt quotation," said the president, "and with it we will close our pleasant little conference. Under the heading of 'The Unprepared Wife,' the writer says: 'The normal girl naturally looks forward to the time when she will have the care of home, husband and children; yet, sad to say, she is often wholly unprepared to assume the responsibilities when they come to her. To presume to make a home and care for a family without preparation is parallel to a physician attempting the practice of medicine without study, and with the expectation of gaining knowledge from experiments on his patients. We would be horrified at the temerity of such a physician, and yet we complacently leave our girls without instruction in the highest, holiest duty of womanhood. Under these circumstances, can we wonder that many homes are absolute failures? One of the first things a girl should be taught is that wealth and social position count for nothing unless united with purity of thought and life and honesty of purpose. Until such standards are required by young women in choosing their husbands, the marriage relation cannot be what God intended it to be—the highest type of earthly happiness.'"

We commend our last home topic to the thoughtful consideration of our readers. H. A. B.

A Stocking Yarn.

Two Western men happened to meet one day, and from stories which they expected people to believe about the number of bushels of wheat and corn which their land produced to the acre, they gradually passed to some which they doubtless expected their hearers to receive with a grain of allowance.

"I tell you what!" said the man from Dakota, "a Norwegian woman went out raking and binding one summer, and dropped half a dozen darning needles. And what do you think! The next year there was a large crop of knitting needles came up all over that part of the field!"

"Oh, I can believe that," said the man from Washington Territory, "but it is nothing to the richness of the land out in our country. Why, a year ago last summer a German woman dropped some darning needles in a field out there, and last summer the field was growing thick with a crop of—guess what?"

"Nice hand-knit woolen stockings, all ready to put on."

Horse and the Dog Got Back.

Sam Kiser, an old Cleveland boy, now on the editorial staff of the Chicago Times-Herald, is the author of the appended clever bit of poetry. It should serve as a moral to some of our swell society people, who to this day persist in having their beautiful horses butchered, and to the man in the common walks of life who seeks to beautify his small dog by clipping off his ears. The poem follows:

The horse and the dog had tamed a man and fastened him to a fence; Said the horse to the dog: "For the life of me, I don't see a bit of sense In letting him have the thumbs that grow at the side of his hands, do you?" And the dog looked solemn and shook his head and said: "I'm a goat if I do."

The poor man groaned and tried to get loose, and sadly he begged them stay; You will rob me of things for which I have use by cutting my thumbs away! You will spoil my looks, you will cause me pain! Ah, why should you treat me so? As I am God made me, and he knows best! Oh, masters, pray let me go!"

The dog laughed out and the horse replied: "Oh, the cutting won't hurt you! You see, We'll have a hot iron, to clap right on, as you did in your docking of me? God gave you your thumbs and all, but still the Creator, you know, may fail To do the artistic thing, as He did with furnishing me with a tail."

So they bound the man and cut off his thumbs and were deaf to his pitiful cries, And they seized the stumps and they viewed their work through happy and dazzled eyes: "How trim he appears," the horse exclaimed, "Since his awkward thumbs are gone! For the life of me I cannot see why the Lord ever put them on!"

"Still it seems to me," the dog replied, "that there's something else to do; His ears look rather too long for me, and how do they look to you?" The man cried out: "Oh, spare my ears! God fashioned them as you see, And if you apply your knife to them you'll surely disfigure me!"

"But you didn't disfigure me, you know," the dog decisively said; "Why, you bound me fast and trimmed my ears down close to the top of my head!" So they let him moan while they cropped his ears away, And they praised his looks when they let him up, and proud, indeed, were they!

But the years years and years ago, in an unenlightened age, Such things as are ended now, you know, we have reached a higher stage! The Creator's thumbs God gave to man are his to keep and use, And the horse and dog look on and never appear to care!

THE QUIET HOUR.

Don't Make the Wrinkles Deeper.

Is father's eyesight growing dim, His form a little lower? Is mother's hair a little gray, Her step a little slower? Is life's hill growing hard to climb? Make not their pathway steeper; Smooth out the furrows on their brows Oh, do not make them deeper.

There's nothing makes the face so young As joy, youth's fairest token; And nothing makes the face grow old Like hearts that have been broken. Take heed lest deeds of thine should make Thy mother be a weeper. Stamp peace upon a father's brow— Don't make the wrinkles deeper.

In doubtful pathways do not go, Be tempted not to wander; Grieve not the hearts that love you so, But make their love grow fonder. Much have thy parents borne for thee, Be now their tender keeper; And let them lean upon thy love Don't make the wrinkles deeper.

Be lavish with thy loving deeds, Be patient, true and tender; And make the path that ageward leads Aglow with earthly splendor. Some day thy dear ones, stricken low, Must yield to death, the reaper; And you will then be glad to know You made no wrinkles deeper.

Help One Another.

We could make life much easier for one another if we would. For instance, some people have conveyances and some have none. It would cost nothing but a little trouble to go with your carriage and take an aged or infirm saint for a ride some week-day, or perhaps to church on communion Sunday, or, it may be, round to "God's acre," where a green sprig or flower might be laid on the grave of a precious one. Yet how much a breath of air during the drive would invigorate, an hour in God's house would refresh, or a few moments in the cemetery would sadly but surely comfort. And we, doing this kindness, without cost of a cent, would turn homeward listening happily to the song some angel would sing to our hearts.

This is but one way in a countless multitude, showing how in city or country we could relieve the hard monotony of life to which our neighbors are often subjected. A visit, a letter, a token sent, some bit of tempting food—in ways past mention, we could lift a burden, let in a ray of sunshine, brighten a home and bless a heart. The cost would be nothing, or next to nothing, and the result would be better than silver or gold.

Add to these helps, that cost so little, those that demand some outlay of money or substance, and it will be seen that our statement is as true as truth—we could make life easier for one another, if we would.

Why don't we do it?

Do not, then, stand idly waiting For some nobler work to do, What your hand each moment findeth Is the work God means for you, Go and toil in any vineyard; Do not fear to do and dare; If you want a field of labor, You can find it anywhere.

Some may not care, do not care, but others do; and yet few sit down to think how they can render a helpful kindness. People do not think. To pursue our instance—owners of carriages do not realize the condition of those who do not keep them. When they need a conveyance they have it. They don't put themselves in the place of those without the luxuries so common to them. So it probably is with the kind hearts of other good people. They do not realize what their neighbors lack.

We write to awaken thoughtfulness. Do, brother, sister, sit down and think how you can better the life of someone near you. They are at hand. Do not for a moment suppose that there are none you can help. If you fail to recall one, talk it over with your pastor, or with someone. And when you find your opportunity, thank God for it; ask Him to give you tact to do the right thing.

"What Wilt Thou Have Me to Do?"

Hast Thou, my Master, aught for me to do To honor Thee to-day? Hast Thou a word of love to some poor soul That I may say? For see, this world that Thou hast made so fair, Within its heart is sad; Thousands are lonely, thousands sigh and weep, But few are glad.

But which among them all to-day is mine? Oh, guide my willing feet To some poor soul that, fainting on the way, Needs counsel sweet; Or into some sick room, where I may speak With tenderness of Thee; And showing who and what Thou art, O Christ! Bid sorrow flee.

Oh, into one whose straits call not for words To own in want indeed; Who will not counsel, but would take from me A loving deed, Surely Thou hast for me some work to do, Oh, open Thou mine eyes— Lo, see, O Lord, how Thou wouldst have it done, And where it lies.

Ingle Nook Chats.

"Nothin' like green grass and woodsy smells to right folk up. When I was a gal, if I got riled in my temper or low in my mind, I just went out and grubbed in the garden, or made hay or walked a good piece, and it fetched me 'round beautiful. Never failed; so I came to see that good fresh dirt is first-rate physic for folks' spirits, as it is for mounds as they tell on." LOUISA M. ALCOTT.

Have you ever experienced the truth of the above statement? If not, just put it to the test. I can assure you that the medicine recommended will prove efficacious in many cases of insomnia and loss of appetite, and it costs nothing, which fact is in itself a charm; but the return that surely follows faithful "grubbing in the garden" should doubly enhance it.

As soon as the snow leaves, and the earth is dry enough to work, I begin my "labor of love" in the flower beds, and from the first day's work I am mentally delighted with thoughts of the coming beauty and the pleasure in store for myself and others. So you see I have a treble share of joy—that of anticipation, that of realization, and, best of all, the joy of sharing with others. If I were obliged to keep all my flowers myself, I should scarcely care to grow them; but who does not enjoy the gracious gift of a sweet-smelling bouquet! No matter if your first attempts be attended with difficulties, go ahead and try only two or three of the more easily cultivated varieties at first. Nasturtiums will almost care for themselves, and a bowl of their brilliant blossoms, with a few leaves and tendrils, add materially to the daintiness of the table at mealtime. One lesson they and many other plants teach us, is not to be niggardly in giving; the more they are culled the better they bloom, and I really think the more generous we are the more we are enabled to give.

OUR COMPETITIONS.

The awards in Contest VIII.—poem on Queen Victoria—are as follows: Class I., Miss Mary Spencer, England (please forward full address); II., Miss Florence M. McEachren, Cotswold, Ont.; III., Verne Rowell, Bryanston, Ont.

The following deserve a place in the roll of honor: Class I.—Jennie MacFaden, "Mind and Pen," E. B. Buckbee, Iain Andris; II.—Ethel Ironside, "Highland Helen," Chas. MacCallum, M. A. Revington, Edgar MacKinlay, "Jock o' Hazeldean," Mary Hunter, Walter Beaton; III.—Maud Jose, Eunice Dunning, and Flossie B. Schurman. Other contributions were received from G. D. Logge, Nelson Thomson, Fred Dawson, Geo. F. Jamieson, Fanny Flewelling, Mrs. Pound, Mrs. J. H. Taylor, L. H. Libby, I. M. D., Mrs. A. Bunt, Arthur Frayn, "Molly," "Antrim Farm," Wm. Abbott, H. F. Babby, Mrs. A. Rodd, Fred Walls, "Helen," Arthur Dunning, Clement Devine, Alice L. Dunning, Willie Minogue, Fred Cummings, Charlie Franklin, Maggie Kincella, Abbie Kincella, Irene Dunning, Maud Minogue, Theo. Laverne, Fred Burton, D. H. Silverton, Annie McIntosh, Elizabeth Radcliffe, A. W. Gordon, David P. Wills, Arthur Laverne, Florence O'Brien, Morgan O'Brien, Nelly Laverne, Minnie Kellam, J. Dunlop, David Kennedy, Geo. Ferguson, Walker Watts.

In all sixty-five papers were received, and it was not easy to decide just which three should win. Many containing good ideas, quite nicely clothed, had to be discarded owing to incompleteness of some of the sentences; others on account of defects in metre, etc. But, on the whole, as a first attempt I think the result was fairly good. No. IX. has drawn out a large number of competitors, and I expect some excellent essays in No. X. The story of our compatriots who have specially distinguished themselves should be an agreeable topic for those who are clever with the pen. See April 20th issue for fuller announcement. THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

PRIZEWINNING POEMS—CONTEST VIII.

CLASS I.

Queen Victoria.

A sorrow—like a pall—is spread o'er all the land, And stretches o'er the seas as stormy foam, Binding a world of nations with a tender band, For she whom all named "Mother" has gone home.

Gone home, but leaving us with sad and stricken hearts, Murmurs of grief rise as from murmuring sea, The whole world mourns, as she from earth departs, The Royal shell cast off—the Royal soul set free.

Free to return again to her Heavenly Father's place, Where nought can spoil or wither wreaths of green, Which in our thoughts as crown her brow shall grace In Heaven the Spirit, as on earth the queen.

England, MARY SPENCER.

CLASS II.

Queen Victoria.

Our saintly Queen has left this sin-stained land, Peacefully trusting, crossed death's sullen foam; And by the expectant, joyous angel band Been welcomed to her last palatial home.

There mourn for her to-day a million hearts,— Her influence is felt o'er every sea; With her a noble life of love departs, A life that toiled to make her subjects free.

But she now occupies a higher place, Now wears a laurel of a brighter green; A heavenly mansion she will henceforth grace To recompense her life as Britain's queen.

FLORENCE M. McEACHREN (age 16). Cotswold P. O., Ontario.

CLASS III.

Queen Victoria.

Ye hills of Scotia mourn, ye shores of Albion's land; Mourn, Erin's happy bowers beside the sparkling foam; Canada, don your sable robes. Alas! each sorrowing band, Your Queen has fallen asleep, revered in every home.

O'er three-score years she ruled us well and loyal were our hearts, And the "soldiers of the Queen" fought well on land and sea; Her poets' song of battles won, but all our joy departs, For with winter's winds comes sorrow to our people free.

O never, never more, alas! shall she fair O-borne Place With all its towering turrets and velvet lawns of green With her stately, queenly beauty that fair castle grace, For beneath the snowy marble lies Victoria our queen.

Bryanston, Ont., VERNE ROWELL.

NOTICE.

A Wonderful Implement. One of the most excellent labor-saving devices that has ever been invented for the benefit of the farming community is the steel cultivator made by Massey-Harris Co. This implement, we have been told, has been used and is being used to-day by the most progressive farmers in nearly every part of the globe. It is made in three different styles, namely: 10-tooth, cultivating 4 feet 3 inches wide; 13-tooth, cultivating 5 feet 6 inches wide; 17-tooth, cultivating 7 feet 6 inches wide. The spring shoes at the rear of the machine admit of regulating the depth of cultivating as desired. The shanks can be fitted with weeder points or thistle-cutters, which are made to take the place of the reversible points. The spring steel helper fitted to the teeth prevents breakage when obstructions are encountered.—Advt.

GOSSIP.

In the advertising columns of next issue, R. McKenzie, High Bluff, will draw attention to his herd of Berkshires and the opportunities offered by him to obtain foundation stock or material for the show ring. The McKenzie farmstead is pleasantly situated to the south of a fine maple bluff, planted some fourteen years ago, which bluff is highly appreciated by the owners for the shelter it affords. At the time of our visit the McKenzie family were busy seeding about 400 acres being sown to wheat. Owing to the amount of land under crop, the show ring has been neglected the last two years. While that is the case, the stock has not deteriorated, the Berkshire matrons being engaged raising what will be moneymakers and prize-winners at some future date. The stud boar, Perfection, is still in good heart, and will be remembered as a lengthy pig of even width throughout, strong bone, good hams and back, and was a winner at Winnipeg and Brandon fairs. He is by Baron Lee 4th, and was bred by Teasdale. The brood-sows were nursing litters of good pigs. We make special mention of such matrons as Artful Belle, the Gentry sow, a deep, lengthy pig with good back, rump and hams, and showing lots of quality. She won first prize at Winnipeg in '38 for sow under twelve months. A lengthy sow of the late J. G. Snell's breeding was also seen, a lengthy, wide-backed sow out of the Snell sows, and by perfection, with a litter of youngsters to a good one. She was winner as sow under 6 months at Winnipeg and Brandon, and if fitted would have to be reckoned with in the matron class. A good one is the Higheleere sow of Coxworth's breeding. Several sows were in the pens, one of which should be a good investment for any farmer. A few Holsteins were also noticed, and a good, level, thrifty year-old Shorthorn bull, which is for sale, of a type to get thick-fleshed steers. The flock of poultry is composed mainly of S. L. Wyandottes.

HOG, HORSE, CATTLE, DOG, Sheep, fire and water and snow drift proof. The fence that fences—Cheap and lasts a lifetime—AMERICAN FIELD AND HOG FENCE. If you cannot find our local agent write to American Steel & Wire Co., Chicago or New York.

FARM HORSES For Sale.

Clyde and Shire Bred.

Prices reasonable per carload. Write.

High River Horse Ranch, HIGH RIVER, ALBERTA.

For Sale: Clydesdales, Shorthorns.

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

Clydesdales and Shorthorns.

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

FOR SALE:

Registered "Klondyke" Guernsey Bull.

Three years old. Two first prizes in succession at Winnipeg Exhibition. For particulars and price: P. D. MCARTHUR, 324 PORTAGE AVE., WINNIPEG, MAN.

BULLS FOR N.W.T.

Arrangements have again been made by the Pure-bred Cattle Breeders' Association of Manitoba where pure-bred bulls will be shipped from Manitoba to the Territories under arrangements with the Territorial Government. Apply to Department of Agriculture, Regina, for conditions, etc. Freight charges only \$5.00 per head. Cars will be dispatched as soon as sufficient animals are booked. The Association can confidently recommend parties desiring to purchase stock to place their orders with Mr. William Sharman, Souris, Man., who will again take charge of the shipments.

GEORGE H. GREIG, Sec'y Pure-bred Cattle Breeders' Association.

ANDREW GRAHAM, President, Pomeroy, Man.

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

GALLOWAYS.

BULLS AND HEIFERS FOR SALE. APPLY TO

T. M. CAMPBELL, St. Jean Baptiste, Manitoba.

SHORTHORNS

Gold Medal herd of 1899-1900. Bulls in service are: Nobleman (imp.) and Topsman's Duke. Some good young bulls for sale.

J. G. BARRON, Carberry, Manitoba.

Shorthorns and YORKSHIRES. Choice heifers by Imp. Knuckle Duster and Lord Lottie 2nd. Boreas and prizewinning sows now due to farrow. Order early. White Plymouth Rock cockerels and eggs.

JAS. BRAY, Longburn.

SHORTHORNS FOR SALE

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

IN WRITING

PLEASE MENTION FARMER'S ADVOCATE.

SHORTHORNS FOR SALE

2 young bulls 9 months old, got by Crimson Chief 2407. Several cows and heifers. ALEX. STEVENSON, "Brookside Farm," Railway Station, Nunga. Wakopa P. O., Man.

MAPLE GROVE STOCK FARM.

7 young SHORTHORN BULLS, by a son of Indian Warrior. Also a few choice heifers. Lord Stanley 25 2927 at head of herd. Write.

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

I HAVE FOR SALE

SHORTHORNS

My herd bull, King Christopher (2286), 1 young bulls (reds and roans), and a few females. Write for prices.

Wm. McDonald, Pilot Mound, Man.

Thorndale Shorthorns.

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

JOHN S. ROBSON, Manitou, Man.

I AM PURE GALLOWAY WHEN I GO HENCE I WANT CARRUTHERS TO TANNY HIDE FOR A ROBE. "What a Wise Old Chap!" He has left his hide in good hands. Send for our circular in reference to custom tanning. We send samples of work with circular.

CARRUTHERS & CO., TANNERS.

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

D. FRASER & SONS, EMERSON, MAN.

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

Queenston Heights Stock Farm

Shorthorn Cattle.

Eight young bulls for sale; any age, any color. Three sired by Royal Standard 2763, by Judge 2319. Well known as winners at Toronto Industrial and Winnipeg. Also good cows and heifers, straight Scotch crosses.

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

SHORTHORNS, YORKSHIRES AND TAMWORTHS.

Stock of all ages and both sexes, at prices according to quality. Write W. G. STYLES, ROSSER P. O., St. 12-13-1, West, C. P. R.

POPLAR GROVE HEREFORDS.

Champion herd of Western Canada.

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

J. E. MARPLES, Deleau, Manitoba.

LAKE VIEW RANCH

Herefords and Galloways

Young bulls for sale. For prices write

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

HEREFORDS.

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

Canadian Pacific Railway

Are prepared, with the

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To offer the Travelling Public

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Table with columns for Steamers (ALBERTA, ATHABASCA, MANITOBA), dates (TUESDAY, FRIDAY, SUNDAY), and locations (TORONTO, HAMILTON, MONTREAL, NEW YORK, AND ALL POINTS EAST).

Northern Pacific Ry.

TO ALL POINTS SOUTH, EAST AND WEST. Minneapolis, St. Paul, Duluth, Chicago, Etc.

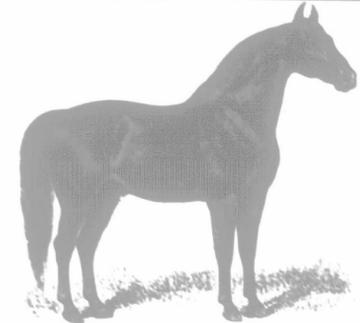
Excursion rates to all Californian, Mexican and Southern Winter resorts. The only line running Through Tourist Cars to California points. Car leaves every Wednesday.

GREAT BRITAIN, EUROPE, AUSTRALIA, AFRICA, ETC.

For information call on your nearest Northern Pacific Ticket Agent, or write.

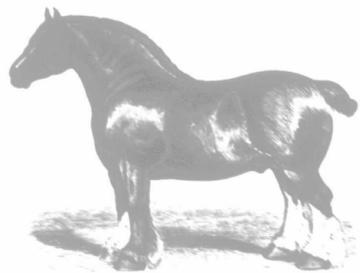
Condensed Time Table from Winnipeg.

Table with columns for MAIN LINE, PORTAGE BRANCH, and MORRIS-BRANDON BRANCH, listing routes and departure times.



For sale or exchange—the imported English Yorkshire Coach-stallion, "Farndale Hero," by Salesman bred by H. Ward, Farndale, York-shire, England, and imported by Stericker Bros., Springfield, Ill. A beautiful bay, with black points, no white; 162, and weighs 1,450 lbs. A perfect model of a horse, with grand style, bone and substance, good disposition, and has proved himself a sure and excellent stock horse. For further particulars, apply to—A. C. DOUGLAS, BRANDON, MANITOBA.

J. E. SMITH



SIR ARTHUR.

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

J. E. SMITH, Smithfield Ave., Brandon, Box 274.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE

Piles Cured

Edward Dunellen, Wilkes-barre, Pa.: "For seven years I was scarcely ever free from the terrible torture of itching piles. I tried all sorts of remedies. Was told a surgical operation might save. One 50 cent box of Pyramid Pile Cure entirely cured me." All druggists sell it. Free book by mail on Piles, causes and cure. Pyramid Drug Co., Marshall, Mich.

GOSSIP.

An English exchange says: The new Chicago sheep-shearing machine was recently given a test at Ashlyn, the estate of Mr. R. P. Cooper, of William Cooper and Nephews. Several Shropshires were shorn, and the work of the machine was highly commended by those present. The sheep were large, with heavy fleeces, and they were shorn smoothly and well with no second cuts in the wool, and a marked absence of cutting of the sheep. They were shorn in about half the time required for hand shearing, and presented a much better appearance than if shorn by hand.

Oscar Chase, Port William, N. S., writes: "I may say that I am well pleased with your paper, and wish you success. I have the water in my stable now, which I like very much. I am raising seven nice Shorthorn calves this winter, five of which are sired by Bright Stamp, purchased from W. R. Watt, Salem, Ont. I have made a small amount of beef this spring. The demand is not very good this spring. Apple sales have been quite satisfactory on the whole, one variety, Fallwater, selling in London for 30 shillings per barrel. With good wishes for further success, I remain, yours truly."

Roxey Stock Farm,
BRANDON, MAN.
J. A. S. MACMILLAN,
IMPORTER AND BREEDER OF PURE-BRED
Clydesdales, Shires, Hackneys.

Shorthorn Cattle
Shropshire Sheep



INSPECTION INVITED.
CORRESPONDENCE SOLICITED. **Prices Right.**
TERMS EASY.
FULL PARTICULARS ON APPLICATION.
APPLY **P. O. BOX 403.**

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 Russett, 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 950; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Barnardo, Man.

Seed Wheat.

Six hundred bushels Red Eye No. 1 Hard. No noxious weeds. Test at Central Experimental Farm shows 99% germinating, 98 plants of which made strong growth. Price, 53 cents on car at Saskatoon. Will seed with damaged or old wheat.

J. ALBERT SMITH, West Saskatoon.

FOR
Seeds 1901

SEND TO
KEITH & CO.
WINNIPEG, MAN.
Circulars mailed on application. P. O. Box 456.
IN WRITING
PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

The Imperial Fruit and Produce Company has recently been gazetted. The incorporators are Winnipeg and Montreal men.

Alex. McNaughton, who has lived for many years near Pomeroy, Man., has this spring moved out to Didsbury, Alta. He took with him a carload of fine Shorthorn females, and a young bull, bred by Andrew Graham, Pomeroy, to head the herd. This youngster is Blueher, by Robbie O'Day, out of Lily Gray.

Andrew Graham, Forest Home Farm, Pomeroy, reports the sale of three Shorthorn heifers to Edward Smith, of Riversdale, Assa. They are a good lot, all roans, and all by the stock bull, Robbie O'Day. They are: Roan Beauty, out of Forest Home Beauty 2897; Queen Ann 2nd, out of Queen Ann 2889; and Josie 2nd, out of Josie 2821. He has also sold a young bull to J. M. Robertson, Kinistino, Sask.

At the Royal Dublin Society's Spring Show, April 9th to 12th, the Chaloner plate, for best Shorthorn bull three years old and over, went to the roan In-pector (5215), just coming 4 years old the 23rd of April; bred by Mr. Alex. Crombie, Woodend, Aberdeen; exhibited by Mr. Sydney, P. C. Vesey, Bagnalstown, Ireland. He was sired by Granite City (7057), dam Roan Lady, by Standard Bearer (5396). He is a bull of great substance, with excellent fore end and middle, but a little short in his quarters, and hardly deep enough. He was purchased by Mr. Geo. Harrison, Gairford. The second to him in his class was the Countess of Caledon's home-bred Caledon Chief, by Laureate, and his dam by Sign of Riches. Third prize went to Mr. Smiley's Candahar, bred at Pierriessmill, and sired by Prince of Fashion. The Shorthorn Society's prize for best yearling bull, in a class of 88, went to Prince Fortinbras, shown by Mr. Wm. Armstrong, Enniscaorthy; sired by Prince Rufus. The reserve was Mr. Barton's Castor, by Royal Standard.

Alex. Galbraith, Jamesville, Wis., has disposed of the three-year old Hackney stallion, Confidence Squire, from his Manitoba importation, to Stewart Bros., Neepawa, Man. This young horse should prove a very useful one to breed sires for heavy leather. If bred to the right sort of mares, as he is well built, standing close to 16 hands, weighs 1,300 lbs., and has plenty of bone. He is a good, square cooer, handling his knees and hocks very well. His breeding is good, as we find the names of such noted horses as Fashion (189), Confidence, Norfolk Phenomenon (a noted trotter), Fireway Blaze (foaled in 1873 in his pedigree. In the Live Stock Journal Almanac for 1900 we find the Hackney mentioned as being a likely sire of useful cavalry and artillery horses. It will be remembered that the champion harness horse at the Paris Exposition was a Hackney. The Fashion horse mentioned above was the winner at the New York Horse Show for stallion and three of his get, in the harness and carriage classes there.

MAW'S POULTRY FARM

WINNIPEG, MANITOBA.

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

HOME OF BARRED PLYMOUTH ROCKS

Owned by
H.A. Chadwick, St. James, Man.



I keep only this breed, and aim to have in my pens the best birds in the Province. **EGGS \$3.00 PER SETTING, TWO SETTINGS \$5.00.** Black African Bantams. A few choice birds for sale. Also first-class Fox Terriers and Scotch Collies.

H. A. CHADWICK, ST. JAMES, MAN.

EGGS! EGGS! EGGS!

We keep but one breed of fowl, the R.P. Rocks. Our birds are large, well marked and good layers. Plenty of exercise favors a good hatch. Eggs, \$1.50 per setting of 11. A few choice young **SHORTHORN**

Cows and Heifers FOR SALE.

ANDREW GRAHAM,
"Forest Home Farm,"
POMEROY P. O. - MANITOBA.
PLEASE MENTION FARMER'S ADVOCATE.

BIG USERS OF CREAM SEPARATORS

The Continental Creamery Co., Topeka, Kan., uses 175 De Laval Power Separators; The Elgin Creamery Co., Chicago, uses 150; The Borden Condensed Milk Co. uses about that many; The Beatrice Creamery Co., Lincoln, Neb., uses 135.

The Franklin County Creamery Association, St. Albans, Vt., uses nearly 100; so does the Standard Butter Co., Oswego, N. Y.

The Brady-Meriden Creamery Co., Kansas City; Parker Creamery Co., Hutchinson, Kan.; and John Newman Co., Elgin, Ill., all use over 50 machines each.

The St. Mary's Creamery Co., St. Mary's, Ont.; Fairmont Creamery Co., Fairmont, Neb.; McCanna & Fraser Co., Burlington, Wis.; Belle Springs Creamery Co., Abilene, Kan.; Forest Park Creamery Co., Edgerton, Kan.; and the Hesston Creamery Co., Newton, Kan., all use from 25 to 50 machines.

All these are large Power machines, costing \$500 to \$800 each. In addition, some of these concerns have hundreds of "Baby" De Laval machines scattered among their patrons.

Every concern named, as well as every other large user of separators, now uses and purchases De Laval machines exclusively.

The De Laval Separator Co.

Western Canadian Offices, Stores and Shops:
248 McDERMOT AVE., - WINNIPEG, MAN.
CHICAGO. NEW YORK. MONTREAL.

Mutual Hail Insurance Co.

Incorporated in 1891 by **OF MANITOBA.** (Manitoba Government.)
PRESIDENT: **John Renton, Farmer, Deloraine.** VICE-PRESIDENT: **Frank Schullz, Farmer, Baldur.**

The Original Hail Insurance Co.

MANAGED BY FARMERS ONLY.

During the ten years of its existence, this Company has paid over **ONE HUNDRED AND THIRTY THOUSAND DOLLARS** for losses sustained by farmers by hailstorms. The assessments have ranged from 12 to 25 cents per acre, which is the maximum that can be charged. The average amount paid for losses has been \$5.30 per acre for total loss, and at the same rate for partial losses.

BOARD OF DIRECTORS FOR 1901:
T. L. MORTON, Farmer, Gladstone. FRANK SCHULTZ, Farmer, Baldur.
JOHN RENTON, Farmer, Deloraine. W. F. SIRRET, Farmer, Glendale.
C. J. THOMSON, Farmer, Virden. F. W. BEAMISH, Farmer, Elva.

G. J. THOMSON, Managing Director, WINNIPEG, MANITOBA.
LOCAL AGENTS AT ALL PRINCIPAL POINTS IN THE PROVINCE.

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

BREEDER OF
Scotch Shorthorns
80 HEAD TO SELECT FROM.



Offers for sale 12 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imm.) Prince Alpine - 28871, at head of herd. Farm seven miles north of Winnipeg. Telephone connection.

BARRED PLYMOUTH ROCK EGGS

From three of the best pens in the country. I am satisfied there is more good, light-colored pullets in this yard than can be found in any one lot. Eggs 1 setting, \$1.25 for 13.

J. SULLIVAN, Emerson, - Manitoba

NORWOOD BRIDGE POULTRY YARDS.

EGGS FOR HATCHING.
Of White Wyandottes, White Rocks, Houdans - eggs, \$2.00 for 13; Mammoth Bronze Turkeys - eggs, \$2.00 for 10; and Pekin Ducks - eggs, \$1.50 for 11. Eggs guaranteed to be fertile. See report of shows for prizes won. Sale agent for Manitoba for the Smith's Seal Leg Band - guaranteed to stay on. Write.

Joseph Wilding, Prop., Winnipeg, Man.

FORT ROUGE POULTRY YARDS

Eggs for hatching from Golden Wyandottes, Langshans, Indian Games, Light Brahmans, Black Minorcas, Silver laced and White Wyandottes, \$2 for 20; from Pekin ducks, \$1 for 13. Family pigeons, Belgian hares for sale; also some choice stock in Langshans, Wyandottes, Light Brahmans and Black Minorcas. Write **S. LING, Winnipeg, Man.**

PURE-BRED LIGHT BRAHMAS

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

EGGS

From Andalusians, Black Minorcas, Cochins, Partridge-back and white. **\$2.00 A SETTING. STOCK FOR SALE.**
WM. ANDERSON, BRANDON.

GOSSIP.

MARCHMONT SHORTHORNS.

It is doubtful if in the history of Manitoba a more valuable lot of imported Shorthorns were ever unloaded than those that recently arrived at Marchmont Farm, Middlesbrough, 9 miles north of Winnipeg. Mr. W. S. Lister, as will be remembered, secured some of the plums at the sale of imported Scotch Shorthorns, made by John Isaac last December. The arrival home of this valuable selection has been awaited with much interest by all lovers of the red, white and roans, and those who have had the privilege of inspecting them since their arrival at Marchmont are in no way disappointed. It is frequently said that the camera does not lie, but it is only fair to say that scant justice has been done these valuable animals in the snap-shots presented in this issue. Of all the good things Mr. Lister has imported, this carload of 11 head, aggregating in value close on to \$5,000, is without doubt the most valuable.

A light, mossy-coated roan always catches the eye, and there are many who will be captivated by the grace and style of the 3 year old *Claret Jug*, one of twin sisters, by the Mer Missie bull, Marshfield. She is a big, smooth cow, with length and depth, and a deal of quality and bred character that will captivate the most fastidious. She is suckling a fine calf, and has every appearance of being able to do ample justice to the youngster.

A big, strong, sappy cow is *Jill*, a rich red roan, with the appearance of being a deep milker. She is grandly bred, too, being by the British-bred Spicewood, by Cap-a-Pie, her grand-sire being Grayson. She is in calf to the imported bull, Nonpareil, sold for \$600 at the Isaac sale.

Another of the big, thick, sappy sort is the 6 year-old red, *Lady Dorothy*, 1st, by Redstart, a son of the great Star of Morning. *Lady Dorothy* has a very promising red bull calf at foot by Spencer. For depth, thickness and levelness of flesh, one must travel far to find anything to surpass her.

The Kibbican Beauty cow, *Elen*, 2nd, is by that celebrated bull, Star of Morning, out of a daughter of the Sittytown Secret bull, Touchstone. From such sires one expects quality of the highest, and in *Elen* none will be disappointed. She has now at foot a very bonny heifer calf by Imp. Golden Fame, a Kinellar Golden Drop, sold at Platt's sale in Chicago last August for \$1,450.

Lady of Promise is a red daughter of Maid of Promise 3d, a favorite Kinellar family. She is by Director, and her dam by Grayson.

Cherry Cry, a big, thick, sappy red and white, the only Canadian-bred animal in the importation, is by Village Boy 6th, out of Ury Maid (imp.), by Vermont.

Countess, 2nd, a straight Claret, by the Nonpareil bull, Prince of Fortune, sired by Sittytown Sort.

Damsel, 3d, by Prince Rupert, is out of Damsel 3rd, by Prince of Fashion, he by Scottish Archer.

Lustr, a red 3-year-old, by the Sittytown Secret bull, Sittytown Style, has a roan heifer calf by a son of Star of Morning.

Mina Girl, by the Princess Royal bull, Belesarius, out of Myra, by Macaroni, with a red bull calf at foot by Nonpareil (imp.).

Another choice heifer is the roan yearling, *Marycult Princess*, by Scottish Prince, an Uppermill Princess Royal.

These, together with the many imported and home-bred things of high excellence, make "Marchmont" a place of great interest to Shorthorn breeders. Imported Prince Alpine, by Emancipator, at the head of herd, has made a mighty development this past winter, and will prove a surprise for some of the exhibitors at the summer fairs. A fine bunch of lusty, mossy-coated bull calves were in the pens at the time of our visit, but were selling fast.

NOTICES.

Special in the Dairy Class at the Winnipeg Industrial.—The Vermont Farm Machine Company, Bellows Falls, Vt., U. S. A., through their general agent, William Scott, 296 Pacific Avenue, Winnipeg, offer special premiums on butter exhibited at the Winnipeg Industrial Exhibition, to be held the end of July next, made from cream separated by their Improved United States Cream Separator, as follows:

Each entry scoring 98 points or over	\$8 00
" " " " " " " " " " " "	7 00
" " " " " " " " " " " "	6 00
" " " " " " " " " " " "	5 00
" " " " " " " " " " " "	4 00
" " " " " " " " " " " "	3 00
" " " " " " " " " " " "	2 00
" " " " " " " " " " " "	1 00

Brantford Gas and Gasoline Engines.—During a recent visit to Brantford, we called at the extensive factory of Good, Shapley & Muir Co., Limited, the well-known manufacturers of steel windmills, and found the Company very cheerful over numerous orders for windmill outfits. We were surprised, however, to be shown a full line of handsome gas and gasoline engines ready for the market, and asked if they were expected to supersede windmills. The answer was emphatically—"No, we do not know of anything cheaper or better for ordinary farm work than a windmill, but for running cream separators, filling silos, or in positions where the wind is obstructed, a gasoline engine is the perfect power." We were greatly pleased with the ease of starting the engine, the steady, almost noiseless motion, and its handsome and business-like appearance, and were informed that the design is one that has been tested for years, and stands at the head of engines of this type, and that it is strictly high grade in every way, and consequently not so low in price as some, but when wearing qualities and satisfactory and economical work are considered, is as cheap as any. The firm have invested many thousand dollars in up-to-date machinery and factory equipment, and are employing the best mechanics, with the aim of making the best engines possible and they state that their floats are meeting with very gratifying success, for the engines already set up are doing better than any other of the same class, and are saving many dollars in the economy of consumption.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

Chicago Sheep Shearing Machine *1891 Model Stewart's Pat.*



Price \$15

Guaranteed to shear any kind of wool that grows. All gears cut from the solid metal and hardened. **BOOK ON SHEARING** just published. Fully illustrated, with valuable hints for fast and easy shearing by K. M. Marquis, champion of the world, will be sent free to any sheep owner on application. Address: **CHICAGO FLEXIBLE SHAFT CO.** 158-160 Huron Street, Chicago, Ills.

UNION MUTUAL LIFE INSURANCE COY.
PORTLAND, MAINE.
(Incorporated 1848.)

JANUARY 1, 1901.

Assets	\$ 8,182,038 00
Surplus, 4 Standard	886,040 24
Paid to Policyholders	32,738,402 97
Outstanding Insurance	50,191,833 00
New Insurance Written	10,988,132 01
Income	1,309,882 01

EXTRACTS from Directors' Report of business for the year 1900. Comparing the figures for December 31, 1900, with the standing on December 31, 1899, the period covered by the present administration, there appear these **SEVEN-YEAR INCREASES.**

Gain in Insurance in Force, 13,975 Policies; \$14,277,436 Insurance.
Gain in Assets, \$2,028,728 44.
Gain in Surplus, \$356,747 28.

Growth of Annual Premium Income, \$610,973 17.

**Insurance in Force in Maine } Gained
Premium Income in Maine } 300**

"A satisfactory increase, year after year, has been shown in dividends paid by the company during the above term."

"Among the death claims paid during 1900 were 20, under policies aggregating \$36,500 of insurance, all of which had been kept in force by the terms of the Maine New Forestry Law, the payment of premiums having been discontinued months or years before the deaths occurred."

Total payments under the MAIN LAW, 421 claims, representing in Insurance, \$ 865,757.

Address: A. D. IRISH, Manager, Grain Exchange Building, Winnipeg, Man.

THE COMMON SENSE BOLSTER SPRING.



FOR TRANSFORMING COMMON WAGONS INTO FIRST-CLASS SPRING VEHICLES, THE BEST FARM-WAGON SPRING IN THE WORLD.

To carry 1,000 pounds, per set	\$ 5 00
" " " " " " " " " " " "	6 00
" " " " " " " " " " " "	7 00
" " " " " " " " " " " "	8 00
" " " " " " " " " " " "	9 00
" " " " " " " " " " " "	10 00
" " " " " " " " " " " "	11 00
" " " " " " " " " " " "	12 00

The only truly graduated bolster spring in the market. They always afford a spring for light and heavy use. Every set of springs guaranteed to give entire satisfaction. If your dealer does not handle them, write us direct.

Windsor Bolster Spring Co., Windsor, Ont.

The Gold Standard Herd.



I am offering for sale a number of nice young sows in farrow, also three nice lengthy September boars, good ones. I have now spring pigs from large mature sows of the real bacon type, and sired by two grand prizewinning boars, that are bred right up in "the purple." Unrelated pairs and trios supplied. Correspondence solicited. Ask for catalogue. Address **J. A. MCGILL, NEEPAWA, MAN.**

TWIN GROVE FARM.

Young Yorkshire pigs, stock four two years old, and year-old sow, prices still lower. Also Buff P. Rock chickens. Write

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

At the Spring Show held at Manitou last year were only two entries, McNabs Herd, owned by Moore, of Nongay, and Markam B., owned by Johnson & Vickers, of Opewaka. The former was awarded the first prize.

The Winnipeg Creamery and Produce Co., LIMITED.

CAPITAL, 50,000 DOLLARS.

BRANCHES: VICTORIA, VANCOUVER, NELSON, MONTREAL.

TO FARMERS:

Dairy butter promises to be cheaper than ever. It will pay you to send your cream to the Winnipeg Creamery, which is the **OLDEST, LARGEST** and **BEST EQUIPPED** central creamery in the Province.

We guarantee **AN HONEST TEST, AND AS MUCH BUTTER AS YOU CAN MAKE YOURSELVES.**

Never mind the distance; we pay transportation, and are getting cream within a radius of 250 miles around Winnipeg.

FARMERS, BEWARE!
Inquire into the financial standing of a creamery before you send your cream to any of them. A large number of farmers have not yet been paid for cream sent last summer to UNRELIABLE creameries.

Send Us Your Eggs Also.

ASK FOR OUR CREAMERY PAMPHLET, AND FOR FULL PARTICULARS ADDRESS TO:

The Winnipeg Creamery and Produce Company, Limited,
236, 238, 240 KING STREET, WINNIPEG.

Rat Portage Lumber Co. (Limited).

Do you want Cedar Posts?

Write Direct: **JOHN M. CHISHOLM, Gladstone and Higgins Sts. Formerly Manager for Dick, Banning & Co. WINNIPEG.** Ask for Price.

THE DOHERTY GOLD MEDAL Organ

IT PAYS TO BUY A RELIABLE ORGAN. THE DOHERTY SHOWS TWENTY-SIX YEARS OF ACTUAL PROGRESS. If your music dealer cannot supply you, write us, as we offer inducements for our Piano Organ which will be appreciated.

N. B. We have a very beautiful farm for sale, of 200 acres; 1 1/2 miles from Markdale village; all cleared but 35 acres of hardwood bush; crossed by trout creek; bank barn and brick house.

W. DOHERTY & CO., CLINTON, ONTARIO, CANADA.

Yorkshires. Boundary Herd of Poland-Chinas and Model Tamworths.

Two choice fall litters ready to ship, one from the 1st prize yearling sow at Winnipeg, and Brandon, 1st prize at pool. Also a few choice litters fit for service, and sows ready to breed. Address:

FOR SALE: Three sows due to farrow in April and first week in May. Also looking orders for spring pigs sired by Klondike, Gold Dust, and H. H. 3d Pigs, and out of such noted dams as Ed Sanders, Copper Queen, Roxy's Star, and Ed Sanders, at prices that will sell them.

King Bros., Wawanesa, Man. W. L. TRANN, CRYSTAL CITY, MAN

MAPLEWOOD HACKNEY STUD.

PROPERTY OF FREDERICK C. STEVENS, ATTICA, NEW YORK.

Champions of two continents.

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

Magnificent young Stallions and Mares for Foundation Stock,

sired by the above champions, and out of mares equally famous, now offered for sale. MAPLEWOOD is truly "THE HOME OF THE CHAMPIONS."

FOR FURTHER PARTICULARS, ADDRESS:

E. T. Gay, Manager, Attica, N. Y.

The Horses that made Janesville Famous.

For twenty years past Janesville has been associated with all that was high-class in the line of horses, and the name of "GALBRAITH" is familiar as a household word to every horse breeder of any note on this continent. The undersigned respectfully invites an inspection of his present stock of

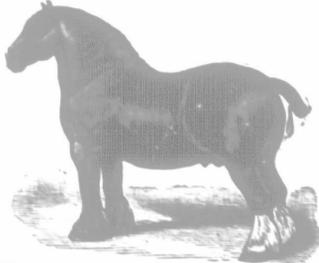
CLYDESDALES.

which are believed to be fully equal to the best ever maintained during the palmy days of the business. Ample size, superior breeding, great individuality, moderate prices, and the best of guarantees, are among the inducements offered buyers. An assortment of Percherons, Shires, Suffolks and Hackneys also on hand. The only place where the best of all the breeds can be compared alongside each other. Prominent prizewinners at the recent International Live Stock Show at Chicago. Send for catalogue.

Branch barn at Woodstock, Ont., in charge of S. P. Thompson, agent. Call and see the horses there.

ALEX. GALBRAITH, JANESVILLE, WISCONSIN.

CLYDESDALE STALLIONS FOR SALE.



A High-class Lot, of Good Size and Quality, and of Most Fashionable Breeding.

Parties desirous of securing high-class horses will do well to see these or write us before purchasing.

Dalgety Bros., 463 King St., LONDON, ONT.

GRAHAM BROS., CLAREMONT, ONT.

PIONEER IMPORTERS AND BREEDERS OF

Clydesdales and Hackneys.

THE HOME AND HEADQUARTERS OF THE WINNERS. The oldest, largest and most complete collection of Clydesdales in America. Established in 1871, and has been the champion stud ever since.

27 FIRST AND 9 SECOND PREMIUMS, INCLUDING 7 GRAND SWEEPSTAKES.

At the recent leading Canadian shows—Toronto and Ottawa being three times the number won by all competitors. Our animals are of immense size, good quality and action. Prices moderate. Terms to suit customers. Visitors cordially invited. Correspondence solicited.

CLAREMONT IS 25 MILES EAST OF TORONTO, ON THE C. P. R.



LATELY IMPORTED A FRESH LOT OF

Clydesdale Stallions,

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

Prices consistent with quality.

ROBERT GRAHAM, Ringwood P. O., Ont.

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

Please Mention The Farmer's Advocate.

GOSSIP.

An effort is being made to establish a creamery at Dominion City.

In this issue, Mr. A. C. Douglas advertises for sale the Yorkshire Coach stallion, Farndale Hero, by Salesman.

Mr. Samuel Scott, Stonewall, recently imported from Ontario a German Coach stallion, Mac, a dark chestnut, standing nearly 16 hands, and weighing about 1,500 lbs.

J. E. SMITH'S CLYDESDALES AND SHORTHORNS.

J. E. Smith, of the Smithfield and Beresford farms, Brandon, reports the following sales of Clydesdales and Shorthorns since April 1st: To Donald Ross, Cypress River, Man., the Clydesdale stallion, Prince Charles (imp.) [2728] (1084), first-prize three-year-old at Winnipeg Industrial and Brandon in 1900. He was head of the Beresford stud of registered Clydesdale mares, and as a breeder was a success. His sire, Sir Morrell McKenzie (9118), was by Sir Everard (3333), sire of the great Baron's Pride. To George W. Creamer, of Balduir, the Clydesdale stallion, Raphael (imp.) (10619), sire Sir Everard (3333), a Darnley horse, good bone, size and quality, together with a desirable color. To Alex. Colquhoun, Brandon, the Clydesdale stallion, Aberdeen (2268), bred at the Beresford farm, sire Carnworth Asses, the Clydesdale filly, Lady Aberdeen [2123], sire Aberdeen, dam Rosilee of Beresford, by Lord Randy (imp.). Lady Aberdeen is a very handsome, big-growing filly of substance and quality, good legs, feet and pasterns, and an abundance of fine silky hair. She is bred to Prince Charles (imp.). There are still for sale a number of Clydesdale stallions fit for service, both imported and home-bred, of good quality and breeding. Also Clydesdale mares and fillies of all ages.

The recent sales of Shorthorns are: To Geo. Rankin, Melrose Stock Farm, Hanuota, the bull, Lord Stanley 3rd, sire Lord Stanley 2nd. This is the making of a good bull, combining size with thickness, and should produce something good when mated with the superior cows kept at Melrose Farm. To Aaron Johnston, Hayfield, Man., Lord Stanley 30th, by Lord Stanley 11th, a promising young bull, strong and vigorous, of proper conformation. To J. W. Henderson, Lyleton, Man., General Buller = 3367 =, sire Pilkington Lad = 2187 =, dam Lord Pansy = 1987 =. This is a three-year-old bull of the short-legged type. To George W. Creamer, Balduir, Man., one cow with a month-old calf at foot, and two heifers. The cow, Daisy = 3101 =, with calf, Gold Mine, sire Golden Measure (imp.); the heifer, Modjeska = 3738 =, sire Lord Stanley 2nd, dam Esther of Smithfield 2nd, by Windsor = 6155 = (imp.), and bred to Golden Measure. The other heifer, Primrose of Smithfield 4th = 3732 =, sire Lord Stanley 2nd, dam Primrose of Beresford 2nd, by Windsor (imp.), also bred to Golden Measure. These three choice females and the bull calf should prove a good investment. They are of the kind with level backs and well-fashioned quarters. To L. R. Burn, of Stirling, Lethbridge, Alta., young herd of ten females from 1 to 3 years old, and a 2-year-old bull to head the herd. Golden King is an extra good bull, has an ample length of body set on short legs. All of the heifers are sired by Lord Stanley 2nd, and bred to Golden Measure (imp.). It is not every day that a purchaser can secure ten such low-set, square heifers of good depth and fine quality, all good colors, rich reds and roans. Mr. Burn is a beginner, and purposes having a herd second to none in the West. To Mr. S. L. Head, Rapid City, Man., ten Shorthorn bulls for the ranches in the West. The cattle business in the West is assuming vast proportions. Mr. Head also having purchased eight hundred cattle for shipment this spring, and there is an unlimited demand for the right kind of cattle for the ranges.

Mr. Smith has still a number of young bulls for sale, and of them he writes: "All the young bulls for sale are a good lot, and ready for much work the coming season. They are not in high flesh, having run out together all along, and as a result have grown well, and are very lusty, strong fellows, but would have had more flesh on them had they been kept in and separated; yet they are in the most profitable condition for the purchaser. The cows and heifers are a useful lot of breeding Shorthorns, and are kept in breeding trim, and there is still a fine herd to select from, bulls and females, at prices that buyers cannot afford to overlook, when quality is considered. While ever on the alert for new business, it affords us pleasure to realize that we merit the continued patronage of old customers. Of the gentlemen mentioned in this list, Messrs. Donald Ross, B. Limoges, A. W. Playfair, George Rankin, and J. W. Henderson are all old customers, as far back as 1886, having sold Mr. Rankin his first Shorthorn. In 1881 I sold Mr. Limoges the Clydesdale stallion, Bravery, and in 1891 sold Mr. Playfair his first Clydesdale stallion and three Shorthorns."

HORSEMEN! - THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

Your genuine without the signature of *Dr. Lawrence Williams* to *Sole Importers & Proprietors 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 scurf or blennorrhoea. 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.

KEMP'S

INSTANTANEOUS Sheep Dipping Fluid kills ticks, lice and all parasites or insect life on sheep, hogs, horses and cattle; destroys mange on dogs.

Immediate in action and permanent in effect. It is also a thorough disinfectant for barns, closets, cellars, etc.

One gallon makes one hundred gallons of wash. Sold in half-gallon imperial tins, at 75c. The cheapest and most effective dip on the market.

If your druggist does not keep it, we will express a tin (prepaid) to any address in the Dominion for \$1.

W. W. STEPHEN & CO., MEAFORD, AGENTS FOR THE DOMINION.

STAY AT

HOTEL LELAND

The Leading Hotel of the West.

ALL MODERN CONVENIENCES. RATES, \$2 to \$4 PER DAY. BUS MEETS ALL TRAINS.

W. D. DOUGLAS, Prop., Winnipeg, Man.

Catalogue Printing our Specialty.

Many of the best Catalogues in Canada are produced by us. Latest type font, design, grammar, and modern machinery.—Best in America. Up-to-date covers designed by special artists without extra charge.

London Printing & Litho. Company, Ltd., LONDON, ONTARIO.

GOSSIP.

W. S. Henderson, V. S., has purchased from J. A. S. Macmillan, the imported Clydesdale stallion, Cavendish 10321. He is a bay four-year-old, sired by Montravel Star, out of a mare by Flashwood's Best.

Messrs. Mutch Bros., Craigie Mains, Lumsden, Assa., write us, under recent date: "We have again sold out, except our two young stallions, and they are growing more valuable every day; in fact, we did not have nearly enough horses to supply our trade. We have added another pair of Clydesdale fillies, bought from O. Sorby, Guelph, to our stud: Charming Lassie (5712) [8331], sired by Lord Charming, supposed to be one of the best breeding horses in America to-day; dam Sonnie Lass (2313) [7099]. Sonnie Lass has been a prizewinner in Canada and the United States. Grandam of Sonnie won the sweepstakes over 100 mares in Glasgow, and her great-grandam was Lord Lumsden's sweepstakes mare, Sunbeam, supposed to be the best mare in the North of Scotland in her time. Lady Eva, rising one year, sired by Lord Charming; dam Eva (2277) [8302], first-prize winner in Toronto, London, Ottawa. Sire of dam, Grandeur; 2nd dam, Lady St. Calir (imp.) (1265)."

NOTICE.

Toronto, April 18, 1901.

Chicago Flexible Shaft Co., cor. La Salle and Ontario Sts., Chicago, Ill.:

DEAR SIRS.—The sheep-shearing machine forwarded to my address reached my farm only last week. I had the privilege of seeing it in operation on Saturday last, and I pronounce it an undoubted success. My Shropshire yearling rams are woolled from their feet to the point of the nose, and I had some doubt in my mind that your machine could possibly be useful in taking the wool from the legs and belly, where it is always more or less matted on account of the sheep having lain in damp places. I found, to my amazement, that it took it off without a scratch, and very rapidly. As to the body of the sheep, there was no difficulty whatever. Your machine saves wool, saves time, saves labor, and saves the sheep, and I prophesy that it will soon be in general use all over the country.

Yours very truly,

JNO. DRYDEN, (Minister of Agriculture, 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, etc., for price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.



SHORTHORNS

SCOTCH IMPORTED.

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:

160
Head

AUGUSTAS
CLARAS
NECTARS
GOLDIES
JENNY LINDS
VICTORIAS
MATILDAS
BESSIES
CROCUSES

ROSEBUDS
BRAWITH BUDS
LANCASTERS
MAYFLOWERS
AMARANTHS
BUTTERFLYS
CLIPPERS
EMMAS
BROADHOOKS

MEDORAS
MINAS
VILLAGE MAIDS
BEAUTYS
MISS RAMSDENS
FLORAS
RAGLANS
LUSTRES
GEMS OF THE VALE

160
Head

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

IF INTERESTED, COME AND SEE US, OR WRITE

H. CARGILL & SON,

CATALOGUE FREE.

CARGILL, ONTARIO, CANADA.

TROUT CREEK HERD OF SHORTHORNS.

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

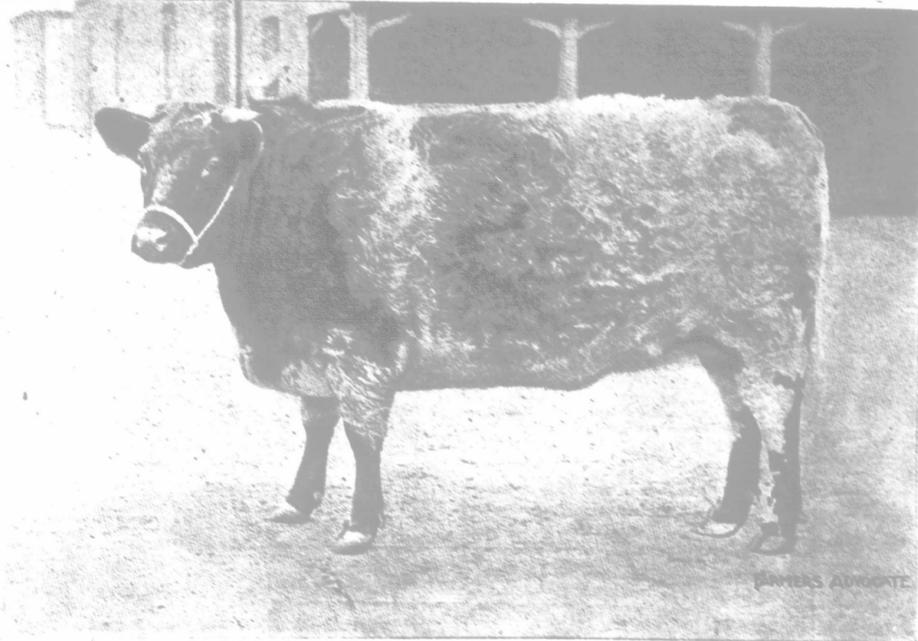
Imp. Lord Banff,

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

Imp. Consul,

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

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



CICELY.

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

Imp. Silver Mist,

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

Imp. Wanderer's Last,

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

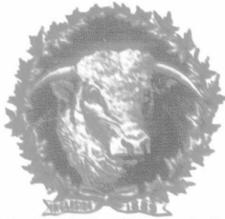
We keep in our herd a choice lot of both imported and Canadian cattle, of both sexes, from which to make selections. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.

W. D. FLATT,

318 Hess St. South.

HAMILTON, ONT.

Jas. Smith, Manager.



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.

H. D. SMITH, COMPTON, QUE.

FOR SALE: Hereford Bull, Santiago,
Register 306, 3 years old, very lengthy, low set fellow—a fine sire; very gentle. Apply to
J. BERGIN, Cornwall, Ont.

R. Mitchell & Son,
Burlington Jet. Station, Nelson, Ontario.

Large herd of Scotch and Scotch-topped Shorthorns of the most popular Aberdeenshire tribes, including 4 imp. bulls, 12 imp. cows and heifers. Also a number of home-bred yearling and two-year-old heifers, and 7 good, thrifty home-bred bulls, from twelve to fifteen months old. Write for catalogue.

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 130 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.

Standard Sheep Dip

(OIL OF TAR.)

Non-poisonous, cheap and effective. Destroys Scab, Lice, Ticks, Foot Rot, etc.

Write for Testimonials and Circulars.

Manufacturers: **The West Chemical Company,**
TORONTO, ONT.

For Contagious Abortion use West's Fluid.
Agt. for Manitoba: **W. R. ROWAN,**
132 Princess St., Winnipeg.

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

**SHORTHORN BULLS AND HEIFERS
FOR SALE.**

Choice quality and best Scotch breeding. Imported and home bred. Imported Kinlock Duster (2733) 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.

6 Shorthorn Bulls 6

Also cows in calf and yearling heifers. All of straight Scotch breeding.

SHORE BROS., WHITE OAK, ONT.

Shorthorns FOR SALE:

- 12 young bulls,
- 10 yearling heifers and heifer calves,
- 10 2-year old heifers and young cows,

all of which are of first-class pedigree. Write for particulars.

G. A. BRODY
Stouffville, Ont.



Well; You've got the McCormick. You get all the Grass and get all the Hay

Yes, Sir:—Theres *nothing* left when the McCormick has Cut and Raked the Field

MCCORMICK MOWERS & RAKES

W. A. CAVANAUGH, Gen. Agt.,
WINNIPEG, MANITOBA.

W. J. CUMMINGS, Gen. Agt.,
REGINA, N.-W. TERRITORIES.

WRITE FOR CATALOGUE, "PRIDE OF THE NEW CENTURY."

P. W. Stanhope, Toronto, Ontario.

FOR SALE:

SHORTHORN BULLS AND HEIFERS

from such sires as Mariner (imp.), Royal Judd 1789, Sultan Selam (imp.), Grenadier 26231, and Roseville Abott 30874, on a Victoria foundation. Also one extra Kinellar Stamp 10-mos. red bull. Come or write.
HURON COUNTY, THOS. CUDMORE & SON,
EXETER STATION, Hurondale,
and Telegraph Office. on Ontario.

WOODSLEE STOCK FARM.

FOR SALE: 3 Shorthorn bulls, 15 months old, two reds and one roan. Well developed, healthy, and thick fleshed.

S. G. LITTLE, Hagerman, Ont.

W. PATON, Manager.

Unionville Station, G. T. R.

**SHORTHORNS, COTSWOLDS, BERKSHIRES
and BARRED PLYMOUTH ROCK FOWLS**

FOR SALE:—One yearling bull and 5 bull calves, a few cows and heifers, 7 shearing rams. Barred Rock eggs at 75c. per 13, \$2 for 50, \$3.50 per hundred. No other variety of fowls kept.

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

SHORTHORNS FOR SALE

Cows and heifers, also a few young bulls. I have employed sons of Lord Lovel, Royal Member, Perfection, Indian Chief, and Clan Campbell, on Lord Lovel and Abbotshurn females.

WM. HAY, TARA, ONT.

YOUNG SHORTHORNS FOR SALE

Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet" and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.

A. & D. BROWN,

M. O. RAILWAY, IONA, ONTARIO.

HAWTHORN HERD

OF DEEP-MILKING SHORTHORNS.
We are offering 8 young bulls for sale, of first-class quality, and AI breeding.

Wm. Grainger & Son, - London, Ont.

J. R. McCallum, Iona Station, Ont.

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

JOHN DRYDEN,

BROOKLIN, ONTARIO,

OFFERS SIX YOUNG SHORTHORN BULLS, ready for service, at reasonable prices. Strong, active, masculine.

GOOD QUALITY AND CHOICE BREEDING.

**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.

PLEASE MENTION FARMER'S ADVOCATE

Hillhurst Shorthorns.

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

SPECIAL OFFER:

Three young bulls (registered), red, roan and white, 12 to 14 months old, bred from Cumberland, Gloucestershire and Canadian dairy strains, at farmers' prices and for farmers' purposes, to produce big-framed, deep-milking cows, and early-maturing beef steers. Write at once for prices and particulars.

Hackney Stallion, Rattling Shot 331 A. H. S. R., 6 years, 16 hands, 1,300 lbs., dark roan, black points, broken to harness, grand actor, and successful sire of promising carriage horses, mostly bays. Dam imported, 15-mile-an-hour roadster. Come and see him, or write for low price and particulars.

M. H. COCHRANE,

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

J. & W. B. Watt, SALEM, ONT., BREEDERS OF
(Post and Telegraph Office.)

Our SHORTHORN herd was founded over 30 years ago, and contains such tribes as the Village Buds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as Barrington Hero 324, Young Abbotshurn 6236, Challenge 2833, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 1481, Canada 1938, Siltiton Chief 17029, Royal Sailor (imp.) 18859, Royal George 28313, Clipper King 16293 and Judge 23419, all of which have been first-prize winners wherever shown. Royal Victor 34681 and Royal Wonder 34682, by Royal Sailor (imp.), and out of English Lady and Mildred dams, now head the herd, assisted by Roan Cloud 31317, by Lord Glasgow 28803, and out of Melody 21992, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

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

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

IMPORTERS AND BREEDERS OF
Scotch Shorthorns
and Shropshire Sheep.

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

Our imported bulls are now getting in good shape. All our heifers of suitable age are bred to Pure Gold (imp.), by Cyprus, and Scotland's Pride (imp.), a Cruickshank Clipper, by Star of Morning.

Catalogues on application. All our imp. cattle were registered in the American Herd Book before the \$100.00 fee for recording was put on.

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



T. DOUGLAS & SONS,
STRATHROY, ONT.

**BREEDERS OF...
Scotch Shorthorns**

100 HEAD TO SELECT FROM.
Offer for sale 14 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee 28841, at head of herd. Farm one mile north of town, on

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

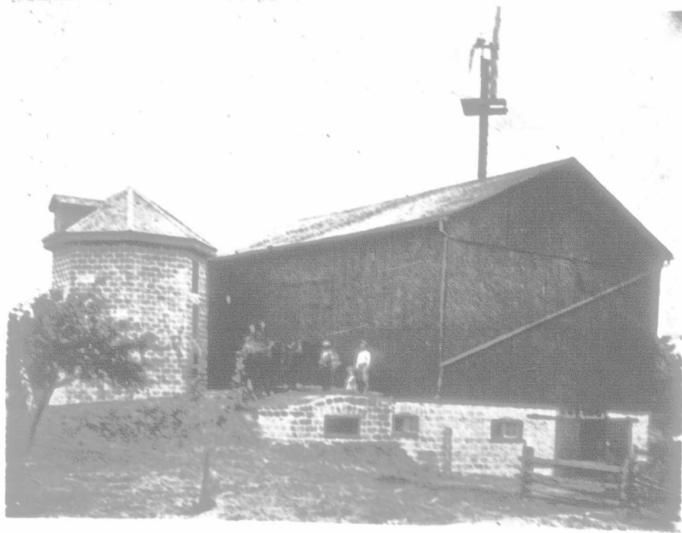
for W. W. Ogilvie Co., Lachine Rapids, Quebec.

A Splendid Silo, Root House, and Barn Walls

THE PROPERTY OF MR. THOS. N. DUNN, MANAGER OF THE STRATHROY CANNING CO., OF STRATHROY, ONT.

ALL BUILT WITH THOROLD CEMENT IN JULY, 1899,

UNDER THE SUPERINTENDENCE OF JOSEPH W. HARRIS, OF KIRKWOOD, ONT., OUR SALES AGENT FOR STRATHROY, KIRKWOOD AND WATFORD.



Size of barn basement walls 1 foot thick, 32 x 30 x 8 1/2, on an 18 x 18 inch footing. Used 65 bbls. CEMENT, and labor—2 men for 16 1/2 days. Size of root house 26 x 11 x 5 1/2, inside measure. Walls 1 foot thick, arch 10 inches thick. Is giving complete satisfaction. Size of silo 16 feet 8 inches inside diameter by 27 feet high. 18-inch walls at bottom, 11-inch at top. It has been filled to the top with corn cobs and husks from the canning factory, and has kept in good shape.

ESTATE OF JOHN BATTLE, THOROLD, ONT.
MANUFACTURERS OF THOROLD CEMENT.

The National Cream Separator



THE Raymond Mfg. Co. of Guelph, Can.

ALSO MAKERS OF THE CELEBRATED "Raymond Sewing Machine."

REPORT FROM WATERLOO COUNTY, TO THE RAYMOND MFG. CO., GUELPH, ONT.

GENTLEMEN,—I wish to make a statement that should be of some encouragement to your firm just at this time when your company is investing a large amount of capital in shops and machinery for the purpose of manufacturing the "National" Cream Separators. I bought a "National" in December, 1898, and received some practical instructions at the O. A. College, Guelph, in the way of making good butter and putting it in neat form for market. The first year I had nine cows and sold \$45.00 worth of butter from each cow, besides keeping the house in butter and having the skim milk fresh, sweet and warm for the calves. In 1900 I received higher prices for the butter, and made \$52.00 per cow from 12 cows, or a total of \$624.73. I market my butter in Toronto and Woodstock, and can find ready sale for more than I can make. Although I am a farmer, I have sold 93 "National" Cream Separators since I got my own, two years ago. The "National" is profitable to a farmer, whether he makes the butter at home or sends the cream to the creamery. I use a Babcock tester, and find the "National" cannot be beat at class skimming. Wishing you success, and hoping you will be able to supply your agents with machines as fast as we need them, I am,
Respectfully yours,
Tavistock, March 20, 1901. CHAS. L. ZEHR.

"NATIONAL" NO. 1 HAND POWER. Capacity, 330 to 350 lbs. per hour.

Joseph A. Merrick,

BOX 518, WINNIPEG, MANITOBA, Gen. Agt. for Manitoba, N.-W. T., and B. C.

SHEEP BREEDERS' ASSOCIATIONS SHORTHORN BULLS FOR SALE.
An American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.
We have Cruickshank Lovely, Fashions and Stamford females, and Matchless females bred by J. & W. B. Watt, Salem, Ont., with Lovely Victor 22170 at the head. T. MERCER, MARKDALE, ONT.

GOSSIP.

Mr. Levi S. Bowles, Springville, near Peterboro, Ont., advertises a number of imported Clydesdale stallions from 3 to 8 years old, bred from noted prizewinning and champion stock of the most approved class and breeding, including the excellent horse, Montrave Matchless 9888, bred by Sir John Gilmour, sired by Prince of Albion, and out of Moss Rose by Prince Charlie. Montrave Matchless, a big, strong, active horse weighing over a ton, won first prize at Ayr, Glasgow and Edinburgh, and is full brother to Queen of the Roses, which sold as a yearling for £1,000 (\$3,000). Moss Rose, the champion mare of Scotland, was sold when four years old for £800 (\$4,000). She won the championship at the Highland Society Show at Aberdeen, and was first at the Royal Show at York. Another very handsome and typical bay horse is McQuhae 8827, by the famous McGregor champion stallion at Warwick, owned by Her late Majesty the Queen, and was stock horse at the Prince Consort's Shaw farm at Wind-or. Stanley, brown, white face, one white foot, a blocky seven-year-old horse by Stanley Prince, dam Ballig, by McGregor, is another of this string. Still another, Attraction 10673, is a brown three-year-old colt, with white face and two white feet, bred by Andrew Mitchell, Barcheskie, sired by Prince Attractive, by Darnley, a colt with grand legs and feet, and smooth top, and the material of a grand horse. Yet another is Lord Tinto, Vol. XXXIII., a beautiful bay with white face and feet, got by Prince Alexander, dam a Brooklyn mare. He is one that will make a mark, and will be heard of in future. Moss Rose, the dam of Montrave Matchless, is illustrated on another page in this issue, and is made after a proper pattern.

CLYDESDALES AT CASTLE DOUGLAS.
Brood mares were a small class, the first award going to Maid of Honor, shown by Leonard Pilkington, Cayens. She was got by The Royal Standard, James Carson, Newfield, was second, with Robina, by Prince Robert. Yearling colts were a strong class, and first, second and fourth honors went to Messrs. Montgomery, for sons of Baron's Pride, who won the family group prize hands down. The get of this grand breeding horse won a large share of the prizes in the sections for mares and fillies.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS REPORTED DURING THE FIRST TWO WEEKS OF APRIL, 1901.

The size of the records and the number received during these two weeks are very remarkable. The number is thirty-two, eight of which average 20 lbs. 19 ozs., equivalent butter of 80 per cent. fat. The full-age cows, seven in number, average 18 lbs. 10.8 ozs.; and the average of the eight four-year-olds is 17 lbs. 12.6 ozs. Of the three-year-old class, only three reports were received, the average product of which is 14 lbs. 12 ozs. Of the two-year-old class, fourteen were received, of which the average product is 12 lbs. 8.4 ozs. The average of the seven highest of this class is 14 lbs. 13.2 ozs. The detail of a few of these records is as follows:

Jessie Fobes 4th 35682, age 6 years 9 months 28 days, 14 days after calving: Milk 314.8 lbs., butter-fat 18,008 lbs., equivalent butter 80 per cent. fat 22 lbs. 8.7 ozs., equivalent 83.7 per cent. fat 21 lbs. 0.7 ozs.

Wild Rose Jones 2nd 37839, age 6 years 8 months 26 days, 21 days after calving: Milk 463.6 lbs., butter-fat 17,691 lbs., equivalent butter 80 per cent. fat 22 lbs. 1.8 ozs., equivalent 83.7 per cent. fat 20 lbs. 10.2 ozs.

Rixa Silvia 3rd's Pietertje 37238, age 6 years 11 months 27 days, 6 days after calving: Milk 390.2 lbs., butter-fat 15,306 lbs., equivalent butter 80 per cent. fat 19 lbs. 0.1 ozs., equivalent 83.7 per cent. fat 17 lbs. 11.8 ozs.

Duchess Ormsby 2nd 35439, age 7 years 9 months 16 days, 64 days after calving: Milk 342.6 lbs., butter-fat 14,432 lbs., equivalent butter 80 per cent. fat 18 lbs. 0.6 ozs., equivalent 83.7 per cent. fat 16 lbs. 13.4 ozs.

Frebe Laura 37248, age 9 years 8 months 27 days, 12 days after calving: Milk 368.6 lbs., butter-fat 14,963 lbs., equivalent butter 80 per cent. fat 17 lbs. 9.9 ozs., equivalent 83.7 per cent. fat 16 lbs. 7.1 ozs.

Nicolo DeKol 12475, age 3 years 10 months 23 days, 7 days after calving: Milk 343.1 lbs., butter-fat 12,894 lbs., equivalent butter 80 per cent. fat 16 lbs. 1.9 ozs., equivalent 83.7 per cent. fat 13 lbs. 0.7 ozs.

Duplex Artis Clothilde 2nd 54061, age 3 years 11 months 17 days, 17 days after calving: Milk 378.9 lbs., butter-fat 11,216 lbs., equivalent butter 80 per cent. fat 14 lbs. 0.3 ozs., equivalent 83.7 per cent. fat 13 lbs. 1.4 ozs.

Jessie Fobes 2nd's Myrtle 49192, age 3 years 3 months 16 days, 11 days after calving: Milk 380.1 lbs., butter-fat 10,983 lbs., equivalent butter 80 per cent. fat 13 lbs. 11.7 ozs., equivalent 83.7 per cent. fat 12 lbs. 13 ozs.

Alameda Luisecke 2nd 49350, age 2 years 4 months 21 days, 29 days after calving: Milk 384.7 lbs., butter-fat 14,906 lbs., equivalent butter 80 per cent. fat 18 lbs. 10.1 ozs., equivalent 83.7 per cent. fat 17 lbs. 6.2 ozs.

Glen Rose DeKol 48906, age 2 years 8 months, 15 days after calving: Milk 403.1 lbs., butter-fat 13,846 lbs., equivalent butter 80 per cent. fat 17 lbs. 4.9 ozs., equivalent 83.7 per cent. fat 16 lbs. 2.3 ozs.

Homestead Girl DeKol 48423, age 2 years 1 month 12 days, 26 days after calving: Milk 390 lbs., butter-fat 12,628 lbs., equivalent butter 80 per cent. fat 13 lbs. 12.0 ozs., equivalent 83.7 per cent. fat 14 lbs. 11.7 ozs.

S. HOXIE, Superintendent of Advanced Registry.

SPRINGBANK FARM. Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale. JAS. TOLTON, WALKERTON, ONT.

FOR SALE: SHORTHORNS AND YORKSHIRES

4 SUPERIOR Scotch-bred Shorthorn bulls, 12 to 14 months; 4 two-year-old heifers of the best strains; and cows with calves at foot. Also a superior lot of Yorkshire boars and sows from 3 to 7 months old. Orders booked for spring pigs. Pairs and trios supplied not akin.

H. J. DAVIS, BOX 290, WOODSTOCK, ONT.

BRAIN FOOD

Is of Little Benefit Unless it is Digested

Nearly everyone will admit that as a nation we eat too much meat and too little of vegetables and the grains.

For business men, office men and clerks, and in fact everyone engaged in sedentary or indoor occupations, grains, milk and vegetables are much more healthful.

Only men engaged in a severe outdoor manual labor can live on a heavy meat diet and continue in health.

As a general rule, meat once a day is sufficient for all classes of men, women and children, and grains, fruit and vegetables should constitute the bulk of food eaten.

But many of the most nutritious foods are difficult of digestion, and it is of no use to advise brain workers to eat largely of grains and vegetables where the digestion is too weak to assimilate them properly.

It is always best, to get the best results from our food, that some simple and harmless digestive should be taken after meals to assist the relaxed digestive organs, and several years' experience have proven Stuart's Dyspepsia Tablets to be a very safe, pleasant and effective digestive, and a remedy which may be taken daily with the best results.

Stuart's Dyspepsia Tablets can hardly be called a patent medicine, as they do not act on the bowels nor on any particular organ, but only on the food eaten. They supply what weak stomachs lack, pepsin, diastase, and by stimulating the gastric glands increase the natural secretion of hydrochloric acid.

People who make a daily practice of taking one or two of Stuart's Dyspepsia Tablets after each meal are sure to have perfect digestion, which means perfect health.

There is no danger of forming an injurious habit, as the tablets contain absolutely nothing but natural digestives: cocaine, morphine and similar drugs have no place in a stomach medicine, and Stuart's Dyspepsia Tablets are certainly the best known and most popular of all stomach remedies.

Ask your druggist for a fifty-cent package of Stuart's Dyspepsia Tablets, and after a week's use note the improvement in health, appetite and nervous energy.—Advt.

STRAWBERRY GROWERS

frequently complain of small yields and poor fruit. This can be corrected by proper use of fertilizers. 100 pounds of

Nitrate of Soda, 200 pounds of acid phosphate and 100 pounds of muriate of potash, per acre, applied to the beds early in the spring, works wonders. Pamphlets on Nitrate of Soda sent free on application to John A. Myers, 12-R, John St., New York City, N. Y.

Maple Lodge Stock Farm

ESTABLISHED 1854. SHORTHORNS—Grand young bulls and heifers for sale. We have the first-prize milking strains. Imported Knuckle Duster and imported Sir Wilfred in service.

LEICESTERS—First-prize flock of Canada for past six years. Imported and home-bred for sale. ALEX. W. SMITH, MAPLE LODGE P. O., ONT.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstakes at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topman—17847—, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply on

T. E. ROBSON, Ilderton, Ont.

High-class Shorthorns and Yorkshire Pigs.

Just now three 10-months bulls, got by imp. Sirius 13281, great big massive fellows with lots of flesh and quality—away above the average. Also a few superior young cows in calf, and 5 or 6 heifers. We are looking orders now for the spring trade. Can ship some in six weeks.

JAS. McARTHUR, GOBLE'S, ONT. Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met.

Aberdeen - Angus Cattle. Several thoroughbred bulls for sale. Apply to the MANAGER, Grape-Orange Farm, or to C. W. HARTMAN, Clarksburg, Ont.

Maple Hill Holstein-Friesians

SPECIAL OFFERING: Three very fine bull calves, 2 to 11 months old. Also several extra good young cows and heifers. Prices moderate. Visitors welcome.

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Patented Design. Made from Finest Quality Swiss Bell Metal.



We sell exclusively to the jobbing trade, but to introduce these delightfully musical Swiss Cow Bells more generally, offer them in sets of three, tuned to accord. Sizes 4, 5 and 6 in. in diameter, with extra fine and substantial straps, or singly with or without straps. Send for circular of Cow, Sheep and Turkey Bells, etc. We are oldest Bell makers in America.

BEVIN BROS. MFG. CO., EAST HAMPTON, CONN.

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I am now offering Holstein calves of both sexes, out of such cows as Panarista Pauline, Inka Darkness 3rd's Jessie DeKol, DeDickers DeKol, Belle Burke Mechthilde, Pieterje Hartog DeKol, and others, all closely related to DeKol 2nd and Netherland Hengerveld, the greatest of Holstein cows.

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The home of officially tested, Advanced Registry, dairy test and showing-winning **HOLSTEINS**. A grandson of Sylvia now for sale. Price is in keeping with breeding and performances.

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Brockville, on C.P.R. or G.T.R. Glen Buell, Ont.

WHERE ARE THE BEST HOLSTEINS?

Have you read of Lilith Pauline DeKol's wonderful record? Her sire was bred here. Have you read of Susie DeKol's record? She was sired by a son of our great cow, DeKol 2nd. We can give our customers more of the blood of the greatest producers than can be found in any other herd. Look over official reports and see where the sires of the great producers were bred. We have over 30 young bulls for sale, and a large number of females. Animals shipped to Canada are accompanied by certificate of health, and are subject to no duties or quarantine. If you want the best, write or visit—

BROOKSIDE HERD,
H. Stevens & Sons, Lacona, Oswego Co., N.Y.

Live Stock Labels
Send for circular and price list.



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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-cow and springers—grand family cows.

B. H. BULL & SON, BRAMPTON, ONT.

GLEN ROUGE JERSEYS.

WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right.

Choice Ayrshires,

AND BARRED ROCK EGGS.

3 BULLS, from 7 to 17 months old, also a few COWS AND HEIFERS.

Eggs for hatching, from choice matings, at \$2.00 per 15. Incubator eggs \$4.00 per 100.

JAS. McCORMACK & SON,
ROCKTON, ONTARIO.

For Sale: High-class Ayrshires.

1 choice bull, 11 months old, from prize-winning dam and sire. A few young females of different ages. Calves of either sex, from 6 months to 2 weeks, sired by our imported bull, Caspian of St. Amnes, and White Cockade.

ALEX. HUME & CO., Menie, Ont.

CHOICE AYRSHIRE BULLS.

1 choice bull, 12 months old; 2 bulls, 8 months old; and 3 bulls, from 3 to 5 months. All of imported and heavy milking stock.

W. W. BALLANTYNE,
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AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.

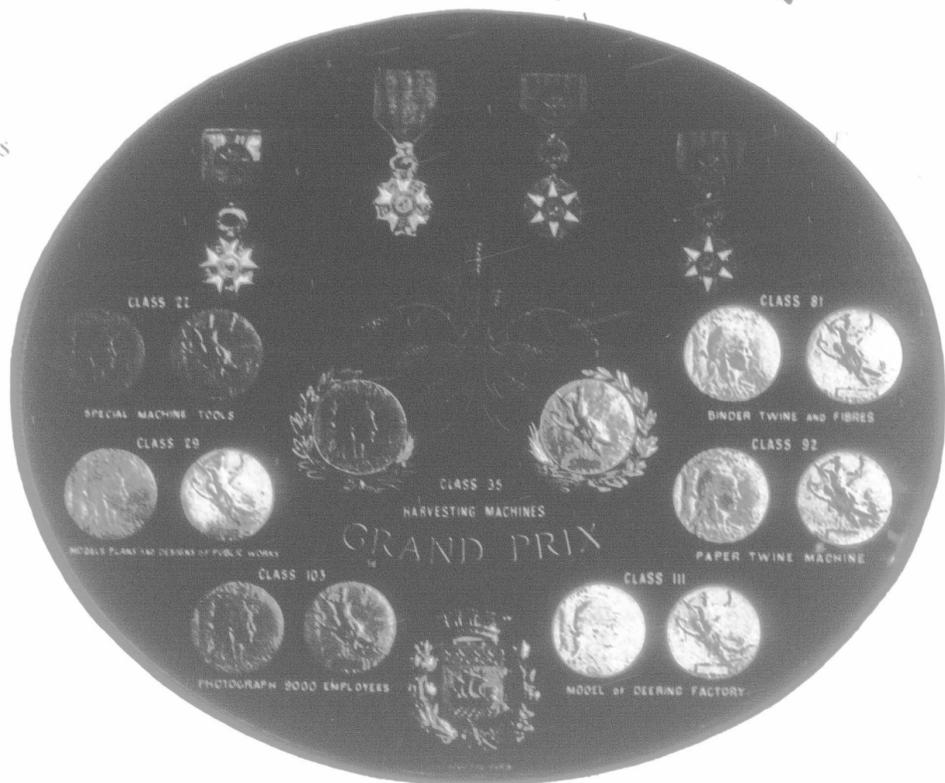
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More and Greater Honors than were Ever Accorded an Exhibitor at any International Exposition.

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I expect to import from Europe, in the near future, and can book orders for stock on commission, as I have a good connection in England and Scotland.

T. D. McCALLUM, Danville, Que.

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

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W. H. BEATTIE, Wilton Grove, Ontario.

Specialty: Can supply pairs and trios not akin. Various ages.

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The largest herd of imported and Canadian-bred Yorkshires in America. Out of 121 exhibits at the leading shows in '99 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Won most of the best prizes offered, including first prize for best pen of pure-bred bacon laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont.

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The partnership heretofore existing between J. H. Patrick and Eugene Patrick, of Ilderton, Ontario, as to the management of Fairfield Stock Farm, has been dissolved. J. H. Patrick again resumes full management at Fairfield, and Eugene Patrick taking charge of Lincoln Grove, Teeswater, Idaho.

J. H. & E. PATRICK, Ilderton, Ont.

FRESH BERKSHIRE BLOOD.

Have secured the first choice of the champion gold medal herd of America (which won over 400 prizes, cups and medals), including the \$1000 show sow, Elphick's Matchless (never beaten), and other sweepstakes sows in the United States. Also 15 April, May and June boars and 15 sows of the same age, and 3 fall litters, selected to meet the best Canadian demand, being long, low, and extra good through the heart.

Farm within 10 minutes' walk of electric R. R. terminus on Kingston road.

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NEVER FAILS: ONCE IS SUFFICIENT.

Kills the eggs, cures scab, improves the wool. 35c. Tin—sufficient for 20.

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We have at present a number of good ewe and ram lambs. Also some choice young ewes dropping lambs in April for sale. Correspondence solicited. Visitors welcome.

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A specialty. Can supply pairs and trios not akin. Various ages.

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ARE THE CORRECT TYPE TO BRING THE GREATEST PROFIT.



We breed our winners, and we win more prizes than all other herds combined at Toronto, London, and other large shows. Sweepstakes in bacon classes over all other breeds in dressed carcass competition, also on foot, for two years in succession. Championship carcass in bacon class at Chicago, 1895. First prize herd at Toronto Industrial for nine years. Write for prices.

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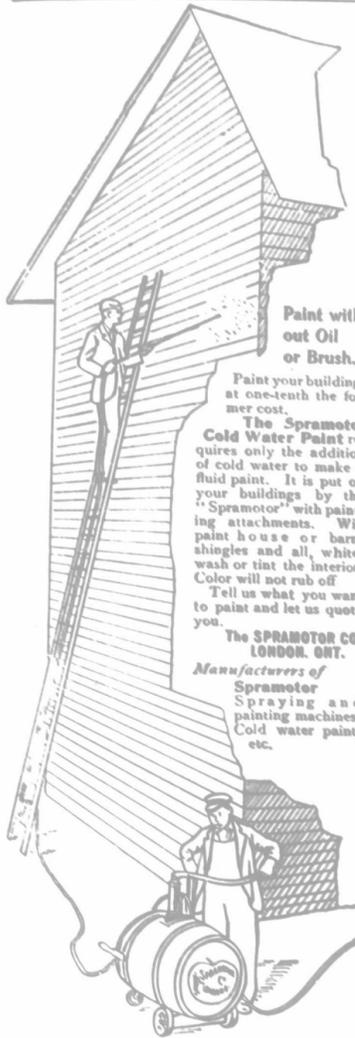
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are thoroughly reliable, and better cannot be found. We mail our Illustrated Seed Catalogue for 1901, to all sending us their addresses. Our assortment is complete, and includes full lines of Plants, Flowering Bulbs, Shrubs, Tools, etc., besides all varieties of seeds for farm or garden, and Seed Grains.

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Paint with
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Paint your buildings
at one-tenth the former
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The **Spramotor** Cold Water Paint requires only the addition of cold water to make a fluid paint. It is put on your buildings by the "Spramotor" with painting attachments. Will paint house or barn, shingles and all, white-wash or tint the interior. Color will not rub off. Tell us what you want to paint and let us quote you.

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Manufacturers of
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painting machines,
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THE "ACME" Patent Poultry Netting

is the only poultry netting that can be successfully stretched without rabs at top and bottom. This is so because we use strong, heavy wires at top, bottom and through the middle. Note the graduated meshes, running from 1/4 in. at bottom to 3 in. at top. Keeps in the fowls, big and little, and keeps out their enemies. Not flimsy in any particular, but a strong, heavy, desirable netting. We also make Lawns and Farm Fencing, Gates, Staples, etc. Catalogue Free. The Page Wire Fence Co., Ltd. Walkerville, Ont.

"D. ROSS, Box 553, Winnipeg, General Agent. Fence in Stock."

LOW PRICE IN WIRE THE CHEAPEST GOOD FENCE.
Fence Building is attracting farmers and agents attention. No trouble to answer questions. Write for free Catalogue. McCLOSKEY WIRE FENCE Co., Inc., Box A, Windsor, Ont., Detroit, Mich., Birmingham, Eng., Paris, France. Agents wanted.

BULL-STRONG!
...**PIG-TIGHT**...
An Illinois farmer said that after his harvest he had fully 200 bushels of loose oats on the ground that he could not secure any benefit from, because the fence hogs, figure the loss for yourself. He also said, all this would have been saved if he had used the Kitchman Woven Wire Coiled Spring Fence, and the value would have gone a long way towards paying cost of the fence. With the **Duplex Machine** any farmer can make it himself at the actual cost of the wire. Catalogue free for the asking. **C. G. DAVIS & CO.** Box 6115, Freman, Ont.

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preserves and pickles, spread a thin coating of refined

PARAFFINE WAX

Will keep them absolutely moisture and acid proof. Paraffine Wax is also used in a dozen other ways about the house. Full directions in each pound package. Sold everywhere.

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The **Finest Spray** is produced with

RIFFLEY'S

Compressed Air 5 gal. Sprayers. Tested to 90 lbs. pressure. Has safety valve—can't burst. Throws a continuous stream 25 feet if desired. Guaranteed the best 5 gal. Comp. Air Sprayer made, or money refunded. Made both in copper and galv. iron. Write for descriptions. Nothing else so good for whitewashing poultry houses, stables, etc. We also make Lice Killers, Fly Remover and Food Cookers. Agents make big money selling these and our other specialties. Write for special terms and prices to dealers and agents.

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Grafton, Illinois.
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UNTIL further notice, Binder Twine will be sold at the Kingston Penitentiary to farmers, in such quantities as may be desired, for cash on delivery, at the following prices:

Beaver.....	8 1/2 cents per pound.
Sisal.....	7 " "
New Zealand.....	6 " "
Monarch.....	8 " "
Pure Manila (650 feet to pound).....	10 " "

Address all communications, with remittances, to **J. M. PLATT, Warden Penitentiary, Kingston, Ontario.**

Papers inserting this notice without authority from the King's Printer will not be paid therefor.

Kingston, March 20th, 1901. -om

Vol. II. of the **Herdbook of the Large Black Pig Society of England** has, through the courtesy of the secretary and editor, Mr. Ernest Prentice, 61 Oxford Street, Ipswich, been received at this office. It is a neat and substantial volume, well bound, and printed on first-class paper, and containing the pedigrees of 192 boars and 730 sows.

\$3000 STOCK BOOK
FREE POSTAGE PREPAID

It contains 183 Large Colored Stock Engravings that cost us over \$3000.00. Book is 9 1/4 by 6 1/4 in. Beautiful Cover in 6 Colors. Gives description and engravings of different breeds of Horses, Cattle, Sheep, Hogs and Poultry. It contains a finely illustrated Veterinary Department. Mailed Free if you answer 4 questions: 1st—Did you ever use "International Stock Food" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs? 2nd—Is it for sale in your town in 25 lb. pails? 3rd—How many head of stock do you own? 4th—Name this paper. Over 500,000 farmers and 100 "Farm Papers" endorse this Book and "International Stock Food." Answer questions and write to:

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Our New 1901 Catalogue now ready, sent free to any address. Tells all about the QUALITY of our goods. It will pay you to get one.

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THE Frost & Wood Company LIMITED.

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YORKSHIRES AND POULTRY.
Eggs for hatching: from extra fine matings of B. P. Rocks, W. Wyandottes, White and Brown Leghorns, and White and Black Minorcas, at \$1.00 per setting, or \$5.00 per hundred. M. B. turkey eggs and Pekin duck eggs in season.
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To Poultry Keepers.
WE will send, for \$2.40, one case containing twenty packages, of five pounds each, eight varieties, Poultry Food, including the following: Ideal Egg Food, Anglo-American Food, Green's Chicken Food, Animal Meal, Meat Scraps, Mica Grit, etc. Address:
Ellis Poultry Supply Co.,
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Canada's Winners.
EGGS FOR HATCHING.
Silver Gray and colored Dorkings, Indian Games, Houdans, Minorcas, Hamburgs, Leghorns, Poland, Ducks and turkeys. Our birds win at Boston, New York, Toronto, London, Kingston, Ottawa, Montreal, Also Ayrshires (bulls and females). For full particulars, write **WM. STEWART & SON,** Menie P. O., Ont.

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

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

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INCREASED CAPACITIES

1901
Improved Alpha-De Laval
BABY SEPARATORS.

The Baby Separators have now their respective capacities increased as follows:

	Milk per hour.	Price.
Humming Bird, instead of 225, now skims	250.	\$ 65.00
Baby No. 1, " 325, " "	450	100.00
Baby No. 2, " 450, " "	600	125.00
Baby No. 3, " 550, " "	1000	300.00
Dairy Turbine, " 850, " "	1000	225.00

30% to 35% more capacity. No increase in price.

The same standard of "ALPHA" closest skimming is preserved. Apply to local agents or to

Canadian Dairy Supply Co., 327 COMMISSIONERS ST., MONTREAL.

Please Mention Farmer's Advocate.

Highest Quality Always.

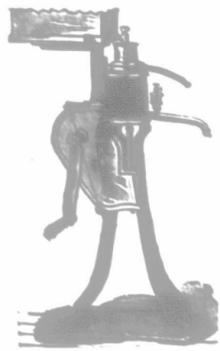
If you want Dry Goods of the latest and newest kinds, Groceries of the finest and freshest quality, and everything that you Eat, Drink, Wear or Use the best that can be obtained, then trade at the Hudson's Bay Stores.

Have you tried TETLEY'S TEA? It is one of the most fragrant and refreshing Packet Teas in the world. We are sole agents for Manitoba, the Northwest Territories and British Columbia.

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Both Theory and Practice

Prove the Superiority of the U. S. Cream Separator



In Theory, its one piece frame, enclosed gears running in oil, few parts, three - separators - in - one bowl, and superior construction in general make it the

Cleanest skimming, most substantial, safest, easiest operated, and most durable Separator made.

In Practice, it is daily proving the correctness of our theory, as testified to by pleased users everywhere. If interested, write for catalogues containing hundreds of letters to this effect.

Made in all sizes for either the Dairy or the Creamery.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

REMEMBER, there is No Duty on Improved U. S. Separators shipped into Canada.

THE IMPROVED UNITED STATES CREAM SEPARATORS are worth more than they cost, and are bought in preference to all others by the best farmers. Nearly every machine sold brings a letter similar to the following:

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Dear Sir,—The Improved United States Cream Separator, No. 7, which I purchased from you a short time ago, is giving perfect satisfaction. As a cream separator I consider it as near perfection as anything could be. It skims exceedingly close; in fact, there is practically no butter-fat left in the skim milk. One great advantage it has over several other makes of machines is the few parts inside the bowl, and the ease with which it can be cleaned. I find that it will skim fully as fast as the makers claim for it (viz., 300 lbs. per hour), as I have timed it several times. It is a machine that is made to last, being very strong and simply made: all running parts being enclosed, which not only protects it from dust and dirt, but renders it impossible for any accident to happen, such as getting wound on a shaft or caught in the gears. It is also very light running, which is a great consideration in a cream separator.

Yours truly, H. O. AYERST, breeder of Shorthorn Cattle.

Enquiries and orders from Manitoba and N.-W. T. should be addressed to the general agent for that part of Canada, W.M. SCOTT, 206 Pacific Ave., Winnipeg, dealer in all lines of Dairy Supplies and Farmers' Fresh Separator Butter.

David Maxwell & Sons,

ST. MARY'S, ONT.

PATENTED
STEEL ROLLER BEARINGS, IMPROVED DETACHABLE LINK, IMPROVED STEEL FRAME, COMBINED LEVER AND FOOT DRIVE.



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

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

SOLD BY ALL LEADING WHOLESALE HOUSES AND DEALERS. . . .

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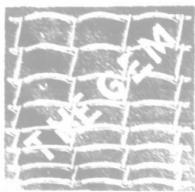
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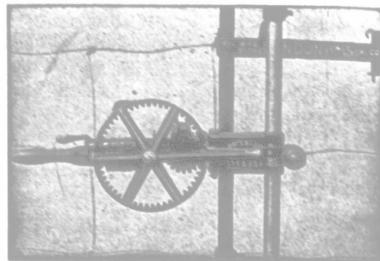
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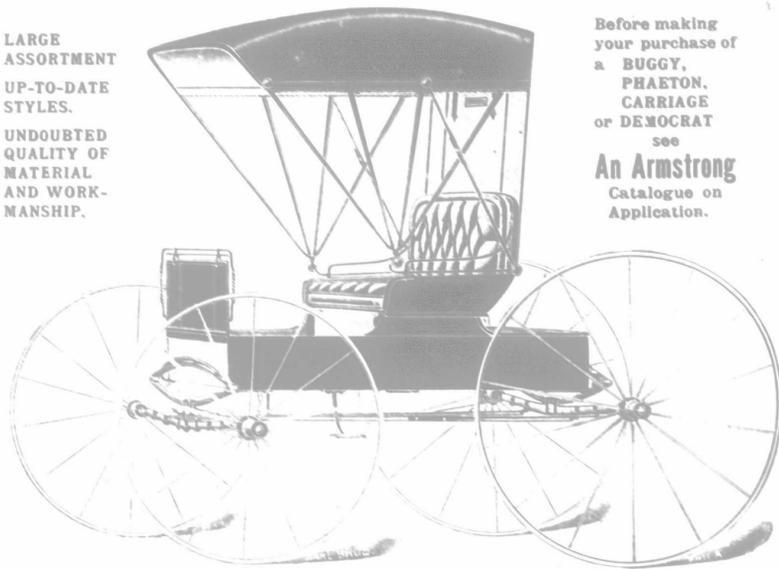
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