

**PAGES
MISSING**

FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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No. 456.

EDITORIAL.

The British Board of Agriculture issued an order, taking effect on June 3rd, prohibiting the importation of swine from the United States.

Letters were recently read in the Canadian Parliament, asking, on behalf of several hedge-fence companies, that honey locust plants be allowed to come into Canada upon previous inspection in the United States, which cannot be done under the San José Scale Act. The application was not entertained, the Minister of Agriculture stating that the honey locust plant was peculiarly susceptible to the scale. If, after a year's experience, he found that anything could be done in the direction suggested, he would be glad to consider the matter.

The Veterinary Department of the British Board of Agriculture reports a very great improvement in respect to the losses of cattle and sheep shipped from the United States during 1897 compared with 1896. "It has been observed that almost all the cattle now sent from the United States are dehorned, and the recent improvement in the condition in which these animals have arrived in this country is probably in no small measure due to the removal of this power of injuring each other during transit." In the South American trade the losses amounted to the serious total of 81 per 1,000 cattle shipped and 36 per 1,000 sheep. The Canadian losses amounted to about 8 cattle in the 1,000, and this occurred mainly on two voyages, due to circumstances of an exceptional and accidental nature. There was no diminution in the efficiency of arrangements for the Canadian trade.

The Sheep Industry in Canada.

It is unaccountable, in a country so admirably adapted to sheep husbandry as is this Dominion, that so few sheep are found on its farms. We believe it is absolutely safe to say that in no other country are sheep liable to so few diseases or disabilities of any kind. The climate is as near an ideal one for the successful raising of this class of stock as can be found anywhere in the world. The soil also, in almost every section of the Dominion, is suitable to the healthful growth and development of sheep and their volunteer crop of wool. All the leading breeds do well with us. There is no class of stock the raising and care of which requires so little labor or expense as this inoffensive and unpretentious money-maker. They need very little grain at any season, and where roots are grown and fed the breeding flock may be successfully carried through without any grain, though they will pay well for a light ration in the winter season, and for shelter from storms, but cheap sheds are sufficient and may, if well managed, answer the purpose as well or better than fine and expensive structures. Sheep will eat and will thrive upon many of the weeds which infest the pastures, and in this way help to clean a farm and keep it clean. They will live in summer largely upon pickings in the lanes and by-places of the farm, which would otherwise be wasted. The fleece of wool, a product which no other farm stock yields, and which is perennial during the life of the animal, amply pays for the winter's keep, even when liberally fed, and anywhere from fifty to a hundred per cent. of an annual increase from the breeding ewes may reasonably be expected, and with a little care and good management may be realized. There is generally a good demand for mutton sheep and lambs at all seasons of the year at fair paying prices in the meat market, while the demand for breeding stock of all the breeds for replenishing and improving the flocks in the range territories both in Canada and the United States, at prices far above those of the butcher, is such as to make it decidedly profitable to

cater to that trade, and Canada is peculiarly well situated for taking advantage of the increasing trade in this line which seems bound to come our way. United States flockmasters look to Canada for rams, knowing from experience that sheep bred and raised on our soil have the requisite stamina and quality to improve the stock they are brought into contact with, and will continue to come here for fresh blood. If we excel in any one class of stock more than another it is in our sheep, as was amply evidenced by the great success of our flocks at the World's Fair in 1893, at the Madison Garden Show, and the magnificent displays made at our leading exhibitions. While it is true that the quality of our best breeding flocks has been well maintained, thanks to the skill and pluck of the breeders of our pure-bred flocks, who have held the fort without adventitious aid from outside sources, and notwithstanding the fact that sheep have been systematically ignored at the Dominion Experimental Farms, while kindred industries have been boomed by Government commissioners and aided by special favors at the public expense, yet it is also true that sheep are being neglected by a very large proportion of farmers and that the aggregate number of sheep in the Dominion has been steadily decreasing for the last ten years or more, a fact which, as stated in the first sentence of this article, is unaccountable when all the good things which can be truthfully said in their favor are enumerated. If any words we have written shall lead to a more general recognition and active appreciation of the claims of this class of stock by our farmers we shall feel that we have done good work in penning them, being fully persuaded that no more profitable branch of farming is within the reach of our people.

The Elevator Monopoly--Reply by Dr. Rutherford, M. P.

To the Editor FARMER'S ADVOCATE:

SIR,—I observe in your issue of June 1st an article on the Elevator Monopoly, which is somewhat misleading as to the position taken by the Western members in their efforts to abolish this grievance. Western Liberal members, with one notable exception, are unfortunate, inasmuch as, under existing journalistic circumstances, they have no widely circulating medium through which to inform their constituents of what they are doing or endeavoring to do on their behalf. As a consequence, they suffer from constant misrepresentation, due sometimes to self-interested vainglory and sometimes to the indiscriminating antagonism of writers politically opposed to them. I trust you will allow me to explain to your readers as briefly as possible the facts relating to this vexed question. The elevator grievance, shortly stated, lies in the fact that the farmer, who should unquestionably have the privilege of shipping his own grain, when, how, and to whom he pleases, is at present compelled to pass it through elevators which may or may not be honestly and fairly conducted. As a result, he is largely in the hands and at the mercy of the elevator owners, who, by the recent union of their forces, have deprived him of the competition which formerly to some extent served as a protection to his interests. Different men hold different views, and the Western members, while all desirous of remedying the existing state of affairs, were not of one mind as to the best manner of bringing about the needed reform. Speaking for myself, I long ago came to the conclusion that there was no need for new legislation, as I considered that the case was already fully provided for by Sub-section 2 of Section 240 of the General Railway Act, which you might publish for the benefit of such of your readers as are not familiar with it. Acting on this belief, and after consultation with several high legal authorities, I represented to the Government the desirability of compelling the railway companies to live up to the existing law, and obtained assurances that the matter would receive the attention it deserved. I presented my views as above to the public in the *Manitoba Liberal* of February 24th, and to the House of Commons as forcibly as I could on March 14th, in seconding Mr. Jameson's ably advocated resolution in favor of the establishment of a Railway Com-

mission. Meanwhile, however, Dr. Douglas had introduced his Bill to regulate the transit of grain, and after perusing it carefully I came to the conclusion that as a supplement to the section of the General Railway Act, above referred to, it would strengthen the position of the producer, and I therefore gave it an ungrudging and hearty support. The Bill was read a second time on March 17th, was referred to the Railway Committee, and came up for discussion on April 30th. It was strongly opposed by leading Conservative members and by the elevator owners, as also by Judge Clark on behalf of the C. P. R., and occupied the Committee for a whole session, without any progress being made. After the Committee adjourned, Dr. Douglas was informed by the railway people that they had no interest in the matter save that of getting the grain loaded quickly, so as to enable them to keep their cars in motion during the short season between harvest and the close of navigation. Dr. Douglas, on this understanding, agreed to certain slight alterations in his Bill, and Judge Clark undertook to draft a new clause to be submitted before the next meeting of the Committee. When the Committee met, however, on May 3rd, the newly drafted clause was handed to the Doctor just as his Bill was called, and he, dreading the risk of losing the chance of getting his Bill through this year, and taking it for granted that the new section was drawn in accordance with his verbal agreement, explained it on that basis, and asked that the Bill be reported to the House. Having the most implicit confidence, as has every decent man who knows him, in Dr. Douglas' integrity and honesty of purpose, the Western members, anxious to advance the Bill a stage, endorsed his position, and no amendment being offered, the Bill was reported by a unanimous vote. When the new clause was printed, however, Dr. Douglas discovered that it was not at all what he expected it to be, and it was promptly repudiated by him and by all who were supporting him in his original Bill. The so-called Farmers' Institute and independent grain dealers' delegates, who, as far as we could learn, represented themselves and their own interests only, had absolutely nothing to do with our action in this matter. As it then appeared too late in the session to introduce another bill, it was resolved by the representatives from the West to follow the plan which I had advocated from the first, viz., to ask the Government to compel the railway companies to live up to the provisions of the existing law. We accordingly drew up the following memorial, which was placed in the hands of the Prime Minister by Dr. Douglas himself:

"Whereas, owing to the pressure of other business it has been found impossible to enact such legislation during the present session as will remove the grievances in respect to the shipment of grain under which the producers of Manitoba and the Northwest Territories at present labor; therefore, we, the undersigned members of Parliament, request you to take such steps under the Railway Act as will secure to the producers the right to ship grain under the following conditions:

"1. The producer may load cars directly from his vehicles by means of a suitable platform or otherwise, and shall be allowed reasonable time to do so.

"2. Where flat warehouses now exist or may hereafter be erected, grain may be shipped through the same and no discrimination shall be made against such warehouses in favor of standard elevators.

"4. Where grain is shipped directly from vehicles no charge shall be made by any other elevator owner or other person for such privilege, and where grain is shipped through flat warehouses no person other than the owner of the warehouse shall be entitled to make any charge for said privilege.

"3. Where the supply of cars is insufficient, such cars as are furnished shall be divided equally among the applicants until each has received one car, and after that the cars shall be distributed in proportion to the amount of business transacted.

"(Signed)

JAMES DOUGLAS.
" J. G. RUTHERFORD.
" R. W. JAMESON.
" J. A. McDONNELL.
" T. O. DAVIS.
" FRANK OLIVER.
" R. L. RICHARDSON."

The memorial which you publish did not emanate from the Western members, and you are entirely in error when you state that it was prepared or presented to the Government by them. A

THE FARMER'S ADVOCATE AND HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION

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Careful perusal of this latter document will reveal clearly the special interest which it is calculated to promote. I think I am safe in predicting that there will be no more elevator monopoly...

I cannot close without a word regarding the miserable attempt made in some quarters to convey the impression that Dr. Douglas, myself and others are under the dominating influence of the O. P. R. and like corporations. A more foundationless charge was never made...

House of Commons, Ottawa.

STOCK.

Our Scottish Letter.

A Pioneer Ayrshire Breeder's Demise.—Fanciers of the Ayrshire in Canada have long been familiar with the name of Mr. Alexander Allan, formerly tenant of the farm of Munnoch, Dalry, Ayrshire. He was the oldest of the generation of Ayrshire breeders that now is, but someone else is now holder of the premier place. Mr. Allan died on 15th May, in the seventy-sixth year of his age. He was a great favorite with all classes of the community, and as a judge was in his time unrivalled. He officiated at all the leading shows in this country and on the Continent, and had a very large share of the foreign trade in Ayrshire. He was entrusted with many commissions and selected many animals for foreign buyers. As a typical Ayrshire farmer, shrewd, cautious, painstaking and industrious, Mr. Allan had few equals, and none survised exactly of his own type. His sons, Mr. A. Y. Allan, Croftjane, Thornhill, and Mr. James Allan, Blackston, Dalry, are well-known and popular farmers, and both are recognized as admirable judges of Ayrshire stock. Ayrshires in Scotland.—Reference to Mr. Allan naturally leads one to say something of his favorites—the Ayrshires. After a long conflict, there are

this year signs that the breeders and judges of Ayrshires have hit upon the happy medium between the show cow and the dairy cow. Complaints have long been made of the divorce between the cow of commerce and the cow of the showyard. Dairy farmers who have to supply the town with milk in the early morning complained bitterly that the showyard fancy for small, well-planted teats and a beautifully suspended vessel only was inimical to the utilitarian interests of the dairy farmer. The best prizes made in the sale ring and the best prizes gained in the showing were made by animals of two distinct types. When cows have to be milked at lightning speed in the small hours of the morning, the neat teat and fancy vessel of the show cow are a great nuisance, and the female part of the agricultural community have never been slow to condemn the fancy animal. Mr. Allan, although not an advocate of the fancy animal, always stated what could be said for it with moderation and precision, but he was quite ready to admit that it was one of the good things of which one could have too many. This season, more than in any preceding, evidence is furnished in the showing of a return to common-sense in the matter of judging. With a view to bringing out what was wanted by dairy farmers, special prizes have in recent years been given for what were called commercial cows, and this season in several instances these prizes have been won by the champion cows of the showyard. This happened at Kilmarnock, Ayr, Glasgow, Dunbarton and Bute shows. At the first-named show Mr. Hugh Todd, Harperland, Dundonald, secured champion honors with a lovely 3-year-old named Nellie IV. of Harperland—a splendid cow, of great scale, and just the kind of animal everyone wants to fill their byres with. The champion cow at Ayr and Glasgow was Lady Flora of Burnhouses, bred and owned by Mr. William Howie, Burnhouses, Galston, and one of the grandest cows of the Ayrshire breed on record. As a dairy cow she is unsurpassed, and it is a remarkable fact that she has not only swept everything before her for two years in succession, but there is also a strong probability that in the year that is to come she will be equally invincible. It is doubtful if there has ever been exhibited a better example of the Ayrshire dairy cow. The Dunbarton champion, Queen of Auchentullich, was also bred in Ayrshire, and is owned by Mr. John Banchope, Auchentullich, Alexandria. She is a grand, lengthy, white cow, of the right scale, with any amount of breed character. The Bute champion, Moss Rose of Mid-Ascog, was bred by her owners, Messrs. R. & J. McAlister, Rothesay, and in some respects she has no superior. She is as good a dairy cow as any, and it is rather noteworthy that she and her forebears, and also Bute of Burnhouses, the sire of Lady Flora, were all bred on Mid-Ascog. This is one of the best herds of Ayrshire cattle in Great Britain, and it is managed with consummate skill. Altogether, the Ayrshire breed is in this country at present in a very hopeful condition.

Tuberculosis as a subject of agricultural discussion is ever with us, and if Government inquiries and Royal Commissions could have cleared it away, we should have been quit of it long ago. Three separate reports on the subject have issued from authorities under parliamentary sanction, but, after all, we never seem to get any "forrader," so far as the elimination of the disease is concerned. The labors of these Commissions have not, however, been in vain. They have tended greatly to relieve the public mind in regard to the dangers arising from tuberculosis; they have made us familiar with the true nature of the disease; and they have shown that while the number of tuberculous cattle is very large, the number of such affected in the udder is by no means fitted to cause unnecessary alarm. All the men of science are apparently now agreed that unless the udder be diseased there is no risk attending the use of milk from tuberculous cows, and even when the milk is the seat of the disease, the boiling of the milk removes all risk of disease. Dairy cows are more subject to the tendency than others, but even in their case the disorder is to rear cattle so framed that they will not be predisposed to the disease as too many in the past were. Ayrshires of the type referred to in the preceding paragraph are not likely subjects for the disease, and altogether there is every reason to expect an increase in the number of healthy dairy cattle in this country. The discussions on tuberculosis have revealed a curious illustration of the provincialism which is so marked a characteristic of the British mind. In spite of the evidence collected by various independent witnesses regarding the success of Bang's treatment and method in Denmark, an extraordinary number of men in this country refuse to believe in the success of that system; and they are not inclined to listen even when told that in this country a similar success has attended the Castle Craig experiments of Sir Thomas Gibson-Carmichael. This provincialism is sometimes an advantage, but at other times it counts for nothing, and in its relation to experimental work it is calculated to do great injury to agriculture.

Hackneys Gaining Popularity.—Hackneys have been in great favor during the past few weeks in this country. We have had several sales by auction, and prices are keeping up and going up. Mr. Alexander Morton, of Gowanbank, Darvel, is the great pioneer breeder in Scotland, and for a long time he fought the battle single-handed. At length a change has come over the country, and he has now a large number of companions and competitors. During the past few years all of the

Hackney breeders have devoted their attention to breeding carriage horses, and this has proved a decided advantage to the entire Hackney interest. The Hackney which was too small for a carriage horse and too large for a pony is wanted by nobody, and better days have dawned for the breed now that all sorts and conditions of men are recognizing that it is a harness horse or nothing. At his sale in the beginning of May, Mr. Morton this year sold 54 head, of all ages and both sexes, at an average of £75 18s. apiece. A Hackney gelding named Grenadier was sold for 230 gu., or £241 10s. (\$1,150), and a pony mare made £420. She is a well-colored animal and a phenomenal mover. The average price of four pedigreed Hackney brood mares was £118 2s. 6d., and 30 harness horses made an average of £82 11. 3d. Another very good Hackney stud in Scotland is that of Mr. William Scott, Gilfoot, Carlisle. He had a sale one week earlier than Mr. Morton's, when he sold fourteen animals at an average of £62 2s. each. Of these the majority were driving horses, and three of them came to the top at the Ayr Show; while more than one was well placed at the great horse show at the Crystal Palace in the end of May. The highest prices and the liveliest biddings were made at the Limefield sale on Tuesday, 17th May. The late Mr. James Walker, of Limefield, was one of the best judges of Hackneys in Scotland. His stud was one of the smallest in the country, but it was known to be one of the most select, and when, on account of his lamented death, it was announced that it was to be sold without reserve, everybody knew there would be a good sale. A three-year-old filly went to Lancashire buyers at £300 15s., and a four-year-old mare at £230 10s. The average price of seventeen Hackneys was £84 7s. 6d. There were in the sale six brood mares with foals, four yearling fillies, and four yearling colts, as well as one three-year-old mare, one two-year-old filly, and one harness mare. It was a wonderful sale, and shows that given good blood, careful selection, and an unreserved sale, Hackneys will make almost any price in Scotland. Even the canny Aberdonians have been trying to breed Hackneys, and a successful sale of ponies and Hackneys took place there not so long ago. "SCOTLAND YET."

Exhibitions for 1908.

Table listing exhibitions for 1908 across various locations including Trans-Mississippi, Winnipeg Industrial, Portage la Prairie, Brandon, Carberry, Stanstead, Rock Island, Que., Toledo Tri State, Toronto Industrial, New York, Syracuse, Ohio, Columbus, Minnesota, Hamline, Eastern, Sherbrooke, London Western, Indiana, Indianapolis, Prescott, Vankleek Hill, New Brunswick, St. John, Bay of Quinte, Belleville, Northern, Walkerton, Ottawa Central, Wisconsin, Milwaukee, Northern, Collingwood, Peninsular, Chatham, Prescott, Prescott, Lanark, South Perth, Illinois, Springfield, Peel, Brampton, Lanark, North Almonte, Centre Bruce, Paisley, Northwestern, Goderich, Prince Edward, Picton, Oxford, Kempville, Elgin West, Wallacestown, Ontario and Durham, Whitby, Peterboro, West Peterboro, St. Louis, St. Louis, Mo., Norfolk, Tilsonburg, Norfolk, Simcoe, Woodbridge, Ontario Fat Stock Show, Brantford.

[NOTE.—If Secretaries of Fair Boards will send us dates of their shows we will include them in the lists of succeeding issues of the FARMER'S ADVOCATE.—EDITOR.]

How to Lead a Wild Cow.

"A few years ago," writes a reader of the FARMER'S ADVOCATE, "I purchased a highly fettled Jersey heifer. She was sent from her former owner by train, and when she arrived at our station she was so wild and excited we could not untie her in the car. In fact, we knew if we did turn her loose she would go over everything jumpable. So we threw a blanket over her head and untied her, then tied an old sack over her eyes so that she could not see. This so completely subdued her that she walked home some four miles tied behind a wagon as quietly as anyone could wish. In a few years the cow was again sold, and her purchaser, although confident he could lead any cow, could not get her home until he had taken my advice in blindfolding her with an old sack, when she again led away quite peaceably."

J. C. MURRAY, Brandon, Man.:—"I would not like to be without the FARMER'S ADVOCATE."

The Bath and West of England Show.

NOTES ON SHEEP, SWINE, AND DAIRY SECTIONS.

This annual meeting took place this year in the old town of Cardiff. The sheep were, as a rule, not at all well represented, the principal exceptions being the Devon Long-wool and Shropshire breeds. Cotswolds came out fairly well, Mr. R. Swanwick being the principal winner, as at the Oxford County Show, although the second ram from Mr. McCalmont's flock might have gone higher up. Ram lambs were as above, and yearling ewes only one moderate pair forward. Devon Long-wools were well and strongly shown. Evidently there is being made a commendable effort to increase the demand for this hardy breed of sheep. Southdowns were most disappointing, both in regard to number of entries as well as to quality. No single exhibit could be called tiptop. Earl Cadogan led the way in two classes, ram and ewes, and Mr. C. R. W. Adeane in the ram lamb class with a pair of capital lambs, the best and most typical exhibit in the section. Hampshire Downs made a very second-rate exhibit. Some few typical and useful sheep were present, but these were not so numerous as one would have expected them to be at this important show. Lord Rothschild took the ram prize, and two out of three in the ram lambs, but these latter awards were certainly lucky ones, for a far and away better pen of Mr. A. de Mornay's was placed after them. The leading pen in this class came from Mr. L. H. Baxendale's flock. Yearling ewes found a grand pen of Mr. A. de Mornay's to the fore. Shropshires were very strongly shown. Mr. J. Bowen Jones led the way in both the ram and ewe classes, in which the competition was very close indeed. Mrs. M. Barrs, W. F. Inge, and J. Harding were winners in the ram class, and in the ewe class Mr. P. L. Mills, Mrs. M. Barrs, and Mr. A. Tanner. Ram lambs not so strong a class, which ought to have been headed by Mr. A. Bradburn's pen that came second, but was headed by Mr. W. F. Inge's pen, a good skinned pen, but not of the quality and handle that Bradburn's pen had. Oxford Downs, which were a weak lot, even at the Oxfordshire Show, where in days gone by one always found this breed in strong force, was this year provided for by one of the most moderate ram classes we have ever seen, and here at Cardiff the leading winner was a sheep that failed to get a cash prize at Oxford Show, owing to those of his competitors who were more successful than he not being present. Ram lambs and yearling ewes were such that the least said the better. Dorset Horns were fairly well shown, the ram lambs of Mr. W. R. Flower being first and second, and were about the best, most level and even pens of this breed seen out for some years. This breeder was also successful in the ram classes, and Mr. H. McCalmont took the lead in yearling ewes.

Pigs.—Berkshires were present in good numbers, and generally speaking, their quality and merit was of a very averaged standard of merit. In the boar classes the principal winners were Messrs. J. Jefferson, R. Swanwick, E. Burbridge, N. Benjafield, and J. Lawrence, commended. For sows, in strong competition, E. Burbridge and J. A. Fricker led the way, J. Jefferson, N. Benjafield, J. Lawrence and R. Swanwick also coming in for notice. Large Whites were small in number but good in quality, the premiums being divided between Sir G. Greenall and Messrs. S. Spencer and F. Allmand. Middle Whites were fully shown, and many first-class pigs were to be seen therein. Messrs. S. Spencer, Sir G. Greenall, A. C. Twenlyman and Hon. P. D. Bouyerie proved to be invincible, taking the whole of the best prizes; whilst in the Tamworths Mr. R. Ibbotson had the classes all to himself, his exhibits being, however, of very great and good merit.

The Dairy Section at this show is a most important one, and it has earned a well-deserved reputation of being one of the most important held during the summer season as well as being about the best and most thoroughly well-managed one. The butter tests, the exhibit both of butter and cheese, were all one could wish for, and many valuable and useful lessons were doubtless gathered up by the large number of visitors who flocked to see the exhibits and hear the lectures, and watch the competitions that took place.

Oxfordshire (England) County Show.

This fixture is one of the most important of the earlier summer shows; in fact, it, to many of the principal sheep exhibitors, is the starting point of what you, in your country, term the "fair circuit." This meeting is the one at which the Oxford Down sheep show out in greatest number, and doubtless the classes we saw thereat, in respect to numbers, will not be exceeded at future shows this year. Mr. A. Brassey is not showing at all this year, so that one misses his well-known exhibits. These were particularly missed in the shearing ram class, in which there were few really first-class show sheep. The winner was one of Mr. Treadwell's, and he also

took the breed championship with him. We did not like his color nor the way he stood on his legs. Messrs. C. Hobbs & Son came second with a better sheep in respect to type and color, but a bit weak outside the thigh. Mr. J. C. Eady was third with a very taking sheep. Ram lambs a useful class; Messrs. W. Arkell and A. H. Wilsden securing the awards. Shearing ewes were headed by a grand pen. Mr. J. C. Eady most deservedly secured therewith the championship of the yard, and his second pen, equally good as the former, were most excellent. Ewe lambs were fully representative, but those selected for the first awards were not of so good a style or quality as Mr. A. H. Stilgoe's, which took second place. Hampshire Downs were, in the ram and ewe classes, very strong indeed, and the chief honors, not only in these classes, but in several others, went to Earl Carnarvon, whose flock is rapidly pushing its way to the fore. Both Mr. J. Flower and Mr. A. de Mornay, who won first in the shearing ewe class, were well to the fore, exhibiting first-class specimens of this breed. Southdowns were present in strong force, and the championship of the breed went to a ram lamb out of the pen of three who secured first premium in their class, from that well-known and noted flock of the Pagham Harbour Co., Selsey England. This ram lamb, and, indeed, the whole of this flock's representatives, was of first-class quality, type and character, such as few, if any, of the flocks could produce. Earl Cadogan secured second for shearing rams and the award for shearing ewes. Both pens will probably in future shows turn tables on their more successful competitors which came from Sir James Blyth's flock. Shropshires were not fully representative, but the winning sheep

we are enabled to say that the .32 of an acre of rape saved 1,062 pounds of grain, or that an acre would be worth 3,318 pounds of grain.

In another trial with two lots of 19 in each, conducted in the same manner, and fed the same rations for seven weeks, the rape lot ate 2,220.3 pounds of maize, 1,109 pounds of shorts, .6 of an acre of rape, and gained 1,066 pounds. The penned lot ate 3,106.5 pounds of maize, 1,553 pounds of shorts, and gained 1,076 pounds. The gain is practically the same in this instance also, so that it may be said that the .610 of an acre of rape saved 886.2 pounds of maize and 444 pounds of shorts, or that one acre of rape is worth 2,217 pounds of grain. The average of the two trials indicates that an acre of rape is worth 2,767 pounds of such grain as we fed for fattening pigs.

The two trials that have been made indicate that this crop is likely to prove as valuable for swine feeding as it is for sheep. There is less risk in feeding it to swine, as they do not bloat on it nor scour if fed properly. It gives every promise of proving an excellent crop for pasturing brood sows and young pigs. It is very evident that for late summer or early fall pasturing it is especially valuable. At that season of the year, when it is hot and dusty, swine are most liable to have fevers, cholera, and other derangements, and there is no doubt but that pasturing them on such a succulent crop as rape would add to their thrift and vigor, and thereby lessen the losses that occur in these months. Rape seems specially valuable for swine feeding during the hot summer months, because of its succulence and the relish of swine for it, and for these reasons we would urge our swine breeders and feeders to try it on a small scale for this purpose.

Rearing Young Bulls.

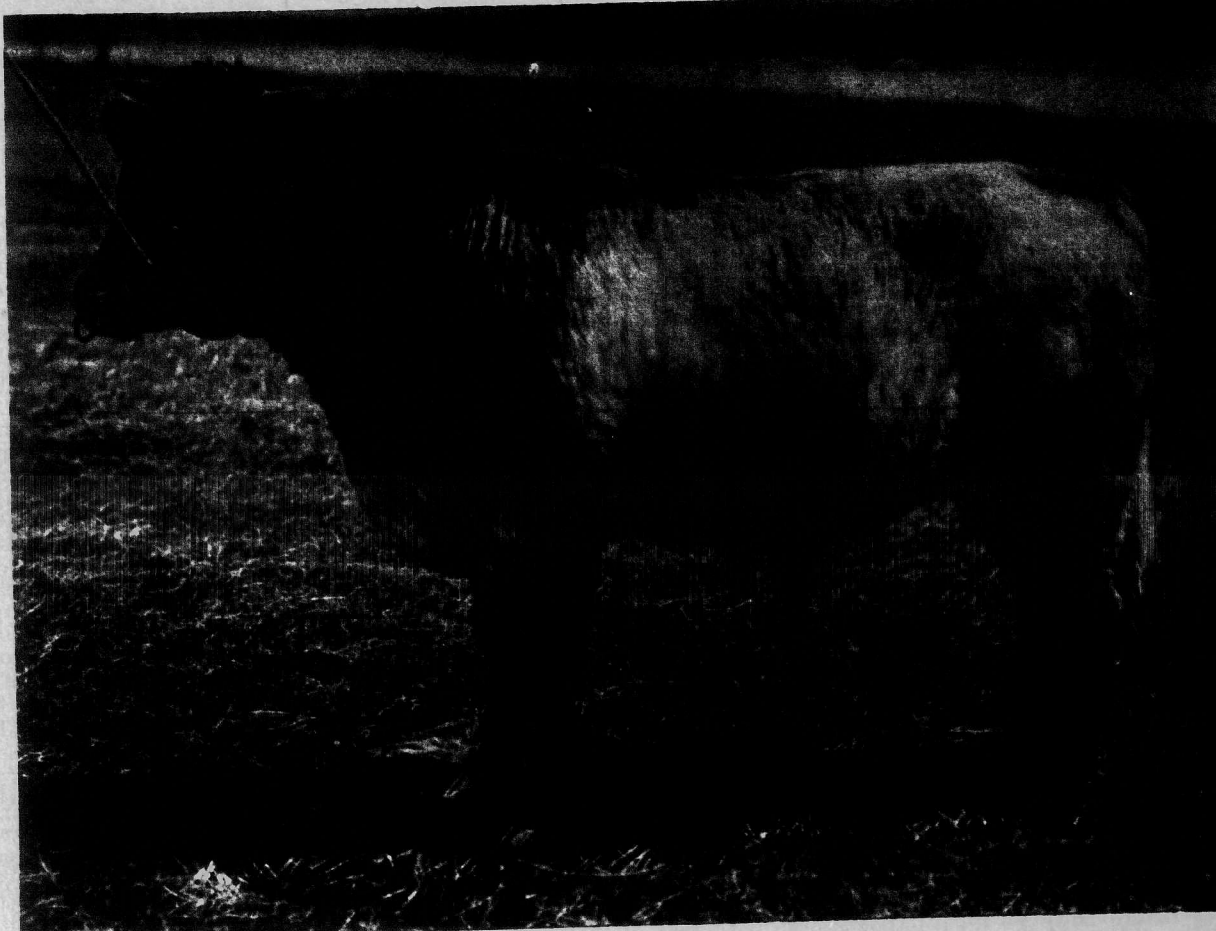
Perhaps at the present, more than at any time in the past, breeders are purchasing bull calves under a year rather than those of greater age. Numbers of breeders report that it will be with difficulty that they can retain bull calves in the herd to meet the trade of next spring for animals fit for service. Now, it is important that these young animals be given the right attention, which is not well understood, especially by beginners with such stock. Whatever method is pursued, it should be the one object of his owner to make him fit for service by producing a strong frame, with plenty of vigor and activity. One of the common mistakes made with such animals, especially when a good price has been paid for him, is to keep him in too close confinement, which, if he is well fed, is nearly certain to send him wrong on his legs. He is especially liable to go back over his heels greatly disfiguring him and injuring him for service. If obtained as a calf in spring, he should be turned out

during the nights through the summer, and given a roomy box and plenty of yard exercise the following winter. It is a good practice to accustom him to be led about with the halter, and will assuredly result in less trouble with him afterwards; in fact, every bull calf should be thoroughly halter-broken before a ring is put in his nose.

If fed milk, though not necessarily sucking a cow, for four or five months, and afterwards given ground oats, bran, and a little oil cake, along with good fodder, he will be fit to serve a limited number of heifers and small cows at twelve to thirteen months old. He will have plenty of time during the following summer to pick up his strength and vigor again, and having more framework and strength, will be fit for general service throughout the herd in the following autumn. It is a great mistake to turn a young bull out with the herd during his first or even second service summer. He will not only do himself injury, but while some of the females will be served too often, others are liable to be missed.

During the time of service it is recommended by E. Brand, in *The Farmer and Stockbreeder*, the young bull's food should be slightly on the increase, and of somewhat more nitrogenous composition. Musty hay should be avoided, and liberal feeding of oats, bran and oil cake, along with swedes and savory cut hay, will fortify him against the double tax of growth and service.

C. GALLAGHER, Edmonton, Alta.: "The FARMER'S ADVOCATE is a first-class paper, and no farmer should be without it."



THE YEARLING BULL, INDIAN NOBLEMAN, ONE OF THE LAST SONS OF IMPORTED INDIAN CHIEF; BREED BY ARTHUR JOHNSTON, GREENWOOD, ONT.; NOW IN THE HERD OF W. S. LISTER, MARCHMONT FARM, MIDDLECHURCH, MAN.

from Mr. A. Bradburn, G. L. Foster-Harter and Mr. M. Cooper were fully typical of their breed. Cotswolds were but small in numbers, but the quality was good, particularly in the case of Mr. R. Swanwick's ram, who secured the award as best ram of all breeds in the yard. This sheep and his flock-mates secured all the first prizes for their owner.

Rape for Pigs.

At various times, says an American bulletin, we have tried feeding pigs on rape, and it has always been satisfactory, though it would sometimes be necessary to restrict the other feed that the pigs were receiving until they became acquainted with the taste of the plant. We have made two experiments, including, in all, fifty-eight pigs, with the definite object of determining the feeding value of rape. In both these experiments one lot of pigs were penned and fed soaked maize and also shorts in a sloop. The grain was fed in the proportion of two parts maize and one part shorts by weight. The other lot had in addition to this grain a limited piece of rape. The pigs were fed so as to secure a satisfactory gain in both instances, but the amount of grain fed to those on rape was less than that given the penned pigs, that they might eat the rape more freely and make as nearly as possible the same gain as the others. In the first trial the ten pigs on rape ate in 76 days 1,386 pounds of maize, 600 pounds of shorts, .32 of an acre of rape, and gained 853 pounds. The other lot penned ate 2,006 pounds of maize, 1,042 pounds of shorts, and gained 857 pounds. The gain is practically the same, so that

The Preparation of Dairy Cattle for the Showing.

BY F. S. PERR, MOUNT MORRIS, N. Y.
(Continued from page 258.)

Now that I have told you what I consider the principal things to do, I will tell you a few things that you should not do, which is, perhaps, the most important of the two.

First.—Don't wait until a few days before the show to begin fitting. Four or six weeks is little time enough; two months is better, and if your cows are always about fit so much the better.

Second.—Don't hurry; you are most sure to overdo the matter and have your stock reach their bloom before you start for the fairs, which should by all means be avoided.

Third.—Whatever you do, DON'T feed heavily of solid grain at any time; let moderation in grain feeding be the rule,—for that reason begin early. An animal that is forced is easily upset, and then you have undone more in a day, perhaps, than you can recover in a week. Begin early, and go slow.

Fourth.—DON'T feed corn (maize) in any form. It is very heating to the blood, makes grease instead of bone and muscle, and on the first extra exertion of your cow (like carrying her to the fair) she will wilt like cut grass drying in the sun. Of course we are talking about dairy cattle. I do not pretend to know much about fitting beefers for show, but my experience with corn meal would lead me to say that it is poor stuff to feed to anything, even a hog. I have had experience—and of the sorrowful kind—with it on cattle and sheep, hogs ditto.

Fifth.—Don't try to feed a dairy cow to a point where she shows she is getting more feed than she can take care of and convert it into milk, or the judge will say she is no good as a profitable dairy cow and send her to the rubbish pile, when, if you had fed less, and at the same time fed more, you might have won a prize. You know a judge has no business to say he thinks the cow has simply been overfed, and if she had been properly fed, etc. No, he must take them as he finds them in the ring that day; no ifs or and's about it. A really good dairy cow carrying a lot of meat which you have ignorantly put on to fit her, as you think, gets sent to the stable without a show. Some old cow whose ribs you can see as far as you can see the cow (without any fitting) walks off with the ribbon, and you know you have the best cow for milk, and you naturally think the judge has made a mistake. Perhaps in reality he has, but it is your own fault; you have deceived him by bringing a beefy cow into the ring that is not so naturally, and you must take the consequences.

There never was a more mistaken notion than getting dairy animals fat, or even in high condition, for the showing; it has lost to the owners no end of prizes, unless the society happens to get a beef breeder to judge them.

Sixth.—Don't wait until you get on the car to go to the fair to begin polishing horns and hoofs, or begin the use of the brush; do these things at home in your own quiet stable, where the cow will be less annoyed than in a strange place. After she has been shook up in a freight car she should have absolute rest and quiet. This is a little thing, but when your cow is fit you must remember she is very easily unfitted, and every farmer knows how sensitive a good dairy cow is to change. Let a boy or dog chase her for two rods and she shrinks in her yield of milk accordingly. So don't do anything to add to her disquiet.

Seventh.—Don't wait until the last day in the afternoon to order your car; have it on hand a day or two before and all ready bedded, and with a bit of hay in front of the cows before they go in, a barrel filled with water, and see that they are very quietly loaded into the car at least an hour before starting; give yourself or men plenty of time; see that the gang plank is littered with straw, and that they have everything done to ensure their safety and to avoid excitement. Tip the engineer if necessary, so he will start them out of the switch carefully.

Eighth.—Don't wait until you get to the fair grounds to know where your stalls are. Write the secretary and see, or have some one you can trust see for you, that your stalls are all ready bedded and hay in manger, and when your cattle arrive take your time in unloading, let the trainmen swear, and the superintendent of cattle damn. Don't hurry, don't get rattled, keep cool. It is enough to make a man lose his religion to have spent six weeks getting his cattle fit, and then when he gets them to the grounds have to tie them to a fence next to the railroad track because the stalls are not ready. There is no excuse on the part of a society for such gross neglect. Not a wax figure, or the most delicate piece of machinery, needs more careful handling than a herd of dairy cattle. When they have been brought up to the top notch some farmers have had such disheartening results that they say: "It don't pay to fit our cattle; we take them up out of pasture and take our chances; we know we are greatly handicapped, but we prefer to lose a prize rather than one of our best cows."

Ninth.—Don't use kerosene oil to make the cattle's hair lay smooth; it makes a botch job of it; a handful of oil-cake meal in their feed daily for a week or two before, and a soft brush to remove the dirt, will do the business to perfection.

Some of this is not exactly how to fit, but it amounts to the same thing if it tells you how to avoid some things that help to unfit. One thing more.

Begin watering your cattle at home in a pail, or, together with the excitement of the journey, they may refuse to drink on the grounds. Many a good cow has lost a prize by refusing to drink from a pail, because she never did such a thing before in her life. She goes into the ring all "gaunted up," and the judge sends her to the rubbish pile the first thing. "No barrel, no capacity, poor feeder," says the judge; or perhaps he knows the cow well—knows she is a good one—but he cannot help it, it is the owner's misfortune. He says he cannot let himself begin to make excuses for this cow or that;—if he did, where would he end; so out she goes.

FARM.

Haying Pointers.

To the Editor FARMER'S ADVOCATE:

SIR,—You have an excellent article in June 1st issue re cutting and curing clover, and only favorable comment can be made on same. Our system here is very similar to what you recommend. Would suggest, however, that all hay be cocked on day of cutting (provided it is cut on a drying day), otherwise the night dew considerably deteriorates its value. As a rule, on the third day, weather being favorable, hay is sufficiently sweated and ready for mow. Here we cut and always cock on same day.

I certainly agree with you re feeding clover hay to horses, and feel exceedingly pleased to have my view backed by your lucid argument in its favor.

From experience here we find that lucerne can be properly cured as you suggest, only care must be taken not to make large cocks.

Mr. Editor, keep us posted up in our "good and glorious" cause by such edifying reading as paragraph referred to, and appreciated by

JOHN D. MACLEAY,
Norfolk Co., Ont. Manager Annandale Farm.

Haymaking in Nova Scotia.

In curing clover my method has been to strike the first settled weather in July, or as soon as the clover is ready to cut. We prefer to mow in the afternoon and evening, and, as clover with us is never less than three tons per acre, we can usually get enough down without starting the machine in the morning. We do not touch it again till about four o'clock the next day, when we turn the green side to the dew and leave it in that shape for the second night. In the morning we open out a little more thoroughly, shaking the green bunches well out, and towards night, while the hay is good and hot, and before any dew falls, we cock snugly. I might say here, that we never use a horse rake in clover, for two reasons: First—I have never yet found a horse rake that would leave a good crop of clover in as good form for cocking as it is in the swath; and, secondly—Because we find it sheds the rain much better when cocked out of swath than out of windrow. Weather being favorable, we let it stand in cock for a couple of days; we then open out in morning, and turn over after a few hours' sun, and start teams hauling to barn. One of the disadvantages of this method is, we have a large quantity of hay out in case of bad weather, as we keep cutting every day; but even clover hay, after it has stood over night in snug cocks, will turn quite a shower of rain.

Timothy is much easier to handle. We cut it in evening, or in morning after the dew is pretty well off, and turn over about noon, start rake about three o'clock, cock snugly for over night, turning out the next morning; it will be ready for the barn about noon, with very little turning, provided the weather is favorable. Of course, no one can lay down cast-iron rules for haymaking in our Nova Scotia climate, and it is often a question of letting hay spoil outdoors or putting it in the barn to spoil, and of two evils we try to choose the least.

Colchester Co., N. S. C. A. ARCHIBALD.

Cut the Clover Early.

If possible let the farm work be well forward in this month of June so that haymaking may commence as soon as the clover is fairly in bloom. Cut first such fields as may have in them any noxious weeds that are liable to ripen early and thus to spread from the seed. If it is intended to harvest clover seed from the second crop it is well to cut the first crop early. If the purpose is to plow down the clover sod in any field as a preparation for fall wheat it should be cut early so that advantage may be taken of any wet spells that may come to keep the teams going turning under the sod, which should be immediately rolled and harrowed, the harrowing to be repeated frequently, especially after each rain, to solidify the ground and to retain the moisture in the land. This makes a fine preparation for fall wheat, and no matter how dry the months of August and September may be the land will contain sufficient moisture to give the wheat a good start when sown and to keep it going on. Early cut clover, if well cured by exposure to wind and sun for a day or two and allowed to stand in cock for three or four days, if weather permits, makes the very best and most nutritious hay; and the aftergrowth of pasture on early cut clover meadows is so much more abundant than on those cut later that it makes a wonderful difference in the amount of feed a field will produce, even in a dry season.

Harvesting Clover.

To the Editor FARMER'S ADVOCATE:

SIR,—Clover, next to silage, is the most valuable crop for stock that a farmer can grow, and therefore should have the greatest care. Turnips might not suffer to a very large extent by three or four days' neglect—their product is not damaged by a shower of rain, while a shower of rain on the clover at a certain stage of its curing would deteriorate the value of the crop from 40 to 60 per cent. Clover also, like silage, should be cut at a certain stage to get the most food value. In the corn crop every successful siloist knows that the crop increases in value up to the glazing stage, after which every day allowed to pass is a decrease in the palatability of the silage. The clover plant follows the same lines. The object of every plant is to reproduce its kind, and every growth to the time the seed is ready to mature has the one object. When the seed is formed nature has no further use for the leaves and stems and they begin to decay; the leaves dry up and fall off and the stalks become woody. The proper time to cut clover, therefore, is when the plant is in full bloom and the seed pods formed; this takes place before the heads turn brown.

There are different methods of harvesting the crop, and every farmer (almost) "thinks he knows it all." I don't. I think the object should be to get it in the barn dry, with as much of the leaves on as possible, and with as green an appearance as possible. If it is allowed to get wet and has a bleached appearance, with most of the leaves left on the ground, it would require the farmer to furnish green goggles to make the cattle take to it. The following appears to me to be a good method, with variations to suit the weather: Commence to cut after four o'clock in the afternoon and cut until nine in the morning (if necessary). The object of this is that the clover will not have commenced to wilt to any extent before the dew falls, and therefore is not affected by the dew. If the following day is warm, with a good breeze, after noon put on the tedder or turn with forks. By five o'clock it will be sufficiently dry to put up, when it is allowed to sweat 60 hours or thereabout. Turn it out gently (so as not to shake off the leaves) in the forenoon, and draw after dinner. Keep a certain amount cut ahead so as to keep the hands going, never cutting more than the strength of the force available can handle. It is advisable to put on about a gallon of salt to the load; it makes the hay more palatable, and, I think, helps it to retain its green color.

If properly cured, and properly fed, it is better food for horses than timothy, as it contains more food elements. The mistake with most horse feeders is that they imagine a horse should eat all the time he is in the stable, and if they go in and see the manger empty they immediately fill it up. The clover, if properly cured, is so palatable that they would eat too much of it. If they would feed what they would eat up clean in say an hour, and if any is left remove it until feeding time again, they would never be troubled with colic. If they feed musty clover, and all they will eat of it, it will likely affect the horses' wind. If fed with judgment it is superior to timothy hay.

Ontario County, Ont. J. E. G.

Clover Cutting and Curing.

There has been a great deal said about clover during the past few years; quite sufficient, one would think, to convince the most sceptical. Still, some of us farmers do stick to the dear old timothy. Perhaps if we would sit down and think how dear it is we might think less of it and more of clover. This old world of ours must be moving, and not a few wide-awake agriculturists are helping it along. When I read so much about clover and contrast the ideas expressed now with those I remember hearing when a boy—which is not so long ago—I wonder whether it is the time that has changed or the clover. I never did quite fall in with the old idea that timothy was the only hay fit for a horse to eat; that he must have all of it he could roll into himself, and oats too, or he could do no work; that clover might do very well for the cows and sheep, but keep it away from the horses, and as for hogs and hens, I don't think such a preposterous notion ever entered the mind. Look at it now. I was very glad to see in your June 1st issue the statement: "Early-cut, well-cured clover is undoubtedly the best all-round fodder for either horses, cattle or sheep, and even hogs and hens are kept in a healthy and thriving condition by the use of clover as a part of their winter ration." That clover is an all-round fodder for all our farm stock is becoming more and more patent to all who will give it a fair trial. We think that well-cured lucerne clover will not only form a complete ration for horses during the winter, but for a summer ration, and for a working team give me the lucerne hay in preference to timothy hay and three gallons of oats per day. I remember hearing T. B. Terry, of Ohio, that clover king, saying he had a working team thirteen years old, and he offered \$500 to any man who could prove they had ever had one gallon of oats during those thirteen years; they got nothing but clover hay; did all the work of the farm; always looked well, and we might also add that neither was touched with the heaves. I could hardly credit the statement then, but I am sure now it can be done; such managing would greatly lessen the cost of production. As for the hens, all I know

is that they are very fond of it green or cured; that they work better, or whether it produces heaves or not I am not prepared to say; but I would like to say a word for the hog if I am not getting away from my subject. We winter our sows, when we have no roots, on cut clover, soaked, with a sprinkling of bran, and find it very economical. We also find it good for growing or even fattening pigs, but with more of the bran or meal. At present—June—we have eighty-four (84) pigs running on a two-acre paddock of lucerne clover, getting nothing but the clover and what they will drink. They work hard, but they cannot keep that patch down; it is getting ahead of them. So good is clover for pasture, the pigs are doing well, and we expect to have a few tons of cheap pork before the winter comes.

The advantages of cutting clover early mentioned in your article are decisive, but I believe are not fully understood or appreciated by many of our farmers to-day. I have known men who were, perhaps, a little behind with their haying, leave the hay until their fall wheat was cut and in the barn. Last season taught a lesson to the tardy ones; those who were behind and had their hay wet so often were unable to sell, and admit that oat straw was more relished by the stock. Better cut early and avoid to a large extent the chance of being spoiled by either rain or old age. We find the question of having the clover well cured in the cock very important, also keeping it from the dew and rain. If possible, we leave none lying over night. With alfalfa the greatest care must be taken not to allow too much exposure to sun, as the leaves fall off very readily. Out after the dew is off, rake as soon as leaves well wilted, medium sized cocks before evening dew falls, allowed to stand for several days until thoroughly cured, well stacked or put in mow, and if the quantity is there, the horses, cattle or sheep, and even hogs and hens, will come out in good thriving condition, and even fat if so desired.

Huron Co., Ont.

F. C. ELFORD.

Harvesting the Clover Crop in P. E. Island.

To the Editor FARMER'S ADVOCATE:

SIR,—Your article on "Farm Work for June" is seasonable and pointed, and should be carefully read by all who are so fortunate as to have a good crop of clover to make into hay this year, and I am happy to say that most all farmers down here have. Clover is perhaps the best paying crop we grow on the farm, even if we do fail to save it in the best of order. But if we can get it cured properly, there is no other crop can be compared to it in value. Well-cured clover is said to be worth \$5 to \$6 a ton for its manurial value after it is fed, and it is surely worth as much for stock feed. The feed in clover is so very largely contained in the leaves and blossoms that it is very important that in curing and handling it these should be all saved. The directions in your article for cutting and curing the crop are pretty full and explicit, and leave little to be said.

The secret of making good clover is to begin early, before it is too ripe, and take your time to it. We mean by this, don't hurry and cut down a lot of it at once, and run the risk of having it all spoiled. Unless you are sure of fine weather don't leave it in swath over night. If it is tanned about during half a day in sun and wind, cock it up at night before the dew falls. No fear of it spoiling this way for a night and a day, if there is no water in it when it is cocked up. We never leave hay in windrows over night, for if it gets wet in that shape it is about useless. We would much prefer leaving it in swath.

Hay caps are almost a necessity in curing the clover crop; a hundred or two of them will pay for themselves a year like this when the clover crop is heavy. They can be made cheaply of a square of cotton forty inches wide, well oiled, and a stone tied to each corner or pegs to stick into the bottom of it is cock through the corners will serve to keep them in place. We prefer to put our clover into the bottom of a deep mow, and we think it can be cured much better and greener that way, as if it begins to warm up by putting a weight of other hay on top it will press the heat out of it and completely cure it. The air being excluded in the mow is a great advantage in keeping clover. If the cocks are covered with good caps and let stand till the hay is well sweated, it will not require long after opening out to get it in prime condition for the mow. The crop of clover on this Island this year will be worth many thousands of dollars to the farmers if harvested in proper condition. With a wet haying season much will be lost at best; but with care and judgment in haying and using all the help we find useful, much may be saved that would otherwise be spoiled.

Queen's Co., P. E. I.

W. S.

Dodder Infesting Clover and Lucerne.

On several occasions there have been brought into our office specimens of clover entwined with dodder. No doubt this parasitic weed is quite generally distributed, even more so than farmers recognize. There are various species of dodder, all of which are annual plants with inconspicuous yellow, pink or white flowers growing on threadlike stems of similar color. It may grow upon and draw its nourishment from almost any herbaceous upland plant, but it thrives best on clovers.

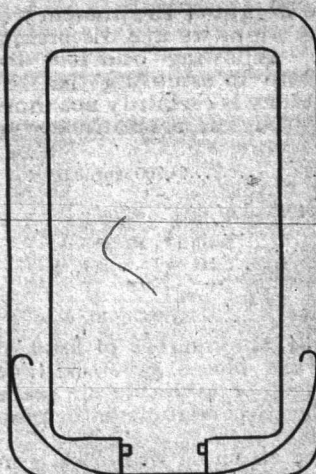
The seeds are generally introduced with impure clover or distributed with hay. The seeds germinate in the soil and grow up as do the clover plants. After growing several inches high it clings to some green plant. When it binds this host plant tightly many roots or suckers are produced and grow into the tissues of the plant, elaborating its sap. The clover plant, when thus attacked, usually dies, as

does also the root of the dodder, but the dodder stem continues to grow, extending itself to other clover plants, from which it continues to draw nourishment. Thus the dodder lives on, dying behind as its support is destroyed, and pushing out branches to attack new plants. It soon begins to produce clusters of flowers, and if not interrupted a succession of flowers and seeds is produced, being checked only by the frosts of autumn. The seeds, ripening and dropping throughout the season, are able to retain their germinating power five years or longer, but will grow at the first favorable opportunity. It is never safe to sow clover or lucerne seed from a dodder-infested field.

Eradication of this nuisance is not an easy matter. All vegetation on infested spots, and for some distance around, should be mowed as closely as possible with a scythe. If the seeds are not formed the fodder may be fed to stock, but if seeds are formed it should be saturated with kerosene and burned. About a week after the infested spots should be carefully examined for new growth of the dodder vines, which not infrequently appear on the remaining stubble or surrounding growth. Strong brine, sulphate of lime, and dilute sulphuric acid have been recommended as a destroyer of dodder, but the sulphates of iron, potassium, and copper, are claimed by the U. S. Department of Agriculture, Division of Botany, in a recent bulletin, to be most effective when dissolved in water and liberally applied in ten per cent. solutions. The solution should come in contact with the dodder vine, which it kills, as well as the clover upon which it is growing, but the clover plants usually grow up again from the roots. It is well to hoe infested spots after the vegetation has been removed, or give the patch a season's cultivation. To pasture closely with sheep is a good method of subduing a badly infested field that is not desired to be broken up, but the animals should not be allowed access to other fields or they may carry some of the seeds in their wool or feet.

The Stone Silo.

To the Editor FARMER'S ADVOCATE:



GROUND PLAN OF STONE SILO.

from the inside face of the wall. Then get tongued and grooved lumber, the narrower the better, so that it won't warp and let in the air; cut to fit across the open space on to the scantling. This makes it much more convenient to throw ensilage out, as you can take pieces off as you desire. I plastered inside with common mortar once, and last coat with water lime and Portland cement, and bottom as well, so there is no waste at the bottom. For about six weeks after it is filled the liquid comes out through one place into the stable by bucketfuls, as it can't escape otherwise. It is well to make the wall as air-tight as possible with mortar.

I cut for half a day into the silo, last fall, two inches long and some one inch. In the evening I noticed in FARMER'S ADVOCATE it was better to cut corn short, as it would pack better and take up less room. I find it is much better cut short every way you like to take it. In the first place, one can run the barley fork through it and peel the top off, and the fork is always clean; but when I got down to the long cut it was everlastingly sticking to the prongs. With the short cut it was easier to mix with other cut feed, and the cattle liked it better. This advice alone was worth two or three years' subscription to the ADVOCATE. It took two men to take it off the wagon and feed the cutter with less than half-inch cut. I like high speed for ensilage cutter. I use a jack with horse power. It's much better to keep your knives one-sixteenth of an inch from the plate when cutting corn, and then you can keep your knives sharp.

JOHN JONES.

Wellington Co., Ont.

It is announced that the Dominion Express Company has reduced its rate on fruit from British Columbia to Winnipeg from \$4 to \$2.40 per 100 lbs., and \$2.25 per 100 in 1,000 pound lots. The B. C. people are endeavoring to supplant the California fruits in the markets of Manitoba, and as they are paying more attention to the selection of varieties and the conditions of shipping, they should, with the more favorable express rates quoted, succeed, which would be greatly to the benefit of both provinces in retaining the money, formerly going to the States, within Canadian territory.

The Octagonal Cement Silos.

To the Editor FARMER'S ADVOCATE:

SIR.—I am pleased to note the interest you are taking in discussing the question of silos. This, to my mind, is one of the most important questions of the day to the average farmer, because of the close competition and very small margin on all farm products, and especially so with those who feed for beef, dairy or breeding purposes. With them it is a question of where can I get the raw material cheapest, and the most convenient to be manufactured into beef, dairy products or live stock, and thus lessen my expenses? It is a question of economy, then, we are after, and to my mind the silo goes far to aid in the right direction.

After having come to the above conclusion, we want a silo of some sort. Now, the question is, What sort of a silo shall I build that will fill the bill properly, and not be too heavy an outlay? This I understand to be somewhat of a puzzle to many. For my own part I can readily settle the question, but for another I cannot, because circumstances differ so much with different people. In discussing this question I would like to say, after the experience I have had with silos for the last eight years, that I believe any of the modern silos, well built, will keep ensilage good if properly put in. Then it is largely a matter of individual choice between the round, octagonal, square or rectangular as to shape, and a question of economy and durability as to the material with which it is built. Now, sir, I have worked with and been around several different styles of silos, namely, those of wood, built square, rectangular and round (of staves and frame), stone (square), and those of cement (square, rectangular and octagon), and my choice of these is cement, built eight-sided, and having the corners cut, making it practically sixteen-sided and almost round inside, so that it has every convenience and all the advantages of a round one, and, taking the durability into consideration, it is by all means the cheapest, providing you can get good, keen, coarse gravel conveniently, especially when you have to pay, as we do, \$16 to \$17 per thousand for suitable lumber. Allow me to say, I claim the honor of building the first successful cement octagonal silo in this part of the country for the Hon. John Dryden, Minister of Agriculture, for whom I am acting as farm foreman. I laid out the plan and superintended the whole thing myself, and kept up the farm work besides. And it cost very little in excess of a wooden silo of the same capacity. Any one wishing further particulars regarding the building of an octagonal cement silo I will be pleased to answer such questions as I can.

Ontario Co., Ont.

A. H. CHRISTIAN.

[NOTE.—We are sure many of our readers will be anxious to learn from Mr. Christian the dimensions of the octagonal silo he so successfully built, the thickness of walls, the number of barrels of cement contained in it, the proportion of gravel and stone to cement, the number of men and time required to build it, the arrangement of the doors, and the arrangement of wooden frame used in building the structure.—EDITOR FARMER'S ADVOCATE.]

Preparing for Fall Wheat.

The high price recently ruling for wheat will no doubt lead farmers generally this year to make provision for sowing a larger acreage than usual. This is quite natural, and we would not dissuade those who have available land suitable for the crop from taking chances on what appears to be a good prospect for continued good prices; but we would emphasize the importance of making a good preparation for the crop and giving it a fair chance to give a fair return. The experience of farmers in the past year in many sections of the country where wheat was sown on unsuitable soil, or on ill-prepared seed-beds, should not be forgotten, but should teach them to profit by the mistakes of the past and to practice wiser methods this year. The extreme drouth which set in last year immediately after harvest and continued through the months of September and October over a large area in the central provinces rendered the germination and growth so very slow and imperfect that the crop was weak to begin the winter with; and the severe freezing in the first weeks of April still further enervated it, and the result is, in many cases, a very unsatisfactory prospect for a crop. These remarks apply principally to clay lands where care was not taken to preserve moisture in the land preparatory to sowing. On land that was summer fallowed, being frequently stirred and consequently kept moist, wheat started well and made good growth, even on strong clay lands. We also noted that on clover sod that was plowed down during the wet weather in July, and kept well worked on the surface after each succeeding shower up to seeding time, the wheat made a good start and stood the winter well, and is very promising. We have also seen some very good-looking crops that were sown after peas, which had been grown on sod plowed in the spring, the land being simply cultivated, without plowing, after the peas were harvested. If the land is tolerably clean, and the surface is well harrowed after each rain, such a preparation has proved quite successful. Wheat may also, to a limited extent, follow barley or oats if the land is in good heart and there is sufficient moisture in the ground to admit of its being worked fine after plowing. If the land is not rich enough it is unwise to risk wheat on such a preparation

unless short manure is available and is applied as a top dressing, being worked into the soil with harrow and cultivator. In all these cases it is well to make calculations for re-seeding to grass and clover, sowing say three or four pounds of timothy with the wheat, or soon after, and a full seeding of clover in the spring, to fertilize the field by the growth of a clover crop, which is one of nature's best restorers of fertility.

Sow a Piece of Rape.

Every farmer who keeps sheep or young cattle will find it profitable to have a few acres of rape for late fall pasture. No crop will produce as much succulent feed or force young stock on in condition so rapidly. It may be sown profitably any time up to the middle of July, but the last week in June is the ideal time to sow. Clover sod may be plowed down after the early cut crop is removed, and will make a good preparation for rape, which may be sown on the level with a grain drill if a turnip drill that will sow on the level is not available, using the grass seed attachment of the drill, closing part of the holes and running the seed down the rubber tubes, which may be slanted to carry it to the hoes in use, sowing two or three drills at a time from 20 to 26 inches apart as the division of the hoes on the drill will admit. Cultivate a few times with the horse hoe to keep down weeds and promote the rapid growth of the crop.

VETERINARY.

The Housing of Live Stock with Regard to Health.

BY C. A. SANKEY, V. S., LEWIS CO., N. Y., U. S. A.

My attention has recently been turned to a subject of great interest to farmers and stock-owners, namely, the proper housing of live stock during the long winter months of our severe northern climate. The importance of the great dairy and live stock industry justifies the application thereto of the best results of scientific experiment and structural skill in the erection of suitable buildings for the shelter and care of the animals upon the output of which the profits of the industry depends. Regard for economy and convenience, the smallest possible pecuniary outlay with the best facilities for attention to the stock, looking to the maximum of results with the minimum of investment and labor, has led to the combination of barn and stable in one building. While this combination has many commendable features, it has also serious disadvantages which are liable to imperceptibly defeat the prime object of the investment and render the enterprise unprofitable through an unthrifty condition of the stock from overcrowding, the results of which are that the circulatory system of the animals is impaired, digestion is only partially performed, vital stamina is lowered, and the resistant power to disease is diminished. These results become definite in the poor showing of the farmer's ledger at the end of the year.

Several things have tended to bring this subject prominently to my notice during the past few months, among which may be mentioned the inspection of some unhealthy cattle which I found housed in a faulty barn, the perusal of various plans for barn and stable buildings which have appeared in this journal, and a suggestion contained in a letter by Mr. Arthur Johnston, of Greenwood, Ont., which appeared in the issue of Jan. 15th, commendatory of my article on Tubercular Infection in the issue of Jan. 1st, which, with other like favorable comments, I desire gratefully to acknowledge.

Mr. Johnston was more than right in saying a good word for light and ventilation in stables, and it is to the unfolding of this suggestion by showing how essential these are from a sanitary and economic point of view that I now address myself. If rational methods of barn architecture conduce at once to the maintenance of the highest standard of health and the most economic and profitable care of stock, there is surely sufficient inducement to the consideration of this subject.

SUNLIGHT A VALUABLE GERM DESTROYER.

The benefits of light justify the trite statement that you cannot have too much of it. It is not generally known, though it ought to be, that the best, cheapest and most easily applied germ-destroyer is bright, hot, dry sunlight. The most thrifty microbes cannot live in its presence more than a few hours, while in a dark, dank place they will thrive, and it would seem that the whole wicked brood love darkness rather than sunlight because of their evil deeds. Put in, therefore, all the windows you can, and if your animals "laugh and grow fat" from the increased pleasure brought into their monotonous existence, as probably they will, you will not object.

The principal interest of the subject, however, centers in the matter of accommodation and ventilation or the provision of the necessary space so that the animals may have an adequate supply of pure air, for it is in this respect that the gravest sins against nature's laws are committed and the greatest need of improvement in our barn buildings obtains.

The natural life for stock is, of course, out in the green field where everything conduces to health. But the necessity of winter sheltering confronts us, with the artificial conditions it involves, and this has to be considered, with provision for the

prevention of disease and the maintenance of health under these conditions as factors in the problem. The solution of this problem lies in the application of the principles of animal hygiene to barn structure, and let not the farmer be afraid of the application of science to this matter, for true science is essentially practicable.

In what follows I shall use data supplied by that eminent authority, Fred Smith, F. R. C. V. S., in his work on Veterinary Hygiene. Dr. Smith stands at the head of the Army Veterinary Department of Great Britain, and is consultant in the building of military stabling. His statements may be accepted with the greatest confidence, and my calculations and deductions will be based upon them.

For the maintenance of health the exhalation of carbonic acid gas from the lungs or arising from excrement must not accumulate in excess of .2 per 1,000 volumes. The gas ammonia is also largely present in the cattle stable, and that is detrimental to the system generally and to the eyes in particular. Besides the poisonous effect of these gases in themselves, if an atmosphere befouled by their presence has to be breathed by stock any microbic infection present has a good opportunity to get in its fine work. The average amount of carbonic acid gas exhalation is 6.5 cubic feet per head per hour for animals weighing 1,000 lbs. A supply of 32,500 cubic feet of pure air per head per hour is therefore necessary in order to the maintenance of a healthy standard for animals of this weight. Reducing this to the average weight grade of the stock contemplated, we have 32,000 cubic feet per head per hour as the necessary supply.

AN ILLUSTRATION.

To illustrate my argument I will ask my readers to study carefully, with the accompanying description, the plans for a "Well-contrived Barn" in the FARMER'S ADVOCATE of March 1st, page 102. These plans are probably better than the average of actual barns, and are referred to not for special admiration, but to give concrete effect to the discussion.

In the description the height of the masonry of the main building, which alone we are discussing, is given as nine feet. Allowing one foot for joisting, I think I am safe in assuming that the height of the basement story is certainly not more than ten feet. We have, therefore, the following dimensions:

40 x 62 x 10.....	24,800 cubic feet.
Deducting:	
15 cubic feet per head for 34 head of cattle.....	510
Root bin, 6 1/2 x 21 x 11.....	546
Fittings (estimated).....	144
	1,200

Available air space..... 23,600 cubic feet.

Dividing this result by 34, the number of head of cattle for which fixtures are placed, gives 694.4, or say, roughly, 700 cubic feet of available air space per head as the most liberal construction the plan admits of.

Without ventilation such space would be contaminated with carbonic acid gas to the extent of 9.3 per 1,000 volumes in one hour. Alarming as this appears, the vitiation can be remedied if sufficiently frequent changes of air can be made so as to dilute or remove these poisonous exhalations. In our northern climate, however, the condition of cold is a factor to be contended with, and the necessary introductions of pure air to maintain the health standard of .2 per 1,000 volumes would be not less than 45 times per hour, or about once every minute and a half. With such frequent changes of air the temperature of the stable would be practically the same as that outside, the extreme cold making great demands upon the feeding simply to maintain body heat. Yet the failure to effect these changes of air where by the cubic contents of stablespace per capita of stock they are necessary is precisely the reason why cattle will come out from the pretentious new barn in a less healthy condition than from the old straw-chinked stable with its unintentional provision for ventilation, the same care in other respects being exercised in each.

THE ASSOCIATED MANURE SHED CONDEMNED.

The manure shed in the plans under review cannot but be regarded with disfavor. Any receptacle for the temporary deposit and rehandling of excrement so situated would only increase the trouble. In such a place and under such conditions the liberation of ammonia would be very considerable, and that of carbonic acid gas would be from .9 to 3.0 per 1,000 volumes; and if heating of manure ensues bacterial spores will fill the surrounding air and be carried to the adjacent stables.

The fact is, there are fixtures for double the number of cattle that in cubic dimensions the building is adequate for when conditioned by the necessity of protection from the extreme cold of our rigorous winters. Seventeen is the utmost number of stock which such a stable would properly accommodate. It might, however, be made to accommodate twenty-five head by certain alterations which are perhaps possible. At least 1,500 cubic feet of space per head must be provided, though 2,000 feet would not be any too much in our climate. This would require that the stable basement be made 13 feet clear of floor and the total area of the manure shed be added, the space of which could then be advantageously used as a driveway to remove the stable clearings every

morning. The root bin will also have to be left out. These changes would yield the following result:

Basement, 40 x 62 x 13.....	32,240
Manure shed, 16 1/2 x 30 x 13.....	7,800
	40,040 cubic feet.
Less—	
15 cubic feet per head for 25 animals.....	375
Fittings (reduced estimate).....	100
	475

Available air space..... 39,565 cubic feet.

Dividing this by 25, the number of stock we now propose to provide for, we have 1,582 1/2 cubic feet per head. With this amount of space per head the more rational number of twenty changes of air per hour only would be necessary instead of 45 required under the previous conditions, while if 2,000 cubic feet per head were provided only sixteen changes of air per hour would be needed.

A VENTILATION SCHEME SET FORTH.

The best mode of ventilation now claims our attention. I regret that the absence of side elevation or sectional view in the plans we are reviewing leaves us without precise knowledge of the means of ventilation employed therein. I can therefore only state what I conceive to be necessary and serviceable.

Adjustable windows are, as a rule, unsatisfactory on account of their fragile nature and the tendency of frames to swell under the influence of moisture. Windows should be made only for the access of light, and should be used double or provided with storm sashes for the saving of heat; and, indeed, every part of the building should be made as cold-proof as possible, since every unit of heat thus conserved may be reckoned as a bank account on which we draw for the purchase of the pure air necessary for health, and the balance of which means economy in feeding and increased productivity. Neither can doors be relied upon for ventilation, though useful for occasional flushing, since it is during the long nights when prudence tells us that they should be locked that the greatest need obtains for a regular change of air. A draft is in nowise necessary in order to perfect ventilation, which consists essentially in the dilution of vitiated air by the gradual perfusion of pure air, or simply by the diffusive power of the gasses.

In vertical ventilation shafts, as ordinarily constructed, there is great difficulty in maintaining the up draft, from the tendency of the foul air to have only a slight amount of buoyancy, and to balance in the shaft, becoming when cooled of equal weight with the surrounding medium in the upper part of the shaft. The only mode of construction I have found successful is making them two feet square, with smooth boards on the inside to avoid friction, dividing the shaft vertically and cornerwise from end to end, and having it project two feet from the roof, with side openings for the four compartments and a suitable covering. Thus constructed, the shaft becomes a combined up and down ventilator, changing its up and down draft according to the direction of the wind. Shafts thus constructed work admirably in small stables; but in stables on the scale we are considering horizontal ventilators placed between joists, with openings on the sides of the building, and conveyors to carry the fresh air one-fourth across the building, give better results.

A word must be said concerning the area of ventilators. In the plans being reviewed I notice there are in the cattle department three shafts, the combined area of which is fifteen square feet, which would not begin to effect the changes of air required by the number of stock contemplated for the space. For twenty-five head of stock twenty square feet of ventilator area on each side (for in and out draft) would be required, assuming an average wind rate of eight miles an hour. Slides would, of course, have to be provided for use in case of special draft; and in order that only pure air be admitted, without which the whole purpose of the provision would be defeated, it is absolutely necessary that manure be not deposited under the openings of the ventilators.

PRESERVE FEED FROM CONTAMINATION.

In regard to the feed storage upstairs, though very convenient, unless it be well protected from the gasses ascending from the stables by the tightest fittings and covered chutes, the feed will not be improved in quality, and may become seriously contaminated by microbic foes.

In conclusion, I would say that stock-owners should realize that light and pure air are just as necessary as foods; that nature supplies us with an unlimited quantity of these free of charge; that windows and ventilators are all that is necessary to give access to these important vital agents; and that space is an absolute stable requirement of the latitude in which we live; and also that the extra expense involved in a good building is very little when spread over a fifty years' term of usefulness. The tendency of the time is towards the large, pretentious barn, which has so many valuable features to commend it, and makes such a show on the farm; but I believe that the best results will be obtained in the single-storied stable, with moderately-pitched roof, and separate building for feed storage, which, being adjacent to the stable, will allow of the feed being mechanically distributed to the stock by means of travelling conveyors.

Animals, we know, can adapt themselves to a great variety of adverse circumstances, but the

stock-owner will best secure his interests by following the principles I have imperfectly set forth. Nor do these principles apply only to the cattle stable, but also to the horse stable as well.

The maintenance of health commends itself from a humanitarian as well as from an economic standpoint, for the enjoyment of health is the right of all creatures, and we should provide, therefore, as far as possible for our dumb friends, to whom we are indebted in so many ways for profit and pleasure, and with whom we are involved in the consequences of a common environment.

DAIRY.

Revision of Rules and Regulations of the Dairy Department of the Provincial Winter Show.

The committee appointed to revise the Rules and Regulations of the Dairy Department of the Provincial Winter Show met at the Royal Hotel, Guelph, on Saturday, June 4th. Members of the committee present were Prof. H. H. Dean, G. W. Clemons, G. E. Day, and W. E. Butler. The clauses in which a change was made now read as follows: (a) The following entrance fees will be charged and must accompany each application for entry, for which accommodation will be provided; for each entry, with the exception of those designated "Special," \$2.00. (b) The age of dairy cattle will be computed to the 1st of August. (c) Cows must all be giving milk, and the awards shall be made by the following scale: 10 points for constitution and conformation, 20 points for each pound of fat, 4 points for each pound of solids (not fat), 1 point for each 10 days in milk after the first 30 days (limit, 90 points). (d) An affidavit will be required from each exhibitor in the Dairy Department stating the number of days his exhibits have been in milk, also stating that each exhibit is shown in her proper class, and that she is the animal named on the registration certificate produced. (e) Prizes in the Dairy Department will not be paid for one week after the show is held. This rule is made necessary on account of the large amount of work in figuring out the result of the test. As the show this year will be held on Wednesday, Thursday, and Friday, the test will take place on Wednesday and Thursday instead of Tuesday and Wednesday.

Ensilage Feeding and Good Butter.

To the Editor FARMER'S ADVOCATE:

SIR,—Apropos the question of the silo and ensilage and the adaptability of silage for feed, on enquiry at Avonbank factory regarding results for last winter, Mr. Jos. Lang, buttermaker, handed me letters received from Messrs. Park & Blackwell, of Toronto, and Peebles, of Hamilton, on the closing of the year's business. Appended are extracts:

Toronto, May 25th, 1898.

Avonbank Cheese and Butter Mfg. Co., Avonbank: We are pleased to say in closing the season's account that the quality of the Avonbank butter during the past season has been quite satisfactory, and the trade here are now well acquainted with the Avonbank brand, and will look forward to receiving same next season, when your company resume buttermaking operations.

Yours truly, PARK, BLACKWELL & CO.

Hamilton, May 26, 1898.

Avonbank Creamery Co., Avonbank, Ont.: DEAR SIR,—Enclosed you will find check in full of last statement amounting to \$81.00, and I take this opportunity of saying that your butter has given us the very best satisfaction during the past season. Not even once during the season was it the least bit off, which is saying a great deal. It is very pleasing for us to be able to speak in this way, for as a general rule when we have to write about butter it is to make complaint, as we are considered cranks on the butter question. Therefore you may consider it quite a compliment for us to have nothing but words of praise for the even and first-class quality of your butter, and from the satisfaction given we expect to double the sale next year. Hoping to handle your butter as usual next winter, I beg to remain, etc.,

C. H. PEEBLES, Grocer, Hamilton.

Messrs. Park, Blackwell & Co., of Toronto, and Peebles, of Hamilton, have handled the output of Avonbank since first operated. As stated in your last issue in regard to the silos in this vicinity, fully 50% of the butter was made from cows fed on ensilage, and proves conclusively that good creamery butter can be produced from ensilage.

Perth Co., Ont. JOS. MOUNTAIN.

A Big Day's Make of Butter.

On one Monday recently, says the *Argus* newspaper, "the St. Mary's Creamery Co. separated over 150,000 pounds of milk, and on May 31 churned 6,272 pounds of butter. This is the largest day's make yet in the creamery, and without doubt the largest quantity of butter ever made in one creamery in the Dominion of Canada in one day. Why, if the promoters of this concern had made any such statements that within six months of starting over three tons of butter would have been made in one day their audiences would have thought them ready for an asylum. But there it is. For May the output will be over 95,000 pounds of butter. In April 17.43 cents was received for butter; with 3 1/2 cents deducted for making, the net returns were 14.23 cents."

A Great Dairy Cow.

To the Editor FARMER'S ADVOCATE:

SIR,—Enclosed find photo of our celebrated grade cow, Scotch Lassie, from pure-bred Shorthorn cow and sired by registered Holstein bull, Prince Seward. This cow last year in a little over ten months gave 17,731 lbs. of milk, totalling 765 lbs. butter, a record which, in my opinion, shows what careful breeding, scientific feeding, and care and study of the individual animal will do. The above total is included in year's record of Mr. Tillson's 55 cows, given in your valuable issue of the 16th ult., showing an average per cow of 10,242 lbs. of milk, and 418 lbs. butter, for 11 months and 42 days. We are raising a heifer calf from this cow which it would be difficult to buy at any price, and last year's bull calf we propose using on a few good cows by way of experiment, although Mr. Tillson is adverse, on principle, to using anything on his herd but a first-class thoroughbred bull.

Please note that by no means do I advocate the exclusive using of grades. The herd here is constituted of very excellent pure-bred Holstein cows, giving from 60 to 65 lbs. of milk per day on date of writing, and for which Mr. Tillson paid a handsome price; but I do claim that by careful selection, use of weigh-scales and Babcock test, and study of the individual animal, very much can be attained to bring the stock to a point of perfection. Most dairymen must now know that the making of a good milker begins before birth, by the proper breeding, feeding and handling of the mother.

JOHN D. MACLEAY, Farm Manager.

Norfolk Co., Ont.

Influence of Food on the Quantity and Quality of Milk.

The quantity and quality of milk as influenced by constituents and conditions of rations of cows has been the subject of much discussion during the last few years, and the end is not yet. Mr. F. J. Lloyd, F. C. S., Consulting Chemist to the British Dairy Farmers' Association, in a paper read at a recent conference of the above Association, goes into the subject very fully and arrives at some important conclusions which agree with both science and practice. The author of the paper points out



"SCOTCH LASSIE"—SHORTHORN-HOLSTEIN CROSS—MILK RECORD, 17,731 LBS.; BUTTER RECORD, 765 LBS. IN TEN MONTHS.

that after careful study of the results of very many experiments he is firmly convinced that the food of a cow may materially influence both the quantity and the quality of her milk. The reason that the results of so many experiments have been so conflicting is that experimenters have neglected to take into account the inevitable limitations and conditions with which nature has hemmed in this subject.

In every milking cow two tendencies are at work. The one is to convert the nourishment which is supplied by the food to the blood into the milk; the second is to store up that nourishment in the body. The relative strength of these two tendencies varies greatly in different breeds of cattle. This peculiarity is even more marked among individuals than it is in the various breeds. Hence, in every milking animal there is a constant struggle between the two tendencies. Sometimes a comparatively slight or simple cause may upset the balance. Take as example the effect of cold. An exceptionally cold night will cause a marked decline in the milk yield of a large herd. The materials have been utilized for maintenance, the demand for animal heat for the time being having exercised a more powerful influence than that of milk production.

In a similar manner the character of the food supplied to an animal may affect either tendency. Thus, if the food provide an excess of some particular constituent, this will ultimately strengthen the tendency for which this constituent is most adapted. For example, a cow fed with an excess of starchy food, having used all that it requires for milk production, will still be left with a surplus of nutriment in the blood. This will be utilized by the tendency of the cow to fatten. In a similar manner an excess of nitrogenous food—which, however, is far more rare—will produce a tendency to make flesh. The invariable result of an excess of nutriment is to increase the live weight of the animal. It may be well to here follow out this effect on a milk cow to its final result. The udder, like every other tissue of the animal, is capable of

fattening, but in doing this its secretory power is diminished. Hence the ultimate result of a food excessively rich in nutriment is not to increase the milk yield, but to diminish it.

In considering the effect of a food deficient in nutriment it might be pointed out that the tendency to produce milk, following out the general law of nature whereby the maintenance of offspring is a more powerful influence than self-preservation, is, as a rule, stronger than the tendency to preserve the food stored up in the body. Hence, the effect on the milk of a deficiency of nutriment in the food is for some time very slight, but it will tell on the body of the animal and there will be a gradual loss of weight. For some time only the scales would show the effect of this insufficient food, and not the milk. Hence no experiments on the effect of food on milk supply are conclusive which do not take into consideration the effect on live weight, for the two are inseparable.

There is for every individual cow a maximum quantity of milk which she can yield at any one milking. This depends upon the capacity of her udder. The late Mr. C. E. Tisdall, who had devoted years of study to the milking capacity of cows, accumulated a number of measurements of the udder, and claimed that by a careful measurement of the udder it was possible to form a very approximate estimate of the quantity of milk a cow can yield, provided the feeding was so regulated as to prevent any fattening of tissues of the udder. Now, it is perfectly evident that if a cow is receiving an ample supply of food containing the necessary constituents for the production of milk she will make the maximum quantity her udder will hold. Some experimenters, starting with cows in such a condition, and finding that an increase in the quantity of food, or variations in that increase (which did not diminish its nutritive value), produced, as was natural, no increase in the quantity yielded, have jumped to the conclusion that food has no effect. This is one of the most striking sources of error which experimenters have been led into.

The quality of milk is dependent on certain factors quite irrespective of feeding. Primarily any influence which diminishes the quantity tends to increase the quality, hence the richness of the milk of small breeds. Heifers too, whose udders are not fully developed, yield richer milk than they will produce subsequently as cows, but the quantity of this milk is small. Again, as cows decrease in volume of milk as the period of lactation advances they give milk of increasing richness.

Viewing the entire situation, Mr. Lloyd is led by his experience to believe that we can only get at the truth by, instead of considering quantity and quality separately, combining the two. We can thus determine the actual amount of solid matter, whether fat or non-fatty solids, which the animal has produced as milk, together with any gain or loss in live weight which has taken place simultaneously. "Out of nothing comes nothing" indubitably holds good in feeding. Hence, the quality of milk must ever depend upon the stock of nutriment in the blood, whether that nutriment be supplied by the food or from the animal's body.

"In my opinion," concludes the writer of the paper, "the present state of our knowledge as regards the effect of food on milk production may be briefly summarized as follows:

"When properly fed a dairy cow will neither gain nor lose in live weight, and under such conditions will produce the maximum quantity of milk which her physical conformation permits, and that milk will have its maximum quality; i. e., there will be a maximum epithelial growth.

"The food which produces such results is an ideal milk ration, and the nearest approach to it which man possesses is a good pasture. The moment artificial feeding commences the conditions are altered. If an excess of nutriment is given the tendency to fatten will gradually outstrip the tendency for milk production. If a deficiency of nutriment be given the body will suffer first, subsequently the quality of the milk, and lastly the quantity. These results will be most marked when there is simultaneously an abundant supply of water. If now the food be changed there will be a corresponding change in the quantity and quality of the milk, but it will not be immediate. Experiments have been made for me under the latter conditions. The result was that the animals first utilized the food to replenish their emaciated bodies. The milk remained practically unaffected for from four to six weeks. Then the food told. This fact emphasizes one source of error in feeding experiments—they are not conducted for a sufficiently long period.

"Some years ago I carried out a feeding experiment by placing a herd of milch cows on various pastures of different character. The milk varied, both in quantity and quality, according to the pasture the animals were on. This, I think, will be the universal experience of every observant farmer here present. And I, though a scientific man, agree with practice, and have yet to find evidence which can shake my conviction that food has a marked effect on both the quantity and quality of milk."

Ask your neighbor if he reads the FARMER'S ADVOCATE. If he does not get him to subscribe for it.

POULTRY.

Gapes in Chicks.

To the Editor FARMER'S ADVOCATE:

SIR.—In your issue of May 16th, Mrs. D. H., of Perth Co., asks a question regarding young chicks. From description of symptoms I would think chicks are suffering from gapes, caused by a small worm in the windpipe of the fowl (although a little early in the season); but if she will examine some of the chicks by cutting the windpipe open, she will probably find a number of small red worms about half of five-eighths of an inch in length—somewhat of this shape γ . The best and simplest cure we have found is to keep all drink from chicks for a few hours, and then give drink of alum dissolved in water till water is quite sour; give no other drink. There are numerous other remedies, but we have found this the simplest and best. For larger chicks, soak some corn in alum water and let them eat it. If Mrs. D. H. will please report after examination, she will confer a favor on the numerous readers of the ADVOCATE. W. W. E.

Kent Co., Ont.

Pens for Poultry.

To construct a good feeding pen that will admit the young fowls and exclude the old and greedy hens, turkeys, etc., procure about six yards of poultry wire netting, two feet wide, and having a three-inch mesh. This will not cost more than twenty cents. Four stakes should be driven into the ground to form a square, a yard and a half each way; around these the wire is stretched and the ends united; the pen is complete. The food may be placed on boards in the pen and the young fowls will pass in, while the older birds are so busy trying to get through that they never consider that it were possible to fly over. If the pen is desired to exclude also the month old chickens, it should be constructed of netting having a mesh of only two inches; while if it is desired to restrain the wanderings of very young chickens, turkeys or ducks, a finer mesh will be required. But in this case it must be constructed so that it may be easily moved from place to place, and, of course, must be much larger, having room for a coop in the center of the pen. If the coop be placed near one side, hens will learn to fly over the netting to the roof of the coop, and then down among the young birds. These pens will be found much superior to the old board pens. Besides being lighter to handle, they exclude other fowl and look much better, and are not so apt to get apart at the joints.

GYRA.

Infertile Eggs and the Poultry Industry.

Only those who have to depend upon the open market for their supply of eggs realize, especially during the warm months, what a quantity of eggs are wasted each year by becoming stale or rotten. True, the average housekeeper on the farm knows how necessary it is to break the eggs one by one into a cup before consigning them to their culinary destiny. Now, as we have often pointed out before, these difficulties arise only when the eggs have become fertilized. Eggs do not soon become rotten when there is no male bird in the poultry yard. An unfertilized egg will come out of an incubator or from under a hen at the end of two weeks perfectly clear and fit for cooking purposes, while an impregnated egg, if sat on for forty-eight hours, will, at the end of another week, even if kept in a cool place, be of bad odor. The germ will have commenced to live, and afterwards began to decay. The story is told of two poultrymen, one of which cracked the shell of an egg and asked the other to decide whether or not it was all right. The reply he made was to open the shell and consign the contents to his digesting machinery. So fresh and palatable was that egg that even after he had learned that it had been sat on by a hen for four weeks he had not the slightest desire to rid himself of it. Of course, the egg was unfertilized. Speaking from experience along this line, we may say that for two seasons we have allowed no male bird to run with our hens, and while we are convinced that the egg returns have been just as large per hen as on previous years when male birds were running with the flock, we have never had bad eggs to contend with during that time. What about chickens? some will ask. We have no difficulty about that, as our neighbor, who keeps a beautiful flock of Plymouth Rocks, is always willing to exchange eggs whenever we have hens wanting to sit. The objection has been raised by some that hens will steal away their nests during the summer months and will, in such cases, bring forth fine broods of chicks from fertilized eggs, whereas infertile eggs will be all lost in such cases. Granted that some such loss may occur, we believe the most profitable and satisfactory results are secured when the breeding is managed as it is with other stock—by selecting the stock from which we would wish to breed, instead of being compelled to throw away large quantities of stale eggs that need not have been stale.

Viewing the matter from a breeding standpoint, odds are in favor of selecting the stock to be mated; in fact, it is only in this way that improvement in the flock can be accomplished. Every hen is not fit to breed from, any more than every cow will raise the most desirable class of dairy offspring. This poultry question is surely worthy of more careful consideration than is usually given it. Markets for eggs can be developed only by supplying eggs of

good size and of such a character as there is no doubt about, and for poultry by furnishing a plump, well-developed and nicely dressed class of birds. There is, perhaps, greater room for development along the poultry line than either meat or dairy products, and those who exercise the greatest skill and intelligence with their flocks will reap the benefit which will surely come.

Rearing Ducklings.

As a number of advertisers of ducks and duck eggs claim to have had ready sales we are forced to conclude that many beginners in duckling rearing are readers of the FARMER'S ADVOCATE.

The method of rearing young ducks is very simple. The first feed after being hatched may consist of corn meal and bran of equal parts, with a sprinkling of coarse sand, all well mixed with cold water. This they should get five times a day, just what they will eat up clean, so that they will always be hungry at meal time. When a few days old, finely chopped fresh meat scraps should be added to the ration. If they are overfed, so that they fail to attack each meal greedily, they should be made to miss a meal or two to give them a chance to relieve their stomachs. If they have grown well until they are four or five weeks old, four feeds a day will do them, and two weeks later three meals a day is all they should have. Pea meal and shorts, or rolled oats, will do as well as any other food, but the meat scraps and plenty of green matter should be continued. Rape leaves or cabbage is much relished by them and serves to force them along rapidly.

The common idea that ducklings must have a pond to swim in no longer holds sway, especially if the ducks are to be marketed as "young duck" at eight or nine weeks old. True, they do need access to water continually, day and night, but only to drink and puddle in, and not to swim in. If allowed to swim they will work off very much of the flesh their owner has endeavored to grow upon them. Water should be kept close at hand while they are feeding, as it seems necessary that they eat and drink simultaneously. If ducklings are carefully reared in not too large, but clean, quarters, they will make much more rapid and economical gains than will chickens. At twelve weeks old a well-fed chicken should weigh one and one-half pounds while dressed as a broiler, while a ten-weeks' duckling, similarly nourished, should dress five pounds, and will bring, in the same market, twice as much money, while in the one case twelve weeks' feeding was necessary, as against ten weeks' in the other. It has been learned from actual experiment that ducklings pushed along as indicated above will gain, after three weeks old, from nine to ten ounces per week until they are nine weeks old, when they will each weigh from four to five pounds.

GARDEN AND ORCHARD

A Grand Old Pear Tree.



IN BLOSSOM FOR THE 61ST TIME.

The pear tree illustrated herewith, reproduced from *Agricultural Gazette* (Eng.), would not readily be recognized by Canadian born readers without the name beneath, but Englishmen will be reminded of the custom of training fruit trees upon the sides of walls in the old land.

Boxing and Marketing Strawberries.

Unless strawberries and other fruit are packed so as to be opened to the market in firm, fresh and inviting condition, much of the season's work with the crop is lost. It is well in selecting pickers to be guided by the personal appearance of those who make application. A dirty, untidy person, be it boy or girl, woman or man, is rarely satisfactory as a berry picker. When one has a number of pickers employed, as a rule they are not all equally careful. A good means of detecting the poor pickers is to give every picker a number which he or she must mark on the bottom of each box as it is brought in. In this way every picker's work is easily examined, and the bad pickers discharged or otherwise dealt with.

Strawberries should be picked with a stem about one-half to three-quarters of an inch in length. Every berry should, if possible, be picked separate and laid in the box. At least one cannot impress

the fact too often on the pickers that they must be handled carefully. When the boxes are nearly full the stems should be turned downwards. This gives them a very attractive appearance, and there is no fraud in it. In fact, this is the practice of G. W. Hopkins, a prominent berry grower of Missouri, who read a valuable paper at the State Horticultural Society's summer meeting in 1907. Berries set in the boxes in this way look nice and bright. He pays his pickers 1 1/2 cents per box, and by so doing has a right to demand careful work.

Berry crates should be made out of nice clean timber, well nailed together. Before nailing on the tops the berries should be covered with heavy tissue paper, except they are for a very near market, when the paper is not necessary. A spring wagon and careful driver should take the berries to market, so that they are not jostled.

Another man's method is whenever he had poor fruit to sell, he took it around to some dealer and let him have it at his own price. The successful grower must not only grow the finest fruit, but he must educate his customers and manipulate them so as to keep them everlastingly eating and calling for more. This was accomplished by R. M. Kellogg, of Mich., by giving close attention to the growing of good fruit, and by delivering it to a good class of customers in a way that they will want more. He had made for him a beautiful wagon, painted as the finest carriage, calash top, and artistically lettered in gold leaf, with his own name and the name of the farm, a large, well-groomed black horse, dressed in a heavy brass-trimmed harness, kept beautifully polished. Next, a neat four-page circular, with suitable engraving, was printed in two colors, describing the fruit, and giving the people to understand what he had to offer and how they could get it. These were neatly folded, and a man (not a boy) called every lady to the door and handed her one of the circulars. The local columns of the daily paper bore conspicuous one-line advertisements, reading—"To be happy, eat Kellogg's berries." Then a family ticket was printed so each family could keep its own account.

A competent superintendent was placed in charge of the pickers, and each one required to put the big berries in the bottom of the box, and face the top off with medium-sized berries with points all turned up. A soiled box was never used, and was to the picker who put a bad berry in the box. The different sorts of berries were so arranged in the crates as to cause no loss of time in exchanging a box for a customer. Mr. Kellogg makes it his one mission during the berry season to keep these people stuffing themselves with berries. The result is two, four, six, eight quarts, and frequently a half bushel for Sundays are required, in place of one or two quarts formerly required from the grocery. Customers are never overcharged, but a good price for fancy fruit is always insisted on. It does not do to sell a crate of berries to a dealer and then undersell him to his customers. Whenever the people will not eat all the offerings, the price is promptly reduced to increase consumption. When a cut is made it is to everybody, and the utmost fairness is maintained.

When the strawberries are past, raspberries, blackberries, and other fruits are engaged, so that a continual succession is had throughout the summer. Customers are often unreasonable in their demands, and one's patience is often severely tried, but never forget that to quarrel with them should be the last thing. Be sure you are right, then be firm, courteous, and liberal. There is much hard work connected with marketing in this way, but to the person who has tact and snap there is pleasure and profit in it.

Spraying of Fruit Trees.

To the Editor FARMER'S ADVOCATE.

SIR.—I am sorry Prof. Craig thinks my formula will produce Bordeaux mixture unsafe for application on plum or peach trees. I copied that formula from a bulletin issued in 1896 by U. S. Government, and which was written by Prof. B. T. Galloway, who is considered the highest authority on such matters obtainable. If what Prof. Craig says is correct, the U. S. Government is doing a serious wrong to the fruit-growers of America by publishing for distribution all over North America a bulletin the formulae of which are "entirely unsafe." My experience in spraying is this: I began to spray some five or six years ago. For the first three or four years I used the original Bordeaux mixture (as given by Prof. Craig in the April 1st number) on plum and apple trees. Two years ago I received the above mentioned bulletin, and I have since used the formula recommended in it, which I find to be nearly as efficient as the original one. In all the time I have been spraying, I do not think I ever noticed a leaf injured on plum trees the injury of which could be attributed to the Bordeaux mixture. As far as I remember, I sprayed twice, and did not find it necessary to spray with Bordeaux mixture more than twice a year; and now the trees are looking fine. The varieties of plums I have sprayed are Moor's Arctic, Damson, Sugar Plum, and Monroe. Now, I wish to direct Prof. Craig's attention to the formula given in Mr. Caston's article (which he recommends as sensible) for the preparation of Bordeaux mixture. He will find it to be precisely the same as mine, with Paris green at a much stronger ratio; yet his is "sensible" and mine is "entirely unsafe." This looks bad, especially as Mr. Caston's article contains a complimentary reference to Prof. Craig and mine does not, which some people would say was the reason

of the difference, but which I do not believe, and I hope Prof. Craig will furnish a better one. Wishing the FARMER'S ADVOCATE and also Prof. Craig success in all undertakings.
E. EDWARDS.
P. E. Island.

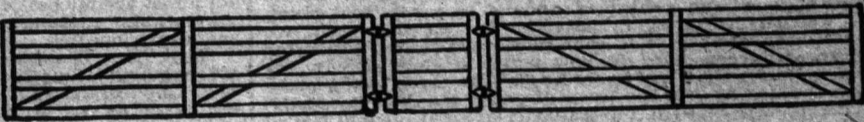
THE HELPING HAND.

How to Tramp Hay in a Mow.

At this age of hay loaders and horse forks the mow hands, especially in shallow lofts, find it difficult and often impossible to give the hay sufficient tramping to get as much in as the loft should hold. We recently learned, while in conversation with one of our best farmers, that astonishing results in compressing hay can be accomplished by the entire force of the farm going up at noons and in the mornings, and all moving forward together, shoulder to shoulder, keeping in step and springing down at every short step. By going over a mow a few times in this manner on several occasions during the filling of the loft, the hay will be pressed so tightly that it will settle very little after the mow is filled.

Hurdles for Guiding Hogs.

At this season of the year there is more or less necessity for catching hogs or driving brood sows quietly from place to place on the farm. A hog is not the easiest animal in the world to drive. We have always used sheep hurdles for this purpose, but recently have noticed a device like the illustration herewith shown. It is composed of two long, light hurdles hinged to a short gate. This permits turning it at any angle, and when in the hands of two persons it enables them to do wonders in driving the most obstinate hog.—*Homestead.*



HURDLES FOR GUIDING HOGS.

offspring are heifers, the male calves not being counted, how many will the herd number at the end of ten years, provided none have died in the meantime; and if the male calves also are counted, what would the number be?"

[Will some one or more having time and the disposition to work out a complex problem please answer this question, which is not so easy and the result probably not so surprising as that of the question, "If half a cent is charged for driving the first of the 32 nails in a horse's shoes, and the price is doubled in the case of each nail driven, what will it cost to shoe a horse?"]

Harvesting Lucerne Clover Seed.

J. A. L., Peel Co., Ont.:—"I have some lucerne clover which I intend cutting for seed. Could you tell me something about eaving it for seed; whether I take the first crop, or, as with red clover, take the second crop?"

[When alfalfa is grown for seed, the second crop is the one usually saved. The yield from this is usually heavy, and ripens uniformly. The first crop does not often seed well, probably because the insects which aid in fertilization of the flowers are not present in sufficient numbers in May or early June when the flowers first open. The crop should be cut for seed when the pods are dark brown. Rake at once into heaps and allow it to cure there. If the crop is put together damp it is very liable to mold. In Kansas, Nebraska, and Colorado considerable success has been had in cutting the crop for seed with a binder, and threshing directly from the field or from the stack. Alfalfa can be threshed with any of the ordinary machines when provided with sets of screens of small mesh, such as are used in hulling clover.]

Goslings with Staggers.

J. F. H., Simcoe, Co., Ont.:—"Can any of the readers of the FARMER'S ADVOCATE tell me what they think is wrong with my goslings and what to do with them? They are kept in the orchard and have plenty of good grass and water, but in the middle of the day some of them got so weak they were unable to walk, and if taken into the house for a while they would seem to get strong, and when taken out again would appear all right, but afterwards would take staggers and die. I gave them sulphur in their feed, which consists of shorts and bread, but it did not seem to help them."

Eradication of Burdock.

R. O'DONOGHUE, Wellington Co., Ont.:—"Will you kindly inform me of the best method to get rid of burdock?"

[The burdock belongs to the class of plants known as biennials, producing seed the second year, which is the last year of its life. If growing where they can be left until the flowers have formed, they may then be cut off near the ground and destroyed, and the root will give no further trouble. If it is desired to dig them up the first year, or during the early part of the second year, they should be cut off well below the crown, when the roots will die. If cut above the surface of the soil during the first year, or early part of the second year, the roots will throw up fresh shoots and propagate themselves afresh. Our method is to go carefully round the farm, especially along line fences, immediately after harvest and gather all the plants in flower and burn them. We thus prevent seed ripening and falling into the ground.]

Hardwood for Posts and Floors.

"LLEWELLYN":—"1. Do hardwood posts last as long as soft wood when cut in summer, allowing leaves to draw sap out? 2. When would be the best time to cut the trees down, July or August? 3. Which of the three would you recommend, maple, birch, or beech? 4. Would hardwood make suitable flooring for a dwelling in rooms to be

carpeted? Would it be hard to draw carpets? If so, could a strip of soft wood be put in all around edge of room?"

[1. Under no circumstances will hardwood, except perhaps oak, last as long as posts as cedar or tamarack. 2. The best time to cut timber to secure the best and most lasting quality of wood is when the tree contains the minimum of moisture, and that is in the autumn just after the leaves have fallen. We would suggest that the trees be cut at that time, allowed to season, and given a thorough painting with hot oil. 3. We think there would be very little difference in the lasting qualities of the three woods mentioned, except perhaps red beech, which is claimed to remain solid longer than the others. 4. Maple is frequently used for flooring with the pine strip inserted around the edge of the room to tack the carpet to.]

Wool Balls in Lambs.

J. W. H., Peterboro Co., Ont.:—"I had four lambs die since going on the grass, and when I opened them I found a ball of clotted stuff in the stomachs like as if they had chewed up some wool or binding cord. The clots were as large as an egg, and some larger, and so hard and matted one could hardly pull it apart with a stick. I had several die last spring, and the ones I opened were the same. The lambs were on the grass two or three weeks when they died. Was that the cause of their death; if so, what caused it to gather?"

[The wool balls were, no doubt, the cause of death, and had probably been formed before the lambs went to grass from wool taken in while eating clover leaves from the backs of the ewes, or, possibly, while biting at ticks that were worrying them. Sometimes the ball is composed partly, or wholly, of the fiber of overripe lucerne or other clover or grasses. It is hardly possible to break up such a combination with medicine, but a liberal dose of castor oil will do no harm, and in some cases may be effectual in removing the trouble.]

Origin of the German Coach Horse.

W. Y., Lanark Co., Ont.:—"Can you give any information as to the breeds of horses from which the German coach horse of the present day originated?"

[Mr. A. B. Holbert, President of the German Coach Horse Association of America, writes us that they originated from the Arabian horses and that during the last century there has been an influx of the blood of a few English thoroughbreds. In Schlesing, Holstein, the stud book carries many of the horses back to Kuhlerlan-el-Ajus 30, a stallion imported into that country just 50 years ago, and this horse is said to be a direct descendant of the great mare that carried the Prophet Mahommed from Mecca to Medina A. D. 622. Stud books have been kept by the Government in the different provinces, showing a record of all breeding stallions, subject to the "Koerung" Examining Committee, all through the 19th century, and some records run back as far as the 17th century, the first appearing about 1620; and in 1660 the Duke of Newcastle speaks with much favor of the German horse—his excellence, and uniformity of style, etc. The present style of recording horses in Germany is different from the old as kept by the Government, but all pedigrees and books are faced and backed by the old Government records as compiled by the "Koerung" of the different provinces. Hence we may say that the stud book dates back through authentic records from one to two and a half centuries in different parts of the empire.]

MARKETS.

FARM GOSSIP.

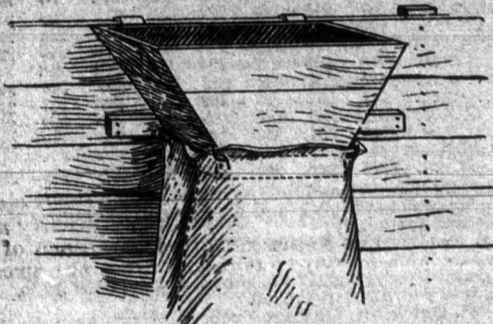
Prince Edward Island.

The crop is all in here now, except the turnips. Vegetation is well advanced for this time of the year. Grain has come up finely and is growing well. Most of the cheese factories opened about the first of the month. The supply of milk is fair, but there is not the hopeful feeling in regard to dairy markets that there was last year. There will be more butter made than formerly at the factories. The hog crop this season will likely double that of last. Two litters are being raised where there used to be only one. Pasture is the best for years and the hay crop promises to be exceptionally heavy. One altered feature of our farming is more roots, peas and corn grown for cow feed, and less oats for shipment. Prices still keep up for grain and potatoes. Wheat is worth \$1.10; oats, 40c. Considerable quantities of potatoes have been bought for shipment at 45c per bushel. Best fat cattle are worth 43c live weight. Hogs, of which there are very few available for packing-house, sell at 5c. for best and 43c. for heavy fats. More mares are being bred this year than for many years past on account of the better prices obtainable for good horses. The failure of the Government to give grants for exhibitions will put a damper on the breeding of pedigree stock. Much dissatisfaction is expressed at the strangling of our Provincial exhibition. We have a Government inspector, a qualified veterinary, employed on the Island with the object of discovering and stamping out tuberculosis. He has not found many cases of it yet.
W. S.
June 7th.

Prof. F. M. Webster, of the Ohio Experiment Station, after four or five years' study, believes he has definitely located Japan as the original home of the San José scale. A few weeks ago he found flowering cherries, imported by a U. S. nursery firm from Japan, badly infested with the pest.

Filling Sacks Easily.

The accompanying illustration shows a convenient device for filling grain sacks. Strong iron



FOR HOLDING SACKS.

hooks fasten the box to the edge of the bin, while smaller hooks are put in each lower corner, to which the sacks are attached. The grain is then shoveled from the bin into the box.—*American Agriculturist.*

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Legal.

Landlord and Tenant.

READER:—"A, the tenant, leases from B, the landlord, a farm for three years; the lease is in writing, but there is nothing in it expressly requiring A to sow any grass seed, either clover or timothy, nor is there any express clause providing against sowing successive crops of wheat, etc. Is A bound to sow any grass seed, and could he if he choose take off three successive crops of wheat from the same land?"

[Unless the lease provides for the same, B cannot compel A to sow any grass seed, nor can he prevent him from taking off three successive crops of wheat; but the ordinary forms of farm leases usually contain a clause requiring the tenant to crop and cultivate the land in a proper, good, husbandlike manner, and by a regular rotation of crops, so as not to injure or impoverish the land, and if the lease contains such a clause, then, of course, it must be observed in a reasonable way, and the question would be whether under all the circumstances, considering the quality and nature of the soil and the custom of the locality, such proposed seeding and cropping is a reasonable observance of the agreement.]

Veterinary.

Lame Mare.

W. B., Haldimand Co., Ont.:—"I write to ask, 1st, What is the matter with one of my mares? One of her hind legs swelled up and broke out from the pastern joint, and yellow, watery matter runs out. It is very painful. She holds her foot up when standing, but lies down a good deal, and is losing flesh fast. She has been in Alsike clover. Do you think that the clover would be the cause of her trouble? I gave her a quart of oil and one ounce of sweet nitre. I also gave twice a day half-

Canadian Bacon at the Top.

We notice by a recent report from Carter, Wilkinson & Co., of Liverpool, Eng., that "Canadian singed Wiltshire, heavy to light," tops the list of quotations, at 46 to 48 shillings...

Canadian Horses in England.

The English Live Stock Journal of May 6th contains the following encouraging note for our horse-raisers: "Canadian and United States horses have considerably advanced in price in London..."

Lincoln County, Ont.

The price of farm produce is much the same as it has been during the past five or six weeks. Hay is bringing from \$5.50 to \$6.50 per ton, and there appears to be plenty of it...

Toronto Markets.

"Why, times are good!" was the remark of several drovers on the market. The great advance in the price of agricultural products, the increased export demand, the opening up of a new channel of trade to the West Indies...

Butchers' Cattle.—Altogether there were better prices in this class of cattle; in fact, the best active market which has ruled for some time here. A great many Montreal buyers on the market to-day...

fat and light advanced 5c; the price is now \$4.50, and will likely continue next week. Too many light hogs are still coming forward. Heavy fat hogs are still quoted at \$4.50 to \$4.90...

The Montreal Markets.

The runs of cattle on recent markets have been of a very even nature, and, consequently, no great changes have taken place from one market to another. Neither has the price of stock on this market been very materially affected by the continuous run of poor British markets...

Cattle.—Receipts of veals just about met requirements—about 600 being in and selling from \$1 to \$6.50 each. Sheep and Lambs.—Receipts about 500 head, for which there was a good trade at \$10 to \$12 for shipping sheep; 4c for good to choice yearlings...

Hides and Skins.—In our last report of this market we noted a prospective advance of 1c per lb. on green hides, owing to pressure of opposition. That we were justified in our estimate of the market has been amply verified...

The British Markets.

Cabled advices this week were a trifle more encouraging for exporters of Canadian stock, but are as yet not sufficiently good to see much margin on shipments. Both London and Liverpool cables noted an advance of 1c per lb. on Canadian stock...

May Live Stock Shipments.

The shipments so far this year show quite a heavy falling off in numbers from the corresponding period of last year, as will be seen in the accompanying table. Shipments so far in June only serve to accentuate the decrease.

Table showing May Live Stock Shipments with columns for To (Liverpool, London, Bristol, Newcastle, Glasgow, Belfast), No. of Ships, Sheep, Cattle, Horses, and Totals for May 1897 and 1898.

Included in the above totals to Liverpool are those of the SS. Scotsman, which sailed on April 30th, taking 580 cattle and 189 horses. June 10th, 1898.

Chatty Stock Letter from Chicago.

Following are the current and comparative prices for the various grades of live stock:—

Table of live stock prices for CATTLE and HOGS, showing extreme prices and two weeks ago prices for various grades.

Chicago receipts of cattle, hogs, and sheep for May, 1898, and the first five months of 1898:

Table showing receipts of Cattle, Hogs, and Sheep for May, 1898, and the first five months of 1898, with columns for Receipts, Cattle, Hogs, Sheep, and Totals.

Shippers of live stock to this market from all points of the compass agree almost without exception that fat cattle are very scarce and young stock cattle still scarcer. Some 130-lb. steer calves recently sold here to go to Iowa. Feeders at \$4.25 per 100 pounds.

W. A. Christie, of Eureka, Kas., has just finished marketing 160 head of heifers fed on his farm at Ourlow, Iowa. The average price for the entire shipment was \$4.45, average weight about 900 lbs.

All Montana correspondents unite in stating that the ranges and grass fields are in the best condition for years, and that the outlook for grains of all kinds and for field and garden crops is exceedingly promising.

The marketing of cattle at present shows that if the Western range cattle were eliminated from the situation the supply would be small indeed. In about 30 days the fed Westerners will have been marketed, but it will then be time for the grass rangers to come.

The wire edge seems to be off the cattle boom in the southwest. A Texas authority says: "There are those who think that some of our big cattle owners missed it by not 'turning loose' when their stuff was riding on the crest of the high wave..."

The 131,675 hogs received here last week averaged 233 lbs., the heaviest average since last January. Average the previous week, 230 lbs.; the second week of last month, 217 lbs.; a month ago, 223 lbs.; a year ago, 233 lbs., and two years ago, 246 lbs.

The average weight of hogs at Chicago for months mentioned was as follows:

Table showing the average weight of hogs at Chicago for months from Jan. to Dec., with columns for Year and Weight.

The hog market has lately suffered quite a slump in prices, due to heavy marketing and a speculative feeling that the market was top-heavy.

J. S. Robinson, of Neponset, Ill., was here with some good Shropshire lambs of his own raising and feeding. They were extra good, averaging 112 lbs. shorn, and sold for \$5.50.

R. F. Quick, of Chicago, representing Armour & Co., bought 2,000 mutton feeders from Chas. Schreiner, at Kerrville, Texas, at \$2.37 per head.

There have been 909 cars of Colorado lambs received at Chicago for the season up to June 1. In February, 68; March, 251; April, 304; May, 291. This made about 850,000 head of these lambs averaged about 275 head to the double deck.

C. W. Mills, Richland, Iowa, sold a choice consignment of drivers in the auction to-day, one 16-hand coach horse, weighing 1,200 lbs., of good style and fine knee action, brought \$300, being purchased by P. Oiff for export to Franco.

Only a small percentage of horses shipped to the market for cavalry service pass inspection, and the residue are \$15 to \$25 per head lower than before the Government commenced to buy cavalry horses.

The live stock exporters for the two weeks ending June 8th, as prepared by R. Eckerdike, of the Live Stock Exchange, Montreal, show that 5,320 cattle and 1,040 sheep have left Montreal for Liverpool, London, Bristol, Glasgow, Newcastle, and Manchester, on sixteen boats.

Live Stock Exports.

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English Live Stock Markets.

Liverpool, June 11.—(Special).—The market is slow. American steers are selling at from 9c to 10c per lb. (estimated dressed weight); live sheep are steady at 9c to 10c per lb. (estimated dressed weight); refrigerator beef is dull at 7c to 8c per lb.

An Exhibit at Omaha.

An exhibit of grain in the straw has been sent from the Brandon Experimental Farm to the Trans-Mississippi Exposition being held at Omaha, Neb. The exhibit consists of 150 bunches of various varieties of grains best calculated to illustrate the capabilities of Manitoba farmers' wheat lands.



I received the following little story from Lilly Thomson, Minnedosa, Manitoba. Although we are not offering a prize for children's stories just now, still it is a pleasure to encourage young authors by printing their first efforts whenever it is possible.

The Discontented Boy.

There was once a boy who was never contented. If you gave him one thing he would always wish for another. One day his father and mother went to town and left him to take care of his little sister Maggie. His mother and father said they would be home soon. After they had gone to town Maggie cooked some apples, and then they played in the garden. Their parents had told them not to open the gate unless their uncle came. They were playing ball and the ball went over the fence. The little girl told her brother not to go after it, but he went. When he was outside he saw some berries. He called on Maggie, but no, she would not go. After a while she heard her brother calling "help!" She ran after where the voice came from, and there she saw her brother up to the waist in sinking sand. After a while help came and he got out, but his leg was broken. If this little boy had been contented in the garden he might not have been hurt.

LILLY G. THOMSON.

Well done, Lilly! Your little story is very nicely written, and it is a pleasure to give it a place in our "Corner." I wonder if you young writers had so many troubles as a certain little boy I have heard of.

"Johnny on Easy Writing."

I don't believe 'twas hard to do When Homer wrote of Troy— There were no rules for him to watch, No grammar to annoy; He had no slang to guard against; He spelled the easiest way; The subjects were not threadbare then, Because he had first say.

And Dante had it easy, too, In Florence, when he wrote; He made each phrase as he went on; There were no words to quote. The common talk of every day Was good enough to use. "Too trite" was something never heard; There were no terms to choose.

Old Chaucer had no task at all, He wrote what came along; He put down just what people said, And couldn't spell words wrong. You see, no one had tried before To write this brand-new speech, So Chaucer fixed it his own way For all the schools to teach.

It wasn't bad when Shakespeare lived; The right no one could tell; There were no dictionaries then,— No wonder he wrote well. Now it gets harder all the time; Each word must mean just so; The very term you'd like the best Is one that will not go.

Now, boys, you don't care very much about writing, do you? But you know how to appreciate a young fellow who has nothing of the sneak in him. Here is a story for you.

A Point of Honor.

A reporter called to a little bootblack to give him a shine. The little fellow came forward rather slowly. Before he could get his brushes another larger boy ran up and, calmly pushing the little one aside, said, "Here, you go sit down, Jimmy!" The reporter at once became indignant at what he considered a piece of outrageous bullying, and sharply told the newcomer to clear out. "Oh, that's all right, boss," was the reply; "I'm only goin' to do it for him. You see, he's bin sick in the hospital for mor'n a month, and can't do much work yet, so us boys all turn in and give him a lift when we can." "Is that so, Jimmy?" asked the reporter, turning to the smaller boy. "Yes, sir," wearily replied Jimmy, and as he looked up, the pale, pinched face could be seen even through the dirt that covered it. "He does it for me if you'll let him." "Certainly; go ahead." And as the bootblack plied the brush the reporter plied him with questions. "You say all the boys help him in this way?" "Yes, sir. When they ain't got a job themselves, and Jimmy gets one, they turns in and helps him, 'cause he ain't very strong yet, ye see." "What percentage do you charge him on a job?" "Hey?" queried the youngster. "I don't know what you mean." "I mean, what part of the money do you give Jimmy, and how much do you keep out of it?" "Yer bet yer life I don't keep none; I ain't such a sneak as that." "So you give it all to him, do you?" "Yes, I do. All the boys give him what they get on his job. I'd like to catch any feller sneaking it on a sick boy, I would." The shine being completed, the reporter handed the urchin a quarter, saying, "I guess you're a pretty good fellow, so you keep ten cents and give the rest to Jimmy."

"Can't do it, sir; it's his customer. Here, Jim." He threw him the coin and was after a customer himself in a moment.

Well, boys what do you think? Wouldn't you like to lend a hand to a sick comrade sometimes? Surely boys like that may be found in the country as well as in the city. And believe me, a boy that is an "all-round good fellow," and "no sneak," will never grow up into a dishonorable man.

COUSIN DOROTHY.

THE QUIET HOUR.

Sunshine for Every Day.

"She doeth little kindnesses Which most leave undone or despise; For nought which sets one heart at ease, And giveth happiness or peace, Is low-esteemed in her eyes."

Some people are like sunshine. Even to meet them on the street and receive their smiling greeting does us good. Think how our comfort depends on the good spirits of other people. If any member of our family is in an irritable mood, finding fault with the meals, or even the weather—how many seem to feel themselves at liberty to do that, forgetting that the weather comes from God, and to grumble at it is really complaining against Him—think how the commonplace crossness of one individual can make the whole family uncomfortable.

Now, if you are that individual, is the position one you would like to maintain? Do you realize how unlovely you can be if you try? It is easy to see, if someone else is in a bad temper, how unpleasant he is making himself. Do we like to upset the comfort of our friends and relations? Of course we don't. But let us be careful lest, without intending it, we are making the atmosphere of our homes unpleasant.

Now let us look at the other side. Think of the sunny people. They come down smiling in the morning, and all the little annoyances of the day

gives us to do is great, and all other work is small. You do not know how the kindness which seems so trifling may reach a brother or sister, and draw them nearer to Christ than a hundred sermons might. Your daily life shows most certainly to those who live in the same house the reality or unreality of your religious profession.

"The little worries which we meet each day May lie as stumbling-blocks across our way, Or we may make them stepping-stones to be Of grace, O Lord, to Thee."

The days in which you find most opportunities for sacrificing your own will, for bearing patiently the little things which might fret and worry you, are like good growing weather for the character. Welcome, then, the little disappointments and worries, for they will, if rightly used, make you patient and strong to endure when the larger trials are sent to test your character.

"I am glad to think I am not bound to make the world go right; But only to discover and to do, With cheerful heart, the work that God appoints. I will trust in Him."

That He can hold His own; and I will take His will above the work He sendeth me, To be my chiefest good."

Is it for Me!

O Saviour, precious Saviour, My heart is at Thy feet; I bless Thee, and I love Thee, And Thee I long to meet. A thrill of solemn gladness Has hushed my very heart, To think that I shall really Behold Thee as Thou art;

Behold Thee in Thy beauty, Behold Thee face to face, Behold Thee in Thy glory, And reap Thy smile of grace; And be with Thee forever, And never grieve Thee more! Dear Saviour, I must praise Thee, And lovingly adore! F. R. Havergal.

MINNIE MAY'S DEPARTM'T.

MY DEAR NIECES,—

Let us have a talk this month on one of the social virtues. Suppose we choose Courage. That is a social grace which is one of the most important factors in human life. Picture two persons, one gifted with courage and one without this virtue, and what a difference there is between them! The former will not be conquered. Whenever any difficulty occurs she will rise to meet it, call courage to her aid, and fight the obstacle to the bitter end. There may be—nay, probably there will be—a hard, sharp tussle; but she has a grand weapon to help her, and with its assistance she will win the day. But the other person—the one not blessed with this grace—appears very different. Let her come face to face with some difficulty and she will give way at once. She will say: "There is no use in trying to surmount this, for I simply cannot. What must be, must be; so I shall just resign myself to my fate, and bear it meekly." Not much resignation there, is there? I call it moral cowardice. Such conduct will make her weaker and weaker every time there is need for courage, and she will imitate the timid snail by drawing herself, as it were, into her shell at the least hint of danger, until at last she will become a very insignificant person indeed, of little use in the world, and of no use whatever in helping others.

Now, it is far easier to have courage in a great crisis than it is to have the same in small temptations. We have scores of examples of men who held to their opinions in spite of the greatest opposition. Think of good old Martin Luther in Germany, of John Wycliffe in England, of John Huss in Prague, of the Scottish Covenanters. These were all noble examples of great moral courage in great crises, and we should do well to imitate them; but it is more likely that we women will be tried in smaller matters—in what would appear trifles. Now, cowardice in trifles is a common failing in social life, touching nearly everyone, though few will confess it.

One thing a woman finds it hard to confess is having a small purse. How often we would fair appear richer than we are, and spend our money on things unnecessary, just because some other woman does so—and all because we are cowards and do not like to be behind our neighbors. Perhaps the "other woman" does it for the same reason. Why cannot we all be courageous and say firmly, "No, I cannot afford that?" People may smile, or even laugh derisively; but it is far, far better to bear sneers than to be dishonest. And, indeed, the sneers of those persons are not worth minding (though we are all human and cannot help feeling). If we could only peep behind the scenes with regard to these people we would probably find that they were deep in debt and living in style off their creditors. My dear nieces, would you not far rather ride in your own old wagon than in a handsome buggy (I do not like that word buggy, it is never used in good society) unpaid for? I would. Of course, it would be delightful to have a fine carriage to drive about in; but that is



A Summer Scene.

This picturesque scene might aptly be named "A Study in Foliage," so rich are the exquisite combinations of light and shade. The stretch of water, with the reflected shadows from the banks, adds much to the beauty of the picture.

fail to ruffe them. They form a habit of doing the "little kindnesses" which, more than anything else, make the indoor sunshine of our homes. The fresh flower gathered for the breakfast-table, the "cup of cold water" carried to a thirsty worker, the cheery word or laugh, the filling up of the wood-box or the water pails to lighten someone else's burden,—little things like these, how they oil the wheels of life and do away with the jolts. Why shouldn't the farm wagon be fitted up with pneumatic tires? The best part of it is that the one who makes things easier for the rest of the family gets the largest share of happiness himself. It is always "more blessed to give than to receive." Try it for a day or two, and see! Forget your own little worries in trying to give pleasure to others.

Unfailing good-humor goes a long way; and a real sympathy, entering into the feelings of others, should be cultivated by anyone who desires to play the part of a ray of sunshine and gild the dark corners of life. If any members of the household are old, and perhaps rather neglected in the busy rush of work, there is always a chance to pay them the little attentions which they appreciate so much. It is very hard, after a busy life, to find when one is old and unable to work, that the children and grandchildren find one in the way; or, if not really unkind, yet never think of including grandfather or grandmother in the conversation. Don't spend all your strength in dreaming of the heroism and self-sacrifice you are capable of if only the opportunity would arrive. Great things we would like to do, small things we may do. Wait! What are great things and what are small things? We know what men consider great and small, but surely our ambition soars higher than the desire to please men. We wish to offer to God a gift which He will feel is worth accepting. What shall it be? Shall we neglect the little daily duties which He has set us, and do (or dream of doing) something great which is not required? Surely the work He

where the courage comes in, and possibly the nice cart will come yet.

Another small social temptation is to act or speak contrary to one's conscience because we have not the courage to stand up for right against wrong.

We require courage in our duties, in our pleasures, in our associates, in our fashions, and in our habits.

Another thing we dread is ridicule, and which of us can endure that? Many a one will undergo anything rather than be a laughingstock.

Be good, sweet maid, and let who will be clever; Do noble things, not dream them, all day long;

Your loving old auntie, MINNIE MAY.

Acknowledgments from Winners in the "Great Canadian Puzzle" Competition.

Up to the time of going to press we had received acknowledgments from the two undersigned successful competitors in the Great Canadian Puzzle competition.

To the Editor FARMER'S ADVOCATE: DEAR SIR.—I have received the gold watch which I was fortunate enough to win in your Prize Puzzle competition.

To the Editor FARMER'S ADVOCATE: DEAR SIR.—Please accept my thanks for the silver watch which I have received.

The Greatest Human Oddity the World Has Ever Known.

Jemmy Hirst's career is perhaps the most amusing and extraordinary in human annals. This oddity of a man lived to be ninety-one, after a life spent in doing the strangest of things.

He was born in 1738 and died in 1829, and was buried in a grotesque coffin of his own construction, and in accordance with his will he was carried to his grave by twelve old maids.

Not only was Jemmy Hirst odd in respect to his pets; in his person he was one of the strangest figures seen.

He wore a broad-brimmed hat of lambskin, fully nine feet in circumference; a rabbit-skin jacket, a waistcoat made of the skins of drake's necks with the feathers on, red stockings; his breeches were of listings of yellow, blue, black, and red, plaited to-

gether by his housekeeper; and he wore yellow boots.

Jemmy made many curious inventions. He made himself wings and tried to fly, but had little success.

Lord Wharnclyffe used to be among his guests, and Jemmy is said to have given a very fair entertainment, and to have always amused his company with his jokes.

The Duke of Devonshire was waiting for an audience, and at sight of Jemmy was convulsed with laughter, and chaffed Lord Beaumont about his strange companion.

PULLING THE NOSE OF A DUKE.

Jemmy listened patiently for a moment only, and then seizing a tumbler of water that stood on the sideboard, he dashed it in the Duke's face, exclaiming that the poor man was in "hysterics"; he ran to the Duke, loosed his cravat, pulled his nose, and shook him, pretending that he was doing his best to bring him round from his fit.

Jemmy was very familiar with the King, shook hands, saying, "Eh, I'm glad to see thee such a plain owd chap. If thou ever comes to Rawcliffe step in and give me a visit. I can give thee some rare good wine or a sup of brandy and water at any time." The King was much amused.

Recipes.

STRAWBERRY SHORTCAKE.

Rub 2 ozs. of butter into 1 qt. of flour, then add 1 teaspoonful of salt, 2 teaspoonfuls of baking powder, and sufficient milk to make a soft dough; mix quickly; roll out about one and one-half inches in thickness, put into a greased, large square baking pan, and bake in a very quick oven for about 30 minutes.

GINGER COOKIES.

One pint of molasses, one coffee cup of lard and butter, using equal parts; put these over the fire and boil two minutes. When nearly cold add three tablespoonfuls of boiling water and one small tablespoonful of soda; stir briskly until it foams, then add one tablespoonful of ginger, a little salt, a little Cayenne pepper, and flour to roll.

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.00; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c; 3rd, 50c.

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1.—ANAGRAM.

- (Characters of Walter Scott.) 1. Mary St. Robb. 2. Deacon St. Chizer. 3. Major A. F. W. Garton. 4. Freddie Gemlod. 5. Martha R. Reby. 6. Annie P. Ismoed.

2.—WORD SQUARE.

- No. 1. An entertainment. No. 2. A mistake. No. 3. To arrange in line. No. 4. Compounds of oil and alkaline. No. 5. To trust. MURIEL E. DAY.

3.—CHARADE.

I ran away from school one day, It vexed my one, and he did say, That "if such a trick again I would do, Of whippings I would get one or two." He also told my Uncle Sam That he would send me to COMPLETE. 'Twas not because my teacher was cross; I guess 'twas I that wanted to boss. I was not because of little to eat, I always got plenty of THREE and meat. So long ago it is since that, Beyond my two it has almost got; Still, I think, in all my ways I'll always remember my school days. DICK.

4.—SQUARE WORD.

- 1. Reward. 2. To strike off. 3. To mature. 4. Thoughts. 5. A modification of a verb. PETER HYDE.

5.—NUMERICAL ENIGMA.

- 2, 22, 12, 8—warmth. 21, 14, 10, 11, 6, 1—a small bird. 5, 7, 4, 3—anger. 4, 13, 19, 29, 21, 3—to eat greedily. 10, 13, 15—one interested in the puzzling corner. 1 to 22—something which has been of great interest. PETER HYDE.

6.—NUMERICAL ENIGMA.

- (Composed of 17 letters.) My 10, 16, 3, 12 means humble. My 4, 5, 6, 14, 7, 17, town in Australia. My 11, 2, 17, 1, 9, a vault. My 8, 5, 15 means nothing. My whole is the name of a prominent American. "ART."

7.—FLOWERS TRANSPOSED.

pyras. bleov. pctorerth. yll. rrpmlots. rates. gguuroornally. seawipee. ygellouara. "PANEY."

8.—CHARADE.

In my FIRST my SECOND grows Pure and white as mountain snows. MABEL ROSS.

9.—NUMERICAL ENIGMA.

My whole is a state which sometimes leads to desperation. My 2, 6, 7, 8 is to resound. My 1, 2, 4, 5 is vile. My 3, 4, 5 is not fat. My 7, 8, 9, 10 is holy. My 4, 5, 6, 7 is a spear. HAZEL.

10.—My (1) is in tree but not in shrub; My (2) is in snake but not in grub; My (3) is in tall but not in short; My (4) is in mien but not in part; My (5) is in eye but not in mouth; My (6) is in north but not in south; My (7) is in water but not in fire; My (8) is in father but not in sire; My (9) is in town but not in fort; My total's the name of a Chinese port. BLANCHER MACMURRAY.

11.—WHAT IS THE WORD.

I am a word of five letters spelled the same both backwards and forwards. Each letter represents a number. "KIT."

12.—TRANSPOSITION.

- 1. Cirrifeas dna lefs-vondelet lhaolv trhee dan lllf his ekies. 2. Ewhn hot rthae is rthg hrote is rthg torimapsit. 3. Erro, dunocdy thicewr ni naip, ada sids sngon sh swroerpephi. "DICK."

13.—LADDER ENIGMA.

Initials—a stamp. Finals—goes over. 1st rung—a fish. 2nd rung—to repair. 3rd rung—a hunting dog. 4th rung—design or purpose. MURIEL E. DAY.

Answers to May 16th Puzzles.

- 1.—Don, Selma, Operto, Dec, Missouri, Garonne, Miami, Oregon, Rhone, Arno, Rhine, Douro. 2.—PENAL HOPES TEPID 3.—Sweet-bread. SEDAN REMIT

- 4.—(1) Jamaica, (2) Aven, (3) Tortuga, (4) Orupa, (5) Trinidad, (6) Gomatra, (7) St. Catherine, (8) Falkland, (9) Faroe, (10) Khabba, (11) Bermuda, (12) Long. 6.— R U M M A G E O P I A T E S A S S U A G E R I L L R O T S T E

- 7.—Portland, Madeira, Finland, Haikal, Stanley, Storey, Sligo, Ill. 8.—These are the great of earth—Great not by kingly birth, Great in their well-proved words. Firm hearts and true. 9.—You are to use your eyes to see for us (4's).

- 9.—Whenever duty waits for thee, With some judgment view it, And never idly wish it done,— Begin at once and do it. 10.—Build a little fence of trust around to-day, Fill the space with loving work and therein stay. Look not through the sheltering bare upon to-morrow, God will help thee bear what comes of joy or sorrow.

- 11.—FARMER'S ADVOCATE, Agriculture, Glasgow, Abyssinia, Florence, Mississippi. 12.—A weed to him who loves it is a flower. True worth is in being, not seeming. 13.—Cord-ill-ers. 14.—Dollard ("herd" should have read "hero.")

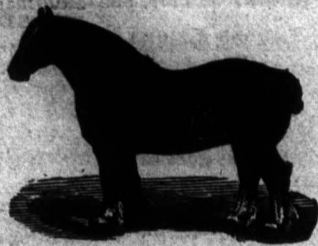
- SOLVERS OF MAY 16TH PUZZLES. "Dick," "Brownie," "Toledo," J. A. Macdonald, Crisaf Ferguson, Peter Hyde, Jessie Hyde. SOLVERS OF MAY 2ND PUZZLES (Late for last issue.) "Pansy" and "Essex."

- COUSINLY CHAT. Nellie R.—The answer came all right, but I did not think the puzzle suitable. Try some others. Pakenham is in Lanark Co. "Mae"—I did miss your letters. Too bad you have so little leisure. Did you, "Margareta" and "Pansy" make that trip yet? "Muriel"—So glad everything went off nicely. Did Lily get my letter? Do not let your new title prevent your coming regularly to see us. "Ogma"—Surely the prize has reached you; I sent your address some time ago. J. A. M.—Really, your initials sound pleasant, now don't they? Did not use your puzzle because it seems slightly of an advertisement. Send some others please. Thank you for kind words about our "Corner." You know each contributor does his share to make it bright. Did your friend receive the sample copies? "Pansy"—You have chosen a pretty *nom de plume*. Are you fond of flowers. I am, and pansies are great favorites with me. "Dick"—Can't use your rebus, lad, it is not well enough drawn. Your other puzzles are very nice. "Margareta"—You mischief, where are you now? Not up on the honsetop with a novel, surely. Do hurry and send me that "expected." I sent answers just as you drew them, but they were not published so—not my fault, dearie. "Crisaf"—Your visits are too far apart; come oftener. Peter.—Don't talk of being discouraged—you do very well. "Toledo"—Was glad to hear from you. My best friend is a—like you, but a girl, of course. Will always be pleased to hear from you.

DISPERSION SALE OF SOUTHDOWN SHEEP.

I will sell at auction, without reserve, at my farm, three miles south of the City of London. On Thursday, July 7th, 1898, my entire flock of EIGHTY Registered Southdowns, including Rams, Ewes and Lambs. Flock was founded in 1890 on selected imported ewes from the famous flocks of Webb, Coleman and Jones, which have been bred to imp. Webb rams till last season, when a high-class imported ram from the flock of Sir J. Blyth was used, and a grand crop of lambs will be in the sale. This flock has furnished show sheep and prize-winners to leading breeders and showmen in Canada and the United States. Terms:—Under \$10, cash; over that amount, six months credit on approved notes. Discount at rate of six per cent. per annum for cash. D. H. DALE, GLENDALE P. O., ONT. A. M. HUNT, Auctioneer.

Clydesdales for Sale



1 three-year-old imported stallion, by Prince of Millfield, out of Connie Nairn, by Prince of Wales. 1 four-year old, by Queen's Own, out of imp. Candour, by Macgregor. 2 imported two-year-old stallions, by Macgregor. 2 two-year-old stallions, by Prince of Quality, out of imported dams. Have also a well-mated team of three-year-old Clyde Fillies, sired by imp. Energy (7691), out of imp. mares. These animals are all large size, good quality and sound. Terms reasonable.

ROBT. DAVIES, Thorncliffe Stock Farm, TORONTO.

CLYDESDALES

We have several imported Clyde mares 8 and 10 years old for sale at moderate prices. Some of them in foal to Grandeur. An imported Hackney mare in foal to Square Shot. Also Ayrshire bull and Heifer QUEEN. Calves. Write for prices or come and see

D. & O. SORBY, GUELPH, ONT.

W. D. FLATT, Hamilton P.O. and Telegraph Office,



5 FASHIONABLY-BRED 5 YOUNG SHORTHORN BULLS 5

Also cows and heifers representing the leading popular families. Imported Golden Fame—20556—at head of herd. A few good Roadster horses. Farm six miles from Hamilton. Catalogue sent on application. Visitors met at G. T.R. or C.P.R. if notified.

Hawthorn Herd of Deep-Milking Shorthorns Stock of both sexes for sale, of choicest breeding and good quality, prices right. WM. GRAINGER & SON, London, Ont.

GOSSIP.

The live stock associations will send another carload of pure-bred live stock from Ontario to the West the last week of this month. The following gentlemen have already spoken for space: Henry Arkell, Arkell; J. E. Brothour, Burford; W. H. & C. H. McNish, Lya; W. R. Bowman, Mount Forest.

R. J. & A. Laurie, Wolverton, Ont., write under date of June 7th: "The demand for Tamworths is very brisk just now, a few of our most recent sales being a sow (in farrow) to D. Clemens, Washington; two young sows to Geo. Kennedy, Strathallan; one boar to W. J. Smith, Kilsyth; one pair to W. J. Moorhead, Elm; one pair to J. Silverthorn, St. Mary; one boar to N. Blain, St. George; four sows to W. D. Reesor, Markham. The ADVOCATE gives great satisfaction as an advertising medium, as well as being full of news of great interest to farmers."

Henry Stevens & Sons, of Leona, N. Y., in making change in their advertisement, write: "That the readers of the ADVOCATE may know something relative to the class of animals we send out, we quote from a letter which we received this day from Mr. A. D. Foster, of Holloway, Ont.: 'The two-year-old heifer I purchased of you last spring is doing well. She has given in the last seven days 281 lbs. has given 56 lbs. on two different days. Think she will reach 60 lbs. Expect to commence an official test of her June 15th. Mr. Foster's heifer is no accident. She has two crosses of DeKol 2nd, and her grandam is Helena Burke, with an official record of 25 45 lbs. butter in seven days, and 96½ lbs. milk in one day. Our herd is largely composed of DeKol 2nd, Helena Burke, and Netherland Hengerveld strains.'

Under the management of W. D. Grand, formerly of Toronto, a very successful sale of high-class carriage and road horses was held at the American Horse Exchange, New York, on June 1st. The animals sold were the property of Wm. C. Bryant, and Dobson & Aiz, of Marion, Iowa. Thirty-two animals of the Bryant consignment brought \$12,880, an average of \$402, the highest price being \$2,000 for a pair of brown geldings, 5 and 6 years old, 16 hands high. The next price received was \$1,600 for a pair of 5-year-old bay geldings, 14 3/4 hands, and \$1,300 for a pair of 5-year-old geldings, 15 1/2 hands high; \$800 was paid for the single Royal Seal, 5 years old, and \$1,000 for a pair of chestnuts, this last pair being of the consignment of Dobson & Aiz, whose thirty animals averaged \$333 each. The highest price for a single animal in this lot was \$650 for a 4-year-old brown gelding, 16.04 hands. CAITHNESS, VANITY AND CRIMSON KNIGHT FOR MANITOBA.

Mr. James Yule, farm manager for Hon. Thomas Greenway, Crystal City, Manitoba, recently visited Ontario, and returned with other consignments of high-class Shorthorns to be added to the already exceptionally strong string in the Prairie Home herd. In this latest purchase is included, from the herd of A. W. Smith, Maple Lodge, the grand red four-year-old bull Caithness—22065—by Jocelyn, an imported Vice-Consul of the Crutchebank-Victoria family, dam by Conqueror of the Clipper family, one of the most valuable sires at sixties. Caithness is rightly regarded as one of the very best bulls in America, having great scale, perfect top and bottom lines, smooth shoulders, full crops, long, well-sprung ribs, level quarters, strong, straight legs, and fine handling quality. He would command attention among the best in any showing in any country, as he did at the Toronto Industrial last year, where the judges hesitated, and for a time were divided between him and the champion of the two previous years there. Vanity—22731—, a rich roan six-year-old cow from the Springhurst herd of Harry Smith, Hay, goes with Caithness to the Prairie Province. She was the first prize cow in a strong competition at the Toronto Industrial last year, and is a daughter of Village Hero—14312—, by Prince Albert, a son of Bampton Hero, and of imported Village Blossom, bred by Amos Crutchebank. She is a deep-fleshed, breedily-looking cow, of fine quality and contour, and is nicely bred, being descended from imp. Vain Duchess, by Edgar (41501), imported by Green Brothers, Innerkip, Ont. The handsome and stylish red yearling bull Nelson, from the Maple Lodge herd, is in the company. He is a son of Valkyrie, by Abbotsford, out of Vanity, and his dam is by Abbotsburn's Heir. He is very smooth and well proportioned. A choice heifer calf also from the Maple Lodge herd was purchased. She is a daughter of Village Squire and of Second Countess, the dam of Caithness, and is said to be an exceptional good one. From the Trout creek herd of Mr. W. D. Flatt, Hamilton, was selected the excellent roan ten-months bull calf Crimson Knight, by Canada—18536—, winner of 2nd prize at Toronto in '94, a son of Clan Stuart, 1st prize three-year-old at Toronto in '93. The dam of Crimson Knight is Crimson Jewel 2nd of the Scotch-bred Crimsons, Flower family, by imp. Hopeful, bred at Kinloch. He is a calf of great promise, smooth and well filled in all points, and having fine quality of flesh and hair.

AN IMPORTANT SALE OF AYRSHIRE CATTLE. Mr. Robert Davies recently had landed on his Thorncliffe farm (Toronto) four of the best Ayrshire yearling heifers that have been hitherto imported into York County. They were bred by Messrs. Dundas & Grandy, of Springville, Ont. The sire, Victor of Boghall, was bred by Robert Wilson, of Boghall, Scotland. The dams of Mr. Davies' heifers were bred by Mr. Parks and Mr. Wilson, of Renfrewshire, Scotland, and were selected by Mr. Dundas as imported because of their great excellence as dairy cows, one of them having a record of 15 lbs. butter in one week. These Ayrshires are of the most fashionable type.

GOLD MEDALS AT THE OTTAWA EXHIBITION. A splendid string of gold medals donated as special prizes by liberal citizens of Ottawa, for horses, cattle, and dairy produce, will be up for competition at the Central Canada Exhibition, Sept. 16th to 24th. Over thirty gold medals are on the list, besides a number of handsome cash prizes offered by cattle and sheep breeders' associations, amounting in all to some \$250.

VALUABLE FARM PROPERTY FOR SALE

This farm consists of 4,000 acres of land, situated in what was known as Wilbur Swamp, Iosco County, Michigan. Is now well drained by main ditch running through the property which is connected by smaller ones. The soil on this property cannot be beaten in the world. There is over 400 acres of cultivated land, and a large portion of balance is wild meadow. Balance is timbered chiefly with black ash, cedar, etc. Is situated three miles from Bristol. Balance is a two-story frame dwelling, station, and six miles from East Tawas. On this farm there is a large quantity of various kinds of fruit, and a few miles away, where an unlimited quantity of stock can be turned out in the spring and they are fit for the market in the fall. There is an inexhaustible supply of spring water everywhere. This farm cost over \$40,000, and will be positively sold at a great sacrifice on easy terms, and will bear inspection. The owner, who is not a farmer, is closing out all his interest and retiring to Southern California. For all further information, write to 1103 MAJESTIC BUILDING. A. R. CODE, Detroit, Michigan.

Dispersion Sale---June 22nd, OF HIGH-CLASS SCOTCH SHORTHORNS.

THE undersigned will offer on the above date, at their farm, without reserve, the entire Ample Shade Herd, consisting of about 40 head, of both sexes; many of them show cattle, and bred from prize-winners for many generations. We confidently claim that no better herd of Shorthorns has been offered at Public Sale in recent years. This Herd has supplied many prize-winning animals at the leading fairs of Canada of late years, including Nominee, sweepstakes bull of 1897. We have placed Herd Bulls at the head of many of the best Canadian herds. Clean, up-to-date breeding combined with animals of distinctive merit. A cordial invitation is extended to all who appreciate good cattle to attend this sale. Catalogue on application. E. GAUNT & SONS, ST. HELEN'S, ONT. Lucknow Station, G. T. R., three miles from farm.

Mrs. E. M. Jones

OFFERS A FEW CHOICE JERSEYS OF RARE BREEDING. Two Yearlings, in calf. Three Bulls, 2 to 18 months old. Three Heifers, 1 to 9 months old. MRS. E. M. JONES, Box 324, Brockville, Ontario, Can.

W. C. EDWARDS AND COMPANY, IMPORTERS AND BREEDERS

Laurentian Stock and Dairy Farm, NORTH NATION MILLS, P. Q. Pine Grove Stock Farm, ROCKLAND, ONT.

Ayrshires, Jerseys, Shropshires, Berkshires, and Scotch Shorthorns.

Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Ligar Pogs of St. Anne's heads the Jersey. The young stock are all from time-tried dams. ED. McLEAN, Manager.

We can be reached either by steamboat, the G. P. R., or C. A. R.; the C. A. R. making connections with the G. T. R. at Coteau Junction. Rockland is our station on all lines.

DENTONIA PARK FARM W. E. H. MASSEY, Proprietor. HIGH-CLASS REGISTERED JERSEYS.

The following offered for sale to make room for additional imported stock soon to arrive: ST. LAMBERT OF HIGHFIELD No. 4899, a handsome bull, in fine condition; sold fawn color, black points; born March 3rd, '95; sire Karl of St. Lambert No. 31995; dam Niobe of St. Lambert 2nd No. 66304. A FEW GOOD COWS Also some splendid HEIFER AND BULL CALVES. Prospective buyers should visit the farm. Full information given on request. Apply—WM. PATTON, Supt., Coleman P. O., Ontario. Farm located near East Toronto.

WILD BRINO 10073. Record 2:19 1/2

With ordinary mares in Canada, Wild Brino has demonstrated his ability to sire extreme speed. Among his get are: Little Jim 2:19 1/2, Dorothea S. 2:19 1/2, Engracia 2:19 1/2, Attar 2:19 1/2, Colina 2:20 1/2, Suren 2:20 1/2, Sweet Violet 2:21 1/2, Mo S 2:22 1/2 and Wildcreek 2:23 1/2, and many others with records of 2:30 and better. At the great Toronto exhibition of 1897 five of his get raced, two winning first money and three second money. Five others were exhibited in the show ring, three took first prize and the other two second prize. At the Breeders Meeting at Hamilton, Ont., same year, five of Wild Brino's get raced, three taking first money and two second money. At Windsor, Ont. Thursday of each week. Terms \$25.00 cash with usual return privileges. Special attention given to mares white with us but at owners risk only. Write us when and how you ship and our men will meet boat or train. Write for tabulated pedigree of Wild Brino. We also have the best bred thoroughbred stallion this side of Kentucky, "KABBAR." Terms \$10.00 cash, return privileges. Tabulated pedigree on application. WILDWOOD STOCK FARM, 85 & 87 Congress St., West, Detroit, Mich.

FOR SALE—Shorthorn Bull, BOLD BRITAIN—20397—, bred by John Isaac, Markham, sired by Golden Crown (Imp.), first class in every respect, having headed my herd for the past three years. F. A. GARDNER, BRITANNIA, P. E. COUNTY, ENG.

ASHTON FRONTVIEW FARM A. J. WATSON, CASTLEBERG, ONT. Shorthorn heifers, by Statesman; and Berkshires 8 weeks old, by Baron Lee; also one Baron Lee boar 10 months old.

"Gem Holstein Herd." TOCK FOR SALE!

We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality...

HILLS BROTHERS, SHEPPARD PARK P.O., ONT. Shipping Station, Toronto. 7-y-on

Maple Hill Holstein-Friesians (THE GOLD MEDAL HERD OF 1897).

SERVICE BULLS: DeKoi 2nd's Paul DeKoi Duke (Imp.), Sir Pledge DeKoi (Imp.)

Can spare a few young things of both sexes from strictly first-class cows of DeKoi, Empress Josephine Meenthilde, and other famous butter families.

G. W. CLEMONS, ST. GEORGE, ONT.

HOLSTEINS FOR SALE

Do you want the blood of DeKoi 2nd or Netherland Hengereid? These two cows have produced more butter in seven days than any other two cows that have been officially tested...

HENRY STEVENS & SONS, Lacena, Oswego Co., N. Y.

BROOKBANK HOLSTEIN HERD

50—Champions for Milk and Butter—50 A number of desirable young BULLS on hand from eight months to two months old, from our great milkers...

A. G. E. BOB, Oxford Co., Ont. CURRIE'S CROSSING.



Non-Poisonous Fluid Dip.

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

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

CATTLE, HORSES, PIGS, ETC.: Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

PREVENTS the attack of warble fly. HEALS saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

NO DANGER; SAFE, CHEAP, and EFFECTIVE.

BEWARE OF IMITATIONS.

Sold in large tins at 75c from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

Sold by all druggists. Send for pamphlet. Robt. Wightman, OWEN SOUND, ONT. Sole agent for the Dominion.

SMITH EVANS, Gourrock, Ont.

Breeder and importer of registered Oxford-Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.



WE ARE NOW BOOKING ORDERS FOR SELECT YEARLING SHROPSHIRE RAMS

HEAVY WRIGHTS, STYLISH FORM, QUICK FEEDERS.

Also lambs of both sexes, sired by "Bonny Royal," bred by Mr. Mansell, England. Address JOHN DRYDEN, Brooklin, Ont.

HENRY ARKELL, ARKELL, ONTARIO, Importer and Breeder of Registered Oxford Down Sheep.

Animals of all ages and both sexes for sale at all times. Price reasonable.

LIVE STOCK AUCTION SALES

Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: Hon. Thomas Ballantyne, Stratford, Ont.; John I. Hobson, Guelpin; Hon. M. H. Cochran, Compton, P. Q.; or this office. JOHN SMITH, BRAMPTON.

Important Auction Sale of Southdowns.

Mr. D. H. DALE, of Glendale, Ontario, advises in this issue that he will sell without reserve at his farm, three miles south of the City of London, on July 7th, his entire flock of eighty registered Southdown sheep, including rams, ewes, yearling ewes, and lambs.

A public sale of sheep in July is rather an unusual event in Canada, and we are not sure that Mr. Dale is doing himself justice in making the venture, as the sheep would probably make a better showing in a fall sale.

GOSSIP.

One of the features of the approaching show of the Hereford Agricultural Society, England, is a department in which are exhibited pictures of Hereford cattle, for which the committee in charge has secured the loan of many fine paintings.

JOSEPH CAIRNS' CHESTER WHITES.

In the village of Camachie, some twelve or so miles from the St. Clair Tunnel, on the main line of the Grand Trunk, we were shown over Mr. Cairns' farm, and viewed as choice a bunch of Chester Whites as we have yet found.

We were also shown the well-gotten-up Jersey bull, Mighty John 35909, by Mighty Dollar 24051, out of Luella of Avondale 67502, which is held for sale. He is a good type of an animal, worthy of the consideration of parties requiring a dairy sire, or even qualified to head a herd of pure-breeds.

BRITISH ADVERTISEMENTS.

HAMPSHIRE DOWN SHEEP

Splendid mutton, good wool, great weight. This highly valuable ENGLISH BREED OF SHEEP

is unrivaled in its rapid and WONDERFULLY EARLY MATURITY,

Possessing, too, a hardness of constitution adapted to all climates, whilst in the quality of

MUTTON AND LARGE PROPORTION OF LEAN MEAT, IT IS UNSURPASSED.

At the great Smithfield Club Show in London, December, 1897, Hampshire Down sheep again held their own, the class for wether lambs with 20 entries exceeding in numbers that of any other breed, whilst a pen of wethers stood reserve for the champion plate for the best short-wooled sheep in the show.

Full information of JAMES E. RAWLENCE, Secretary, Hampshire Down Sheep Breeders' Association, Salisbury, England.

ALL PEDIGREE STOCK BREEDERS

should keep in touch with Herd, Flock and Stud movements by reading the Farmer and Stock-Breeder

The best, most complete and attractive agricultural and live-stock newspaper. Enlarged to 35 pages weekly. Frequent special issues, 40 to 48 pages. Illustrations are a specialty, each number containing many of the leading prize-winners, etc.; brilliant and practical articles on the Farm, Dairy, Horses, Cattle, Sheep, Pigs, Poultry, Veterinary, etc., etc.

Intending Purchasers of British Purebred Stock should send us particulars of their requirements, large shipments and extensive connections having given our staff of expert buyers that experience which is indispensable in live-stock transactions. Enquiries welcomed.

Address: FARMER & STOCK-BREEDER, LONDON, ENGLAND

W. W. Chapman

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered Stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address - FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepoote, London.

Harding's Sanitary Hog Trough, No. 27



IS INDESTRUCTIBLE, PORTABLE, SANITARY, CHEAP,

and answers all requirements of a desirable Hog Trough. One price only, 60 cents per foot. VOKES HARDWARE CO., Limited, 111 Yonge St., Toronto.

OAK LODGE HERD OF YORKSHIRES



Highest quality of bacon hogs, profitable to the feeder, and correct type for the packers. Orders now being taken for young pigs suitable for exhibition purposes. Largest herd in Canada to select from. Write for prices. J. E. BRETHOUR, BURFORD, BRANT CO.

R. HONEY, Warkworth, Ont., Northumberland Co., BREEDER OF

Reg. Holsteins, Large White Yorkshires, and Cotswold Sheep.

Choice young Yorkshires for sale at prices to suit the times. Orders booked for choice Cotswold ram lambs. 12-2-y-o

DURING the month of June we offer choice bred Berk. and York. swine, 6 weeks old, at \$6. F. O. B. Also an up-to-date Jersey bull calf for \$15. All stock registered. We have them all ages.

W. R. BOWMAN, Mt. Forest, Ontario

GOSSIP.

H. CARROLL & SON'S SHORTHORNS.

The Shorthorn herd of Messrs. H. Carroll & Son, Carroll, Ont., were looked over when in that section, and although we found them much reduced in numbers from a year ago, yet what we did see might be considered the best bunch ever owned together on the farm. Since our visit a year ago we learned that over 60 animals had been shipped to new homes: going to various parts of Ontario, some to the United States, and a number to the Northwest.

At present Mr. Bowman has on hand four bull calves that are the kind, with proper care, that will be in great demand again the coming season; their dams being of the high milking kind, little risk can be run in them.

In Yorkshire we were shown some twenty head, and were informed that they were the result of foundation stock obtained from such breeders as Brethour, Hume, Cowan and Featherstone. Four brood sows are kept on hand. Our attention was attracted by a bunch of nine young boars that are from six to eight months old, among which we saw some really good ones, not highly fed animals, but growing up in strong, serviceable condition, being allowed a plot to run in for exercise. Mr. B. informed us that they were sired by the stock boar, Lord Grey.

The Berkshire herd is made up of half a dozen of Snell and Model Farm bred animals. Riverside Jewel, purchased from O. A. College, is now five years old, and was due to farrow shortly after our visit. She should produce some good things, for she possesses good qualifications herself. The stock boar, Count Vaseel, is a two-year-old hog, having plenty of length and bone and nicely marked. He has always been a winner in the showing and is proving himself a valuable sire. We were also shown a bunch of half a dozen five-month-old pigs that are held for sale.

In Shropshires we saw some strong, well covered, even, good ewes. They were bred to a very choice, well covered ram, purchased last fall from Mr. Wright, Gleanworth. Twelve of the twenty lambs, bred in ram, will be held for sale. The ewes were purchased from Messrs. Campbell, Pin, Hunter, and directly imported, and are bred in the purple.

A pen of some fifty odd Plymouth Rock fowls are kept on hand, of Dickson strain, which receive considerable attention and from which eggs and young fowls may be obtained at a reasonable price.

At Mr. Hunter's dispersion sale last winter two pure-bred Clyde mares were purchased. They were from imported Queen and Master Lyndock. One dropped a nice filly the morning before our visit, to McClintock (imp.), that was a nice, straight, well-marked foal, the dam having plenty of size, bone and hair.

NOTICES.

Who wants a 4,000-acre farm, especially adapted to sheep and cattle raising? It is all ready to go right along and make money from...

The Maple Leaf churn advertised elsewhere in this issue by Wilson Bros., Collingwood, Ont., is not claimed by its manufacturers to make more butter than the cream contains...

Mr. W. H. Gardner offers for sale in this issue farm lands in all parts of Manitoba on easy terms and low prices. All visitors to the Winnipeg Industrial who are thinking of purchasing farm property in this Province are invited by Mr. Gardner to call on him at 383 Main Street, Winnipeg, where they can look over his list and receive information in person.

As the school holiday season is approaching we would remind teachers and pupils of the special teachers' session to be held at Belleville Business College, of which J. Frith Jeffers, M.A., is principal, during July and August.

WARNING RE WINDMILLS. Gould, Shapley & Muir Co., limited., Brantford, Canada, manufacturers of Galvanized Steel Windmills, hereby notify the public that they hold Canadian Patent No. 48,143 for roller and ball bearings on windmills...

GOSSIP.

Six New York dealers were recently convicted of handling oleomargarine, and fined amounts varying from \$25 to \$50 each.

Only 69 creameries in 1897 availed themselves of the bonus offered by the Dominion Government to assist in providing cold storage equipment.

The well-known French Coach stallion, Indre, has been sold by Mr. Dunham, of "Oaklawn," to L. V. Harkness, a New York millionaire, for his Kentucky farm, where he will be crossed with trotting-bred mares.

On June 3rd, Wm. Cummings & Son, Buda, Ill., sold 37 Shorthorns at an average of \$94.20. Gleriana, a red yearling heifer, by Imp. Giltspur, sold for \$230, the highest price of the day, and the red yearling bull, Victor of Glenwood, by the same sire, made \$200, which was the next highest price obtained...

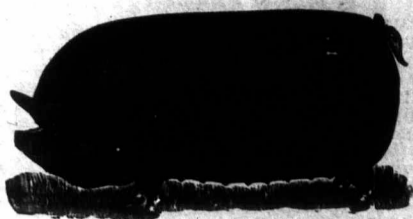
Capt. T. E. Robson, Ilderton, Ont., has purchased from Mr. H. F. Brown, Minneapolis, Minn., the fine show cow Louisa 2nd of Browndale and her calf. This cow, we understand, is a graduate of the Minnesota State Fair, having won all the honors that one animal is permitted to compete for in that institution...

Messrs. H. Bennett & Sons, St. Williams, Ont., breeders of fine Berkshire swine, report that sales are good, and that they are gaining orders all the time through the FARMER'S ADVOCATE. "We trust your paper may prosper in the future as it has done in the past. We consider it the best medium to advertise in."

Vol. 20 of the British Clydesdale Stud Book has recently been issued, and contains pedigrees of mares Nos. 12,973 to 13,334, and stallions Nos. 10,302 to 10,453, being in all 96 more than were contained in Vol. 19. The book is gotten up in its usual good form, and bears lifelike illustrations of the stallion, Montraive Sentinel (10094), winner of first prizes as a three-year-old in 1897...

Among other stock which has recently been taken to Manitoba from Ontario by Mr. James Yule, Hon. Thos. Greenway's herdsman, are the two Clydesdale mares, Kate Hill 3rd and Boydston Lass 7th, bred by Messrs. Jas. I. Davidson & Son, Balsam, Ont. They go to the stables of Mr. McKenzie, of Burnside, a horseman who will keep only the best, and a successful farmer of the Portage Plains. It will be remembered these mares were illustrated in the FARMER'S ADVOCATE of October 15, 1897. They are half-sisters by Westfield Stamp (imported) (1819), and out of Boydston Lass 3rd and Kate Hill. Boydston Lass 7th won first as a foal, as a 2-year-old, and as a 3-year-old at the Toronto Industrial, and at the same exhibition Kate Hill 3rd won first as a 2-year-old, as the Canadian class, and first as a 3-year-old, as well as the championship over all ages. Their best victories, however, were at the late Toronto Horse Show, when they won first and second in the mare class (Kate Hill 3rd winning first) and first as team. As they are just four years old, they have, barring accidents, a brilliant future before them in their new Western home.

ENGLISH BERKSHIRES I I



Come to headquarters for pigs of either sex if you want Berkshires that will make you money. Orders taken for spring pigs.

Write for Prices. J. G. SNELL, SNELGROVE, ONT.

A CHOICE LOT OF lengthy, large English Berkshires from six weeks to three months old. Pairs supplied not skin.



Write H. J. DAVIS, Box 290, Woodstock, Ont., breeder of Yorkshires, Berkshires, Shorthorns, and Shropshires.

ROSE HILL FARM.

JAMES DORRANCE, SEAFORTH, ONT.

REGISTERED: BERKSHIRES Of the most approved type. Choice young stock always for sale. Write at once and secure a bargain.

LARGE ENGLISH BERKSHIRES. Imp. Knight of Riverside, Bright Star, and Canada's Glory at head of herd. Boars ready for service and choice pigs two months old. Write to H. BENNETT & SON, St. Williams, Ont.

ENGLISH BERKSHIRES AND CHESTER WHITES. Young boars fit for service; sows ready to breed. Also young stock of either sex ready to ship.

CAMPBELL & MARTINSON, Near Lewisville, G.T.R. Northwood, Ont.

English Berkshires. Herd headed by three first-prize boars. Large size, strong bone, fine quality, and a choice lot of breeding sows. Orders booked for spring pigs.

GEORGE GREEN, Fairview P.O., Ontario. Stratford Station and Telegraph Office.

BERKSHIRES One yearling boar, 1 boar pig, 3 mths. A few young sows. GEO. N. HARRIS, LYNDEN, ONT.

BERKSHIRES, BERKSHIRES, BERKSHIRES My herd contains such blood as Baron Lee, Varna Duke, and other imported strains, with the celebrated sire, First Prize, at the head.

HEADQUARTERS FOR DUROC-JERSEY SWINE Our herd secured nine of the first prizes out of the eleven exhibition, and similar portion at London and Ottawa. We are justified in saying we have the best herd in Canada.

VICTORIAS. I have now two Imp. Victoria sows in pig; they are in pig by Chief, the boar that won 3rd premium at Wisconsin State Show and 2nd at St. Louis State Show. Write for prices at once.

MERTON LODGE Herd of Chesters and Tamworths are in full bloom, and are offering choice stock of both breeds and sexes. Also booking orders for coming spring stock.

H. GEORGE & SON, CRAMPTON P. O., ONT.

The Ontario Veterinary College (Limited) Temperance St., TORONTO, CANADA. Affiliated with the University of Toronto.

BORNHOLM HERD IMP. CHESTER WHITES! Stock for sale at all times, all ages. Nothing but first-class stock shipped. Inspection invited. Correspondence promptly answered.

D. DeCOURCEY, BORNHOLM P.O., ONT.

GOSSIP.

Prof. Jas. W. Robertson, of Ottawa, Agricultural and Dairy Commissioner, has gone on a tour to the North-west.

At the public sale of Shorthorns belonging to B. Whitsett & Sons, Pre-emption, Ill., June 2nd, 34 head brought an average of \$92.80, the highest price being \$205—the red yearling bull, Scarlet Prince, by Waverley, Lady Lavender 2nd, by the same sire, brought \$150, which was the next highest price.

E. JEFF & SONS' SHORTHORNS, BERKSHIRES, AND SOUTH-DOWNS.

At the village of Bondhead, Ont., is the large, well kept farm of the Messrs. E. Jeff & Sons, whose special attention is directed to the breeding and improving of live stock. Shorthorns have been bred here for upwards of thirty years, and many worthy animals have been developed and passed through Mr. Jeff's (Sr.) hands, and to-day his two ambitious sons are as alive to their own interest in this respect as the father was in the past, assisted by his lifelong experience.

Among the yearlings is the red Springfield Chief, by Grosbeak and out of Lady Isabella, by imported Killibry, running to British Statesman and through five imported top cross sires, and apart from his gilt pedigree he is a lengthy, well-formed young bull. The yearling red daughter of Zora 3rd, by Patron Bay, is a well-matured, smooth animal of good size. This year's crop yielded half a dozen splendid young bulls.

The young red son of Gimcoo Maid, muscled. The young red son of Gimcoo Maid, muscled. The young red son of Gimcoo Maid, muscled. The young red son of Gimcoo Maid, muscled.

in fact, they are a pair of calves that would be hard to equal together. The young females are going ahead in splendid form and also bear out the sweet quality of their ancestors, and promise to have a better lot on hand than later.

He is well and evenly fleshed, without a black spot about him; while the red son of Fancy A (by Joyful Lad) is a little more rangy in his make-up, with splendid bone, and is well muscled. The young red son of Gimcoo Maid, muscled.

in fact, they are a pair of calves that would be hard to equal together. The young females are going ahead in splendid form and also bear out the sweet quality of their ancestors, and promise to have a better lot on hand than later.

The Southdown flock have received their share of attention, and none but the best sires have been obtained. The ram employed last year was purchased from Mr. John Jackson, year was purchased from Mr. John Jackson, year was purchased from Mr. John Jackson, year was purchased from Mr. John Jackson.

THE... AVON HERD of Chesters Are in fine form. Orders are now being booked for April litters from notable strains. Henry Heron, Avon P. O., Ont.

E.D. GEORGE PUTNAM, ONT. Importer and Breeder of Choice Improved Chester White Swine

The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices.

BORNHOLM HERD IMP. CHESTER WHITES! Stock for sale at all times, all ages. Nothing but first-class stock shipped. Inspection invited. Correspondence promptly answered.

D. DeCOURCEY, BORNHOLM P.O., ONT.



We have at present for sale some choice Duroc-Jersey and Improved Chester White boars and sows, suitable for show purposes, which we can sell for prices to suit the times; also, two imported Guernsey bull calves. Write for description, photo, and price.

WM. BUTLER & SONS, DEREHAM CENTRE, ONT.

Chester White Hogs

White Holland Turkeys W. E. WRIGHT, GLANWORTH, ONTARIO.

IF YOU WANT CHESTER WHITES Write me for particulars. The imported sires, John A. 751 and Nonsuch 910, at head of herd. JOS. CAIRNS, LAMBTON CO. CAMLACHIE P. O.

HERMANVILLE TAMWORTHS.

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Having won the herd prizes at Toronto, London, Ottawa, and Brantford Fat Stock Shows, we are justified in stating that we are in a position to offer you what you may ask for from gilt-edge prize-winning stock. W. & H. JONES, MT. ELGIN, ONTARIO.

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EGGS FOR SALE. White Wyandotte, White Plymouth Rock, Cornish Indian Game, Black Minorcas, Houdan, Black Langshan, White Langshan, Barred Plymouth Rock, Silver Laced Wyandottes, \$1.50 for 15, or \$2.50 for 30. Packed in patent boxes. Will replace at half price any not fertile. Also poultry supplies. Will exchange any of above for first-class Tamworth pigs, any strain. Dorset and Shropshire sheep, Tamworth pigs, Shetland ponies, Jersey cattle, all ages (registered). Prices right.

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Send 15c. for Poultry Annual and Almanac for 1898 to C. C. Shoemaker, Freeport, Ill., U.S.A

Prof. Jas. Fletcher, Dominion Entomologist,

At the Ontario Fruit Growers' Meeting at Waterloo, December 15th and 16th, 1897, said:

"In buying a cheap spraying pump you make a great deal of bad temper, and use a great deal of bad language, and not save, as you intended, a percentage of your crops. Now, there are a great many spray pumps, and there is only one shown here (the SPRAMOTOR of London), and I will say it is a good pump. You will do better to pay an extra dollar or two, that is charges for the bearings that are subject to the influence of copper mixtures, to have those of brass; it is a saving in the life of the pump, sometimes of three or four years."

FRUITLAND, April 21, '98.
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Dear Sir:—Your favor of yesterday just received. Am glad to learn that the fourteen pumps ordered for Provincial Experimental Spraying have gone forward so promptly. Please ship me a No. 2 outfit, complete, for my own use.

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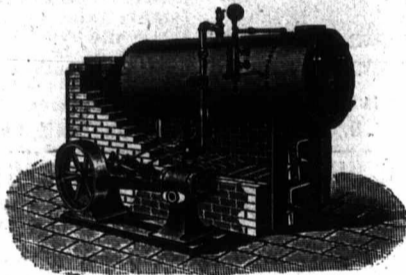
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HESPELER, ONT. a specialty.

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NOTICES.

The New Brunswick Provincial Exhibition will be held at St. John, Sept. 13th to 23rd.

An adjourned meeting of the American Southdown Breeders' Association will be held in Springfield, Ill., June 29th, for the election of officers and directors, and for the transaction of other business. John G. Springer, Springfield, Ill., is the secretary.

Mr. F. S. Peer, Mt. Morris, N. Y., will call for England and the Channel Islands on July 9th to import cattle, sheep and swine. This is his second trip this year, and he is open to accept commissions to bring out stock for breeders who wish to avail themselves of his services.

The Farmers' Gazette states that at a sale of Shorthorns, at Harwich, Eng., May 23rd, bred by Col. T. R. Ratcliffe, the young cow Sea Gem, the champion of the breed at the Royal Show last year, illustrated in the FARMER'S ADVOCATE of September 1st, was sold for 420 guineas to Mr. Wm. Harris, of West Smithfield.

At the unreserved sale of seventeen Hackneys, the property of James Walker, of West Calder, Scotland, May 17th, an average of 234 7/8 lbs. was made. The highest price was 295 guineas for the three-year-old Regina Danegelt Sweetest May made 310 guineas, and the seven-year-old brood mare, Miss Agnes, brought 115 guineas.

In a private catalogue of the herd of Jerseys owned by W. Mackenzie Leylands, Kent, Eng., the milk records of all the cows in the herd are given for the year 1897. The highest record is 10,339 pounds. Six cows averaged 9,127 pounds easily. Fourteen cows and two calves gave an average of 7,550 pounds, two of these having calved in October, 1896.

H. J. Davis, Woodstock, Ont., breeder of Yorkshires, Berkshires, Shorthorns, and Shropshires, writes:—"I have had a very good trade in all classes of stock the past season, have filled orders from Missouri, Kentucky, N. W. T., and many places in Ontario and Quebec. Crops of all kinds promise well, and are several days ahead of last year."

J. G. Snell, Snelgrove, Ont., reports his Berkshires and Cotswolds as doing well, and the demand quite satisfactory. Among recent sales of young heifers are one to each of the following buyers: George W. Hammond, Yarmouthville, Me.; Henry H. Berger, Calumet Harbor, Wis.; and Green Bros., Indianapolis, Ill. Mr. James Main, who is now in England, will import twenty Cotswold sheep for Mr. Snell.

At the close of a horse show is a fitting time at which to hold a sale of animals fit to win in modern competition. At a recent sale of Philadelphia Show horses, consigned by Mr. John S. Bratton, \$4,500 was bid for a pair, but as \$3,000 had been previously offered for one of them they were withdrawn; \$850 was the price at which a four-year-old brown gelding went by private sale, however; but \$1,175 was the price paid for a pair of bay geldings five years old; \$675 and \$520 were gotten for two pairs; and \$500 was paid for a six-year-old black mare. Dr. Gagnon also consigned a small number, and received \$970 for a pair of bay geldings.

Among the Canadian stock breeders who are reported as likely to visit Great Britain during the present month, with the purpose of importing cattle, sheep, hogs and poultry, are Robert Miller, Brougham; Arthur Johnston, Greenwood; H. Cargill, M. P., Cargill; John Isaac, Markham; C. M. Simmons, Ivan; and J. E. Brethour, Burford. James Main, Milton, and Lauchlin Cameron, Ivan, sailed early in May, and no doubt have the ground well looked over ere this. The Royal Show will be held at Birmingham, June 20th to 24th, and most of the visitors named will probably take this in, after which we may expect to hear of their home-coming with selections for show and breeding purposes. There is room for toppers here, and the men who have gone over are not likely to bring any other sort.

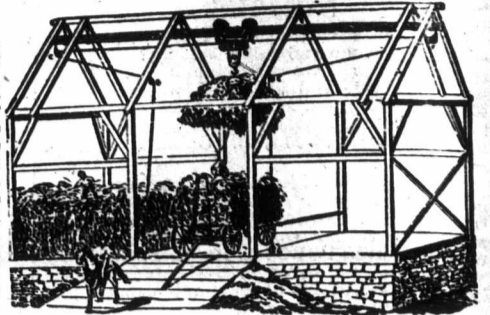
Mr. F. W. Taylor, Wellman's Corners, Ont., breeder of Ayrshires, whose advertisement is running in our columns, writes under date of June 1st:—"I am sending you a few notes, and also some of my last spring's sales since March. My stock are looking well, much better than they have been for the last two seasons. I had plenty of feed of all kinds, and they have gone out to grass in fine condition. My cows are milking extra well; my young two-year-old heifers some of them will nearly fill a large dairy pail, without any extra feeding. I find a ready sale for my calves this spring, especially heifers. I cannot supply all my customers. I sold two to Mr. Charles Parisien, Summerstown Station, and he was so well pleased that he sent for two more. I have still a few bulls since March as follows: John McCullough, Corbyville, Prince Charles; George Johnston, Belleville, White Floss; James Robinson, Cannifton, Prince of Wales; John Kingston, Stirling, Gladstone; E. S. Cassan, Campbellford, Ont., Surprise; George M. Phillips, Cannifton, Ont., Klondike; Wilfred Cummings, Anson, White Lion; Philip Lott, Springbrook, Ont., Melissa.

SALE OF LIMESFIELD HACKNEYS.
Seventeen Hackneys, the property of Mr. James Walker, Limesfield, West Calder, Scotland, were recently sold, buyers being present from all parts of Scotland and several from England. The prices obtained averaged over 284. Regina Danegelt 10464, a three-year-old filly, brought the highest price of the day, being bought by Messrs. Billington Bros., Blackpool, for 295 gs. Sweetest May 8512, a brood mare, was purchased by Captain Ashe, Mid Calder, for 210 gs. Another mare, Newbald Regina, was bought by Mr. Watson, Blackpool, for 120 gs.; while the mare Miss Agnes 248 also went into three figures, going to Mr. Mitchell, Millfield, for 115 gs. The following is a summary of the prices:

6 Brood mares, with foals.....	Average, 4 s. d.
1 Harness mare.....	92 11 6
1 Three-year-old filly.....	220 10 0
1 Two-year-old filly.....	309 15 0
1 Yearling filly.....	44 2 0
4 Yearling fillies.....	12 5 3
4 Yearling colts.....	33 17 3
17 All ages.....	684 7 5

HAY FORK OUTFITS COMPLETE FOR \$12.25

We are headquarters for Hay Fork and Wagon Sling outfits for Barns and for Stacking Outfits. The picture shows one of our \$12.25 Fork Outfits in use. The price (\$12.25) includes the very best malleable iron improved Swivel and Reversible Car, a good Steel Double Harpoon Fork, the rafter track Bolts, the Rope Pulleys and Pulley Hooks, 125 feet of the very best 1 in. Pure Manila Rope, and the best Russian Hemp Trip Rope, the whole outfit required for a wood track Horse Fork apparatus, all for only \$12.25.



STACKING OUTFITS. We also carry a full line of Wire Cable Track Fork Outfits for Northwest use for building stacks of hay or grain. Our printed matter explains everything and quotes the lowest prices for the best goods in America. If you are interested, write to us, mention this paper, and we will at once mail you our Hay Fork circular. Write at once; the outfit should be in place. Thousands of farmers are taking advantage of our low prices and putting in these great labor-saving machines.

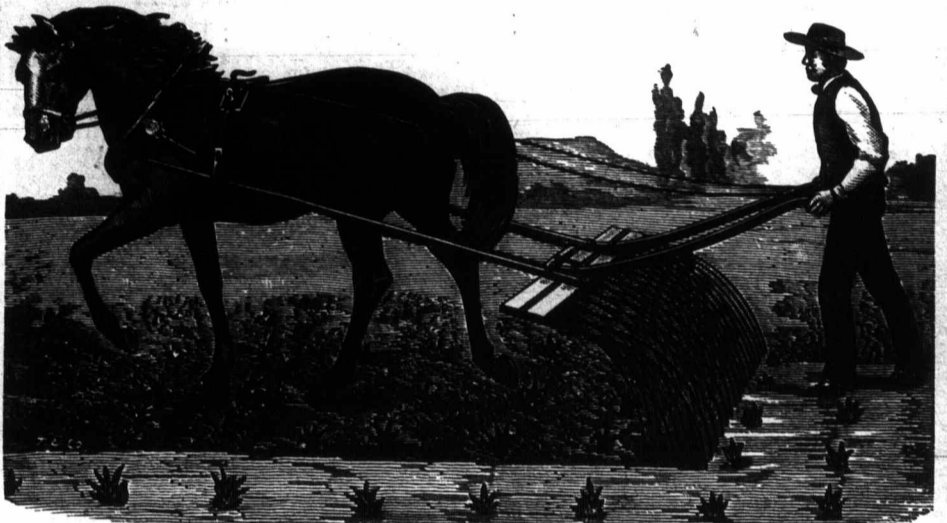
MACHINE SECTIONS. We sell machine sections to fit any machine, whether it is an old machine not now made or one of the modern binders, reapers or mowers. Send a pattern of the old section on paper, showing rivet holes, or send us an old section. Our price for any number of any sections is only six cents (6c.) each, with rivets.

BINDER TWINE. Pure Sisal Binder Twine of the best quality, six seven cents (7c.) per lb. Our terms are cash with the order.

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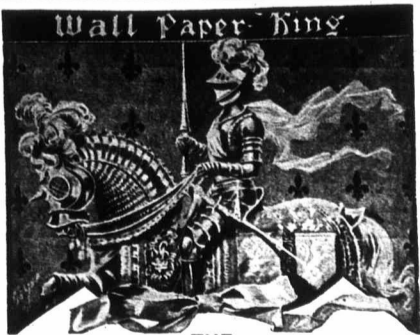
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CEMENT CONCRETE WALLS ARE PERFECTLY DRY AND FROST PROOF. If use of cement is not understood we will send competent man FREE, to lay out work and give complete instructions. We warrant all structures when our instructions are carried out, and guarantee our cement quite equal to any domestic or imported Portland cement for above structures.

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For prices of Cement and other particulars, apply,
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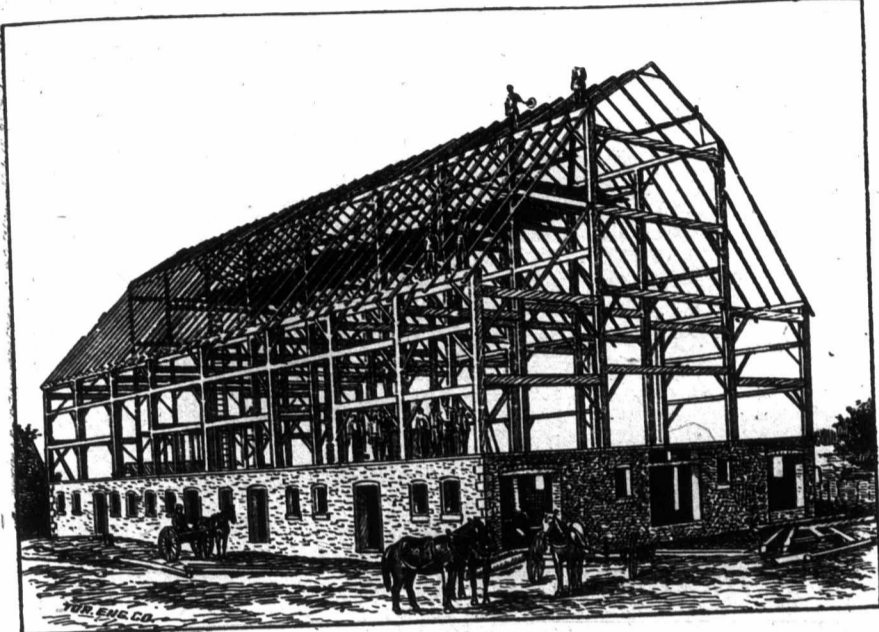
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THE Thorold Cement

High in Quality 56 Years in Use.
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To those who are unacquainted with the manner in which the cement should be mixed and prepared, we will send, FREE OF ANY CHARGE, a thoroughly practical mason and builder who will lay out all work and give full instructions.

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POSSESS MORE EXCLUSIVE FEATURES THAN ANY OTHER.

THEY RUN EASIER AND LAST LONGER THAN ANY OTHER.

THEY ARE MADE IN THE LARGEST BICYCLE FACTORY IN CANADA,

AND CANADIAN LABOR AND CANADIAN CAPITAL ARE USED.

FACTORY: ST. CATHARINES, ONTARIO.



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OUR "FAMOUS MAGNET"

Made in 8 sizes, using 3, 4 and 5 feet wood. Will heat from 10,000 to 100,000 cubic feet. Very strong fire box. Large feed door. Extra heavy steel flues with cast heads, which are very easily cleaned. Instant direct or indirect draft. ALL OPERATIONS FROM FRONT OF FURNACE.

You can keep your house warm from cellar to garret, and do it Cheaply.

HIGHEST TESTIMONIALS FROM ALL DEALERS AND USERS.

The McClary Mfg. Co., London, Toronto, Montreal, Winnipeg, and Vancouver.

If your local dealer cannot supply, write our nearest house.

The Bath and West of England Show

was held at Cardiff, Wales, May 25th to 30th, and the entries in most of the classes of stock were creditable considering the distance from many of the breeding districts. In the class for *Shorthorn* cattle Scotch-bred bulls took the lead, Mr. Mills' *Marengo* winning first honors in the section for bulls over three years, followed by Mr. Stratton's *Alto*. In two-year-old bulls Mr. Harrison's *Misty Morn*, bred by Mr. Duthie, won first prize, and Mr. Deane Willis' *Victor* was second, the third prize going to *Wilt-hire Victor*, bred by Mr. Willis, who had the first-prize yearling bull in *Bapton Count*. In the cow class Mr. Brierley's *Queen of Hearts* took first place. Mr. Harrison won first in the three-year-old cows with *Welcome*, a daughter of the prize cow *Warfare*, and Deane Willis second with *Bapton Daisy*. Mr. Willis came first in two-year-old heifers with *Bapton Vanity*, by *Count Lavender*. In yearling heifers Mr. Harrison's *Fairy Queen*, by *Champion Cup*, won first, followed by Mr. Willis' daughter of *Count Lavender*.

Herefords were not in large number, but the young classes were strong. *Tedstone President*, shown by E. Wright, took first place in aged bulls, the second winner being *Newdigate*, bred by J. H. Arkwright, and shown by Hill & Lewis. In two-year-old bulls Mr. Edwards won first with *Liberty*, by *Prince Marquis*, and Mr. Evans second with *Prince of Orange*. The first-prize yearling bull was *All England*, by *Albion*, shown by J. H. Arkwright, and the second went to Mr. Hughes' *Protector*. Only four cows were shown, and Mr. Armitage got into first place with *Pimpernel*. Mr. Cleasby's *Miss Nancy* 2nd coming into second place. Mr. Evans third with *Beauty*, and Mr. Tudge was reserve with *Ruthven*.

Jerseys, which are usually numerous at this Society's shows, were not out in as strong force this year on account of the show being out of the Jersey district. The section for cows was the strongest of the class. Lord Rothschild's *Dairy's Golden*, by *Golden Lad*, a beautifully-bred cow, with well-shaped and capacious udder, won first prize; Sir Jas. Blyth's *Tenby*, finely bred, of good quality, and with show plenty of milk, winning second prize. Mr. McIntosh's splendid *Jerseys* of the year, was placed first in the class for three-year-olds, her quality and udder being superb.

Guernseys made a very respectable muster considering that the meeting was so far away from the home of the breed. The cows made a very strong section, the first place being given to Mrs. Hamilton's *Jessie* 10th, champion at the *Manchester Royal* last year. "She is," says the *London Live Stock Journal*, "of the type sought, and takes first position on account of her milk vessel, which is of the *Ayrshire* form, falling freely and nearly vertically at the back, and then stretching forward with a flat sole until it meets the underline of the body. Sir F. Montefiore's *Flora*, who stood second, and Mr. Hambro's *Flora*, who stood third, the first winner, surpasses and figures go, but their udders, excellent of their kind, are not of the highest type. They are of the pendulous form, and when charged stand away off from the body, and show a prominent bulging appearance forward."

SHEEP.

Shropshires made a stronger show than any other class. In the section for shearing rams there were twenty-four entries, and the premier position was given to a grand sheep shown by J. Bowen Jones, second to W. F. Inge, third to Mrs. M. Barrs. Ram lambs—1st to W. F. Inge, 2nd to A. Bradburne, 3rd to J. Harding. Shearing ewes—1st to Jones, 2nd to P. L. Mills, 3rd to Mrs. Barrs.

Oxford Downs.—Shearing rams—1st, Hobbs & Son; 2nd and reserve, W. A. Tweeke. Ram lambs—1st and reserve, W. A. Tweeke. Shearing ewes—1st and 2nd, W. A. Tweeke; reserve, G. C. Williams.

Southdowns.—Shearing ram—1st, Earl Cadogan; 2nd, Sir James Blyth; 3rd, Earl Bathurst. Ram lambs—1st, C. R. W. A. Tweeke; 2nd, Sir James Blyth; 3rd, Earl Cadogan. Shearing ewes—1st, Earl Bathurst.

Cotswolds.—Shearing ram—1st and 3rd, R. Swanwick; 2nd, H. McAlmont. M. P. Ram lambs—1st and 2nd, R. Swanwick; 3rd, W. Thomas. Shearing ewes (one entry)—F. Craddock.

GOSSIP.

The great *Ayrshire* cow, *Nelly Osborne*, who has figured so conspicuously in the showing for many years, has changed hands along with two of her granddaughters. They leave the herd of Mr. Daniel Drummond, of *Petite Cote*, Que., to occupy places in the herd of Mr. Robt. Reford, of *Ste. Anne de Bellevue*, Quebec.

At Mr. Burdett Coutt's fifth annual sale of harness horses at the *Brookfield Stud*, Highgate, Eng., recently, 47 animals were sold, some of them at fancy figures. The highest price of them at fancy figures, paid by Mr. Waller for a match pair was 550 gs., and a stylish pair of chestnuts; whilst the highest price realized for a single animal was 320 gs., at which figure Mr. Braskenridge purchased the chestnut gelding *Cadet*. Mr. Marsh took a handsome chestnut mare, *Lady Chesterfield*, for 230 gs.; *Collingwood* realized 210 gs., and *Lucifer*, a chestnut, 260 gs. A team of four—*Knight, Ladye, Plum*, and *Imogen*—brought no less a sum than 850 gs. Some remarkable prices were paid for pairs. Lord Strathcona gave 540 gs. for *St. Vincent* and *Trafalgar*, and Sir W. Plowden took *Jacobite* and *Jacobin* for 240 gs. Mr. J. Irvine Boswell paid 320 gs. for *Lady Silverstick* and *Lord Silverstick*; Mr. Lionel Phillips, 500 gs. for *Normahai* and *Khorassan*, a fine pair of bays; and Mr. Breitmeyer, 510 gs. for *Treasure Trove* and *Monte Christo*. Altogether, forty-seven lots realized a total of 27,751 gs., giving an average of nearly £165 each.

American Poultry Association.

Dr. Bell, President of the Ontario Poultry Association, has been advised that the American Poultry Association will meet in Toronto next January 10 to 14, and as the Poultry Association of Ontario will hold their 25th annual exhibition in that city at the same time, the largest show of fine poultry, pigeons, pet stock and cats ever held in Canada will be given.

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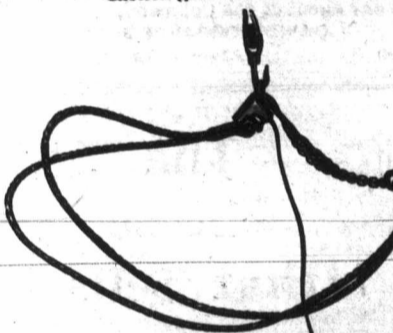
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For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter

Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

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STONE BRICK. CLAPBOARD CORRUGATED ETC.



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WILL RUN	AT RETURN FARES.
HOME-SEEKERS' 60-DAY EXCURSIONS TO THE CANADIAN NORTHWEST	Deloraine..... } \$28 Reston..... } Estevan..... } Bismarck..... } Moosomin..... } Winnipegosis..... }
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Going July 13th (All Rail) Returning until Sept. 12th (S.S. Athabasca)
Going July 14th (S.S. Athabasca) Returning until Sept. 17th (All Rail or S.S. Alberta)
For tickets apply to any C. P. R. Agent, or to C. E. McPherson, Assistant General Passenger Agent, 1 King St. East, Toronto.

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Montreal to Liverpool every Saturday at 9 a.m.
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DAVID TORRANCE & CO.,
General Agents, MONTREAL.

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GOSSIP.

Mr. A. Yaeger, of Simcoe, Ontario, has purchased the Hackney stallion, Hillhurst Sensation, and Mr. J. Lawson, of Almonte, Ont., the Hackney stallion, Danish Duke, from Hon. M. H. Cochrane, of Hillhurst, P. Q.

During one week in May there were 72 outbreaks of swine fever in England, involving the slaughter of 1,524 animals, as against 63 outbreaks and 1,295 animals slaughtered in the corresponding week of 1897. During the first twenty weeks of 1898 over 30,000 pigs have been slaughtered. The disease shows no signs of abatement.

The fourteenth annual report of the Missouri State Horticultural Society has been issued. It is a neat, liberally illustrated and well-bound volume of over 400 pages, containing many good papers on horticulture, as well as full reports of summer and winter meetings, and of a number of county societies. The secretary of the Association is L. A. Goodman, Westport, Mo.

The American dairymen are beginning to devote more attention to Ayrshire cattle. Mr. K. B. Armour, of Kansas City, has in quarantine at Garfield six head, besides 56 head of Herefords. George H. McFadden, of Philadelphia, had ten head of Ayrshires landed there on April 28th. On same date F. S. Peer, of New York, placed in quarantine twenty head of Jerseys and one Shropshire ram. Wm. Rockefeller, of New York, also has one Jersey at same station.

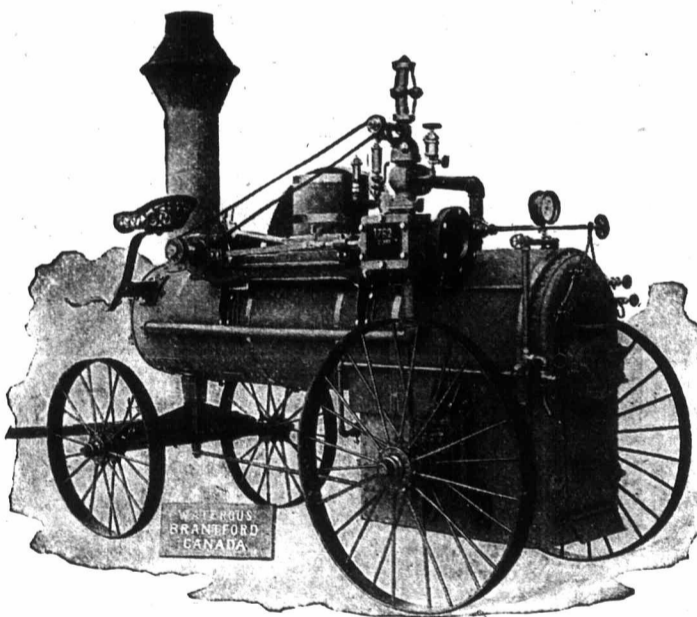
An important and interesting sheep-feeding experiment is to be carried out at the South-eastern Agricultural College, Wye, England, during the winter of 1898-9, with twenty wether lambs of the following breeds: South-down, Kent, Shropshire, Hampshire, Oxford and Sussex. The breeds chiefly found in the area covered by the operations of the college. They will be fattened in hurdles side by side, fed in the usual manner on roots, hay, cake, etc., and slaughtered in March, 1899.

Hampshire rams to the number of 365 have their pedigrees recorded in Vol. IX, of the English Hampshire Down Flock Book, of which society J. E. Rawlence, The Canal, Salisbury, Eng., is secretary. This brings the number of Hampshire Down rams up to 2,777. There is also registered in this volume 72 flocks since the issue of Vol. VIII. Also record of flocks registered in Vol. I, 2, 3, 4, 5, 6, 7 or 8 dispersed prior to the issue of Vol. IX., and a record of flocks registered in Vols. 1-8, inclusive. The book is cleverly compiled and shows taste and good judgment in its entire make-up.

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