

J H Crisdale
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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED
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* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE *

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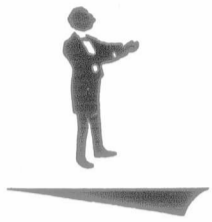
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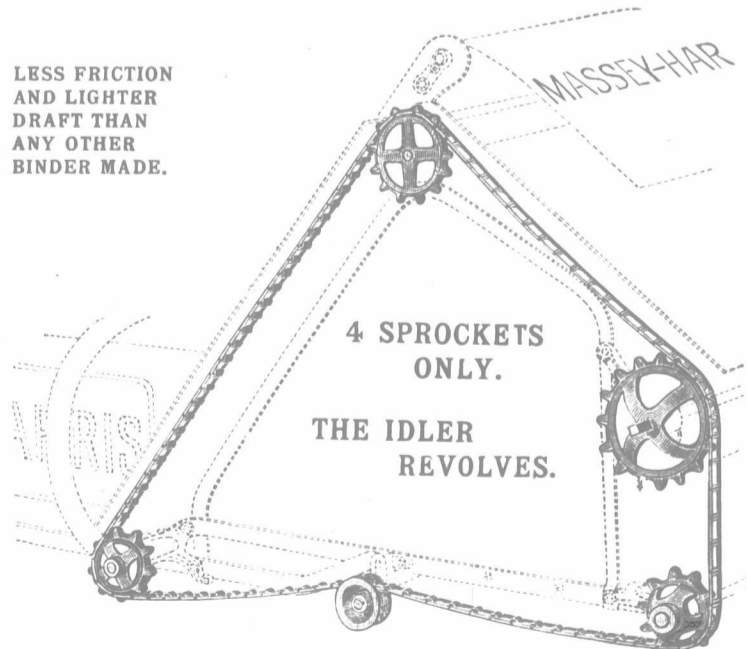
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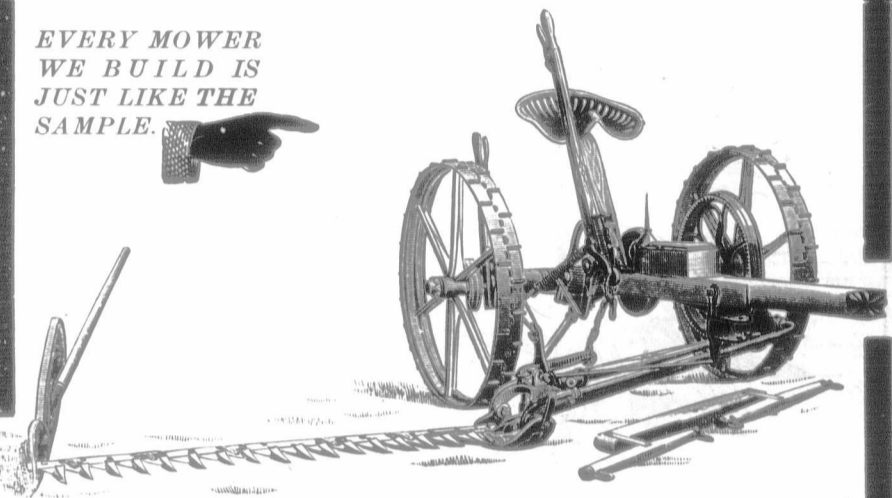
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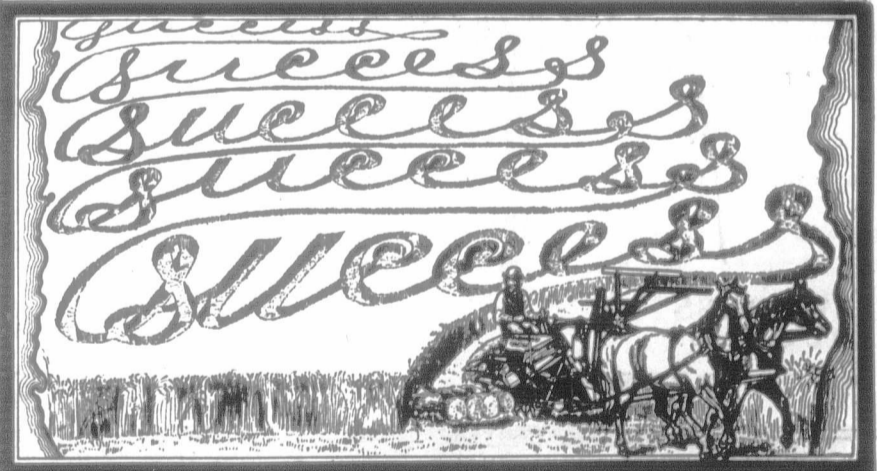
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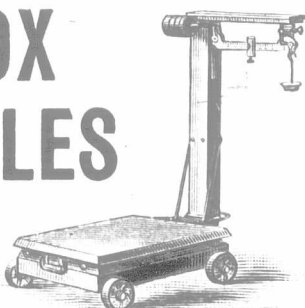
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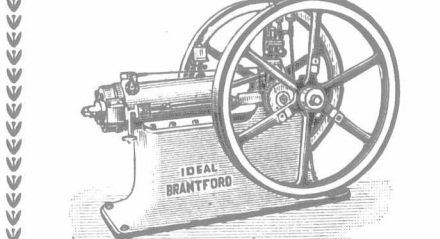
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ADVOCATE

The Farmer's Advocate

and Home Magazine.

"PERSEVERE AND SUCCEED."

ESTABLISHED 1866.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

VOL. XXXVII.

LONDON, ONT., AND WINNIPEG, MAN., MARCH 1, 1902.

No. 545

EDITORIAL.

The Great Need of Ontario Dairying.

Without desiring to take the roll of an alarmist, the "Farmer's Advocate" is bound to state that the Canadian cheese industry has reached a very critical stage in its history. The magnitude of the amount invested in this branch of dairying makes it a matter of grave concern, not only to dairymen, but to the country at large. Last year witnessed a very large shrinkage in the exports of cheese, and there were continued and increasing complaints of bad flavors and rough texture in the product. This condition of affairs results in loss to the exporter, the factoryman and the patron. It is a present injury and a menace to the future, for the reason that cheese or, for that matter, any other food product of an inferior quality going on the market discourages consumption and lessens the demand. An immediate effect of this is to depress prices, and in 1901 cheese sold for probably 1½ cents lower all round than in 1900. It is claimed by the trade that in the latter year prices were abnormally high, but making due allowance for that, the baneful effects of the conditions to which we have referred have unquestionably made themselves felt, and unless systematic and vigorous measures are promptly taken, the consequences to cheese dairying are bound to be most serious. The industry must not be allowed to drift along in its present shape. The Canadian butter trade is expanding, last year showing a large increase in the amount of exports to Britain, where the product is steadily gaining in popular favor. Why? For the simple reason that in butter dairying we are actively improving, but in cheesemaking we are resting on our oars. For buttermaking, the milk is more carefully looked after, the use of the separator puts the cream under control of the maker, butter factories and creameries are newer and more up-to-date in their construction and equipment, the product is very uniformly being turned out in fine condition, refrigeration is properly utilized, and the product is put up in very attractive packages. Are the same systematic efforts being made to advance cheese dairying? We think not, and it is too great and vital an industry to be allowed to fall into decay. The officers of the Dominion Department of Agriculture at Montreal and elsewhere are doing good work in looking after the transportation end of the business. But that is not sufficient. Some one may ask, are not the dairy schools and conventions enough as educational agencies? No. We have a parallel case in the Ontario educational system. There are Normal and Model schools for the efficient training of public-school teachers, and no board of trustees is allowed to employ teachers without proper credentials. The public would not tolerate, and the law does not allow, slipshod, go-as-you-please methods. More than that: The schools of every county are grouped into inspectorates in charge of instructors or inspectors of acknowledged skill and experience, whose duty it is to visit regularly, at intervals, every school under their supervision and report upon their condition, direct the teachers in their work, and advise trustees as to the needs of the building and equipment. If the latter are not satisfactory, the Government grant may be withheld. Some such oversight is what our cheese

factories require. The successful development of Ontario cheese dairying was built upon the co-operative system founded by Jesse Williams and the work of Prof. Arnold and other travelling instructors sent out by the Western and Eastern Dairymen's Associations. To-day that sort of helpful oversight is just as imperative as it was then, and must be revived with renewed energy. Ontario, that once led the van, is being set a wholesome example by Quebec, with her co-operative syndicates and bands of instructors. Many factories are old and improperly equipped, and the drains are in an unsanitary condition, the premises and herds of the patrons and foods used need looking after, and the factory curing rooms in many cases are "curing" rooms in name only. At the late Eastern Dairymen's convention at Whitby, Ont., Hon. Mr. Fisher, the Dominion Minister of Agriculture, suggested a possible solution of the difficulty large central curing stations for the storage of cheese; but whatever may be yet attempted in that direction, it does not cover the present exigency. We have in mind the case of several defective curing rooms that were made thoroughly efficient by an expenditure of about \$75 or \$80, by which two thicknesses of building paper and matched lining was put on inside the walls and on the ceiling, double windows put in, and an ice box located in the center of the room, by which the temperature was kept down to the proper degree, and in the hottest weather of the past summer the cheese was kept and ripened in perfect condition, greatly improving its value. A competent instructor going from factory to factory can point out to those in charge these defects and the necessary remedies. Through the same medium, patrons who are negligent in the care of their milk, and who may be feeding rape, turnips and the like, or allowing their cows to drink impure water, can be reached. Factory visitation must be made general and systematic. No appropriation that the Provincial Minister, Hon. John Dryden, can bring down during the present session of the Legislature is more urgently needed, will commend itself more generally to the farming community, or give larger and more substantial returns, than a sum sufficient to enable the Eastern and Western Dairymen's Associations to properly carry on this great work.

Best Immigration Literature.

To the Editor "Farmer's Advocate":

Sir,—In reply to yours of the 3rd, I received the book you sent me with thanks, and trust you will have received the order I sent you on the 18th. I shall be pleased to send you any more new subscribers I can get. I have no doubt the postage takes a large share off the publisher's profits. I see an extra effort is to be made by the Immigration Department of the Dominion. If Canada wishes to make known her resources in England, she could have no better advocate than the "Farmer's Advocate," in my opinion, as its contents would be read with confidence by the average farmer, where an immigration pamphlet would be thrown on one side as highly colored. An exchange of ideas with the Colonies would be to the advantage of both, I think. There is only the towns or the Colonies for the surplus population of the country districts, so it rests with the people to choose.

I remain,

Yours respectfully,
STEPHEN THORNER.

Yorkshire, England, Jan. 27th, 1902.

The Gospel of Clover.

Pre-eminent among plants in serviceableness to the farmer, wherever it can be successfully grown, is clover, and, fortunately, it is admirably adapted to the soil and climatic conditions of a very large part of the Dominion of Canada. It is, in a very broad sense, a dual-purpose plant, valuable in that it feeds the land as well as the animals of the farm. It possesses in a marked degree the power to gather from the atmosphere nitrogen, one of the most valuable of soil fertilizers, storing it in its roots and giving it out for the good of the land and succeeding crop. Its roots, running deeply into the soil, bring up more or less of mineral fertilizing elements to improve the crop-growing capabilities of the land, and, dying, leave open tubes in the soil, which help to drain it, while its decayed roots and leaves, when plowed under, add largely of humus or vegetable matter to mother earth for feeding future crops, improving the physical condition of clay land, preventing it from caking or baking; firming sandy or light land, and giving to both the power to store and retain moisture to be given out in time of need to perfect the growing crops. It is thus a trinity of blessings in relation to the land, while as a food for stock it is one of the most complete and valuable in itself or when compounded with other food products of the farm to form more nearly balanced rations. When well cured and saved, it is one of the very best of foods for all farm stock from horses down to hogs and hens. And that is not the sum of its virtues, for the nectar in the blossoms of some varieties supplies sustenance to the busy bees, from which they store far more than enough honey for their own wants and give to man rich supplies of one of the most palatable and wholesome of foods, while the bees in turn (?) fertilize the blossoms of the clover, making it produce seed in abundance, the fruit trees being also made fruitful by these same faithful workers, thus adding another wholesome adjunct to man's food supply. Is it not well worth the farmer's while to give careful study and attention to the best methods and means of successfully cultivating and conserving so valuable an ally?

It is a lamentable fact that in not a few districts in older Canada, good land, owing to continuous cropping without a proper rotation, including clover, has become so robbed of vegetable matter that it is difficult, except in very moist seasons, to secure a catch of clover in the ordinary way of sowing the seed—that is, with a grain crop—the attempt proving a failure in perhaps three out of five years, with the result that land is cropped with grain far more frequently than was intended, and with each crop is becoming poorer, or at least more and more void of humus, making the securing of a clover catch still more uncertain. As clover seed is costly and the crop a valuable one, it is of great importance that some system be discovered and adopted that will ensure a successful catch, which, if secured, would make farming a vastly more safe and profitable business than it is. The great bulk of Canadian farm lands are strong and wearing, and by the adoption of a system of mixed husbandry, including the feeding of stock and the frequent use of clover in a rotation, may be kept fairly fertile in perpetuity. We have seen abandoned farms restored to first-class fertility by this process, and we know it is a perfectly safe doctrine to preach. The most indifferent farmer knows he gets his best crops after turning down a clover

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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

TWO DISTINCT PUBLICATIONS—EASTERN AND WESTERN.

EASTERN OFFICE:
CARLING STREET, LONDON, ONT.

WESTERN OFFICE:
MCINTYRE BLOCK, MAIN STREET, WINNIPEG.

LONDON (ENGLAND) OFFICE:
W. W. CHAPMAN, Agent, Fitzalan House, Strand,
London, W. C., England.

JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published on the first and fifteenth of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
2. TERMS OF SUBSCRIPTION—\$1.00 per year in advance; \$1.25 if in arrears; sample copy free. European subscriptions, 6s. 2d., or \$1.50. New subscriptions can commence with any month.
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sod. He may not know that such is scientific farming, but it is all the same, and the more of it we have the better. It is the knowledge of the difficulty in many districts in securing a uniform catch of seeds that has inspired this article and the invitation to our readers to give their views on the subject for publication, in order that others may share in the wisdom that comes from counsel with practical men who have had successful experience.

The advocacy of sowing clover seed alone, without a nurse crop, would doubtless be considered by most farmers heterodox, or at least in advance of the times, but it seems to us that whoever first gave the name "nurse crop" to the grain crop with which clover is usually sown, must have used the term in irony, as instead of nursing the tiny clover plant it surely robs it of food and drink, shading it unduly, and leaving it often a weak, sickly thing, to droop and die when exposed to the sun after the grain is harvested, if the season happens to be dry and hot. We have not a doubt that clover would grow stronger and be a more certain crop if sown alone. It would probably be necessary to run the mower over it once or twice the first season to keep down weeds, and it could be used to a limited extent for pasture the first year. The experiment could readily be made on a small scale with little risk, and it is strange that it has not been tried in more instances, as the value of the crop would seem to warrant it. If this is not found to be profitable or practicable, the next best thing would appear to be to sow the grain as thinly as the circumstances will justify without injuriously affecting the crop. This would give the clover more sunlight and air and probably more moisture, ensuring stronger plants, which would more successfully pass the ordeal of drought after the grain harvest. We have an idea that, as a rule, more seed is sown per acre for grain crops than is necessary for the best results if a proper preparation of the soil and distribution of the seed is observed. A light top-dressing of barnyard manure on the land intended to be seeded to clover with spring grain will go far towards re-

taining moisture and feeding the young clover, and is a safe system to follow. We shall be glad to have our readers discuss this question thoroughly, and to receive any useful hints that may be given to help those who have experienced difficulty in this connection.

Beet Sugar Interests.

This season will probably witness several large beet-sugar enterprises inaugurated in the Province of Ontario. For the benefit of farmers who will begin beet-growing we have published a very complete series of articles on the practical aspects of the subject. Other phases of the question are bound to attract attention at an early date. Just now we notice a great conflict in progress in the United States over the proposed tariff for the relief of the Cuban cane-sugar industry, the output of which seeks freer access to the U. S. market by means of lower duties, which the beet-sugar interests are resisting. The average American wants Cuba, but a good many don't like the competition of Cuban sugar. Before the Congressional Committee, Mr. Henry T. Oxnard, President of the American Beet Sugar Association, made a statement to the effect that \$30,000,000 is now invested in the U. S. beet-sugar industry; that it has forty factories scattered over eleven States, and that it is now producing 150,000 tons of refined sugar per annum, and paying out yearly \$7,000,000 to American farmers for beets. If allowed to develop for ten years under existing conditions, he said, the industry would probably be able to furnish all the 1,500,000 tons of sugar now lacking to supply consumption, and which is imported from foreign countries. The present average cost of producing beet sugar he put at four cents per pound, though in a circular letter which he issued in 1899 he declared that beet sugar could be made at a profit for three cents per pound, which he explained by saying that it was based on assumptions that were not realized. Now he contended beet sugar could not hold its own against free Cuban sugar.

Turning to Europe, we find some interesting facts with regard to the production of beet-root sugar brought out at the Brussels conference on bounties. Nearly every country on the Continent now produces more than the home demand. Calculations accepted as accurate estimate the total beet-root sugar production of 1901 in European countries at 6,470,000 tons, while the consumption in these countries is only 3,600,000 tons. The excess is 2,870,000 tons, of which Great Britain receives nearly 1,700,000 tons. A portion of the remainder went to the United States, and what was left entered storehouses, where, controlled by the cartels or syndicates, it has an important influence in regulating the European market. The members of the Brussels conference find that the entire situation is in the hands of Great Britain, and, although it is not expected such a course will be adopted, great apprehension is felt in France lest she should adopt a policy of countervailing (or counteracting) duties. From such a policy the greatest sufferer would be France, where syndicates do not exist. She cannot raise the home-selling prices of sugar and at the same time reserve for the sugar refiner a part of the profit in such a way as to allow exportation at a price lower than the cost of production.

A Word to Educators.

Teach the children, if you must, of the sowing of the dragon's teeth, but also teach them of the sowing of clover and peas, which can double the yield of corn in Illinois and greatly increase the yield of cotton in Georgia. Tell them the story of the wooden horse, if you wish, but be sure to give them more horse sense than the Trojans had. Teach them all you know of the milky way, but do not neglect to teach them the way to milk. That is, lead them as far and soar with them as high as you may, but be sure, all the time, to let their feet rest on the earth, for it is from the earth that all are sprung, and upon it yet there are untold pleasures, undiscovered beauties and marvellous strength for the soul of mankind.—Ex.

The articles on horse-show judging, clover, alfalfa, the cheese industry and hogpen construction in this issue are of supreme importance to the farmers of this country, and are worthy of careful and thoughtful perusal.

Death of Mr. James I. Davidson.

The death of Mr. James Ironside Davidson, which occurred on Feb. 15th, 1902, at his beautiful home at Balsam, in Pickering Township, Ontario, has removed from the scenes of this life a good man, and from the roll of Canadian pure-bred stock breeders one of its most prominent, successful and interesting figures, a man of sterling character and unsullied honor, of splendid physique, kindly disposition and genial manner, and one who numbered on his list of friends a host of lovers of good stock in Canada and the United States, and also in the Old Land, from which he came. Born in Aberdeenshire, Scotland, in 1818, he emigrated to Canada in 1842 and settled on the farm on which he died.

His specialties in stock-breeding were Clydesdale horses and Shorthorn cattle, of which he was a sound and safe judge, an eminently successful importer and breeder, and a liberal and judicious feeder. Mr. Davidson began breeding Shorthorns about 1860, but it was in 1871, when the Shorthorn world was going wild on line-bred cattle and paying fabulous prices for paper pedigrees, that, rightly reading the signs of the times, he made his first importation of composite-blooded cattle from the herd of Mr. Amos Cruickshank, of Sittyton, which subsequently won a world-wide fame on its merits, and has played a prominent part in modifying the type of the breed the world over, bringing it more into conformity with the requirements of modern markets. This consignment comprised five heifers, and transferred to America some of the most valuable blood of the Cruickshank herd, from which have descended a large number of the best cattle in the breeding herds of Canada and the United States, and predominates largely in the most successful show cattle of the present day.

Enjoying the personal friendship and confidence of Mr. Cruickshank, Mr. Davidson became for some years the principal importer and distributor of his cattle on this side of the Atlantic, and from 1881 to 1887 had practically a monopoly of the handling of such stock as could be spared from the Sittyton herd for the American trade, his operations being on an extensive scale, totaling nearly 200 head, and bringing to him considerable wealth, although he was never extortionate in the naming of prices, but always aimed to give good value to purchasers, and rejoiced to learn of the success of the stock after passing from his hands.

While Mr. Davidson was a loyal disciple of the sage of Sittyton, he entertained no undue prejudices regarding pedigree formulas in breeding, and made no protest against the use of a sire of other strains, provided he had individual excellence and came from a line of good ancestry. This liberality was well exemplified and amply rewarded in his selection in 1873, in company with Mr. John Miller, of Pickering, of the bull, Crown Prince of Athelstane 2nd 456, born in 1872, bred by Hon. David Christie, sired by the imported Booth bull, Knight of St. George, and out of Crown Princess of Athelstane, of Mr. Christie's notable importation of 1864 from the herd of Mr. Douglas, of Athelstaneford. This bull, bred to some of Mr. Davidson's best Cruickshank cows, proved one of the happiest hits in American Shorthorn breeding at that period, his offspring being noted for their constitution, thrift and feeding quality, and contributing some of the most successful breeding and show cattle of their day. Mr. Davidson, who later became sole owner of this bull, knowing his value as a sire, always refused to price him, and retained him in service until his death, which occurred at seven years of age.

Mr. Davidson was a modest man, of retiring disposition, and had no ambition for office or public life, but there came a time when his political friends were agreed that he was the only man in the constituency who could carry it in their interest, and reluctantly accepting a nomination, he was in 1891 elected with a comfortable majority to represent the riding in the Canadian House of Commons, which he did with credit, bringing his sound judgment to bear upon public problems with good effect.

Mr. Davidson was a useful and consistent member of the Presbyterian Church. He married, in 1841, Barbara Hendrie, of Aberdeenshire, who died two years ago, and to them were born four sons and one daughter, all of whom survive, namely: John, of Ashburn, Ont.; James I. and Mrs. Wm. M. Miller, who lived with their father, and Andrew and George, of Monticello, Iowa. Mr. Davidson was blessed with a strong and vigorous constitution, and with the exception of failing eyesight, enjoyed good health up to within a week of his death, when he had an attack of pneumonia, which could not be controlled, and he passed away peacefully, in the 84th year of his age, honored and esteemed by all who had the pleasure of knowing him.

HORSES.

Horse Shows.

Spring horse shows are of two or three classes: those in which classes for stallions alone are made; those which include classes for breeding animals, both male and female; and those which include not only the breeding classes, but all classes—harness horses, saddle horses, hunters, and horses shown on the halter. The first class of show is much the more common, mostly every leading horse section holding one. In most cases the prizes are not large. There are prizes given for stallions of all recognized breeds and classes, and while the money offered is not sufficient to induce owners of stallions to go to the trouble and expense of exhibiting, the opportunity of exhibiting their animals before the horse-breeding public is usually considered sufficient inducement. Farmers and others who contemplate breeding one or more mares attend these shows for the purpose of seeing the stallions of the particular class or classes which they are breeding. Seeing several animals of the same class together gives one a better opportunity of judging their respective or comparative merits than seeing each horse singly, and he will usually decide upon the horse he will patronize. This decision is usually influenced to a greater or less extent by the awards, and this is especially the case if he be not a good judge of horses himself, he naturally taking it for granted that the best animals will win the best places. It is a matter of great importance for a man to win at the spring shows with his stallion. The honor of winning the prize is of much greater importance than the prize money, as it gives his horse a reputation and gains him patronage in the stud. Hence, while it is important in all cases that correct judgment be given in the ring, it is of greater importance in the case of stallions than in others. The man who exhibits a stallion in any class and is beaten by an inferior animal, either through incompetency or favoritism on the part of the judge or judges, suffers a greater injustice than is generally supposed; hence the necessity of extreme care being exercised in the selection of judges. In many cases a man is asked to judge, not because he is supposed to have any special knowledge of the characteristics of the class or classes upon the merits of which he is to pass judgment, but because he is considered a horseman, and at all events is a good fellow and a particular friend of some of the directors or probable exhibitors. He promises to act. Possibly he is aware of his inability to do justice to exhibitors, but he does not like to refuse the invitation of his friend, and concludes that at all events there will be some one associated with him whose judgment will be more valuable, and between them they will pull through some way. The day of the show arrives. Something unexpectedly occurs which makes it inconvenient for him to attend; he has not time to supply a competent substitute nor yet to send word to the directors of his inability to be present. Under circumstances somewhat like this it is often noticed that one or more of the judges who had promised to act are not on hand. Something must be done, and done quickly. Time is up, the crowd is present, stallion owners or grooms have their exhibits ready and are waiting to be called. The directors consult, and decide that they are forced to get some one or two of the crowd to act, so they buttonhole the first man they meet who has any knowledge of horses, and endeavor to persuade him to judge. It may be he is incompetent and knows it, and will not be persuaded into accepting, as he realizes the importance of the functions which he is asked to perform. Nothing daunted, they tackle the next man, and eventually succeed in filling the vacancies created by the absence of those originally selected. In many cases those acting will have a friend or neighbor with an exhibit in some of the sections, while the other exhibitors are strangers, and it is noticed that the friend often receives a better place than the merits of his exhibit warrant. This may be done either through ignorance or incompetency, but it is a great injustice to the exhibitor with the better animal. It is certainly laudable for a man to do his neighbor a kindness when it is not done at the expense of another, but when he is doing an injustice to another to favor his friend, it is dishonest. I favor the single-judge system, but this is open to argument. Whether one, two or three judges be selected, care should be taken that each is competent. It is not sufficient to have one good man and one or two indifferent ones. I claim that one good judge will arrive at satisfactory decisions more quickly than two or more, and he will be more particular, as if he make a mistake he alone is responsible, and cannot lay the blame on anyone else; while if there be two or three judges their opinions may differ. If there be three, two may agree, and the third, even though he may be right, will have to give in to the two. On the other hand, no two may agree, or if there be only two, each will have his own opinion, and they must either agree or call in others; as a rule, one will give way in

order to save trouble. Then, at the next disagreement, the one who gave way at first will hold fast to his opinion, and claim that as he gave in last time, it is only fair that his associates give way to him this time, and usually this is done. Hence the facts are that the awards are not altogether to the satisfaction of any one of the judges, and each has the opportunity of laying the blame of any mistake on his associates. No man is justified in accepting an invitation to act as judge unless he thoroughly understands, as far as it is possible to understand, the desirable qualities of the classes he undertakes to judge. He should be so sure of his knowledge that having once made up his mind how the awards should be placed he will not consent to any other allotment. He, of course, must be thoroughly honest and know neither friend nor foe in the ring. In order to do justice to himself, the exhibitors and the society that employs him, he must judge the exhibits solely on their merits, not in the slightest degree taking into consideration who the exhibitors are. In fact, he should not know who owns the animals. In some cases it is not possible to prevent this knowledge, still care should not be taken to impart it. In shows where there are catalogues, you will usually see the judge or judges furnished with them, and all they have to do is to turn up and see who owns a certain number. Now, I think this is not right. If a case should occur in which the judge has difficulty in deciding between two exhibits, even though he is trying to be perfectly honest, if he be a friend of one exhibitor human nature will assert itself and incline him to favor his friend, while the animals alone should be considered.

I would like, also, to say something about judging other classes than stallions, and espe-



THE LATE MR. JAMES I. DAVIDSON.

cially the saddle and hunting classes. I claim that no man can be a good judge of saddle horses unless he can ride, and especially can no man give satisfaction in judging hunters unless he be a cross-country rider. The value of a saddle horse and his right to win depends so much upon his mouth, manners and paces, that it requires a man who can ride to place proper value upon these points. And the same remarks apply to the hunter, in addition to his manner of performing over obstacles. No man who is not a cross-country rider can thoroughly appreciate the difference between the comfort experienced when mounted on a horse with good mouth, good paces, and a nice way of taking his jumps in his stride without altering his pace, and one that is a puller or the extreme opposite, has unpleasant paces, and bucks over the jumps. Many judges of the hunting classes seem to consider that if a horse takes his jumps without knocking them down or tipping them, that it is all that is required, apparently not knowing, or forgetting, that a good hunter must be able to gallop fast and stay, and take the leaps with comfort to his rider and ease to himself. Another point that is often apparently overlooked by the judges in these classes is that hunters are of three classes, viz., light, medium and heavy weights, and that no horse can belong to any two of these classes. How often do we see a horse win in the lightweight class one day, and with the same judges win in the heavyweight class the next. This is certainly wrong; we do not blame the exhibitor so much as the judges. The conditions for this section read something like this: "Heavyweight hunters, up to 200 pounds to hounds, carrying not less than 180 pounds over six hurdles, etc." I have frequently heard judges justify their actions in giving the same horse prizes in both

classes by saying that he carried the specified weight of 180 pounds, and hence could not be disqualified. Now, this is rather funny philosophy. The conditions state that he be up to 200 pounds to hounds, and the fact that a horse can, with apparent ease, carry 180 pounds over a few hurdles on the tanbark or grass does not show his ability to carry 200 pounds across country after hounds for ten or fifteen miles or more. I consider it the duty of the judge or judges in the hunting classes to line the entries up as soon as they appear in the ring and look carefully over them. If any be out of their class they should be disqualified and sent out of the ring—not allowed to compete at all. No hunter should be on any account allowed to compete unless he be well up to the weight demanded; hence, where there are only two classes given, viz., heavy and light weights, medium weights must compete in the lightweight class. Shows are supposed to be educational to those who are seeking knowledge in the line of live stock, as well as entertaining to the general public and profitable to the exhibitor. Supposing a prospective breeder, intending to produce heavyweight hunters, should attend one of these shows with the idea of seeing the ideal animal of this class. He watches with keen interest the lightweight hunter class perform, and sees a grand little fellow of say 1,050 pounds, with all the attributes of a hunter, win first place. This is amusing and instructive, as it gives him pleasure to see the noble animals perform, and teaches him what an ideal lightweight hunter should be, as regards type, style, size, action and performance, but it is the heavyweight in which he is particularly interested. He waits until the "heavyweight" class is called, and is surprised to see some of the same animals that competed in the lightweight class a few hours or the day before, but his surprise is intensified to see the champion of yesterday win to-day in this class before the same judges. This man, who is looking for information, is supposed to know little about horses, and nothing about the tricks of exhibitors, but naturally supposes that the men who are asked to judge at a high-class show understand their business, else they would not have accepted, and that when these gentlemen give a prize to an animal in a certain class, that that animal is at least a fair representative of the class, and when he notices the same animal win in two classes where such difference in size is demanded, he must arrive at the conclusion that he has come to the wrong place for information. Many instances of somewhat the same nature could be cited in other classes. Such things should not be. In all classes where the exhibits are not at least fairly typical, they should be disqualified, and the judge should be able to give his reasons for the disqualification. If judges were required to publicly give reasons for their awards, state why the first-prize animal should be placed ahead of the second, the second ahead of the third, etc., it would make it much more interesting and instructive for both exhibitors and spectators, and would have the effect of preventing a person from accepting the position of judge unless he felt quite competent. As it is, if a judge makes a mistake, either through ignorance or favoritism, he is subjected to uncomplimentary remarks by those who know better, but he hears few, if any, of those remarks. But if he had to give reasons for his awards, he would often hold himself up to ridicule in endeavoring to justify them, and would either quit the business or qualify himself to do better work, and be more careful. Of course, no man can expect to satisfy all exhibitors or have his reasons accepted in all cases by some exhibitors who have failed to take first place. Still, if he be "the right man in the right place," he will be able to satisfy himself and the majority of those who understand the desirable characteristics of the class under discussion. Opinions will differ, but if a man can give his reasons for his decision, he will be respected by others who are capable of judging, even though their opinions may not agree with his. Therefore, I claim that in the selection of judges, either for the stallion classes or other classes of stock, or, in fact, for any animal or article that is up for competition, greater care should be taken than is generally exercised, and I also claim that no man is justified in accepting a position as judge unless he is well qualified, and can convince the public of such qualification by publicly giving reasons as above stated.

"WHIP."

The Remount Scandal.

In the British House of Commons, it has been charged that the Government paid £33 per head for horses bought in the open market in Hungary for £10 and £12, the difference going into the pockets of certain smart individuals who obtained contracts from the War Office, and sold them again and again, at large profits. About the only defence set up was that of incompetence on the part of departmental officials, but the British Weekly, voicing a very general sentiment throughout that country, says: "The public demands that the incompetents be discovered and punished, and the fools fired out."

Our Scottish Letter.

THE GLASGOW STALLION SHOW.

The season of horse shows has opened, and the Scottish Stallion Show of 1902, the first of the year, has just taken place. It has been a very good show in the main, and especially amongst the older horses the quality was high. The show for the third time was held in the Scotstown Show Grounds, about four miles west of the center of Glasgow. The Clydesdale stallion trade has undergone great changes during the past twelve years. At the beginning of that period, or perhaps earlier, very few horses were hired for service in districts until this stallion show, which then, indeed, was more a hiring fair than a show. In the year 1879 as many as 120 three-year-old stallions were shown in the Glasgow market on this day, and an almost equal number of aged horses. This year there were not more than 80 horses of two, three and four years old on the ground. Prior to the show, no fewer than 78 horses had been hired for service during the season, and of these 36 were owned by Messrs. A. & W. Montgomery, Netherhall & Banks, Kirkcudbright, and 21 were sons of their noted stud horse, Baron's Pride 9122. The other horse-owners in Scotland who had horses hired before the show were: Mr. James Kilpatrick, Craigie Mains, Kilmarnock; Mr. Matthew Marshall, Straman; Mr. Wm. Dunlop, Dunure Mains, Ayr; Mr. Andrew Dewar, Arnprior, Kippen; Mr. Peter Crawford, Dargavel, Dumfries; Mr. Wm. Clark, Netherlee, Cathcart; Mr. John Findlay, Springhill, Baillieston; Mr. John Crawford, Maurahead, Beith; Messrs. Mieklem, Begg, Kirkcaldy; Mr. D. L. Picken, Milton, Kirkcudbright; Mr. Herbert Webster, Morton House, Fence Houses; Mr. A. B. Matthews, Newton-Stewart; Mr. James Argo, Crannabog, Rothie-Norman; Mr. Ceur, Merrylee, Cathcart; Mr. William Park, Brunstane, Portobello; Mr. Ewen, Indrewer, Banff; Mr. William Taylor, Park Mains, Renfrew; Mr. W. S. Park, Hatton, Bishopton; Mr. W. R. Trotter, So. Acomb, Stocksfield-on-Tyne; Mr. St. Clair Cunningham, Hedderwickhill, Dunbar; the Seaham Harbour Stud Co. (Ltd.); Mr. Alexander Scott, Greenock; Mr. David Riddell, Blackhall, Paisley; Mr. Malcolm Currie, Stubble Broomhill, Kirkintilloch; and Mr. Alex. Simpson, Whitecross, East Kilbride.

The impression on anyone who viewed the show must have been entirely favorable to the modern Clydesdale as an animal of weight and substance with plenty of action. The thirty aged horses—that is, four years old and upwards—were great, handsome animals, well colored, and, in general, well fitted to produce heavy draft horses. Most of them had exceptionally good action and stood well on their limbs. The champion of the show for the fourth time in succession was the great horse, Hiawatha 10067. He is now ten years old, and is owned by Mr. John Pollock, Papermill, Langside. His breeder was Mr. Hunter, Garthland Mains, Stranraer, and his sire, Prince Robert 7135, was second at the Royal, Windsor, in 1889, as a two-year-old, and in 1892 was first in the aged class at the Glasgow Stallion Show. He has bred good stock, and still survives as one of the best horses of his years. The chief trophy of the Clydesdale world is the 50-gs. Cawdor Challenge Cup, presented by the Clydesdale Horse Society. It was won by Hiawatha in 1898, 1899, 1901, and now, for a fourth time, in 1902. An owner only needs to win it three times before it becomes his property. Hiawatha, when first he won it, in 1898, was owned by Mr. Matthew Marshall, Stranraer, but in 1899, 1901 and 1902 he was owned by Mr. Pollock. He is a horse which has come slowly to maturity. He was narrow and "shelly" to begin with, but he has gone on thickening every year, and certainly never was such a horse as he is now in his tenth year. Two of his sons, Marcellus (11110) and Labori (10791), competed with him for the cup. They did not meet in the class competition, as Labori was only entered for the cup, and their respective merits were not compared by the judges. Marcellus is owned by Mr. Matthew Wanhall, and was last year generally regarded as the better horse of the two. This year few would be prepared to take up such a position. Labori is owned by Mr. A. B. Matthews, and is a marvelously improved horse. He moves well and stands on capital legs and feet. He was brought out in the best of bloom and would have made a strong second to his sire. Marcellus stood second in the class competition to his sire. He was hired in July last, on very high terms, to travel in Strathmore; in fact, he is the highest-priced horse of the season. Labori has been hired by the Gervain & Ballantrae Society in Ayrshire, and doubtless the members there congratulate themselves on their bargain. The third-prize horse in the open class was Mr. Wm. Taylor's Sir Simon 10465, bred by Mr. Cross, of Knockdon, and a very notable show horse. He is a dark brown son of the famous Sir Everard 5353, and

was bred at Knockdon, by Mr. Cross. He is nearly six years old, and in competition with all the other aged horses in the show, except Hiawatha, Labori, and Marcellus, he was awarded the £80 premium to travel the breeding district around Glasgow. Mr. Walter S. Park's Lothian's Bert 10374, a very thick horse of great weight, followed in fourth place. The fifth was Mr. Peter Crawford's Carabineer 10522, an upstanding, lofty son of Baron's Pride; the sixth, Mr. A. B. Matthew's very big powerful horse, Enigma 10739, whose sire was the American-bred stallion, Prince Cedric 10253; and the seventh, Mr. Peter Crawford's Hillhead Chief 10774, a strong, useful, clean-boned horse.

The three-year-old horses were about equal in numbers to the older ones, but they were not at all equal to them in merit. The winner in the open class, which also competed for the Cawdor Cup, was Mr. William Park's Marmion 11429, a horse with extraordinary action and up to plenty of substance. The hair on his legs is rather curly, and although he has a good hind leg, the horse which stood next to him has a better. This is Mr. Matthew Manhall's Manorama, to which the Glasgow junior premium of £80 had been awarded earlier in the day. Manorama is a bay horse, with a faultless hind leg. He was bred by Mr. Thomas Crawford, Dowhill, Girvan, and is strongly inbred to Prince of Wales and Darnley. His sire was the Cawdor Cup champion horse, Prince Alexander 8899, and his dam was by another Cawdor Cup champion, Prince of Kyle 7155. Both these horses were got by Prince of Wales 673, out of mares by Darnley 222, so that the quality of Manorama may be easily understood. If he had as good a fore foot as he has a hind leg, he would be an out-and-out champion. After Manorama came Baronson 10981, a horse of choice quality, with excellent feet and legs, but very moderate hind action. He is also owned by Mr. Marshall. The fourth horse was Mr. Cunningham's Alexander Everard 11242, the biggest horse in the class and the Dalkeith premium horse of this year. Mr. Jas. A. Wallace had fifth, with a promising colt named Nick o' Time 11411, and Mr. Taylor was sixth with Sir Edward (11193), a colt which ran Manorama close for the Glasgow premium. The last horse ticketed was Carnegie 11296, owned by Mr. Currie.

In the two-year-old class there were some promising young horses, but the leader was easily found in Mr. W. S. Park's thick colt, Ardlethen 11246, a son of Gold Mine 9540, and bred in Aberdeenshire by Mr. Robert Copland.

A shipment of nine useful, well-bred horses was this week made by Messrs. Dalgety Bros., London, Ont., to Canada. Amongst them are sons of William the Conqueror 9093, the champion Prince of Carruchan 8157, the good breeding horse, Prince of Galloway 8919, all sons of Prince of Wales 673; the champion Hiawatha 10067; the good big horse, Prince Cedric, sire of Enigma; the big, flat-boned stallion, Ethiopia 5750, for many years stud horse at Keir; and Gallant Potteath and The Gallant, both sons of Top Gallant 1850, a great horse twenty years ago, and the former first at the H. & A. S. Show at Inverness in 1892. These horses should prove profitable in Canada as breeding animals.

SCOTLAND YET.

Judging Ring for Horses.

We are pleased to note that at the annual meeting of the Western Fair (London, Ont.) the subject of providing a separate ring for the judging of heavy and other classes of horses not included in the speeding events was introduced and very favorably considered. Heretofore, all those important classes have been judged in the space within the race track, and from which the public are excluded, so that one of the most valuable educational features of this exhibition is practically lost entirely. Without a field glass the placing of the awards in these classes could not be witnessed from the grand stand, and even then imperfectly. Large numbers of our young horsemen are intensely interested in the judging, and it is one of the very best ways in which knowledge of horsemanship can be picked up. As "Whip" suggests in another column, every facility should be afforded for seeing the awards made and requiring judges, if need be, to state publicly to the onlookers the reasons for their decisions. The Western Fair Board have ample space for such a ring, and we hope to see it provided for the approaching show. Other fairs should do likewise, making provision so that the horse stock can be viewed with comfort. Proper announcement should be made in advance when the different classes are to be judged, and we desire to see the catalogue idea more generally adopted. Our horse industry is reviving, and the plan suggested above is one of the best means of promoting an intelligent interest in the subject.

Mr. J. Q. Dixon, of Missouri, U. S. A., writes: "The copies of the 'Farmer's Advocate' received are the finest journals of the kind I have ever seen, and I have seen many in every corner from Suez to San Francisco."

An Item of Interest to Stallioners and Horse Breeders.

WHY DO MARES BREAK SERVICE?

The pure-bred brood female is usually looked upon as a good investment by most stockmen. There are, however, many instances to be found of big sums of money being invested, with practically no return. Especially has this been the case with some mares, the writer having known instances of registered mares for which their owners paid from \$400 to \$600 each, and from which, owing to bad management or misfortune during the period of pregnancy, never a live foal was obtained. While many causes may be advanced for such results, the question asked above, "Why do mares break service?" will draw the attention of horsemen to an occurrence which to many has been a serious annoyance, and which has been considered by many a horse breeder as something entirely beyond his control.

Most breeders will understand what is meant by breaking service, but for those who do not, we explain: Mares are often known to settle after service as if safe with foal, only to come in season again during the third month.

This fact has caused the lengthening of the season by the stallioner from eight weeks to ten, or even twelve weeks, which, of course, means added expense to the stallion owner and an additional draft on the procreative powers of the stallion, usually, too, at the hottest time of the year.

Prof. Cossar Ewart, whose investigations into the problem of telegony (influence of a previous impregnation on subsequent pregnancies) have interested the scientific and stock-breeding world, made, some time ago, investigations looking to the cause of the trouble under discussion. From examinations made of horse embryos in various stages of development, and the tracing of the processes of evolution in the history of the horse, some valuable deductions were drawn, one of which was that at a certain period, a critical one, the young equine may be thrust into the world, only to perish; that period past, natural development can go along and the foal be born in due course. From the beginning to the end of pregnancy in the mare, the connections between the embryo and the womb are easily broken down; hence, if the mare's womb is in an unhealthy condition or contractions of that organ are set up, the horse embryo is easily loosened from its uterine attachments, and is lost.

From examinations made of embryos of various ages, it has been found that about the 7th week is the period at which the connection between the mare and embryo is the weakest, because just at that time a change is taking place, namely, the embryo is ceasing to be sustained from the yolk-sac of the ovum, and is beginning to get its sustenance from the blood vessels developing in the fetal and maternal membranes.

At the end of the 6th week, as at the end of the 3rd week, the reproductive system is in a more or less excitable condition. The physiological changes occurring during oestrus (the period of heat) are likely to appear in a more or less pronounced form at the end of both the 3rd and 6th weeks; in other words, the habit which the nervous and other systems have of becoming periodically excited is not apparently quite thrown off for some weeks after a fruitful service. In mares, the eggs (ova) which have started to develop in the ovary may be matured and discharged some weeks after the mares, if bred, have settled to the service. Such cases have been known to stockmen. There is a case on record of a mare bearing twins, a foal and a mule, the service of the jackass having been given 15 days after the service by the horse. The escape of the eggs is accompanied by an extra supply of blood to the ovaries and the womb (uterus), accompanying which phenomena will be increased nervous excitement of these organs, increased secretion of the glands, and contractions, more or less powerful, of the muscular fibers of the embryo-carrying and nourishing organ, the womb or uterus. This periodic disturbance is likely to be greater in mares not previously bred. On the other hand, owing to the development of the blood vessels in mares who have born foals or recently foaled, the congestion is not as marked in the uterine or ovarian blood vessels, consequently there is less likelihood of the disturbance of the sexual organs being so great. From what has been already mentioned, there are two causes for the breaking of service: First, the periodic disturbance occurring at the 3rd and 6th weeks; and, second, at the end of 7th week, owing to the weak connection existing at that time between the embryo and the dam.

THE CASE FOR THE STALLIONER.

From the recital of the above studies, the following deductions may be made:

1. Mares which have been indoors during the winter, and which are to run at grass during the

summer, should be acclimated to the change before being served. This is well understood by horsemen who generally follow the above suggestion, which provides for the mares getting accustomed to the changes in food, temperature and surroundings. It is well known by all practical horsemen that digestive troubles are quite serious in their effects on the pregnant female.

2. When any signs of being in season are detected in the mare, she should be removed from mares believed to be already in foal.

3. Mares, more especially excitable ones, should be served in the evening and kept shut up apart from other mares or geldings over night, and should, until all signs of heat have disappeared, be kept from any chance of teasing by other horses. In the case of a valuable mare, it would pay the breeder to retain a competent veterinarian to tide over the excitant periods, when a calmative, both constitutional (such as chloral or opium) and uterine (as black haw), might with benefit be prescribed.

4. Each mare, when bred, should be carefully watched from week to week, and every ninth or tenth day be tried until the critical period (end of the 7th week) be passed.

5. Mares in poor condition should not be bred, but be gotten into condition by the addition of grain to the daily ration.

6. For at least two months after service, the mares should be neither excited, overheated, over-exerted, or chilled, neither overfed or stinted from their usual allowance, and any drugging, except under professional advice, should be at all times sternly deprecated.

If stallioners can only impress upon the owners of mares the importance of an observance of these precautions, they will undoubtedly reap their reward. Science shows plainly that the main responsibility for the production of a healthy living foal rests with the mare and her owner, and not, as is so often asserted by careless mare owners, altogether with the stallion, which wrong assertion has been partially assented to by many stallioners who guarantee a colt to stand and suck before requiring the stud fee, a concession to the mare owner which is unbusinesslike and vicious in its effects on the whole science of horse-breeding.

Docking Horses Condemned.

The fashion, or fad, of docking horses' tails has survived the protest of the growing spirit of kindness and humanity, and the adverse legislation that expresses the best thought of the age. But it has probably received its quietus in the mandate that has gone forth almost simultaneously from King Edward VII. and President Roosevelt. King Edward, whose influence in matters of custom and usage is paramount in Britain, has made it known that he will neither purchase nor own nor even use a horse that has been mutilated by docking, while President Roosevelt has set the fashion in the United States by issuing specific instructions to the effect that horses purchased for his use at Washington must not be docked.

Postal Reform.

At a recent meeting of the Orillia (Ont.) Board of Trade, a resolution was adopted in favor of reducing the postage on newspapers and parcels between Canada and the Old Country, and also a preferential British tariff on food products and merchandise from the Colonies.

Last week, at the annual meeting of the British Empire League in Ottawa, on motion of Hon. Geo. E. Foster, seconded by Hon. Senator Ferguson, a resolution was passed whereby newspapers and periodicals could pass from one part of the Empire to the other at the lowest possible rates, in order that the people in all parts could the better keep in touch with each other. This is in line with the contention of the "Farmer's Advocate" in an article in our issue for Feb. 1st.

We have just received the following letter on the subject from Lord Strathcona, Canadian High Commissioner, London, Eng.:

To the Editor "Farmer's Advocate":

Dear Sirs,—I beg to acknowledge your letter of the 30th ult. and the copies of the "Farmer's Advocate" for February 1st, to which you refer. It will give me much pleasure to comply with your request, and I hope that in the near future it may be found to be possible to do something to remove the anomaly that at present exists in regard to the interchange of newspapers and book matter between the United Kingdom and Canada, as compared with the arrangements between Canada and the United States. The matter is an exceedingly important one, and I am sure it will receive the consideration it deserves at the hands of the Governments of the two countries. Believe me, Yours very truly,

STRATHCONA,
17 Victoria street, London, S. W., 14th February, 1902.

The King's Sale of Shire Horses at Sandringham.

(Special correspondence.)

One of the most notable sales of this season in the Shire horse breed is the one named above. It is four years since, in 1898, His Majesty the King, then, of course, H. R. H. the Prince of Wales, held his previous sale of Shire horses. At that sale his 54 head made the then record average of £224 7s. 9d., and although this high average was not equalled upon the present occasion, the realized £192 12s. 2d. was of sufficient magnitude to disclose the high merit and quality of the animals sold, which numbered 45 head, 20 being under two years of age.

It is needless to enter into details as to who were present, for practically all the principal breeders or their agents were there, as well as many hundreds of other interested spectators. To the disappointment of all, His Majesty the King could not be present, but it was a great satisfaction and pleasure to the large company present that Her Majesty the Queen, accompanied by some other members of the Royal Family, witnessed the grand parade of the animals included in the sale previous to its commencement.

It would be tedious to go into many details or to give all the various prices, as these could hardly interest your readers sufficiently to war-

and Westonia to Mr. Parnell at \$525. The two-year-old mares were an almost equally fine lot. The top price here was \$2,250, to Mr. L. Salamons, Mr. P. L. Mills' representative again being the last bidder but one, Autumn Blossom making, to Mr. C. Keevill, the next best price, \$650. The three-year-olds made a grand average and sale, two making \$1,500, Queen's Birthday, to Mr. L. Salamons, and Lady Darling to the Marquis of Winchester, two others making \$1,350 and \$1,150, respectively.

The following summary gives full range of prices and average for each age and the entire sale:

Description.	No. Sold.	High-est.	Low-est.	Aggregate.	Average.
Brood mares.....	10	\$2,875	\$375	\$11,125	\$1,112.50
Four-year-old mares..	4	1,150	325	2,425	606.25
Three-year-old mares..	9	1,500	350	8,550	950.00
Two-year-old mares... 10	2,250	275	6,625	662.50	
Yearling fillies.....	7	1,750	275	6,450	921.43
Stallions.....	2	2,500	700	3,200	1,600.00
Two-year-old stallion..	1	850	...	850	850.00
Yearling stallions....	2	1,150	900	2,050	1,025.00
	45			\$41,275	\$917.2

The Horse Show Date Fixed.

As the result of the vigorous demand of the Horse Breeders' Association for an earlier date for the Canadian Horse Show for the accommodation of stallion owners, the date for the show at Toronto has been fixed for April 10th, 11th and 12th, and it is understood that the Breeders will join with the Hunt Club in holding a combined show as usual.



FANDANGO (4256) 143.

Imported Hackney stallion, owned by Mr. F. C. Stevens, Maplewood Hackney Stud and Stock Farm, Attica, N. Y. (See Gossip, page 192.)

rant the valuable space they would occupy, therefore reference has been limited to the more important lots of each age, and a special summary in dollars and cents been prepared, the dollar being taken as equivalent to one-fifth of the good old English coin, the guinea, which, though no longer in actual use, is always at pedigree stock sales the denomination used. Lord Rothchild gave \$2,875 for Solace of 1894, by Lord Arthur, out of Madam Albani, who was dam of the \$3,000 filly, Victor's Queen, sold in the 1898 sale. This was the top figure realized of this age, and also in the sale. Her sister, by the same sire, Southern Wood Echo, made the next best price of the brood mares, \$1,500, to Mr. L. Salamons. Mr. F. Crisp gave \$1,250 for Calwick Mavis, and Mr. A. Henderson, M. P., \$1,050 for Rocks Regina. The four-year-old mares, four in number, were not so eagerly sought for, \$1,150 being top price for Girton's Dolly Varden, to Mr. F. Crisp, followed by \$625 for Barrow Heiress, to Messrs. Thompson. The two stallions, Benedick, foaled 1898, and Premwithar, foaled 1899, realized, respectively, \$2,500 and \$700, whilst the two-year-old colt went to Mr. P. A. Muntz, M. P., at \$850. A pair of grand yearling colts, notably Royal President, sold well, the one named above going to Lord Coventry at \$1,150, and the other to Mr. Walpole Granville at \$900. Seven yearling fillies of grand merit were keenly competed for. Sir J. B. Maple, Bart., M. P., secured the pick in Mountain Echo, at \$1,750, Mr. P. L. Mills being the runner up, Lord Llangattock, after a strong contest with the last-named buyer, getting another grand filly at \$1,550. Two more made high values: i. e., Torrida to Mr. Kearns at \$1,350,

STOCK.

A Practical Advantage of Good Blood.

The late Kirk B. Armour, of the Armour Packing Co., Chicago, was not only a practical packing-house man, but also a lover of improved live stock. Such a man was above mere fads in breeding, because his business forced him to consider the utility of live stock, and his efforts were constantly directed towards the blending of good breeding with usefulness, without which combination the breeder of pure-breds might as well go out of business. The following remarks of the deceased packer should be taken to heart by all stockmen, whether breeders of grades or pure-breds:

"The sale of a product increases directly in proportion to the possibility of offering a good article at a fair price. The more general the improvement in cattle, the greater the increase of beef consumption. From an animal of poor quality only the loins and ribs find a ready market. In a good animal the butcher is not only able to dispose of the whole carcass more readily, but the consumer is able to get a choice piece without being forced to take the more expensive cuts.

"The man who sticks year in and year out to the use of a good pure-bred bull will make a better showing than a man who economizes on a bull for fear that cattle will not always bring their present values."

Conducting Beef Rings.

Within a recent date about half a dozen enquiries have been received for directions how to conduct beef rings.

These beef rings are simply unions of farmers united for the purpose of supplying themselves with fresh beef during the summer months. Some rings have 20 members, and others 16, or whatever it may be made. The chart we herewith show is for

A RING OF 16 MEMBERS.

The members each agree to put in a beast that will dress say 400 pounds, which will allow 25 pounds to each member. A beast is killed each week and distributed to the members in such a system as to give each a different cut or cuts each week, so that by the end of the 16 weeks, or 20 weeks, as the case might be, each member will have received a whole carcass in weekly sections.

A butcher is appointed, as well as a Secretary. The butcher provides a suitable place for killing, and furnishes a hook for every member, on which each man's share is hung. He kills the animal in the evening and cuts it up in the morning, weighs each share, hangs it upon its respective hook. He keeps an accurate account of the weight of each animal — of the quantity that each one receives per week. He changes each week the order in which the cuts are distributed; that is, the cut No. 1 receives this week, No. 2 receives next week, and No. 1 takes the place of No. 16. He renders to the Secretary the account at the end of each season of weight of each animal and of weight of meat received by each member, as shown by the following table:

	A's beef.	B's beef.	C's beef.	D's beef.	E's beef.	F's beef.	G's beef.	H's beef.	I's beef.	J's beef.	K's beef.	L's beef.	M's beef.	N's beef.	O's beef.	P's beef.
2. Front shank and rump, No. 2	1. A.	2. B.	3. C.	4. D.	5. E.	6. F.	7. G.	8. H.	9. I.	10. J.	11. K.	12. L.	13. M.	14. N.	15. O.	16. P.
3. Neck and rump, No. 1	11. K.	12. L.	13. M.	14. N.	15. O.	16. P.										
4. Flank and roast, No. 2																
5. Shoulder and roast, No. 4																
6. Hind shank and roast, No. 3																
7. Second rib and roast, No. 1																
8. First rib cut and sirloin																
1. Brisket and roast, No. 5																
2. Front shank and rump, No. 2																
3. Neck and rump, No. 1																
4. Flank and roast, No. 2																
5. Shoulder and roast, No. 4																
6. Hind shank and roast, No. 3																
7. Second rib cut and roast, No. 1																
8. First rib cut and sirloin																
9. Brisket and roast, No. 5																
10. Front shank and rump, No. 2																
11. Neck and rump, No. 1																
12. Flank and roast, No. 2																
13. Shoulder and roast, No. 4																
14. Hind shank and roast, No. 3																
15. Second rib cut and roast, No. 1																
16. First rib cut and sirloin																

This table represents the way in which the beef is to be divided and weighed out to each person. The diagram represents A's beef being slaughtered and weighed out to the men composing the ring. No. 1 cut goes to No. 1 man the first week, to No. 2 man the second week, and to No. 3 man the third week, etc. This is done by moving the long list of cuts (at the left edge of time-table) down one space for every beef that is slaughtered, which changes the cut for each man. This slip is let down week after week until No. 2 comes opposite No. 1 man, then No. 1 cut is placed opposite No. 1 man again, as all the cuts in one half of the beef is contained in the first eight numbers, and the other half of the beef has the same cuts in it.

There are a number of details which each ring can work out to suit themselves according to their own circumstances. The secretary may furnish tickets with numbers on, which the members draw from a box, to decide the order in which they are to supply the animals. He also sends at the close of the season the butcher's account to each member of the weight of his beast, the quantity he has received, and what he owes or is due him, as the case may be.

CUTTING UP BEEF.

Fig. 1. Represents one-half of beef lying on the table ready for the saw. Before letting this half down divide it in the middle by running a saw across at "a" between roasts 4 and 5, leaving two ribs on hind quarter. After laying both quarters on the table divide fore quarter at line "b."

No. 9. Represents neck. Saw neck off, leaving three joints on it.

No. 1. Represents roast No. 1. Saw roast No. 1 off, leaving three joints on it.

No. 2. Represents roast No. 2. Saw roast No. 2 off, leaving three joints on it.

No. 3. Represents roast No. 3. Saw roast No. 3 off, leaving three joints on it.

No. 4. Represents roast No. 4. Saw roast No. 4 off, leaving four joints on it.

No. 11. Represents front shank. Saw front shank off above upper joint.

No. 14. Represents second rib cut. Saw it off, leaving five ribs on it.

No. 13. Represents first rib cut. Saw it off, leaving four ribs on it.

No. 10. Represents brisket.

No. 12. Represents shoulder, which lies directly under brisket as represented in Fig. 1.

Then take the hind quarter and divide it at line "c."

No. 15. Represents flank. Cut flank off at line "c."

No. 5. Represents roast No. 5. Saw roast No. 5 off, with three joints on it.

Nos. 6, 7 and 8. Represent sirloin, rump No. 2

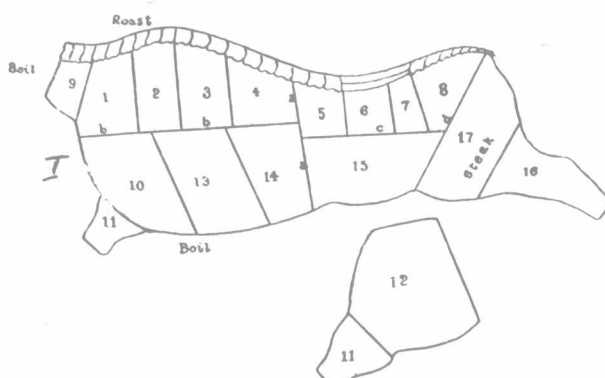


CHART FOR BEEF RING OF 16 MEMBERS.

and rump No. 1, respectively. Divide these three as near to the same weight as possible.

No. 17. Represents steak. Cut steak into slices, giving a slice to each person.

No. 16. Represents hind shank after steak is taken off.

After this half of the beef has been cut up it is divided between the first eight persons, as shown by time-table, giving each person a roast, a boil piece, and a slice of steak. Then the other half of beef is taken down and cut up in the same manner.

A BEEF RING FOR 20 MEMBERS.

Enclosed please find chart which I use for cutting up beef for a ring of 20 members. I have used it for three years, and it has given the best satisfaction of any ring in this locality. Several applicants have asked me to give my chart, and to explain how to run it. I think it will be readily understood. It is run just the same as the one for 16 members. Our rules are just the same as for a ring of 16 members. The only difference is,

we have the members furnish a basket or cotton bag to put the beef in when cut up. Then we hang it up, with their name on it. You will see by my chart that the beef will have to be quartered a little differently from yours for cutting the beef up in 40 pieces. To give each party a boil and a roast, it must be divided after the beef is cut down in halves. You must cut it across between Nos. 7 and 12, leaving four ribs on the hind quarter. After laying the front quarter on the table for cutting up, you will cut off front shank, No. 8; then cut from line B, making two pieces (Nos. 10 and 9); then take off neck, No. 1; then take roast No. 7 (3 ribs in it); roast No. 6 (2 ribs); roast No. 5 (2 ribs); then cut across to line C, taking piece No. 4 (boiling piece); then No. 3 (2 ribs in it), leaving piece No. 2. After cutting up the two fore quarters, you will let down the hind quarter on the table, and cut from line D, leaving flank, No. 11; then cut roast No. 12 (3 ribs in it); then follow along 13, 14, 15, 16; then cut across line E (rump roast), No. 17; then cut off Nos. 18 and 19, leaving hind shank, No. 20.

This is a table to put the pieces for each one:

Nos. 1 and 18	Boil and roast.
2 and 16	" "
3 and 12	" "
4 and 13	" "
5 and 17	" "
6 and 20	" "
7 and 11	" "
8 and 15	" "
9 and 14	" "
10 and 19	" "

The weight of the beef is supposed to be not less than 400 lbs., and not to exceed 500 lbs., all to be cut up and divided into 20 shares. I think the beef should not be less than 450 lbs. If cuts up in much nicer pieces.

Ontario Co., Ont. JOHN I. BALSDON

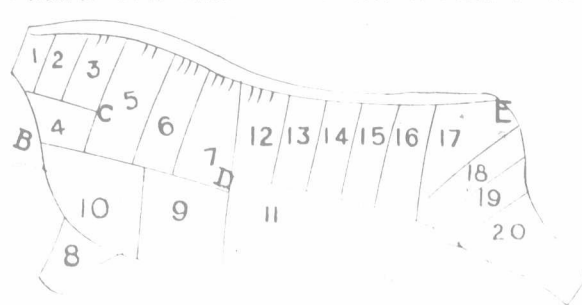


CHART FOR BEEF RING OF 20 MEMBERS.

A Hog Cholera Outbreak.

A serious outbreak of this much-to-be-dreaded disease has occurred in the vicinity of Collingwood, Ont., and before being discovered had gotten a strong foothold, the contagion being spread over a large portion of the Township of Nottawasaga, Simcoe Co., and a considerable number of herds infected. A member of the "Farmer's Advocate" staff, being lately in that district, discovered the existence of the disease, and immediately notified the Minister of Agriculture at Ottawa, who sent Dr. Moore, of Montreal, to take the steps necessary for preventing the further spread of the disease and the destruction of all infected animals. It appears the disease has been to a more or less extent in existence in that section for the last year or two, but either through not knowing what it was, or a misconceived idea of trying to hide the fact that their hogs were affected, it has been allowed to go on and get in its deadly work in a number of places.

In order that farmers may know something of the nature of the disease, and may readily distinguish it should they be so unfortunate as to get the contagion in their herds, we give a few of the more prominent symptoms of the disease. Probably the first sign of anything being wrong is that when throwing in the feed the hogs, or some of them, will not come up to the trough, but will remain buried in the bedding. When they are compelled to rise they do so very reluctantly, getting up slowly, with back arched and belly tucked up, and looking hollow and emaciated. There is generally, but not always, a hard, racking cough; in other cases there is no cough, but, instead, a persistent fetid diarrhea. Generally a watery discharge from the eyes, which later becomes mattery, forming in clots in the corners of the eyes. The pigs at this stage show a reddish discoloration on the ears, inside of the legs and on the belly, which later becomes purple, and an intensely depressing appearance, and if they attempt to walk they have a staggering, tottering gait. Death ensues in from 12 hours to 2 weeks. Generally in a herd of hogs affected with this disease there will be a percentage of them that will not show any signs of being affected; nevertheless, they are. Their whole system is loaded with the bacteria of the disease, but their constitution being extra strong, they resist the action of the bacteria. Yet these same hogs, in case of a brood sow, will give the disease to every litter of pigs she ever has, and will contaminate every hog they ever come in contact with as long as they live, which shows the utter absurdity of allowing any hogs to live that have been in contact with the disease. With regard to compensation, the Government allows three fourths the value of all hogs slaughtered during an outbreak that have not shown symptoms of being affected, and one third the value of all hogs slaughtered that are affected; the value in all cases to be determined on the basis of the value before the hogs became affected. As to the responsibility of parties knowing of the existence of this or any other contagious disease, their duty is to at once notify the Minister of Agriculture at Ottawa. Their failure or neglect to do so leaves them liable to a fine of \$200, with the forfeiture of any claim they might have as compensation for animals slaughtered.

The Tuberculin Test.

In Parliament at Ottawa last week, in reply to a question by Mr. W. H. Bennett, M. P. (East Simcoe), based on the recent resolution of the Dominion Shorthorn Breeders' Association, asking the discontinuance of the compulsory use of the unreliable, unnecessary, and in many cases injurious tuberculin test, and for a reduction in the 90-day quarantine against imported cattle, the Minister of Agriculture, Hon. Mr. Fisher, is reported in the daily papers to have said it was not the intention of the Government to discontinue the test or the quarantine.

What was probably the last official circular under the old regime of Dominion Live Stock Inspection was a striking commentary on the farcical nature of the test. Heretofore the Department had been making free tests of the herds of dairymen and others who applied therefor, but in the circular in question it was gravely announced that it was undesirable for many reasons to test dairy cattle with tuberculin from March 1st to Oct. 1st. It was pointed out that those advanced in pregnancy could not be safely tested, and the removal of animals from field to stable, flies, heat, etc., make the test unreliable; hence the Department would not undertake to make tests in the period mentioned. Notwithstanding this acknowledgment, however, the stockman who desires to import into Canada some of the best breeding animals available in Great Britain, or in case of breeding animals exported to the States, the use of this toxin is still imposed. It might hurt the scrub or grade, but the pure-bred must stand it, no matter at what time of year. With the appointment of a new head to the Dominion Live Stock Inspection Department, in touch with the real livestock interests of the country, a more enlightened policy is looked for.

A Westerner Promoted.

Dr. J. G. Rutherford, the newly-appointed Dominion Veterinarian, is a Western man, making his home at Portage la Prairie, Manitoba, for many years.

The Doctor is a Scotchman, having been born in 1857, at Mountain Cross, Peebleshire, his father, Rev. A. Rutherford, M. A., of Edinburgh, having been for fifty years minister of that place (Mountain Cross). He came to Canada in 1875, spent one year at the Ontario Agricultural College, Guelph, taking first prize for practical agriculture, and one year at Bow Park Stock Farm, Brantford, with the late Mr. John Hope. He graduated from the Toronto Veterinary College, where he was a gold medalist; practiced in Woodstock, Ont., where he was Government Inspector for Oxford County, and at Saratoga, N. Y., where he was veterinarian to a prominent racing stable. Settling in Portage la Prairie, Manitoba, in 1882, he was appointed, in 1884, by the Provincial Government, district veterinarian, which position he held until 1892. He served as veterinary surgeon to the Northwest field force under Middleton in 1885, and was present at Fish Creek and Batoche, receiving the medal and clasp. He married, in 1887, Edith, daughter of Washington Boulbee, Esq., of Ancaster, Ontario. He has been president of the Portage and Lakeside Agricultural Society, of the Driving Park Association, of St. Andrew's Society, and repeatedly president of the Veterinary Association of Manitoba, and president of the Horse Breeders' Association of Manitoba for the last five years, and chairman of the Portage la Prairie General Hospital since its inception.

His early training in agriculture caused him to take part in matters of interest to farmers, and he labored earnestly in the local Farmers' Institutes, and brought to his town the well-known Thoroughbred, "Kilburn." His efforts for the advancement of the veterinary profession in Manitoba were, in a great measure, the source from which the present Veterinary Medical Association and well-constructed Act sprung, and at the hands of the Association he has received the highest honor it can confer, by being made its president; later, he was elected to the Local Legislature for Lakeside, which constituency he represented from 1892 to 1896, when he resigned to enter the larger field of Dominion politics. His public record has been a good one, and has shown him to be animated by patriotic motives and sound common sense. His interest in horse-breeding was not confined to himself, as he fathered the Manitoba Horse Breeders' Lien Act, than which a better measure is not to be found on any statute book to-day, as is shown by the request of the Ontario horsemen, who are now asking for similar legislation. As president of the Horse Breeders' Association of Manitoba, he used his influence to get the British Government officer to purchase army horses in the West. About a year ago he was appointed by the Dominion Government to look after the testing of cattle in Great Britain for importation to Canada. For this work he was stationed at Glasgow, where he resided until the close of the season for shipping live stock to Canadian ports. A practical live-stock man and a successful veterinarian, we feel the Dominion veterinary interests are now placed in safe hands and look for the Dominion Veterinary Department to get in closer touch with the live-stock interests of Canada than heretofore.

Contagious Abortion Again.

Dr. Peters, of the Nebraska Experiment Station, has the following to say regarding the stamping out of this serious menace to the stock-breeder:

It was suggested several years ago by some veterinarians that the bull might be the originator of the contamination, but for a great number of years the most stress was laid on the fluid that exuded from the vagina. It was thought that the contamination took place in this way to the stable, but it was known that cows aborted that had never been in the stable and could not have been contaminated very easily in that way. In Denmark, where the disease has been prevalent, it was found that the bull was the animal that carried the infectious germs. When this fact was thoroughly established, there was a campaign made against the bull and he was thoroughly disinfected before serving the cow, then thoroughly disinfected after serving, and since this practice has been in vogue it has reduced abortion in a great measure. Alongside of the disinfection of the bull, the cow that aborts must be taken care of immediately; the afterbirth burnt—not buried, but burnt—the premises where the cow aborted thoroughly disinfected with slaked lime and the cow immediately disinfected with a five-per-cent. solution of chloro-naphtholeum and lukewarm water. This is best applied with a common fountain syringe. The rubber syringe is inserted into the uterus with the hand, which has been previously oiled; then the solution filled into this fountain syringe and the entire vagina irrigated in that way. After two or three quarts or probably a gallon of water has been allowed

to flow into the uterus, the tube is disconnected from the fountain and it is allowed to siphon out into a pail, and this is repeated until the fluid that flows from the uterus is almost clear.

The bull is disinfected in the following manner: With a small, fine nozzle and fountain syringe filled with a five-per-cent. solution of the chloro-naphtholeum and inserted into the opening of the foreskin, it is thoroughly disinfected; enough, say a quarter of a pint, is allowed to run under the foreskin and the entire penis thoroughly cleansed.

If these methods are carefully followed, and with the addition of a thorough disinfection of the stable, isolating those that are affected, there is no doubt but that in a short time infectious abortion may be eradicated from any herd.

Pitfalls and Points in Bacon Growing.

The examination of the swine carcass on the block often reveals the fitness or unfitness of that carcass for the making of first-class bacon. Length of side, the thickness of fat and firmness of flesh are probably the points on which most stress is laid. An otherwise promising pig may be spoiled for the trade by errors in feeding—e. g., a diet of oats, peas, barley and milk may, on the score of economy or expediency, be changed to a diet of corn and milk, and if the latter is persisted in, the hog product will surely grade down. Sometimes a carcass reaches the packer which is overweight, and, although fed heavily for a few weeks before being slaughtered, yet is unfinished.

feed and may be fed liberally, starting with small quantities (about three pounds) and working up to twenty pounds a day. Turnips seem to spoil the appearance of bacon and had better be avoided.

Chewing of the Cud in Live Stock.

It has been commonly observed by people having anything to do with live stock that sheep, goats and cattle chew their food (or cud, as it is commonly termed) a second time, while pigs and horses do not.

Chewing of the cud is technically termed rumination, and animals performing that digestive act are classed as ruminants, a term which includes goats, sheep, cattle, deer, antelope, and camels.

Ruminants are built on a somewhat different plan from other live stock, in that they are possessed of four stomachs in place of one.

Strictly speaking, it is only in one of these stomachs the digestive process goes on; the others may be considered as enlargements of the gullet and places in which food is prepared for the fourth (true) stomach. These four stomachs have received names: the first one, the largest, with a capacity in mature cattle of 45 to 60 gallons, is termed the paunch, or rumen; the second the honeycomb, or reticulum; the third the manyplies, or omasum; while the fourth, or true stomach, is spoken of as the rennet, or abomasum. The reason for animals ruminating is that when in the wild state, and when liable to be preyed upon by stronger members of the ani-



FARM HOME OF CHALMERS BROS., PALMERSTON, ONT.

The result in both cases is soft pork. Soft pork is not necessarily got from a fat hog. The thrifty, properly-finished hog is likely to yield a firm-fleshed carcass.

The causes of soft pork are: (1) the feed; (2) the manner of feeding; (3) the health of the pig.

A diet of shorts, oats, peas and barley fed to pigs of the right type will result in a No. 1 product at six to seven months, if properly fed. Roots, ensilage and rape may each be added to the above menu, and will give the same results. Milk and corn make too heavy a carcass for the Canadian trade. Three pounds of milk a day is sufficient at two months old, and may be increased to five pounds (not over) later on until finished off. Experiments have shown 300 pounds of milk to be equal to 100 pounds of grain, and that if eight pounds of milk be fed daily the feeding value of the milk falls to half what is given above. The Danes report adversely to rye, from their experience with that grain. Experiments seem to show that while wheat is an economical substitute for peas, the quality of the bacon resulting is not so good. It has been found, however, both in Canada and the British Isles, that barley and milk are the ideal combination for the production of high-class bacon. It seems almost impossible to get the best results from the feeding of one kind of grain alone; mixtures invariably give better results. A good grain mixture can be made from peas, oats and barley in the respective proportions of peas 2, oats 3, and barley 3. Dry-feeding is in favor; if wet, the grain should be allowed to soak about 24 hours. Mangolds or sugar beets are a very good adjunct to the grain

mal world, such as lions, tigers, etc., by this method food could be taken in rapidly and chewed at leisure in a place of safety. An important thing for live-stock breeders to know is that fright, harshness, or the presence of strangers, causes stoppage of this re-chewing for a time; hence, as far as possible, all such contingencies should be avoided. Food when taken in by a ruminant is partially masticated and mixed with saliva in the mouth, then is passed on down the gullet to the paunch and the honeycomb, the fluid and finer portion going on to the manyplies. After a certain time has elapsed, this food, which has been churned up in the paunch by reason of the movements of that organ, is returned again to the mouth, where the bulk of it is finally fitted for the true digestive process in the fourth stomach. It has been estimated that about seven hours are needed for rumination to be completed, hence it will be seen that the practice of the cattleman in bedding down the stock and allowing them a period of quietness and rest after feeding is based on sound principles and observation of facts.

The following averages furnish food for thought to many a farmer-breeder, and doubtless will be used as a text from which to construct an occasional sermon on the breeding of horses. The figures presented are for the entire year, in the twelve months of which a large number pass under the hammer at this big horse market: Drafters averaged \$157; carriage teams, \$400; drivers, \$137; general purpose horses, \$102; chunks, \$52; saddlers, \$147; bus and tram horses, \$121.

Beef and Milk.

The article under the caption, "Dual Purpose Cows," in your Feb. 1st issue leads me to record a few personal opinions and observations. For many years I have been in search of that Mecca, the "farmer's cow." That she may ultimately appear I have not the slightest doubt. Her evolution, while it may possibly be a matter of time only, is surely no greater problem than many which have been met and solved by thoughtful breeders in the past. Your correspondent may, perhaps, be pardoned for venturing to question the existence to-day of more than a very few animals meeting the strict requirements of our ideal in the shape of this two-purpose producer. Were we content with mediocre quality along either line, we might admit that there are thousands of dual-purpose cows at work. But should we be content with half-way production or performance when greater is possible? So many times have we heard at stockmen's conventions the theory advanced that the cow which would yield 4,000 lbs. of milk in a season, and give her owner a moderately promising steer calf, is the right animal for the average farmer. Theory of this kind absolutely fails to hold out anything more than half-way success. Such is sufficient for the man with no very strong desire to improve his stock, whether along beef or dairy lines, but there has never been a time when there was greater demand among the rank and file for continuous improvement along a more definite line. Was it work of this kind which produced a Cicely or a Blackcap Judy among beef types, or a Brown Bessie or a Pauline Paul among dairy types? Without a definite standard—an ideal, if you please—we shall each one breed and mould our animal forms according to our own sweet will. Will the result be uniformity or working towards a common type? I fancy not.

A short time since, the writer saw a comment in one of our leading stock journals upon a sweepstakes class of beef animals, in which he had the pleasure of placing awards at one of our recent large expositions. In one ring competed modern specimens of the Shorthorn, Hereford and Angus breeds. The comment read that had the animals all been of recognized Shorthorn colors and markings, they would have very closely typified Shorthorn ideals. The point is this: Our best breeders of beef animals have agreed that utility must be the measure of their work, and since all are working toward a utility standard, it means that all are eliminating many of the most essential points of breed differences.

On the other hand, our best breeders of pure-bred dairy types are unanimous in the opinion that there is a dairy form which should obtain among all dairy breeds, modified, of course, by minor points of breed difference. Where, then, is our middle-way breed or type to come in? Naturally, half way between the two, and for such a type we grant there is a very large place. Taking the whole country over, we believe that, whether rightly or wrongly, there is, and always will be, a large class of men who will demand the half-way cow. But what are the actual facts as we find them? Do we expect to evolve our best dual-purpose forms from cross-breeds of our best beef and dairy forms? We have a surplus of breeds already. Further, what of our present recognized dual breeds? We find that there is not among their advocates that same singleness of purpose which binds together either breeders of beef or dairy forms. One man may be reaching the happy mean between beef and dairy form, another is inclining towards beef development, and a third is placing greatest weight on dairy shape and production. In the course of three or four generations, each of these two men will have departed very far from dual-purpose standards. How, then, are we going to preserve these. The tendency towards beef or milk will be strengthened in proportion to current prices for these products on the open market. With beef men, dairy quality must always have consideration, as your article suggests, but it must always be subservient to the ability to develop a good carcass for the block. On the other hand, dairy breeders care nothing more for beef form than that their animals shall have their bones decently clothed. Straight dairy types are never affected by variations in the latest quotations on beef steers, but our up-to-date dual-purpose type is bound to be shaken by every changing wind of doctrine.

What the writer would like at the present stage of affairs would be to have someone come forward and outline a standard for us which shall be acceptable to all our dual-purpose friends, and which shall comprehend within its limits the all-essential element of stability. Who is ready to do it?

J. J. FERGUSON,
Animal Husbandry.

Agricultural College, Mich., Feb. 8.

According to recent Liverpool quotations, Danish butter still tops the British market to the extent of from 6 to 8 shillings.

Care of the Brood Sow.

The feed and care of the brood sow will depend somewhat upon the season of the year, but at all times the feed should be of a flesh-forming rather than a fattening or heavy food. Some people think that the brood sow should be thin in flesh in order to raise a good litter of pigs, but this is a mistaken idea. While she should not be too fat, better results will be obtained if she is in a good condition of flesh. There is difference between a brood sow in good breeding condition and one that is too fat.

After the sow is bred she requires a liberal supply of nourishing feed. In the summer months a good pasture is excellent, with a little meal in addition, as ground peas, barley or wheat, and kitchen slops. In winter, in the place of pasture, roots will answer well, as mangel's, sugar beets, or turnips. Salt, charcoal or some earthy matter should be supplied freely, especially when confined to the pen. Sods of earth gathered and stored in the fall is a good thing for pigs in winter. When brood sows are supplied with such things they keep in good health, and are more likely to drop well-nourished pigs.

Exercise is very important, and in the winter season the sow should run out, when the weather will permit, in a yard with some straw, and a little sprinkling of grain scattered over will often keep them working the straw over for an hour or two. A barnyard is a good place for them to take exercise, rooting among the manure.

As the farrowing time approaches, say a week or ten days before she is due, it is well to put her in a pen by herself and feed her night and mornings. For two or three days before farrowing, it is better to keep her in the pen altogether. A fender should be placed around the sides of the pen in order to protect the young pigs. A scantling placed eight or ten inches from the floor will answer the purpose. The sow should be handled before farrowing. She should at least be so accustomed to the feeder that she will be quiet and restful in his presence. It is better to feed the sow sparingly for a week before farrowing, and also for the week following, and the feed should be of a laxative character. The feed may consist of shorts, bran, ground oats, and roots.

It will be well if the attendant or herdsman is around at farrowing time, but if all is well, the sow should be disturbed as little as possible. If the pen is comfortable and the young pigs are strong, they will soon help themselves, but if they appear weak some assistance may have to be given them at intervals for a while. The sow should not be disturbed until she gets up of her own free will, and then she may be given a warm drink, with a little shorts or oatmeal added. The feed may be gradually increased the first week, and then she must be liberally fed. It is very important when the pigs are quite young that the feed for the dam be sweet and wholesome. After the young pigs begin to eat, a small trough may be placed in an apartment inaccessible to the dam, but where the young pigs can help themselves, and warm sweet skim milk may be given for a few days, then shorts may be added.

If the pen is warm at farrowing time, the sow should not have too much bedding, but must be dry. Cut straw or chaff is good, and the bedding should be changed often, as it is important that the bedding for the young pigs be kept dry. After the young pigs are a week or ten days old they can, with advantage, run out with the dam on the pasture or in the yard when the weather is favorable. The age to wean young pigs will depend on circumstances. When only one litter a year is raised, they may run with the dams till they are ten weeks old, but if two litters are raised, they will be weaned somewhat earlier.

Provencher, Man. GEORGE CRAIG.

How to Know Beef.

In these days of fat stock shows, slaughter tests, experimental feeding by agricultural colleges, balanced rations, meat inspection, and well-bred beef stock, one would expect that housekeepers and epicures would have no difficulty in getting what they want. To-day, however, the butcher's shop is the battleground as of yore—there is the bone of contention found. Why? Because, so the butchers say, "the cooks do not know how to cook beef," or else "the farmers will persist in using miserable scrub bulls, and do not go to the meal tub often enough." There is no doubt that lots of purchasers are ignorant as to where the good cuts are to be found, and also ignorant as to the appearance of good beef.

Prime steer beef is a bright cherry red, the lean meat is smooth and medium grained, with white flecks of white through it; the fat creamy, neither white nor yellow; the lean generally much mottled with white fat flecks. Beef from cattle in whom the fattening is unfinished is generally tough, juiceless, and pale in color. The beef obtained from old or ill-conditioned cattle is of a dull red color, the lean being loose grained and sinewy, and the fat yellow in color. Bull beef is a dark red, the lean is loose grained and sinewy, the fat being white and shining. Cow beef is usually dull red in color, the lean rather close grained, while the fat is very white.

Profit in Feeding Hogs.

To the Editor "Farmer's Advocate":

Having been very much interested in reading a statement that appeared in your issue of Jan. 15th, written by Mr. Wm. Wrenshall, of Grey Co., on profit of pork production, I thought it might be equally interesting to many of your readers to read similar statements from neighboring counties. I am always ready and anxious to learn what brother farmers in other parts of the country are doing and how they do it. I am in the habit of keeping strict account of all such and similar doings, having booked the results of all the principal operations of the farm each day since 1885. I herewith send my experience in the feeding of hogs of one particular shipment. They were one litter of twelve, which were born on the 28th of June, and were marketed on the 30th of January. The cost of feeding them was \$2.70 per cwt., as may be seen from figures accompanying statement. As to the food consumed, it may be seen that it did not cost very much up to five months old, as I gave them an abundance of drink, with only a small amount of chop, low-grade flour, and bran stirred in, giving them all they could take three times a day of this thin slush, as you may call it, keeping them well filled up in warm weather, which did not harm their growth in the least; also providing for them a good dry bed, and their pen doors were open, which gave them liberty for exercise in a small yard in connection with their pen. I might say that I fed them only twice daily for nearly a month while they were running the fields after harvest. After being shut in again, began to feed three times, with less drink and more chop, and a few pulped turnips at noon. By degrees I kept decreasing the water supply, until I got down to a reasonable quantity for a necessary drink, with a more liberal supply of chop, by this time feeding it dry, separate from their drink, and owing to their not having access to the open yard as during the first five months, they were easier satisfied. They were crowded to all they would take the last month of dry chop and pure water. Did not show any signs of a production of soft pork, though having been grown to five months old on slop.

Here is my strict accounts of profits and expenditure:

Service fee	\$ 1.00
Sow's feed until farrowing	1.62
The cost of farrowing	2.62
Food until weaned—six weeks	5.27
Expenses when weaned	7.89
To 300 lbs. of bran	1.80
To 500 lbs. of low-grade flour	5.00
To 1,429 lbs. of chop	14.29
Expense at five months old	28.98
To 3,509 lbs. of chop	35.09
To 10 bush. turnips	1.75
Chopping	1.65
Expenses all told	\$ 66.42
Receipts—2,460 lbs. on foot, at \$6.00 per cwt.	\$147.60
Expenditure	66.42
Profit for labor	\$ 81.18
Costing to produce each hundredweight, \$2.70.	

Wellington Co., Ontario. GEO. GREEN.

Early Shearing of Sheep.

To read or think of shearing sheep when snow-drifts block the roads and the mercury hovers around the zero mark may to some persons cause a chilly feeling, but it is a fact, nevertheless, that many of the most successful Canadian flockmasters find it a profitable practice to shear their young sheep—that is the last year's lamb—early in March, or as soon as the back of the winter is broken and the sun shines on us for more hours and with greater power. There is practically no risk in shearing young sheep that are in good condition any time in this month if they are kept in a comfortably warm house for a few days, and they will thrive much better through the warm days of April and May, when they are liable to suffer from the heat with their full fleeces on. Another advantage is that they take up less room when shorn, which is often desirable when it is found necessary to divide the ewe flock so as to feed more generously those that are nursing lambs, while those not due to lamb till late require less liberal feeding. When the young sheep have been shorn a week or two, it is a good plan to dip or wash them with one of the commercial dips to destroy any vermin and give the skin a healthy tone. Yet another advantage is that the sheep will carry more wool and look larger and better in the fall if prepared for the show-ring or offered for sale. We do not advise shearing the breeding ewes before lambing or before the latter part of April, unless they are to lamb late and are in good condition, but it is well to have all shorn before going out to grass, and the lambs dipped for the destruction of ticks and lice. Both lambs and ewes will thrive better, and there is less danger of ewes getting cast on their backs, which often occurs through their attempts to bite at ticks which are torturing them. The price of wool cuts so little figure now that the loss from selling it unwashed is trifling, if there is any, and is more than compensated for by the thrift of flock.

Care of the Ewes and Lambs.

As a rule, owners of pure-bred flocks and good grades plan to have the lambs coming along in March, and as the greater part of this month is generally pretty cold, provision should be made for extra care and watchfulness during the lambing season. If the house is not as warm as it needs to be, a little labor may make it more comfortable. Sheep love liberty to go out in the fresh air and sunshine, and this should not be denied them by day, but when lambs are expected they should be closed in the house at night, and the shepherd should be prepared to lose some sleep if need be in caring for the flock at this season. He should see the sheep before retiring for the night, and if there are indications of an increase before morning, will, if he has the interest of a good shepherd, take short naps and visit the fold again and again, till the little stranger is safely started in life. The ewes, if they have not been liberally fed, should have their bill of fare improved a couple of weeks before the lambs come, by adding a few roots and a little oats and bran to induce the necessary flow of milk. It is wise to provide a few light hurdles, say six feet long and thirty inches high, to be used when twins come, or a weakly lamb, to confine the ewe and lambs for a day or two, till they become acquainted. It is not well, however, to keep them so confined longer than two or three days as a rule, as both are better for exercise, and there is less danger of the ewe being overfed if sharing with the other ewes, while the stimulus of competition in securing her share of the feed is good for her in many ways. When a number of the ewes have lambed, it is well to divide the flock, which may be done by the use of hurdles tied to stakes, as those nursing lambs should be more generously fed than is necessary for those that are to lamb late, and which if fed as well as the nursing ewes need to be, are apt to become too fat. When a ewe loses her lamb from any cause, she may, by a little good management, be made to adopt one of a pair that another mother may not be able to do well for. This may be facilitated if the lamb is deadborn or dies soon after birth, by rubbing it over the lamb that is to take its place, so that the smell of her own may be upon it. If the lamb dies at an older stage, strip its skin off and fit it on the lamb to be substituted. This can be done so that the lamb's head and feet only will show, and if the ewe and lamb are confined together a few days, there will be but little difficulty in making them take to each other. The most stubborn case can be overcome by tying the ewe by the neck for a week, if need be. When a ewe has been in labor for more than an hour, it is well to make an examination, and if the presentation is found to be normal, the nose and two fore feet coming forward together, she should be given longer time, in order that nature may work out its own deliverance. If a false presentation is discovered, the lamb must be gotten into proper position, the oiled hand being introduced for that purpose, and as gentle assistance as possible should be given. In the case of a presentation of the hind feet first, it is decidedly best to bring the lamb away in that position. If the birth has been long delayed and the lamb shows little signs of life, clear the nostrils and breath into its mouth, to inflate its lungs. After difficult and painful parturition, the injection into the vagina of a weak solution of carbolic acid will greatly relieve the ewe, and may prevent inflammation, which may cause straining and inversion of the uterus. Let the ewe lick her lamb, and if she refuses, wipe it dry and cover it with a woolen cloth till it gains strength enough to suck. If the lamb is too weak to stand after an hour or two, hold it up with one hand under its breast, and with the other work the teat into its mouth and draw a little milk to give it a taste. If this cannot be managed successfully, lay the ewe gently on her side, having an assistant to hold her, while you milk a little into the lamb's mouth and induce it, if possible, to suck. Do not gorge it at first—a little at a time is nature's way. When the lamb has become dry and has sucked, he will stand a good deal of cold without suffering, but in a time of very severe frost, his ears may need some attention, as they are the point that is most likely to freeze. Hand rubbing is best to prevent this. The lambs' tails should be docked when they are two weeks old. This may be safely done with a sharp knife, as the lamb is held standing, cutting from the under side upward, at the second joint from the root, the thumb pressing on the upper side. If afraid of cutting the thumb, wrap it with a cloth. Another way is to have an assistant hold the feet of the lamb, with its back against his knees, when the operator, taking the tail in one hand, cuts downward with the knife in the other. Lambs docked at two weeks of age seldom suffer from loss of blood, but at an older age are more liable to. If one is observed bleeding for more than half an hour, a soft cord tied moderately tightly around the stump will generally stop it; the cord should be cut off next day. If the ram lambs are not to be kept for breeding purposes they should be castrated at the same time as docking, or, rather, immediately

before. If one has had no experience in this operation, and is nervous about undertaking it in the professional way, let him try the American rancher's plan on one of least value, a few days before the general; that is, clipping off with the shears the whole scrotum, with its contents, not too close to the body. This should be done when the lambs are quite young, not more than a week. A touch with a solution of carbolic acid would ensure against germ infection. The professional plan is to cut off the point of the scrotum, and with a pair of forceps draw the testicles, one at a time, casings and all, pressing meantime with the finger and thumb of the left hand upon the body. The English shepherds draw them with their teeth, and make sure and safe work. An enclosure for the lambs should be provided when they are two or three weeks old, where they can be fed separately from the ewes, which is almost a necessity if they are to do their best. A "creep" must be arranged through which the lambs can pass and the ewes cannot. Place some straw on the sunny side of the pen, on which the lambs can lie and bask, for they love the sunshine, and it is good for them.

A Condiment for Pigs.

During the long days of winter when pigs, especially brood sows, are debarred from getting earthy or mineral matter to chew, it becomes of importance to the hog-raiser that some substitute be supplied, in order to preserve the health of the pigs and help counteract a tendency in the brood sow to devour her pigs. It is advisable to provide sods for the pigs to work at during the winter, and a supply of a mixture of charcoal, wood ashes and salt should be accessible at all times to the pigs. The U. S. Bureau of Animal Industry recommend the following mixture very highly: Charcoal, sulphur and black antimony, of each one pound, mixed with common salt, baking soda, sulphate of soda, hyposulphite of soda, of each two pounds. If given in the feed, one teaspoonful is allowed daily to each hog.

FARM.

Methods of Cultivation for Spring Grains.

In preparing the ground for the seed in the spring, very much must depend upon what has been done in the fall. A few years ago we had some very fine weather late in the fall and we got all our plowing finished, and one small field that had been plowed early began to get green, so I went in with the spring-tooth cultivator and the ground was in just such condition that it worked very nicely. In the spring we cultivated again, and I never saw ground work up to better advantage. I sowed oats and seeded down with clover and timothy; and grain and grass did well right along through the season. I believe it is a good plan to cultivate in the fall, when the ground is in suitable condition, but it all depends on that. Last spring, all our ground had been plowed the previous fall, and when the ground got dry enough we cultivated with the spring-tooth cultivator and then put the spring teeth on our grain drill and broadcasted the seed, going the cross way that we went with the cultivator, and then harrowed once, and this treatment made a splendid job, and the grain and grass seed both did well. Wet weather set in before we had time to roll, and no rolling was done, but we had a good crop of grain and a good catch of grass. We did not get our corn ground plowed last fall, and now propose to try cultivating both ways instead of plowing, if we can get the ground in suitable condition, but so much depends upon that that we may have to plow if the ground is either too wet or too dry. The ground that we plowed last fall we intend to cultivate and then broadcast with the spring teeth the cross way of the first operation. If it can be avoided, it is better not to plow ordinary soils intended for



A PRAIRIE SCHOONER.

Of Interest to Canadians.

As mentioned in the report of the International Show appearing in our Christmas issue, the bacon hog is invading Iowa. The packing house is located at Ottumwa, in that State. The following query appearing in the columns of a valued American contemporary throws a little more light on the matter:

"BACON HOGS.

"A southern Iowa correspondent writes: "A packing house has shipped in two or three carloads of Yorkshire bacon hogs and is scattering them over its territory at about \$30 each, trying to induce farmers to grow bacon hogs to supply the English trade. They propose to pay 25 cents more per hundred than they pay for lard hogs. Please tell us if this is a good investment. Will the bacon hog be a bacon hog in the corn belt when stuffed on corn?"

Last summer a Minnesota firm made a large importation of bacon hogs from Manitoba. If the type of hogs grown in Canada do no more for the swine of our American cousins than increase their prolificacy, they will be well repaid for their investment.

spring grain. We think spring grain should not be put in too deeply—just nicely covered. If the ground is rich and in good heart, it will require less seed than when in poorer condition. Peas have been such a failure in our county on account of the bug and mildew, that we did not sow any last season. I was thinking of trying a small field with those so-called bug-proof peas, as an experiment. Now that we cannot buy corn to feed at a profit, we miss the peas much more when we come to finish off the pigs. We have found the Banner oats a very reliable variety to sow, generally yielding about 50 bushels per acre and sometimes more. Barley does fairly well here on loamy soils. Some farmers raise good crops of the beardless barley. In former years we used to raise good crops of black barley and it made a good crop when we could get it ground, but the grain was so hard that no one cared to grind it for us. It was really harder to grind than peas. Spring wheat has not been a popular crop here for quite a number of years; has not done well. Some have been trying the Goose wheat, with only indifferent success. Oats and barley are really our staples. Oats should be got in just as early as the ground can be worked.

Early Co., Ont. DAVID LAWRENCE.

Securing a Catch of Clover.

Given the proper conditions, a well-developed clover seed should invariably sprout and grow into a healthy, thrifty plant.

What, then, are the necessary conditions? We need not consider the question of heat, as our climate furnishes that in sufficient amount. First, then, I would say a sufficient and continuous supply of moisture; second, a suitable soil; and, third, room for its proper development.

How can we the more nearly meet these conditions? It is easy to see that the first condition is the one that is hardest to fulfil. As we in Ontario are not dependent on irrigation for the needed moisture, but on the passing showers, it often happens that a good rain is followed by a long drought, which dries up and bakes the ground on the surface, which means death to the young clover plant if its roots have not reached a sufficient depth. The first and most important thing is to give it a good start. And in order to do that we need to make the ground as fine as possible, sow early, at the rate of about eight pounds per acre, and cover evenly to a sufficient depth to sprout the seed. By thus giving it a good early start, the young clover plant, with its tiny, tender rootlets, can take advantage of the moist soil and cool weather of early spring. In seeding down with fall wheat, a good plan is to sow the seed on the frozen ground towards the end of March. If the frost were once out, it would be safer to wait until the ground was firm and cover the seed by harrowing. In seeding down with spring grain, the ground should be made as fine as possible, and by sowing the seed on rolled ground and harrowing it in it can be covered more evenly than if done with the roller on a harrowed surface. A plentiful supply of vegetable mould or humus in the soil will keep the land from drying out and baking, and a simple way to get this very desirable ingredient is to plow down a clover or timothy sod every three or four years.

Second: A suitable soil.—The most suitable soil is one that is clean, dry, and rich. If it is clean, the young clover will not get smothered out with foul weeds. If dry or well drained, the clover will neither get drowned out after a heavy rain nor baked out after a dry spell. If the soil be rich, the clover will get the nourishment needed to give it a quick, strong, vigorous growth in early spring.

Third: Sufficient room for its proper development.—This is especially needed in the case of worn-out soils. It occasionally happens that the clover, after it has come up all right and made a good start, is killed by being robbed of its needed moisture and nutriment by a thick, heavy crop of wheat or oats, should we have several weeks of dry, hot weather towards the end of June and beginning of July. The clover would have a better chance if the nurse crop, so called, were sown thinly. It would have a still better chance if it were sown alone, and if the ground were very poor it might be wise to adopt that plan. But as that would mean the loss of a crop, the almost universal custom is to seed down with grain. And other conditions being favorable, it may be done with a tolerable certainty of success if the crop be not sown too thickly. Two bushels per acre would be plenty to sow of either oats or barley.

Middlesex Co., Ont.

ADAM BATY.

Agriculture Aided by Her Handmaid, Science.

Dr. Hopkins, Agronomist at the Illinois College of Agriculture, has been able to demonstrate to the farmer the practical relation of science to agriculture, and also that the agricultural college is a dividend-paying institution, looking at it from the viewpoint of an investment. The *Drover's Journal* states that corn breeding has grown to be a distinct industry in the corn belt, from the stimulus of an idea originated by Dr. Hopkins, and that the results of such breeding has been to increase the income to agriculturists in the corn section \$300,000 a year. The Illinois Agronomist bred corn by analysis. He found that the manufacturers of glucose, starch and alcohol wanted more of the carbohydrate constituent in corn, while the feeder (especially the swine-grower) needed less carbohydrates (fat-formers) and more protein (flesh-former) in the corn. Taking the market demands as his guiding star, the Doctor set to work to meet it as follows: He made analyses of samples from a large number of ears, selecting for seed those ears containing the highest percentage of the desired constituent, and planted in an isolated field, to avoid cross-pollination by other corn, even of the same variety. From the crop obtained, a large number of ears are selected and samples of each ear are analyzed, seed being taken, as before, from the ears which are found to contain the highest percentage of the constituent which it is desired to increase. This process is repeated each year.

Starting with the Boone County White variety in 1896, the average per cent. of protein was 10.92. In five years Dr. Hopkins produced two crops with a difference in protein of 0.15 per cent., the highest being 16.11, the lowest 6.66 per cent.

Lucerne or Alfalfa Highly Commended.

There are probably very good reasons why lucerne should be attracting attention and gaining in popularity at present. Not the least of these is the fact that in spite of very dry seasons it will grow and produce a splendid crop of valuable fodder or pasture.

Lucerne is frequently spoken of as a comparatively new plant, while, as a matter of fact, it is very old, having been cultivated by the Greeks, Romans and Egyptians long before the Christian era. Later it was introduced into South America, and from there into New Mexico and the Southern States, and from the Western States into Canada, where it has come to stay.

We have grown lucerne more or less for fourteen or fifteen years, and the more we grow it the better we like it. We follow a hoed crop, using barley or oats as a nurse crop. We sow 20 pounds of good seed per acre, and always sow before the drill, thereby giving it as deep a covering as possible. Too much care cannot be taken in the preparation of the seed-bed, and 20 pounds is little enough to sow; some use more. The nurse-crop is frequently made light. At harvest the young plant is usually 16 to 20 inches high. As the first spring is the critical period of its history, it is safer not to pasture after harvest, but leave the stubble and the young clover to form a mulch to protect the roots from the spring frosts. The next season, though it may not look very thick at first, two or three crops of hay or fodder can be taken off and the stand will become thicker with each successive cutting. In 1900, Robt. Harcourt, B. S. A., Assistant Chemist at the O. A. C. (now Prof. of Chemistry), issued a bulletin (No. 111) on the composition and digestibility of lucerne. His experiments proved that to obtain the greatest proportion of digestible matter it should be cut when not more than one-third in blossom.

As a rule, we endeavor not to leave any in the swath over night. Start the mower when the dew is off in the morning, rake it early after noon, and before night put into small coils. One can easily lose over half the crop by allowing it to remain in the swath till it becomes dry. Rake when it is still tough and put in coil. Cure in the coil, allowing it to remain three days, or perhaps longer, depending on the weather. Hay cut at this stage and cured after this manner makes an exceedingly palatable and nutritious ration. All stock like it, from hens to horses, and will fatten upon it. Chemists claim it has as much feeding value as bran, ton for ton. Those who have fed it extensively say it is as good as timothy hay and oats for working horses. It makes an excellent pasture for all kinds of stock, especially hogs, but there is a danger of pasturing too close, thereby killing it; but it is as a fodder crop that lucerne excels. It can be cut early in May, and repeatedly cut every five or six weeks throughout the season. An acre of it will often produce more given fodder than an acre of corn, and it is more economical to feed as a soiling crop to milch cows than to allow them to run on a bare pasture, throughout the dry and hot months especially. It gives excellent results in the milk pail.

Lucerne is prominently a dry-weather plant. It does not burn out when young, like the red clover, and no season is so dry that it will not grow. Its roots go down to permanent moisture and pump what it requires from the subsoil, and it has the ability to gather from the atmosphere a great deal of moisture, as well as nitrogen, which it stores up in its roots for future use. It is, therefore, not an uncommon sight to see a field of red clover or timothy is burned almost to the ground.

Though some claim that it will grow on any kind of soil short of bare rock, the nature of the plant is not adapted to soils of a hard pan, or cold, wet subsoil, nor is it naturally fitted for a short rotation, but I do think that since we have to combat these dry, hot seasons, a farmer would do well to have at least one or two fields seeded to lucerne as a supplement to the pasture and a guarantee of a certain amount of very valuable fodder in the shape of hay for winter feeding.

Huron Co.

F. C. ELFORD.

An advertiser of Jersey cattle in the *Farmers' Advocate* desires us to remind enquirers that in writing for prices and other information, it is important that the writer sign his name to his letter and state his post-office address if he hopes for a reply. Our correspondent states that he has had two unsigned letters of enquiry for stock in the last few months, and probably the writers have written him down as an indifferent business man, but how can a man reply in such a case? The name and address should not only be given, but should be written plainly, as these are not easy to guess, and it is a fact that the signature is often the most carelessly written part of the letter.

Cedar Block Basement Walls.

I notice in Feb. 1st number an enquiry about cedar-block walls for barn foundation, and if you receive nothing better, you can send him my opinion. I have a foundation, 50x75, built of cedar blocks, with stone in the bottom one or two feet deep to keep dampness from blocks. If manure was to be thrown out so as to be against foundation, I would put stone up that height. I have been using my stable for five years, and am well pleased with it. I believe it makes a drier, healthier stable than either stone or concrete, as it never sweats, nor does it be covered with frost. I have one wall built half way up with stone, and in cold weather the stone will be coated with frost quite deeply, while the cedar is dry. I was rather disappointed the second winter when I found the blocks had dried a little from the mortar, letting in air in windy weather, but I found a coat of thick whitewash applied closed this up, making a good job. My foundation is built of cedar 18 inches long, but 16 would do just as well, and if cut out of sound cedar, any size hollow blocks will do to split and fill in between. The round ones, I believe, will last as long as a cedar block will last if kept dry, if any one knows how long that is. It should be tied with pieces about three feet long at the corners and doors. All frames should have a piece 2x2 or 2x4 nailed on the sides in center of frame, and blocks cut to suit. Some build with mortar at each end of block, leaving a space in center without any. It should be pointed with mortar quite rich, and do not use coarse sand in pointing. This can be built much faster and easier than stone, and for about one half the price, about two or two and a half cents per foot, face measure.

W. J. C.

Simcoe Co., Ont.

Last month we saw a basement wall built of cedar blocks 22 inches long with ordinary mortar of sand and lime, on the farm of Mr. R. Miller, Stouffville, Ont. The wall looked well, was firm and dry, and Mr. Miller expressed himself well pleased with it. It was, of course, on stone foundation to the height of a foot above the ground.—Ed.

A Domestic Science Course.

The management of the Western Dairy School, Strathroy, Ont., secured the services of Mrs. E. M. Torrance, of Chateaugay Basin, Que., to give a course of lectures and practical demonstrations in domestic science for two weeks, Feb. 10th to Feb. 22nd. The enthusiasm manifested by the ladies of the town and surrounding district showed how highly they esteemed the privilege of gaining valuable and practical information along the line of the science of cooking. All classes and all ages were so eager to get as much benefit as possible that they would assemble almost an hour before time to get the best seats. The large lecture room at the school was jammed, the average daily attendance being over 200.

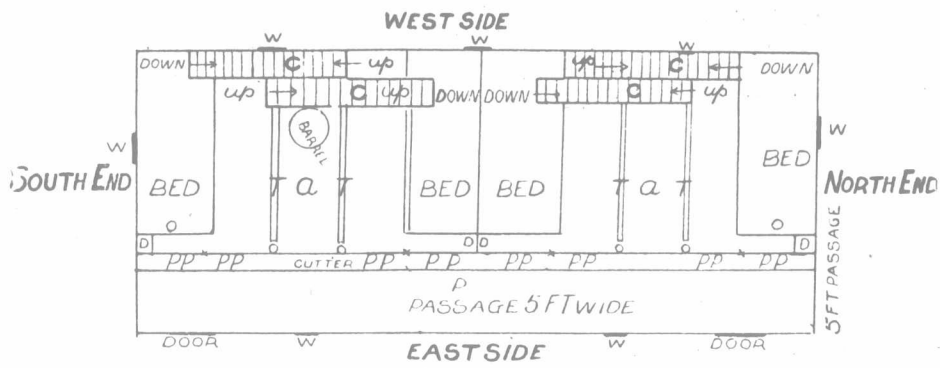
Mrs. Torrance was an excellent teacher, and exceedingly well liked. She confined herself almost exclusively to the preparation of the commonest dishes, among which were the cooking of meats and fish, the boning of fowl, the making of salads, jellies, sauces, custards, and simple cakes, and the cooking of vegetables.

The chemical composition of each food was explained, and the reasons why certain methods of cooking would result in more nourishment being derived from them. But not only was the theory explained, but a practical test was made of the recipes, so that everyone might see just how it was done, and afterwards examine and taste the cooked food. When the cooking was done, all were privileged to question Mrs. Torrance and gain any individual knowledge they might wish. This privilege was highly esteemed and taken advantage of.

When Mrs. E. M. Torrance was leaving, on Saturday, Feb. 22nd, the ladies who had attended the class presented her with an appreciative address and a beautiful "travelling companion" as a token of their esteem.

Paint the Buildings.

In this country, where the sun's rays at times beat down mercilessly and cause timber to shrink and warp, the damage to buildings can be, in a measure, prevented by the use of paint. Nothing adds so much to the appearance of the farmstead as a few coats of paint applied to the buildings and fences, unless it be a nice grove of trees and a fruit garden. During the waiting days of March the mixture could be applied, or else after seeding was through. The following recipe for a paint is cheap and may be applied by any person: Slack $\frac{1}{2}$ bush. fresh lime with boiling water, strain through a fine strainer, and add 1 peck salt (previously dissolved), 3 lbs. ground rice boiled to a thin paste and stirred in boiling hot, 1 lb. Spanish whiting and 1 lb. glue, previously dissolved. Add 5 gallons hot water to the mixture, stir well, and let it stand a few days, covered. It should be put on hot. About a pint, properly applied, will cover a square yard. With lamp-black or venetian red, any dark or reddish shade can be made.



PLAN OF ROBT. NEELY'S PIGPEN WITH OVERHEAD BEDS.

Horizontal Construction Plan.

P, passage; G, gutter; A, feed alley; B, elevated beds (5 x 11 ft.); C, gangway; T, feeding trough; D, small trough; W, window; O, door; PP, double doors.

Horse Stable Changed to a Modern Hog-pen.

Mr. Robert Neely, of Dorchester Township, Middlesex Co., having enlarged his stables and barn, found it necessary to change his horses to another part of the building, and being in need of a hogpen, he "set his brains at work" to transform the old horse stable into a modern ahead-of-date hogpen, and succeeded.

For facility in cleaning out (which one could do and not soil their "Sunday shoes"), convenience in feeding and handling the hogs generally, the writer has seen nothing to excel it. The floor is of Portland cement, with a perfectly smooth surface. The dimensions of house are 20 feet wide by 50 feet long, divided into four pens 10 feet wide by 12 feet long, with an alleyway between each two pens for feeding from, and a passage all along the east side. Between this passage and the pens is a gutter 15 inches wide by 8 inches deep; at one end 4 inches deeper than the other, so that liquid is easily soaked up and handled. As the floor of the pens has a fall of 4 inches in 12 feet (the distance from west side of pen to gutter), all liquid gravitates that way, and with a steel scraper the coarse dropping can all be scraped there in a few minutes by opening the double doors, which swing back across the long passage. Being 5 feet wide, they exactly close off the passage. The pens are cleaned out every day, the manure being wheeled out through the passage in a barrow, put on the manure sleigh with horse and cattle manure at the door and taken to the field. These double doors between passage and pens are fastened on the inside by an iron hook to raised bed, and on the outside, next passage, by a piece of board 1 by 4 inches and 5 feet long, bolted on one door and falling into two curved pieces of iron bolted on the other, holding them securely. Some litter of straw or horse manure thrown in the gutter soaks up all the liquids.

Wherever there was a post required a pin was put in the cement floor until it set, and was then drawn out. Where a post was placed a gudgeon was inserted in the end of post which was put in the hole in the cement, and the post toe-nailed at the top. The doors that swing over the feed troughs are made of two pieces of 2x4-in. scantling, one at top and bottom, with inch lumber well nailed, and swing on a piece of 3/4-in. iron flattened at one end, bolted to under side of top scantling and let into a 3/4-in. auger hole in post at each end. A simple slide in the middle of these doors prevent the pigs from getting at the trough when feeding them.

The troughs, 9 feet long, are at present wood, but will be changed the coming summer to substantial Portland cement ones. In each corner, opposite the feed troughs and next the passage, is a short trough, with chute attached, that comes to a level with swing doors opening into passage. This is for feeding charcoal, sulphur, salt, and also for holding dry chop the last three weeks of finishing hogs for market. Mr. Neely considers it most important to have dry chop always before the pigs during that period.

The raised sleeping beds as arranged in this pen are something entirely new. The beds are supported by 3/4-in. iron rods fastened at top by wood screw into sleeper, and at bottom through a plank with nut and large washer. There are four of these 3/4-in. rods on each side of bed, and four short planks crosswise. On these are laid, lengthwise, 10-in. plank, which make the floor of bed. These beds are 3 ft. 6 ins. above cement floor at front end, and are boarded up all around to ceiling with picket stuff 1x3 ins., with a 2-in. space between. In front of this, next passage, just over the gutter, is a small door entering bed to put in straw for bedding, which they will keep clean for two weeks and over. In this quiet retreat the pigs seem perfectly contented, clean and healthy. The inclined walk to these beds is made very easy by having them cross one in front of the other, so that the pigs from one eat out of the opposite trough, and vice versa.

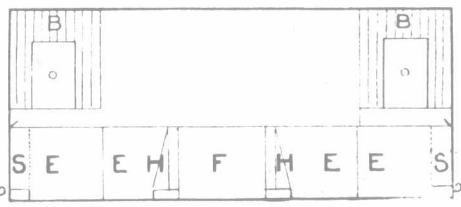
These walks, which are slatted every 8 inches, are 11 feet long by 18 inches wide, and boarded up about 3 feet high with inch lumber, and there was no squealing or crowding, which one generally hears and sees in hogpens.

The posts used were 6 inches square, plank 2 inches, lumber for doors, etc., 1 inch (rough), and scantlings 2x4 inch.

The floor and gutter are of Portland cement concrete—1 part cement to 6 of gravel and sand.

The mason who laid the floor wanted to know of Mr. Neely where to put the hole in gutter to run off the liquid manure, but he was warned that if he made a leak hole in that gutter it would be a "dear job" for him.

The pen is lighted by 6 windows, with 12 8x10 lights in each. Two doors open out to yard on east side and straw-stack at east side, where on sunny days the pigs are allowed a little run for health's sake. The walls of this building are stone, which some would object to, but with the arrangement inside it would seem that Mr. Neely has a first-class pen at the small cost of about \$50. The pen will accommodate 40 hogs. If building again, Mr. Neely would make building 22 feet wide, to allow more trough room.



FRONT OF TWO OF MR. NEELY'S PENS.

Vertical Construction Plan.

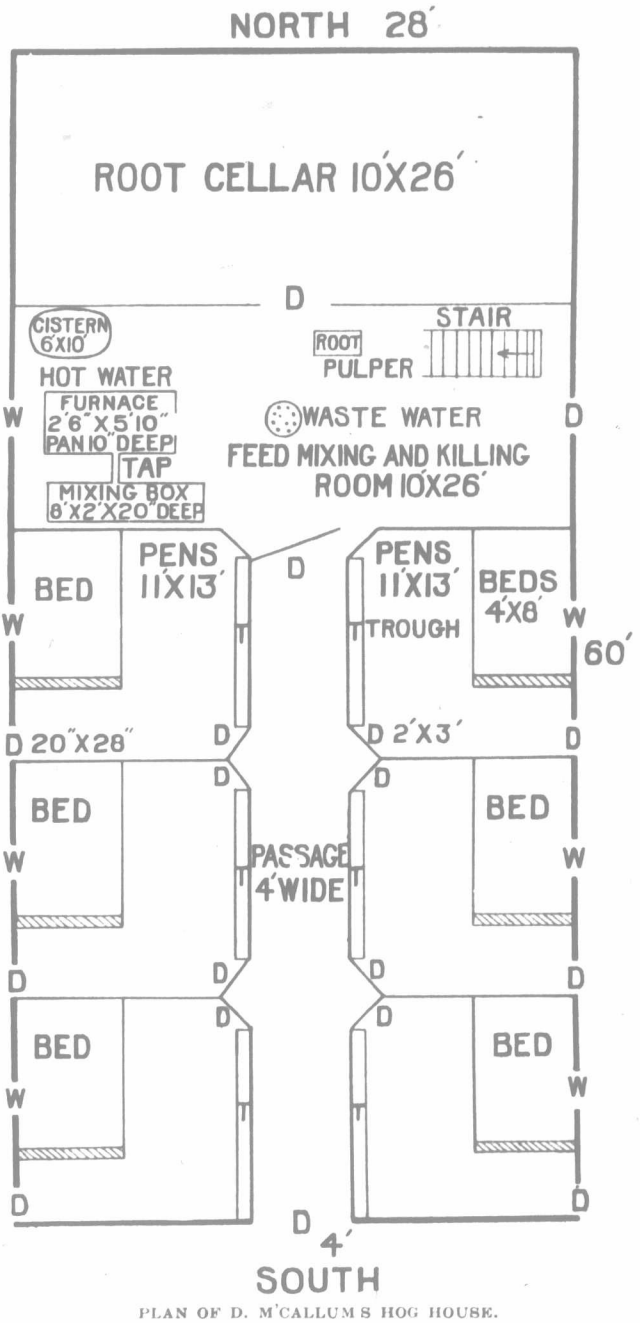
B, elevated bed; O, door; S, chute; E, double doors; F, door into alley; H, swinging door.

In the pen at the time of writer's visit was one extra nice litter of 10 Yorkshire grade pigs with mother worthy of special mention. They were a few days over 8 weeks old, bacon type, and weighed about 60 pounds each. Little pigs run with mothers two months or more before weaning. They are then fed a mixture of oats and barley ground fine, with occasionally some shorts and pulped roots. When young pigs are quite small the sows are fed shorts. Chop and pulped roots are mixed with water or whey in barrel. He finishes his hogs at six months old, weighing from 200 to 210 pounds. The north sleeping pen is used for sows to farrow in. Around the outside, 8 inches from pickets and about 1 foot high, runs a pole about 4 inches in diameter, which saves the young pigs from being crushed; none have been lost in that way. A small door (6x12 in.) between two center pens is used to allow little pigs to leave sow and feed by themselves when they begin to learn to feed. In fattening hogs, Mr. Neely finds it a very great advantage in promoting health and gain to skip a meal (say on Sunday) one day each week. He has practiced fasting hogs that way for five years, and highly recommends it. He never has a crippled hog.

A Modern Pen for 50 Pigs.

In response to requests from several quarters, we publish herewith plans of a very complete pig-house erected last year by Mr. Duncan McCallum, Middlesex County, Ont. The dimensions are 28 x 60 ft., containing six pens 11 x 13 ft., accommodating over 50 pigs; a feed room 10 x 26 ft., and a root cellar 10 x 26 ft., with a second storey for straw and feed. The ceilings are 12 ft. above and 10 ft. below; hip roof. The north end of building runs partly into a bank, so that through the upper end door roots can be thrown into cellar conveniently. The south section, 20 x 28 ft., of the upper storey is used for bedding straw; a space 10 x 28 ft. for clover, to be cut and mixed with feed; and the balance, 30x28 ft., for chop, corn, etc. In the ceilings above pens and hot-water boiler, are five ventilator openings, 3x3 ft. These extend upward in second storey, closely boarded with inch lumber, diminishing in size till at a point 4 ft. above the floor they are 10 inches square. Then they run upward, slanting together and extending upward to peak of roof, entering galvanized-iron ventilators 3 ft. high, with a fan that turns freely so as to catch the wind from whatever point it blows. The opening is protected by a wire screen to keep out the birds. There is a steel shut-off in vent up-stairs, to be closed on very cold nights. In the side of the ventilator, above the floor, is a door, hinged at top, so that the bedding can be freely pushed through it into the pens below. The long rafters are 2 ft. over 1/2 pitch, and the short top rafters are 1-3 pitch. There are two windows (20 x 30 in.) at south end, up-stairs. The ceiling is one-inch matched lumber. There is a door 4 ft. 6 in. wide in south end, up-stairs, between the two windows for taking in straw and clover, and another, 4 ft.

6 in. wide, at north end to take in the roots. The diagram shows clearly how the house is laid-out below. From the cistern (6 ft. wide by 10 ft. deep) water is obtained for the heating pan, which is 10 inches deep, set on a brick arch 2 ft. thick, 2 ft. 6 in. wide by 5 ft. 10 in. long. Between that and the pens is the food-mixing box (wood), 8 ft. x 2 ft. x 20 in. deep. Two plans of preparing food were tried this winter: First, the pulped roots and meal were first put in the mixing box and then the hot-water tap from heater turned on, the water running into a galvanized-iron distributor the full length of the box. The upper part of one side of the distributor is perforated so that the hot water runs out evenly over the whole mass, which soaks 24 hours before being fed. Mr. McCallum did not consider that the raw pulped roots were eaten freely enough, so another plan was tried, viz., boiling the pulped roots separate till quite soft and then putting a layer of them 4 inches deep in the bottom of the box. On this he put about 3 or 4 inches of finely-ground chop (raw); then another layer of boiled roots, then chop, and so on till there was enough to feed the hogs on hand for a couple of days. Sufficient hot water was added to soak the chop well. The chop consisted of 1 part ground wheat to 3 parts of barley and oats, mixed half and half. On this food the pigs did far better than on the raw-root mixture; in fact, he never tried a food on which pigs thrived and gained so well. The mixing box should be thoroughly cleaned out every second day. The feed troughs have Portland cement bottoms with 2-inch blue oak sides, 9 inches wide at top, 6 inches at bottom, and 6 inches deep. Seven 3/4-inch rods bolt the back and front of each trough together, and also prevent the pigs from crowding along the troughs when feeding. An inch board 8 inches wide slants upward from trough next feed alley as a receiving board, and is very convenient in feeding. The feed is emptied in between this board and swinging front, and when the latter is pushed back the food falls into the trough. The partitions between pens are three feet high, and the front of pens swing back over trough, as stated. There is a 4-inch fall in each pen floor to the door (20 x 28 in.) opening into yard, through which the manure is cleaned. The pig beds are 4 x 8 ft. and 8 in. high, of plank resting on gravel. The remainder of the floor is cement, 4 in. thick. The lower portion was 1 part cement to 5 of gravel, and the finishing coat 1 to 3, the walls being 1 part cement to 6 of gravel. The sleeping-bed of the breeding pens on west side are being arranged to lift up so that there is a projecting apron to



PLAN OF D. McCALLUM'S HOG HOUSE.

prevent the sows from crushing their young. The doors next feed alley are arranged so as to fold together, letting the pigs move from one pen to another or from pens into alley. The root-house walls are of Queenston cement concrete, 10 ft. high and 12 in. thick. The remainder of the walls are 3 ft. high and 10 in. thick, cement concrete; above that double-boarded, with felt paper between, the inside being hemlock lumber and the outside V siding. There are three windows on each side, one to each pen, each having 9 lights 8 x 10 in. At west side of feed room there is a 4-light window 20 x 30 in. In the east side of feed room is space for slaughtering pigs. There is an overflow pipe from cistern southward under floor, into which a waste-water pipe runs, so that all wet at killing time is drained away. The cistern is filled from roof, water being collected in galvanized-iron eavestrough. Dressed lumber was used for the exterior and the building is nicely painted. The hogs are usually sold alive for the bacon trade and have for years proved a very profitable branch of the operations upon this farm.

A Satisfactory Piggery.

It is one thing to build a piggery, and another to find it quite satisfactory after several years' test. A good many know by experience that their ideals regarding buildings of this sort frequently fall short when put into practice. In view of what our correspondent says about his piggery and hennery after three years' use, no apology is needed for reproducing the original description and illustrations.

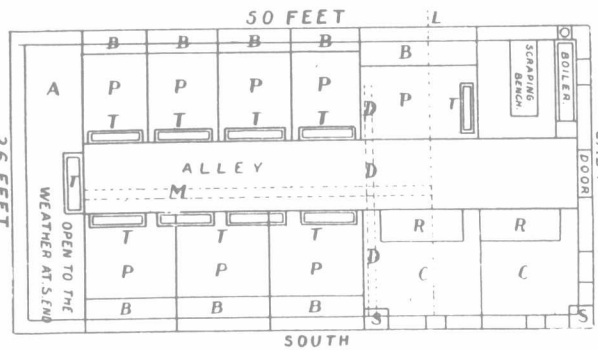


FIG. I.—GROUND-FLOOR PLAN OF F. J. COLLYER'S PIGGERY AND HENNERY.
A, pen for brood sows; B, raised beds for pigs; C, poultry pens; D, drain; M, plank above alley for bedding from above; P, pens; T, troughs; S, dust baths; R, roots on raised platform, with nests below.

The foundations are of stone, 18 inches wide, and come about six inches above the level of the ground. The walls are of 9-16 spruce on 2x4 studs two feet apart. Then tar paper and good quality drop siding, roof tar papered over sheeting, and best quality shingles. The floors are of cement, with fall towards center of each pen, and also towards drain, which passes under alley and through hennery to outlet on S. side. A 12-inch plank covers same in alley and hennery. The boiler (a "Waterloo," 90 gal.) is let down so that top is level with scraping bench, and that portion of floor also falls towards drain. The troughs are of cement, and bed places are raised, resting on top of stone foundation, and being sup-

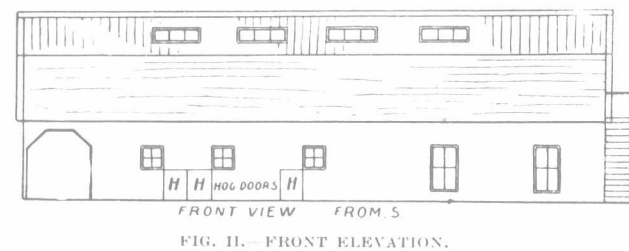
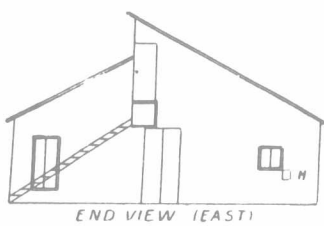


FIG. II.—FRONT ELEVATION.

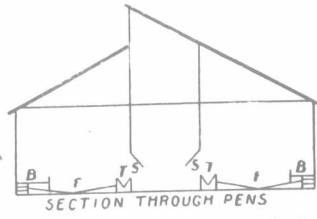
ported at other side by a wide board, the upper edge of which, coming above the bed platform, holds the straw in place; the doors of pens swing inward sufficiently to keep pigs out of trough when feeding, and outward to let pigs in and out. The raised floor under henroosts is cleaned, and eggs removed from alleyway, there being hinged doors in partition.

Owing to the cement coming so late, nearly middle of October, some of the troughs and a little of the floor got frozen, and will need replacing next year. Would recommend anyone using cement to have it all laid by Oct. 1 in this part of the country, as I had an immense amount of trouble with mine, keeping on fires, etc.

The straw is put into loft above A in Fig. I., and then thrown into the beds from plank M, which avoids all litter in the alley.



The building is lofted at each end, 6 feet at west end for bedding (which lasts a long time, as beds are dry), and 14 feet at east end for feed. The center 30 feet is open to the roof, and the plank M, 10 inches wide, runs from the door in the straw loft across the tie beams (which are six feet apart, which are laid on top of the plates, consequently the plank is about eight feet from the floor of alley.



S, swing doors; B, raised beds; T, troughs; F, slope of floor to center of pens, 1/4 inches.

Each loft is partitioned off from center space, with a door into straw loft, but not into feed loft, which is entered from outside, and grain delivered below by spouts. The "hennery" is boarded up about three feet six inches, with wire netting above that. The windows in hennery are double storm sash, the rest being single, those above being hinged at the bottom, opening inward, and one is frequently open. We cook feed about three times a week, feeding dry chop at other times, and except in the coldest weather the water does not freeze in the troughs. There are but 20 pigs in the building; with 10 more I think it would not freeze at all. Except for cooking feed (a boiler full keeping warm and being sufficient for more than a day's feed), we never light the fire.

The building is very comfortable, and the pigs invariably use the bed-places. It is also well lighted; in fact, as well as the average dwelling house.

F. J. COLLYER.

Under date of Feb. 3rd, 1902, Mr. Collyer writes:

Regarding the hogpen I built after receiving, through the columns of the "Advocate," several suggestions, and which was in turn described and illustrated in your issue of March 15th, 1899, I may say that as a whole, after three seasons' use of same, I am well pleased with it.

Among its strong features are the cement floors and troughs, which, I think, cannot be equalled for hogs, and I may add that the latter should not be more than three or four inches deep, and the side on which the pigs feed quite shelving. The raised bed-places also are very satisfactory, but I fancy that overhead sleeping quarters would be even better, if fitted with an adjustable gate, allowing the pigs but bare room to lie down, as with more room than is needed some pigs are not so clean as they might be. With such sleeping accommodation the capacity of each pen would be largely increased, and a smaller building would consequently be needed, which could be made very warm by lining with one ply of matched lumber (free of knot holes), all cracks in which would be closed in cold weather by frost.

The hennery portion of the building is quite a success, having plenty of light (as, in fact, has the whole building), with, we consider, sufficient floor space for about fifty hens. That it is healthy may be judged from the fact that we have not lost more than one or two hens in any winter, and old age was usually the cause.

There is a yard of about 3 1/2 acres in connection, enclosed with 24-inch 7-wire Page fence, with two strands of barbed wire above to keep out cattle, which makes a splendid fence for anything but large boars. Of this enclosure a good share is plowed each spring and sown with oats, rape, etc., which provides most of the feed for the summer.

At the present time I have pure Berkshires only, and sell most of the young stock for breeding purposes, and have occasionally taken a second litter in the season, but as far as my experience goes, the fall litter is not much of a success in this climate, as the pigs do not usually arrive in time to get growth and exercise enough before cold weather sets in, and they do not seem as lengthy as those of the spring litters.

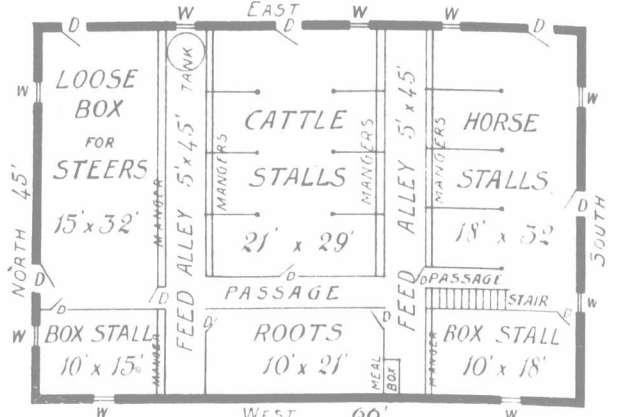
The boiler we find a great convenience for scalding, as it will take any size hog; also for boiling seeds, which it would be impossible to safely feed in any other way; and which, mixed with chop, are readily eaten.

Eastern Assa. F. J. COLLYER.

Running Saw with Windmill.

I want to run a 22-inch wood saw, about 100 feet from the barn, with a windmill. What is the best way to do it?
ARTHUR LAPP.
Victoria Co., Ont.

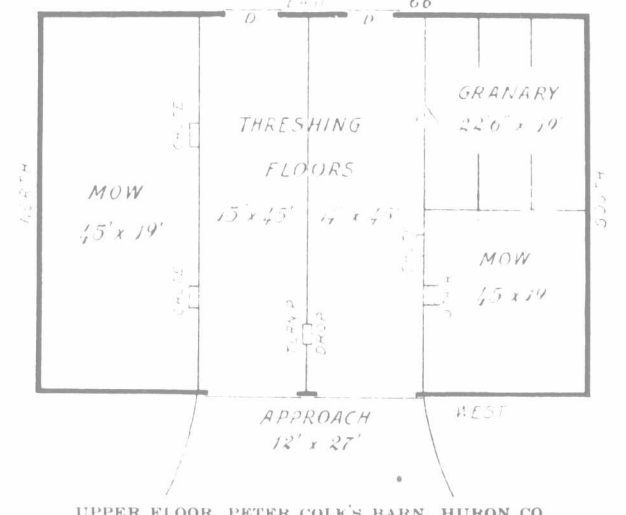
Ans.—Probably your best plan will be to use say a 17-inch wooden pulley with deep groove at foot-gear of mill and an 8- or 10-inch groove pulley at the saw and run with a 3/4- or 1-inch rope similar to that used for horse fork. Your foot-gear is likely high enough so that the slack in rope will not be troublesome. Tarring the rope occasionally might give it a closer grip on pulleys.



BASMENT PLAN OF PETER COLE'S BARN, 45 X 66 FEET. BUILT IN HURON CO., BY MR. MAT. MAINE.

Peter Cole's Barn Plan.

Enclosed find plan of my barn for publication. The barn is 45x66, with 21-foot posts. The cow stable stalls are nearly 8 feet wide, and horse stalls 5 feet wide, with cement floors. The doors A and B are double, while the rest are 4 1/2 feet. The windows are 3 feet by 5 feet.
Huron Co., Ont. PETER COLE.



UPPER FLOOR, PETER COLE'S BARN, HURON CO.

DAIRY.

Prevention of Milk Fever.

To the Editor "Farmer's Advocate":
The last case of milk fever we had was in 1895. The veterinary said: "It is your own fault having these cases; you feed too highly near calving." I did not feel flattered that by either ignorance or stupidity I had lost the cow, so concluded that we would not lose another from the same cause. Since that, when we start to dry a cow we always reduce the grain ration, and in some cases feed no grain for a week or ten days before calving. In about three or four days after the cow comes in, increase the grain feed gradually as long as she increases her milk flow. Another thing we think very important is to milk the cow out dry when you have her nearly dry. Leave her for six or eight days, then go and strip her out dry. This treatment we have found equally good to prevent garget. Of retention of membranes, we have only had one case in ten years, and that was when the cow was on grass. We feed a large amount of wheat to our cows—whether that is the reason or not, we have no trouble from it. I never saw but one case of inversion of the uterus, that was forty or more years since. We have had from fifteen to twenty-five cows freshening each year since '95, and have not had a cow lose a teat or one get off her feet with milk fever, although two cows that we sold since that have died of milk fever. We think the vet. was not far wrong in his statement.
Peel Co., Ont. H. C. CLARRIDGE.

Travelling Instructors Needed.

At the close of the regular business of the annual meeting of the Gladstone cheese factory, a short address was given by Mr. W. Thompson, of the "Farmer's Advocate," on the present condition and needs of the cheese industry, a subject referred to at length elsewhere in this issue, editorially, and in a letter by Mr. Stonehouse. The patrons subsequently unanimously adopted a resolution asking the Western Ontario Dairymen's Association to prosecute the work of factory inspection and instruction for makers and patrons more thoroughly and systematically in future than had been done in the past, and the Provincial Government was urged to provide the Association with the necessary funds for that purpose.

Treatment of Cows at Calving.

To the Editor "Farmer's Advocate":

Our treatment for the troubles accompanying the "coming-in" period of the cows in our herd is almost entirely preventive. When our cows are near calving, we do all we can to avoid excitement and prevent a rise in temperature of blood. Reduce quantity of concentrated food or such as produces fat, and at the same time remember that too much bulky food should not be given at that time. As soon as a cow has calved, we like to give a pound of Epsom salts, which helps to cool the blood and assists the expulsion of the after-birth, as well as regulating the digestion, removing fever, etc., and greatly lessens the chances of milk fever. The retention of the membranes is frequently caused by some undue excitement. Gentle treatment and good wholesome food leave very little else to be done. In extreme cases, we milk before parturition, but whenever possible allow the calf to draw the first milk. The calf needs it and does better with it. If necessary, we gently remove the placenta with the hand, loosening whenever attached, without pulling. For garget, we bathe well with very hot water, and then apply white liniment. It is a very bad case of garget that cannot be removed in that way with plenty of rubbing. A. W. SMITH.
Middlesex Co., Ont.

Travelled Cows.

When the "Ophir" set out upon her memorable voyage in March last, conveying the Royal visitors to the Colonies, she carried with her two half-bred Jersey cows. These admirable animals continued to give an abundant supply of most excellent milk until the vessel was within a day or two of Portsmouth, when it began to get a little thin. When one considers the extraordinary variations of climate through which these cows have passed, their performance is seen to be really remarkable, and our readers, says the Globe, will probably be glad to hear that, as a reward for their services, they have been sent down to Sandringham, there to pass the remainder of their lives in all the ease and dignity befitting cows who have done their duty.—Mark Lane Express.

Splendid Milk Record of Holstein Herd.

The manager of the Annandale herd of Holsteins, belonging to the estate of the late Mr. E. D. Tillson, Tilsonburg, Ont., reports the following results from the herd in milk production during the past year: "This herd of 65 cows (six of them two-year-old heifers) averaged 9,353 lbs. milk in 12 months. Five of his best cows averaged 13,117 lbs. milk in 11½ months; the best cow in herd has produced 17,731 lbs. milk in 10 months. This showing, we think, is exceptionally good, and this standard has been reached by careful breeding and severe 'weeding' during the past 10 years."

The Holstein-Friesian View.

Mr. F. L. Houghton, Secretary American Holstein-Friesian Association, sends us the following summing up of the final figures of the records of the ten breeds of cows, each represented by five animals, in the six-months test at the Pan-American, showing yields and profits in the four points on which prizes were given, net profit in butter-fat, in churned butter, in total solids, and in total solids plus gain in live weight:

BREED.	Lbs. milk.	Per cent. fat.	Lbs. fat.	Estimated but-ter lbs.	Value but-ter.	Churned but-ter lbs.	Value.	Per cent. total solids.	Lbs. total solids.	Value total solids.	Gain in live weight lbs.	Cost feed.	Profit on ad-justed but-ter.	Profit on total solids.	Profit on total solids plus gain in live weight.	
Holstein	39260.2	3.25	1275.8	1501.0	375.25	1430.3	357.57	12.4	4742.6	426.80	391	164.66	211.64	192.88	262.64	274.37
Ayrshire	32998.2	3.69	1219.4	1434.7	358.67	1415.6	353.90	12.6	4185.3	376.68	220	140.98	217.70	212.92	235.70	242.50
Shorthorn	31885.6	3.57	1138.8	1339.6	334.90	1307.5	326.89	12.8	4086.6	367.79	802	162.12	2.81	164.86	196.79	220.85
Brown Swiss	30892.6	3.63	1123.1	1321.35	330.34	1296.4	324.10	12.7	3943.8	354.93	198	147.26	183.68	176.81	207.67	213.61
Red Polled	28694.9	3.98	1141.81	1343.3	335.85	1319.45	329.86	13.1	3773.7	339.64	319	138.03	197.82	191.83	201.61	212.68
Guernsey	27127.6	4.60	1248.1	1468.3	367.10	1429.4	357.36	13.9	3775.0	339.75	195	136.99	230.11	220.37	202.89	207.65
Jersey	26987.1	4.58	1234.9	1453.0	363.25	1409.1	352.28	13.6	3770.1	339.30	189	137.74	225.54	214.54	201.56	207.23
French Canadian	24664.7	3.99	984.1	1157.7	289.45	1179.6	294.91	13.3	3287.3	295.85	288	113.10	176.35	181.81	182.75	191.39
Dutch Belted	24893.5	3.4	847.5	997.0	249.25	977.1	244.27	12.3	3666.4	275.97	376	132.32	116.89	111.91	143.61	154.89
Polled Jersey	20328.8	4.66	948.31	1115.6	278.90	1080.25	270.66	13.9	2831.7	254.84	275	109.47	169.61	160.59	145.43	153.68

- The Holstein-Friesian cows made 6,262 lbs. more milk than their nearest competitors.
- The Holstein-Friesian cows made 33 lbs. more of butter and \$8.15 worth more than their nearest competitors.
- The Holstein-Friesian cows made \$54.97 more profit on total solids than their nearest competitors.
- The Holstein-Friesian cows made a greater gain in live weight than any of their competitors among the dairy breeds, and were exceeded only by Shorthorns.
- The Holstein-Friesians made \$32.07 worth more profit on total solids, plus gain in weight, than their nearest competitors.

These results were gained at an expenditure of \$2.57 more for feed than the next largest consumer. Does this demonstrate anything but the truth of what the late Col. H. C. Hoffman said 25 years ago: "The Holsteins will make more milk per cow, more milk and beef, more milk and butter per cow and more of each for the worth of the feed than any breed or mixture of breeds known to America."

Where We Are At in the Dairy Business.

A STRONG PLEA FOR BETTER MILK.

To the Editor "Farmer's Advocate":

Sir,—Notwithstanding the fact that Ontario has spent thousands of dollars annually for the last fifteen years or more in various methods of instruction along dairy lines, we are to-day face to face with the fact that the quality of our cheese is not satisfying the demands of the British market. During the past season, complaints have come thick and fast from the British dealers who are handling Canadian cheese, and it is evident to those who are in a position to know, that unless there is an improvement in the quality of our goods, we are soon going to lose some of the trade which we have so long held against all competition.

It may be possible that the taste of the British people is becoming more critical and exacting, as is always the case where the taste is pampered and catered to. Every dairy country in the world is doing its level best to send its finest goods to the British market, and that market has the world to choose from, and if we are going to hold our ground we cannot rest on our oars and point to the laurels already won as an excuse for lethargy on our part. Take the case of the United States, for example, to show the mighty efforts which are being put forth to get a share of the British trade. It is no secret that the exporters of dairy products from the U. S. had the door of the British market shut in their faces a decade or so ago on account of their folly in trying the smart game of foisting upon the British consumer a spurious article under the name of cheese. They have repented of their folly long ago, and are now determined that they will try to establish a reputation founded on honest and upright dealing, as evidenced by the announcement of the Secretary of Agriculture in the U. S. Crop Reporter for Jan., 1902. The extracts in this announcement go to show that the U. S. Government is taking up the matter in earnest, and is willing to help all honest producers by placing the Government stamp and certificate upon honest goods, providing that such dairy products and the packages in which they are forwarded are of a quality to bring credit to the country from which they are exported.

Are all our exported dairy products a credit to our country? It would seem that they are not, and if not, why are they not? Our methods of ripening our cheese may be at fault, but not more faulty than they have been in past years.

Our cold-storage facilities, both on land and on sea, are surely better than they were a decade ago, so where does the trouble lie? The indications would point to the British dealer as a more critical buyer, and our improvements have not kept pace with his demands for an improved quality of cheese.

Twenty years ago Canada was exporting large quantities of dairy butter to Great Britain, which satisfied their demands simply because it was as good as they could get from any other part of the world, but as soon as they got a taste of "separator" butter from the now famous dairy countries of Europe, they promptly turned their backs upon our "dairy" butter, and we had to keep it at home and use it up the best way we could.

However, as soon as we adopted the co-operative system of manufacturing and of taking the cream from the milk by the centrifugal method, we have again got a strong foothold in that market for a medium grade of butter, and the volume of trade in that line is very rapidly increasing. I say a medium grade of butter, for I believe that the bulk of our butter is not of the finest quality even when it leaves the creamery. It is true that our butter is giving fairly good satis-

faction, but a great deal of it lacks that fine quality which it is possible to get from good milk.

Many of our factories are faulty in their sanitary surroundings, it is true, and many of our makers are not as careful and as cleanly as they should be. Our curing rooms and cold storages may be at fault, but no cold storage or curing room is going to turn out fine goods if they were not fine when they went in, and without good milk it is impossible for any maker to turn out the finest product.

That every factory or creamery receives more or less good milk is readily conceded, but is there a butter or cheese factory in Canada to-day which does not get more or less milk which is not as good in quality as when it was drawn from the cow? And is it not this poor milk which is keeping down the quality of our dairy products more than any other factor? Where the milk is drawn from the cow in a cleanly manner, in clean surroundings and a pure atmosphere, where it is carefully strained, aerated and cooled, it will usually reach the factory in a condition fit to make the finest goods. This all seems easy enough to be done, but I doubt if there is fifty per cent. of the milk sent off our farms to-day which is treated in this way. There is not an article of food coming from the farm which is as susceptible to taints and odors as milk, and none that is more abused or carelessly handled. Would we tolerate for one moment to have our drinking water go through such a process of handling as does our milk? And yet we allow the milk to become contaminated with filth of different kinds without a thought of the consequences. Our farmers have got to wake up to a realization of the fact that a great deal of the milk sent to our factories does not reach there in as good condition as it ought to be, if we are going to make anything more than a medium class of goods. We may bring the rod down right and left on our factorymen, and we may improve our cold-storage and transportation facilities to our hearts' content, but we are not getting at the root of the evil until we open the eyes of the producer of poor milk and lead him to see that he is doing more to keep down the quality of our dairy products than all other causes combined. A good many could be moved by moral suasion if we had some machinery by which they could be reached and the matter laid plainly before them, but there are others who have to be touched through their pockets, for they will neither read nor listen to what is said on the subject. The Babcock test alone should not determine the value of milk for either cheese or butter making, unless it is all alike, good. It is just as unreasonable for a patron who furnishes milk unclean and badly cared for to receive as much per pound of fat as the patron who furnishes clean and wholesome milk as it is for the patron who furnishes 3-per-cent. to receive as much per hundred as the patron who furnishes 4-per-cent. milk, and until we make a discrimination we are going to get more or less milk which is a menace to the quality of our dairy products. If a farmer takes a load of dirty grain to market he is docked in both price and weight, and that grain is put into a bin reserved for such grain, and our milk should be treated in the same way. It would entail more work, but we are not going to improve the quality of our dairy products without work.

It would not be long, however, until a very small vat would hold all the poor milk.

This course would bring us face to face with another difficulty, for the patron with rejected milk would not tamely submit to such a procedure without a protest, and would be more than likely to hie himself off to the nearest factory and offer his rejected milk, which, in nine cases out of ten, would be accepted by the rival factory, and the nuisance would be perpetuated in that factory, while the "maker" in the other factory would be discouraged in his attempts to improve the quality of his product, and the only consolation that he would have would be the fact that he was improving his product at the expense of losing a patron.

This is a source of infinite trouble in many dairy sections on account of the rivalry which exists between "makers." Many "makers" have not the moral courage to stand up and tell a patron that his milk is not in a fit condition to make butter or cheese from, for fear that the patron will leave the factory and go over to his rival.

If we had a system of inspection which included the milk supply as well as the factory, it would throw the responsibility off the shoulders of the "maker" onto the inspector, whose business it would be to look into the cause of the off condition of the milk and help the patron to apply a remedy. Time has come when we must carry knowledge and information to the very doors of our milk producers, and if they cannot be reached by public meetings, they must be visited per-

sonally, if their milk is not up to the standard.

Meetings should be called in every school section at times most convenient for the farmers to attend, for the purpose of discussing the dairy business generally and the needs of their own locality in particular. This cannot be done by the limited number of men now employed by our associations, and the Government would have to come to their aid with a liberal yearly grant. This would undoubtedly be opposed from many quarters as an unjustifiable expenditure of public money, but supposing that the value of our dairy products by this means could be increased from an eighth to a quarter of a cent per pound, it would increase our receipts from abroad from a quarter to half a million dollars annually, and surely an expenditure of, say, \$10,000 annually would be justified by a result like the above, which is not only possible, but probable.

The writer has in mind a cheese factory whose patrons meet at the close of each season's work in a social gathering, where entertainment is provided in the way of speeches, music, etc., the business of the past year is discussed, and the proceedings wind up with refreshments provided by the ladies. A friendly feeling is cultivated, and it begets an interest in the business of the factory, which has a beneficial influence all around. This is a plan worthy of imitation, and at such meetings the inspector for the district might be expected to take part and give his experience in the work during the season. All meetings in connection with dairy work should have the educational feature well to the front, for we have much yet to learn, and no opportunity should be lost to drop in a word of encouragement or of exhortation to those who produce the milk.

J. STONEHOUSE.

GARDEN AND ORCHARD.

P. E. Island Fruit Growers' Association Annual Meeting.

The annual meeting of the above Association convened in Charlottetown on the 11th inst. The attendance was not as large as was desirable, but the most prominent fruit-growers on the Island were present and led in the discussion of the different phases of our fruit industry.

J. S. Clark, of Bay View, read a paper on "Cranberry Growing," in which he strongly advocated the cultivation of cranberries on our waste lands that are too low and wet for agricultural purposes. Mr. C. R. Dickie, of Prince County, has already engaged quite extensively and profitably in this industry, finding a ready market for his berries in England. Mr. Richard Burke, a Dominion Fruit Inspector, read an excellent paper on "Profitable Fruit Growing." In his capacity as fruit inspector he has been all over the Maritime Provinces, looking carefully into the fruit business in each, and his conclusion is that we can grow some varieties, such as the Ben Davis and Gravenstein, better than they can in the famous Annapolis Valley. He advised farmers to plant principally winter apples. He estimated that if each farmer in the Province had a good-bearing apple orchard of 2½ acres, it would be worth to the Province \$1,250,000. Rev. A. E. Burke, who had lately returned from meeting with Ontario F. G. A., at Cobourg, spoke hopefully of our fruit interests; advised planting winter apples, such as Ben Davis, King of Tomkins, and Northern Spy, for shipment to Britain, and Gravenstein for home markets. Resolutions were adopted demanding cheaper railway rates on apples and other fruits, claiming that the present rate was exorbitant. A resolution, pledging co-operation with kindred associations in pressing on the Government the needs of fruit shippers in the matter of cheaper freights and proper cold storage on ocean steamers, and also a resolution asking for direct steamship service at regular intervals during the summer and fall between Charlottetown and some British port, were put on record; these steamers to have cold-storage compartments for fruit and other perishable products.

The election of officers resulted as follows: President, Rev. A. E. Burke; Vice-President, John Johnston; Secretary, A. E. Dewar, Charlottetown. A large board of directors was also selected from among prominent fruit-growers.

At a public meeting in the evening, Judge Fitzgerald, of Charlottetown, gave an address on the beautifying of our homesteads, school grounds and roads by planting ornamental trees. F. L. Hazzard, K. C., in his address spoke strongly of the great benefit exhibitors had been in encouraging and showing up the possibilities of the Island as a fruit country. At this meeting a resolution was adopted asking the Department of Education to take measures to induce ratepayers of school districts to plant their grounds with ornamental trees.

The mild weather here has been very favorable for fruit trees. There has been no heavy ice coatings yet to injure the fruit spurs.

Senator Ferguson shipped this week 300 barrels of Ben Davis apples to England. Most of them were grown by F. G. Boyver, Georgetown.

The First Hotbed.

HOW TO MAKE AND MANAGE IT.

To treat this question properly would require more space than I can command at present, but I intend to give the main points of the subject in a way that I trust will be interesting and profitable to many readers.

Hotbeds, or, more properly, heat beds, is an arrangement whereby bottom artificial heat can be produced by the means of fermenting material, and so increasing the temperature that seeds will germinate and produce plants long before the outside temperature becomes high enough for their proper growth.

As I have been very successful in the making and management of hotbeds for several years, last year raising from a two-sash hotbed \$25 worth of plants, at an expense of \$3, an account of my methods would be more practical than most articles published on this subject, which are often gained from books and other sources outside the writer's own experience.

The time to start the first hotbed differs much in different parts of the country. In the Kent and Essex districts, or around Niagara, hotbeds can be started probably a month earlier than they can around Ottawa, Montreal, or in the Maritime Provinces. It is little use for the amateur to do much with it before the 1st of April, for unless the greatest attention is paid, nothing is gained by starting the hotbed so early. About the 1st of April, or according to locality, if not done the previous fall, I dig a pit about 15 inches deep, in the driest and most sheltered portion of the garden, either on the south side of a barn or fence, as much is gained in earliness by having the bed well sheltered. The underdrainage should be good also. I dig the pit slightly less in size than the square of the frame, and then set the frame or box for the sashes right over it.

The depth from the top of the box to the bottom of the pit should be about three to three and a half feet; deeper is better if you have plenty manure. The box or frame should be the required size, and made of two-inch plank nailed together and squared, or, what is better, dovetailed, so it can be taken apart and stored for the winter. This frame should be about six or eight inches higher at the north end than at the opposite, so that the sashes will rest at an angle of 75 to 90 degrees, and the bed will be more fully exposed to the sun. Having got the frame in position, the next thing on the programme is the heating material. Horse manure from grain-fed horses, and in a good state of fermentation, is the best, but it can be mixed with straw, leaves or other things that will make the heat steadier and save the manure. It is always recommended to pile this manure for a week or so, till it begins to heat violently, and then turn it over several times, till it gets into the right condition for placing in the hotbed. Now, from my experience, I see little need of this plan. It takes too much time and labor, and if you have a small quantity piled to ferment, the chances are a heavy spring rain will soak it through, thus taking the heat out of it and rendering it comparatively worthless. I usually get it when it is in a steaming condition at the barn and haul it straight to the hotbed, taking care not to get any fire-fanged or burnt manure or any long straw with it. In the bottom of the hotbed pit I put enough of this material to make a layer eight inches deep. I then tramp it down, but not too much, just enough to compact it slightly, and if too hot or dry sprinkle it with water from the watering pot. After about two or three feet of this manure is put in in the same manner, I put the sashes on the frame. The manure heats rapidly for a few days, but soon becomes more uniform, and when it gets to about 80 or 90 degrees, I place about three inches of fine soil on the bed and rake into it a peck of dry, powdered hen manure or wood ashes or phosphate. I like the hen manure best, and after raking level, so that the level of the ground will be about eight inches below the sash, I sow my seed. Shallow drills are marked out about two inches apart, and in every other drill tomato, cabbage and other plants that require to be left in the hotbed for some time, and between the lettuce, onions, and celery. The bed is then watered with warm water, old bags or blankets spread over the glass, and a batten door or other wooden covering over that again. This has got to be done to hold the heat formed during the day, and the neglect of proper covering one cold night may result in the loss of all the plants. In the morning remove the covering and expose the bed to the sun. This must be done through every night and morning for a month or so, until the night temperature increases so that covering is not required. Still, although requiring to be kept warm at night, care must be taken, especially at midday, that the temperature will not rise too high under the glass and be very liable to burn the plants; the sashes should therefore be pushed down several inches or raised on a

piece of wood to insure ventilation. On dull days, however, the sashes should be kept tightly closed or the temperature may be lowered too much and thus chill the plants. Practice, however, will soon teach the amateur the proper attention necessary, and instead of it being a bother, the work becomes a pleasure. Weeds soon begin to spring up and flourish in a hotbed, and they should be quickly attended to, as they are liable to choke and smother the plants, especially the slow-growing kinds, as celery, tomatoes, and onions. A little finger weeding once a week will keep them down. This is one of the reasons why the seeds should be planted in drills, for when broadcast, the weeds get so mixed up with the plants it is almost impossible to separate them, and the plants are liable to be pulled up with the weeds. The plants, when about two weeks old, should be thinned to an inch apart, and later can be taken out and put in the cold frame (the construction of which I propose to describe next month), leaving the remainder three or four inches apart; these plants will be earlier than those which are to be transplanted twice. Later on in the season, when the weather gets warmer, the sashes can be taken off during the day and replaced at night. This is called hardening off, and has the effect of making the plants hardier stock and better able to bear transplanting. The foregoing are the main points of hotbed making and management. It looks like a lot of work, but really the most of it can be done before and after other work. My hotbed was only attended to before work, dinner time, and after work, and I had splendid success. But the best results from the having of a hotbed become apparent later in the season, when you have the various garden products long before your neighbors, and when prices are highest. Then it is you appreciate it fully, and blame yourself for not having a hotbed long ago. I trust these few suggestions will be helpful to those interested, and hope they will be as successful as I have been in the making and management of their first hotbed.

Halifax Co., N. S.

E. MACKINLAY.

POULTRY.

The Travels of an Egg.

A chance whim of a little girl has given a history to a hen's egg. Mrs. Beeson, of 13 Bexley street, Windsor, purchased some eggs, and upon one she discovered some writing. It read thus: "Pearl Wright, Harrow, Ontario, Box 386. The one that gets this egg, please write. I will answer." The egg found its destiny, after traveling between three and four thousand miles, in the Royal borough of Windsor, not far from Harrow-on-the-Hill in the Old Country, and the invitation to correspond was accepted by Mrs. Beeson, who sent a Christmas card to the unknown writer. This brought the following reply: "Harrow, Jan. 9th, 1902.—Dear Mrs. Beeson and Children.—Received your letter and Christmas card on Dec. 23rd. I was out at a friend's when I wrote my name on an egg, which Mr. John Stocker sent away with the others. My friend said, 'I wonder who will get that egg?' So I find that Leghorn egg took a trip to the Old Country. I hope it was good. I am going to school, am 14 years of age, and glad to say happy and cheerful. There is plenty of everything here. My father is of English descent and my grandfather on my mother's side came from England. There are hundreds of English people here who came poor but are well off to-day. You do not see any beggars on the streets, as all have plenty to live on. My eldest sister is at the Methodist College, St. Thomas, Ontario. I suppose the Canadian contingent that served in South Africa, when it came to Windsor, was very nice. I send you a Christmas card, wishing you all the compliments of the season." The writer's hope for the goodness of the egg is hardly realized in the way she thinks, as the shell is still unbroken. Its possessor treasures the egg in its entirety too much not to be able to resist the attractions the shell covers. Were every egg to have its place of origin stamped upon it, geography might be taught through the kitchen, and tempt more of our own people to join the National Poultry Association, whose efforts are all directed to fostering poultry-rearing in the Old Country.—Windsor (Eng.) Chronicle.

An Inviting Nest.

L. K. Felch, the noted American authority on poultry matters, describes how to make a nest that hens will stay with when set, in the following words: "Take a sod, invert it, shape out a nest, 8 x 10 inches, from the soft (dirt) side, flat on the bottom, then put the sod into a box of suitable size, grass side up, and press the same down to make the proper hollow for the nest, making sure the nest hollow is perfectly flat on the bottom; then place the same in the oven or over a radiator till all is thoroughly warmed through to 100 degrees. Use but little hay or straw to make the nest up. The flat nest protects against crushing during the hatching period."

Poultry Pointers.

BY G. R. COTTRELL.

Reported by Superintendent G. C. Creelman.

"1st. There is an unlimited market both at home and abroad for first-class poultry."

"2nd. A better class of poultry than at present offered for sale would greatly increase the consumption."

"3rd. Quality must be improved if we expect higher prices."

These three headings were the points from which Mr. Cottrell preached a poultry sermon at Strathroy Dairy School last month. In dealing with the first point, Mr. Cottrell took occasion to say that there was a good market right at home for first-class poultry. In the City of Toronto, for instance, the market is glutted each week with poor, scrawny chickens, selling at from 25c. to 50c. per pair, while plump young birds, from 3½ to 5 lbs. each, easily bring from 80 cents to \$1.25 per pair.

"I have," said Mr. Cottrell, "no trouble in getting 10c. per pound for all the chickens I can raise. Then there is a great demand for poultry in the Old Country markets. At one time last fall Mr. Riddin, the Liverpool commission merchant, had one million chickens in cold storage in Toronto, and there are other firms in that city, as well as in Montreal and other places, who are taking all the chickens they can get for shipment abroad. There is, therefore, no trouble about the market."

In his remarks on the second point, which discussed the question of better chickens increasing the consumption of poultry, Mr. Cottrell said: "As a rule, citizens and townspeople who can afford it have poultry on their tables two or three times a week, and the wholesale and retail dealers in Toronto tell me that their customers invariably come back after having eaten some birds that have been properly fed. It is the tough, scrawny chickens that spoil the consumption."

"In the third place, we must improve the quality by better methods of breeding and feeding." "Most authorities now agree," continued Mr. Cottrell, "that the Plymouth Rocks and the Wyandottes are the two best general-purpose fowl for the farmer. They can be made to lay when eggs are high-priced, and they mature early for the market. Good table fowl should have a broad breast, should be wide between the eyes, good stout legs placed well apart, and good feet. After the chickens are three or four months old they should be put in fattening crates and fed for three or four weeks. This fall I fed 300 chickens in this way for shipment to the Old Country, for the last three weeks giving them nothing but sifted oatmeal mixed with skim milk. They had all they could eat three times a day, but as soon as they left off eating, the trough was cleaned out and a fresh supply put in."

Mr. Cottrell then described the fattening crate, saying: "I make my crate 10 ft. long and 16 ins. square, slatted on three sides, top, bottom and front. A crate this size will be divided into four compartments, each compartment holding four birds. One trough runs along the entire length of the crate, and the birds put their heads out between the slats and eat the soft food."

"The birds must be dusted with sulphur about once a week to keep off the vermin, and at the end of the second week should have a feed of gravel—about a pail and a half to one hundred birds. This soft, nutritious food makes excellent flesh. The birds not having any exercise, the muscles become tender and juicy, and the fat which is laid on gives them a nice plump appearance, so that they sell well when taken to market. They should be starved for 36 hours before being killed. This will ensure there being no food in their bodies that might ferment and cause decay in a long ocean trip."

"They should be killed by pulling their necks, if they are to be shipped to the Old Country, or by bleeding in the mouth, piercing the brain and then letting the blood out back of the neck, for the home market. Old Country people are suspicious about any wound on the body, and even where they are bled in the mouth or head they seem to think that a bird might have been killed 'to save its life.'"

"The birds should be plucked dry immediately after they are killed, before the body gets cold, commencing at the breast and working back to the wings and legs. This allows the blood to have drained toward the neck before the feathers are plucked from the extreme parts, and there will be no disfigurement by the blood rushing to fill the holes left where the feathers are taken out."

EGG PRODUCTION.

In answer to a series of questions, Mr. Cottrell then took up the subject of "Egg production in winter." "The first thing to be noticed," said Mr. Cottrell, "is the poultry house. Too many farmers expect their chickens to roost in the cow stable, scratch in the manure heap, pick

up what grain they can get on the barn floor, and lay eggs every day. If a farmer keeps poultry at all, he should keep them for the money he can make out of them, and it will pay every time to have a comfortable house for them, and one that can be ventilated without having a draft immediately on the birds. It is not necessary to have a series of ventilating shafts, but the door and window ought to be arranged so that the roosting place does not come between them. They should be left open part of each day in winter while the chickens are having a run out, so that the air in the room will become completely changed. If the room is a cold one at night, it will materially help to have a drop curtain in front of them, which should be rolled up in the daytime."

"Laying hens," continued Mr. Cottrell, "must be kept with a good appetite all day long. I feed my laying hens in winter some mangels (whole) about 9 a. m. At noon I give them some meat, either ground bone or table scraps. If you can get hold of a young calf and boil it, bone and all, it makes excellent food for the chickens. About 4 p. m. I feed a mash, consisting of one part oatmeal, two parts bran, and to every pailful add two handfuls of slacked lime. When mixed I throw in a couple of handfuls of chopped clover hay. After they have eaten this up clean, I throw a handful of wheat or corn into the cut straw in the scratching pen, and let them work away at this until night. Some grit in the shape of crushed granite or fine gravel must be kept where the chickens can get at it from time to time, and, of course, fresh water must always be within reach."

SITTING HENS.

"How do you treat sitting hens?" some one asked. "I separate them from all the other hens," said Mr. Cottrell, "and put them in a nest apart. After the hen is comfortably settled, I leave some solid food—usually in the form of grain—and some water handy to the nest, so that she will not have to stay off long and allow the eggs to get cold. On the seventh day I always examine the eggs. By holding them up to the sun or a candle you can always detect those in which the embryo is forming. You should at once remove all the clear ones, as they will soon spoil, and a bad egg in the nest has an injurious effect on the young germs that are hatching."

Mr. Cottrell went on to say: "The hen should be dusted with sulphur when first put on the nest, and once or twice while hatching. After the chickens are hatched, allow them to dry off well before removing from the nest, then take them to a 'V' shaped slatted crate, without a bottom, so arranged that the hen cannot get out, but giving the chickens their freedom. Better to have a board or small platform in front upon which to feed, and after sprinkling some sand on this, which will supply them with grit, they will soon take to eating solid food."

"More chickens are killed," said Mr. Cottrell, "by feeding too soon and feeding food that is too heavy on the start than in any other way. They should be fed very small quantities of stale bread, mixed with sweet milk and then squeezed out dry."

"This should be given three or four times a day, but only in such quantities as will be eaten up clean. At the end of the first week they may be fed small quantities of shorts and corn meal, then gradually they will take solid food, first in the form of millet and finally whole wheat. They should, where possible, be given sweet milk to drink from the very first. Chickens raised in this way," said Mr. Cottrell, "and then given plenty of food and let run loose, should weigh from 3½ to 4 lbs. at four months old. They are then ready for the crates, to be finished for the market. If they are allowed to wait until they are six or seven months old, they begin to show spurs, and the commission men on this account will not pay as much for them. If they are shipped to England they will bring two cents per pound less than if they had been fattened under five months."

In answer to a question, Mr. Cottrell said that potatoes might be fed if cooked first and mixed with a bran mash.

"How many eggs should a hen lay in a year?" was asked. Mr. Cottrell said he expected his hens to average 180 eggs. To do this, however, pullets alone must be kept, and they only from hens that have been good layers. "There is a good deal in pedigree," said Mr. Cottrell. "By this I do not mean a pedigree on paper, but the eggs should be set only from the hens that have a good record as egg-layers. In this way you can work up a good laying strain from almost any breed."

Mr. Cottrell was kept busy right up until dark answering questions in reference to poultry matters, and it is evident from the interest taken that farmers are beginning to realize the importance of the poultry industry as an adjunct to their business. We know of one lady near Cobourg who makes \$400 a year out of her poultry, and there are hundreds of women bringing poultry to market who average from one to two hundred dollars each season.

Breeds and Varieties.

BY JOHN B. PETTIT.

Every farmer that keeps poultry—and we believe that the majority of farmers do, although many of them at a loss financially, and with the thought that such stock is little more than a necessary nuisance—has, or should have, definite purposes in view. Among others, we but naturally think that the main one is financial gain, and in order that this may be accomplished another aim must be to always keep pure-bred, high-class stock, and to be constantly improving the utility qualities of the breed or breeds chosen. We believe the utility fowl is the bird for the average farmer, and more, that the average farmer, in order to be most successful, should not dabble in too many breeds, and, in fact, carry on the work of a "fancier."

It is far more important to the farmer what breed he selects than what variety of the breed chosen. At least, speaking generally, this is the case, although there are exceptions which may be noted. Take, for instance, Plymouth Rocks as a breed. In this grand American fowl we have several distinct varieties, viz., Barred, Buff, White, and Partridge. These are again divided into classes, according to the style of comb, such as single-comb, rose-comb, and pea-comb. This is all the result of ardent labors of the fancier, and as far as the color goes, it has nothing to do with the utility characteristics of the Plymouth Rock as a breed, although in some climates the comb has. No matter which of these colors a Plymouth Rock may carry, when it is dressed it has the same yellow flesh, yellow shanks, and absence of black pinfeathers. But the color has nothing to do with the egg yield, which is contrary to the ideas that many entertain. Again, take the Leghorns as a breed, and we see the same colors and combs as in the Rocks, but again the color has nothing to do with the famous laying quality of this grand breed. So we can readily understand that the color of feather has no consequence with the farmer as far as egg production goes.

But in the selection of breeds, a subject is presented to the farmer that is of great importance. The average farmer looks to his flock as a source of profit in two distinct lines—first, for an abundant supply of eggs, and secondly, when the days of usefulness as egg producers are over, as dressed poultry for market. Some contend that there is no difference in breeds as regards laying qualities, providing one gets a "laying" strain of a breed. While we believe in "laying" strains, and acknowledge that by careful selection of breeders the laying capacity of any breed may be greatly increased, we will not admit that one breed is as profitable along that line as another. We have our breeds that are egg-machines, and that naturally, and by this method of careful selection of breeding stock, marvellous egg records have been made.

As utility fowls, we have four breeds that have made themselves famous. They are the Leghorns, Minorcas, Plymouth Rocks, and Wyandottes. The Leghorn has been and is to-day acknowledged the "egg-machine" of poultrydom, and the fact that they are so much in use on the extensive egg farms in the United States is sufficient evidence that they have been properly named. We believe if they were a little larger they would be the ideal "all-round" fowl. They mature very early. Last fall we had Leghorn pullets shelling out eggs when only five months old, and pullets of our strain have laid when only four months old. Can this be said of any other breed? Many are of the opinion that Leghorns will not lay in winter. This is a very wrong impression, as they are most excellent winter layers when properly housed. They have the advantage of being active and taking on flesh very slowly, and are in this respect ahead of heavier breeds. It is an extremely easy thing to get Rocks so fat and lazy that they will not lay, and it is more difficult to again get them back into laying condition. While the Leghorns are small when dressed, they are of good color and plump. The Minorcas have won for themselves a very high name as egg-producers. They not only produce a great number, but without doubt they give us the largest eggs of any breed. They often weigh 2½ lbs. to the dozen. They are also very active workers, and it is a difficult matter to get them overfat. The White variety is so far little known, but no doubt will in time be much in use, as it has the same laying quality, and when dressed has not the black shanks and pinfeathers that are a drawback to the blacks.

As "general-purpose" fowls, the Rocks and Wyandottes are to-day very popular. This is because of their handsome carcass when dressed, and of being "good winter layers." No doubt the former is a strong argument in their favor, but as far as "winter laying" is concerned, this year our Leghorns are beating our Rocks. But we know why our Rocks are not doing better than they are. We, in the outset, got them too fat. And we doubt if 99 out of every 100 average farmers would not do the same thing with warm houses. When properly fed, they certainly

are excellent winter egg-producers. But it is seldom that pullets of this breed will do much at laying before they are near seven months old. Here is where Leghorns have a great advantage. A good Leghorn pullet will go a considerable way toward paying for her raising in two months' time in the fall when eggs are a good price. Rocks must be carefully handled in summer months or they will want to sit all the time. But this can be greatly overcome by the caretaker. Break them up as soon as they exhibit a desire to stay by the nest, and keep them in a lean condition.

Wyandottes are much of the same nature as Rocks, and need much the same care. They have proved to be excellent farmer's fowls, and are becoming very popular.

No farmer would err in selecting any of these four breeds. With proper care and careful selection of breeders, any one would prove good layers and profitable utility fowl.

The Ottawa Poultry Show.

The annual poultry exhibition held under the auspices of the Eastern Ontario Poultry Association at Ottawa from the 10th to the 15th of February well sustained its record, and proved a grand success. The show was by far the largest ever held since the formation of the Association. The entries were much larger than they were last year, over sixteen hundred birds on exhibition. The entries were made up as follows: 957 large breeds of all varieties, 25 turkeys, 93 geese and ducks, 196 bantams, and 174 pigeons. The quality of the exhibit in every class was above the average found at any previous exhibition, many of the birds being prizewinners at the Pan-American and the Boston shows. While the accommodation was none the best, light and ventilation being somewhat inadequate, yet the committee in charge are to be congratulated on the success which attended their efforts in giving every attention and comfort to the birds possible.

Mr. Wm. McNeil, London, was probably one of the largest exhibitors. He showed, in all, nearly 150 birds, comprising all varieties of Polands, Hamburgs, and Bantams. Mr. J. Bogue, of London, was another large exhibitor of Dorkings, Leghorns, Silver Wyandottes, and Cochins, showing, in all, about 70 birds. Mr. J. H. Sanders, late superintendent of the poultry department at the Pan-American, and Mr. L. Sage, both of London, had birds on exhibition. The former showed Buff Wyandottes and Andalusians, and the latter, Dark Brahmas. The largest exhibit of Buff Cochins was made by Mr. Chas. Stewart, of London. Other exhibitors from London were Messrs. Wm. McLeod, T. F. Kinsella, Wm. Arthur, O. Andrew, and Lather Bros., who showed, in all, about 70 birds of different varieties. Mr. W. H. Reid, of Kingston, and Jas. Stewart, of Menie, exhibited in the neighborhood of 260 birds.

The following Ottawa poultry fanciers were successful in winning a large percentage of the red tickets: Messrs. Geo. Higman, Geo. C. Benson, F. A. James, F. A. Heney, J. Garland, Thos. Mills, Devlin & Jacques, the Ottawa Poultry Yards, and Messrs. Fortier & Mantel, of St. Jerome, Que. Dr. Craig, Cornwall, and Duncan Cummings, Russell, made large exhibits and won several prizes. The Plymouth Rocks and Wyandottes were the most popular breeds. The display of fancy pigeons was one of the finest ever seen in Ottawa, both in numbers and quality. The majority of the more attractive birds came from the lofts of Mr. J. H. McGill, Port Hope, and the Ottawa Pigeon Lofts. The exhibit of dressed poultry and eggs was very good. The awards were made by Messrs. Wm. McNeil and Sharpe Butterfield, of London, while Mr. C. F. Wagner, of Toronto, judged the pigeons.

During the show very instructive addresses were given along the line of the poultry industry by Mr. W. R. Graham, of the O. A. C., Guelph; Mr. F. C. Hare, Ottawa, and Mr. A. G. Gilbert, of the Central Experimental Farm, Ottawa.

A splendid demonstration in chicken plucking was given by Mr. J. Holiday, of the Toronto branch of the Jas. Ruddin Co., of Liverpool. He performed the work in less than half the time it would take an ordinary skillful plucker, stripping twelve birds of their feathers in twenty-four minutes. Instructions were given along the line as to how the birds should be packed for export after they had been plucked by Mr. Hare. The attendance on each day was fairly large, and lengthy discussions followed each address. Much was learned from the demonstrations in killing, plucking and packing the fowl, and poultrymen saw, in many cases the first time, the methods approved by importers of Britain. The competition in producing eggs of heavy weight was keenly contested, many fine specimens being on the tables. Mr. C. F. Daniels, of Toronto, exhibited a cramming machine.

Poultry for Boys.

BY W. A. HAMILTON, ALBERTA.

The keeping of the country boy on the farm still remains a practical problem. That giving him, early, a financial interest in the farm or some of its products assists greatly, few doubt. For many a boy the problem would be solved by giving him a breeding pen of pure-bred poultry. Such a gift is not beyond the power of the parent of even slender means. Poultry is cheap, easily secured, readily housed, and at once becomes productive. Small difficulty will be found in keeping account of the value of the food consumed, eggs laid and young stock raised. Hence, thrown on his own resources, the boy may at once face the difficulties and realize the pleasures that come to the stock-raiser.

If he enter into it with zeal, and few boys, either in the village or country, will not, the keeping of poultry will tend to develop many desirable traits in the boy's character. He will be kind to his flock; that kindness will extend to all animals. To care for his flock at stated times will require self-denial, while these regularly-recurring duties will give him fixedness of habit. His birds give returns at once, the boy begins to save, he becomes thrifty. His foresight will be rewarded if he provides green food for winter and makes comfortable the house before the cold weather comes on. Indeed, if "genius be the power of taking infinite pains," then that power will be fostered in the boy, and his pains will be well rewarded by the prolific hen.

But what kind of poultry would you give? That depends on circumstances and the boy. Generally, none will be more suitable than "chickens." A flock of hens will engage the boy's attention the year round. Their care will not conflict with school duties, and the work will neither be over-heavy nor disagreeable. Yes, but what breed should we select? The boy's tastes may assist in deciding, but unless he shows a marked preference for some other breed, you will make no mistake in selecting the Plymouth Rocks or Wyandottes. These birds possess beauty, both of form and plumage. They are quiet, are good all-the-year-round layers, and cannot be excelled as mothers. The chicks mature early, giving a table fowl of superior quality.

While you give the boy pure-bred birds, they need not be exhibition birds, nor in exhibition shape. Indeed, these are not always the best breeders, and besides, the boy would not be able at first to keep them in this condition, and so be discouraged; while with good thrifty stock he could see the birds improve in his hands.

Allow the boy freedom in the management of his flock. Take an intelligent interest in it, and encourage him to run his flock in a businesslike way. Let the profits be his. Start him to read the poultry pages in the farm papers, give him a chance to visit the best flocks in your neighborhood. With your encouragement, there is no reason why the boy should not develop a good flock, bringing him at the same time both pleasure and profit.

Marketing Poultry.

Next to being master of the art of producing foodstuffs of high quality is the faculty of knowing the proper way to market such production. As a guide to those who grow poultry for the market, we submit the directions furnished by a large commission house:

"Poultry should be well fed and well watered, and then kept from 18 to 24 hours without food before killing. Stock dresses out brighter when well watered, and adds to the appearance. Full crops injure the appearance and are liable to sour, and when this does occur, correspondingly lower prices must be accepted than obtainable for choice stock.

"Never kill poultry by wringing the neck. Kill by bleeding in the mouth or opening the veins of the neck; hang by the feet until properly bled. Leave head and feet on and do not remove intestines nor crop. Scalded chickens sell best to home trade, and dry-picked best to shippers, so that either manner of dressing will do if properly executed. For scalding chickens the water should be as near the boiling point as possible without boiling; pick the legs dry before scalding; hold by the head and legs and immerse and lift up and down three times; if the head is immersed it turns the color of the comb and gives the eyes a shrunken appearance, which leads buyers to think the fowl has been sick; the feathers and pinfeathers should be removed immediately, very cleanly, and without breaking the skin; then plump by dipping ten seconds in water nearly or quite boiling hot, and then immediately into cold water; hang in a cool place until the animal heat is entirely out of the body. To dry-pick chickens properly, the work should be done while the chickens are bleeding; do not wait and let the bodies get cold, as it is much more easily done while the bodies are warm. Be careful and do not break or tear the skin.

"Before packing and shipping, poultry should be thoroughly dry and cold, but not frozen; pack

in boxes or barrels: boxes holding 100 or 200 pounds are preferable, and pack snugly, straighten out the body and legs, so that they will not arrive very much bent and twisted out of shape; fill the packages as full as possible to prevent moving about on the way; barrels answer better for chickens and ducks than for turkeys or geese; when convenient, avoid putting more than one kind in a package, mark kind and weight on the package and mark shipping directions plainly on the cover."

QUESTIONS AND ANSWERS.

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

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

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

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

Veterinary.

ECZEMA IN MARE.

A four-year-old mare in foal began biting her hind leg about three weeks ago. One side of the leg is now completely denuded of hair and is quite sore. Now she is biting the shoulder on the opposite side. She is in good condition, has nice coat, with perfectly clean skin. She has not eaten a bushel of oats or other strong food this winter. She is fed good hay and a gallon of bran daily. I have given her $\frac{1}{2}$ lb. Epsom salts daily for two weeks without effect.

York Co., Ont.

SUBSCRIBER.

Ans.—Your mare has eczema, a skin disease that often appears without well-marked cause. Some horses are predisposed to it. Under ordinary circumstances it is good practice to purge, but this mare being in foal, that would be dangerous. High feeding is a cause in many cases, but in this case I consider the ration has been too light, especially for a breeding mare. Give her a little boiled oats and bran twice daily, in which mix 2 ozs. Fowler's solution of arsenic. Dissolve 1 dram corrosive sublimate in $1\frac{1}{2}$ qts. warm soft water. Give the affected parts a thorough washing with strong, warm soft-soap suds, and rub until dry. Then rub a little of the solution mentioned well into the parts twice daily. If the disease extends you will have to treat all parts affected, and if you have comfortable quarters it will be well to clip her, as that gives a better chance to treat, but you will need to be very careful of her after clipping.

J. H. REED, V. S.

ENTERITIS (INFLAMMATION OF THE BOWELS).

A twelve-year-old horse in good condition took suddenly sick after a moderate drive of 4 or 5 miles. Seemed in great pain, rolled and tumbled and appeared to try to lie upon his back; then would lie stretched out on his side for awhile, get up quickly, but lie down again at once. He continued this way for about 24 hours. He died in about 48 hours after the first symptoms. During the last 24 hours he was on his feet most of the time, but walked around in a circle, holding a mouthful of hay, but not eating any. His bowels and kidneys acted normally the first 12 hours, but were inactive afterwards. An experienced veterinarian treated him for inflammation of the bowels, but the medicine had no effect. The case is a mystery to us all. What was the trouble and cause of death?

Frontenac Co., Ont.

SUBSCRIBER.

Ans.—Your veterinarian was doubtless quite correct in his diagnosis: the horse had inflammation of the bowels. It is not surprising that the medicine did not produce the desired effects, as in a well-marked case of this disease medicine has little or no action. A post-mortem would have revealed the correctness of the diagnosis. The disease was probably caused by something he had eaten, or as a result of the drive just when his general constitution was such as to render intestinal disease easily produced. Conditions of this kind cannot be recognized.

J. H. REED, V. S.

FISTULA ON HEIFER'S LEG.

Last November we noticed a small lump on the leg of a three-year-old Shorthorn heifer. We supposed she had bruised it. We opened it and allowed the matter to escape, but instead of healing, the leg swelled up to the hock and continued to discharge matter. We washed it with warm water and a little carbolic acid two or three times a week.

Kent Co., Ont.

W. E. H.

Ans.—There is either some foreign body, as a piece of stick, in the leg, else the bone is injured. It is possible a cure will result from the present treatment, especially if a little of the lotion be injected into the opening every day. It would be wise to get a veterinarian to probe the wound, and if any foreign body can be found he will remove it, and if the bone be diseased he will enlarge the opening in the soft tissues and scrape it.

J. H. REED, V. S.

INCONTINENCE OF URINE.

A colt about nine months old, doing fairly well, but does not appear to have proper control of his urine. I first noticed him in September. The urine will drip and run quite a stream occasionally without his notice. The dam is a Clyde. She got a considerable quantity of saltpetre last winter, but none during the summer. Give cause and remedy, or is he likely to outgrow the trouble. J. C. A. Huron Co., Ont.

Ans.—The condition is usually due to a paralysis of the muscular coats of the bladder and urethra. It may be induced by excessive dosing with saltpetre or any other diuretic, and it is possible the medicine given to the dam while pregnant had the effect of weakening the urinary organs of the fetus by overstimulation, and while the condition was not noticed as first, the organs being congenitally weak, the trouble was easily induced. The practice of giving saltpetre regularly to horses cannot be too highly condemned. If a horse be affected with certain diseases of the kidneys, the administration of saltpetre in proper doses is correct treatment, but the common idea that they require the drug regularly is entirely false. It is bad practice to give any animals drugs unless there be some disease to treat or some imminent disease to prevent. It is probable age will have the effect of removing the trouble, but you can assist nature by giving the colt 30 grs. powdered nux vomica three times daily. If you notice any muscular twitchings or nervous excitement after a few doses decrease the dose, and if nothing of this kind be noticed, you might increase the dose until such symptoms be noticed, and then go back to the original dose. In order to get the full benefit from this drug it is necessary to give in doses sufficient to produce its physiological actions expressed as described. In addition to giving the drug, inject cold water into the rectum two or three times daily. J. H. REED, V. S.

LUXATION OF THE PATELLA.

I have a four-year-old mare in foal. On several occasions last fall I noticed her drag her leg for a few steps, then she would draw it up suddenly as though she had stringhalt, and would be all right. About three weeks ago she showed the same symptoms. She has exercise every day. Some say it is a kink in the hock. N. D. Huron Co., Ont.

Ans.—Your mare suffers from occasional luxation or displacement of the patella or stifle bone (commonly called stifled). This is due to a stretching or weakness of the anterior and internal ligaments of the bone. When the bone is out of place she has not power to lift the leg, but when it returns to its proper position she suddenly regains power, and this causes the violent action mentioned. Place her in a nice box stall, clip the hair off the front and inside of the joint and apply a blister. It is not necessary to give details of blistering, as this is frequently given in these columns. It is necessary that she have a box stall, as the accident is much more liable to occur if she be tied. It is probable one blistering will effect a cure, but if not, you must repeat it. J. H. REED, V. S.

CAUSE OF SCOURING IN HORSES.

Having seen, in a late issue of your valuable paper, several inquiries about the cause and cure of scouring in horses, I thought I would write and give our experience of it, which might be of benefit to others and might explain the cause of those horses scouring. We have a heavy horse which used to scour nearly every time he was driven any way fast, even for two or three miles, both when he was on the grass and in the stable on dry feed. He used to get sick quite frequently when driven to town, which is fifteen miles from here, but not when he had a load and went slow. We have always been in the habit of salting our hay when we put it into the mow till last summer, when we did not put any on. One of our neighbors bought some hay from us two years ago, and when he came back for more he asked us if we had not put salt on it. We told him we had. He said he thought so, for it scoured his horses. Now, this horse of ours that used to get sick has never been sick this winter, nor has he scoured any, though driven as fast and as far as other winters, which I attribute to feeding him hay that had not been salted. W. F. Simcoe County, Ont.

PINWORMS IN HORSE.

Would you or some of your readers tell me how to rid a horse of those little pinworms? Renfrew Co. THOS. NEW.

Ans.—For small pinworms affecting the rectum, give physic of Barbadoes aloes 8 drams, common soda and ginger, each 1 teaspoonful, in a pint of warm water. Subsequently, inject into the rectum, soon after evacuation, a strong decoction of quassia chips. Boil one-half pound of chips in a gallon of soft water. Strain off when boiled to half a gallon, and inject with large syringe once a week or oftener. By holding down the tail, retain it there half an hour. Some hardwood ashes and salt—about 1 part to 4—might be mixed with the injection.

RHEUMATISM IN PIGS.

When about three and a half months old, three of our pigs became affected with something like rheumatism. We first noticed a stiffness of the hind legs. They gradually became worse for two or three weeks. Since then they will not come to the trough for food unless very hungry, and after eating will crawl back and lie down, until again forced by hunger to come to the trough. They were kept in a warm pen, but got little exercise. For the first three months they were fed on shorts and skimmed milk. Since then we have added about equal parts peas and oat chop and rye meal. Please state cause, and cure, if any? Stormont Co., Ont. N. McK.

Ans.—Symptoms such as described are caused, in most cases, by damp surroundings, or by lying in warm quarters and being exposed to drafts or cold when out of sleeping quarters. They may also be caused by overfeeding and want of exercise. Give them Epsom salts or raw linseed oil in their food until they begin to purge, and then give a little of equal parts Epsom salts, sulphur and powdered charcoal every day, to keep their bowels acting freely. Give raw mangels or turnips daily, and cook all other food, but allow it to become cool before feeding. If possible, force them to take a little exercise, and when they begin to improve, see that they get sufficient exercise. J. H. REED, V. S.

LAME MARE.

A mare, eleven years old, due to foal in the fall, took lame in the shoulder, with slight swelling of the leg, two months ago. She can scarcely back out of the stable now; seems worse after exercise, which she gets daily.

A SUBSCRIBER.

Ans.—Give her perfect rest until better. While the lameness disappears on exercise, the effects of the exercise are bad. Blister the affected parts with biniodide of mercury and powdered cantharides, of each 1½ drs.; vaseline, 2 ozs. Mix well. Clip the hair off the parts, rub the blister well in. Tie her head so that she cannot bite the parts, in 24 hours rub well again with the blister, and in 24 hours longer wash off with warm water and soap. Let her head down and apply vaseline every day until the scale comes off, when you will tie her up again and blister as at first. After this, blister every month until a cure is effected. Allow her a nice, roomy box stall. J. H. REED, V. S.

SCOURS IN STEER.

Could you tell me a good remedy for scour in a young steer? He is two years old now, and has had scours ever since he was born. Nicola Lake, B. C.

SUBSCRIBER.

Ans.—The symptoms are very suspicious of tuberculosis, and if the animal is very thin, as we should expect it to be, would recommend its immediate slaughter, as, if affected with tuberculosis, it would be a menace to the health of the other cattle. You might try the following: Give, first, a pint and one half of raw linseed oil in which is two ounces of turpentine, and repeat half doses every third day for three or four doses, then give pulverized chalk, ½ lb.; pulverized catechu, 2 ozs.; pulverized ginger, 4 ozs.; pulverized opium, 1 oz.; mix well and divide into eight powders, one of which should be given twice daily in the feed after stopping the oil and turpentine.

CALVES WITH A COUGH.

What is the best treatment for young calves with severe colds, brought on by lying in cold drafts and causing loss of appetite and deep cough? British Columbia.

Ans.—Remove the calves to comfortable quarters; feed easily-digested food. Rub their throats well twice daily with the following liniment: One part liquor ammonia fortior, two parts each oil of turpentine and raw linseed oil. When the parts are blistered discontinue the use of the liniment and apply vaseline daily. Give one-dram doses chlorate of potash three times daily. J. H. REED, V. S.

NAVICULAR DISEASE IN MARE.

I have a blood mare carrying a colt. She seems to be (in farmers' language) chest foundered. Although she can get over the ground very fast, yet she is painfully crippled. She is very narrow in the breast, and a little kneesprung. She eats and drinks well, and seems to be healthy otherwise. Algoma, Ont.

Ans.—Your mare is suffering from what is commonly called navicular disease, but what in her case is most likely to be rheumatism affecting the tendons as they pass under the foot to be attached to the os pedis bone. The treatment indicated is to remove her shoes, pare down her feet well, poultice them well for a week with scalded bran or boiled turnips, keeping the poultice warm, and then blistering them well in the hollow below the fetlock, also around the coronary band at the top of the hoof, with hydrarg. biniodide one dram, powdered cantharides one dram, lard one ounce; repeat the blister in ten days, and oftener, if necessary. Before turning her out in the spring, blister her legs well from the knees down.

FATALITY IN PIGS.

On the 11th Jan. last I purchased a sow which farrowed seven pigs the same day. They thrived unusually well, being fed milk, bran and middlings until about a week ago, when one pig seemed dumpish. In three days after, another was taken the same way. Their bowels were constipated. Then they were taken with a violent diarrhoea. This lasted for three days, when they got weak and could not stand, but would suck the milk from the mother when I held them to her. The rest of the pigs seemed a trifle dull, but otherwise all right at night. The next morning I found a fine one dead—not one of the sick ones, but one which the night before I thought perfectly well. It had no symptoms of diarrhoea whatever. In a few hours one of the sick ones died, not struggling in the least. They are not bloated nor very much diminished in flesh. The other sick one died the same night. None of them ate anything from the trough. The mother is in fine condition. The other four are now dumpish, and have every appearance of dying also. I cannot account for the death of these pigs. About two weeks ago today I started adding to their feed some swill which I got from a boarding house. It contained apple and potato peelings, also some orange, lemon or banana peelings. These I cooked and mixed with the milk, chop and bran. Could there be anything in this swill which affected these pigs, or can you account for it in any way? I have fed and fattened hogs all my life, and have never lost a pig before. Please prescribe? Brant Co., Ont. SUBSCRIBER.

Ans.—A post-mortem of the pig that died without showing any symptoms of sickness would probably have revealed the cause of death. My opinion is the whole trouble was caused by the food, probably from some indigestible substances in the swill mentioned, causing constipation, which, in the first two mentioned, resulted in spontaneous diarrhoea, which weakened the pigs so much that they could not recover, while in the other one a complete stoppage of the bowels resulted; this frequently causes death very quickly. If any of the others have diarrhoea, give ½ dr. tincture of opium in a little milk every three hours until the diarrhoea ceases. On the other hand, if any be constipated, give ½ oz. raw linseed oil. If you feed any more of the swill, remove all orange, lemon and banana peelings, and thoroughly cook the rest. See that both sow and pigs get exercise, and feed raw roots daily. J. H. REED, V. S.

MORE FATALITY IN PIGS.

Some of my five-months-old pigs are not doing well. They get, daily, one meal of pulped turnips and chop, the other scalded chop fed warm. I give them salt in their food, and they have access to ashes. Some of them are crippled. I lost one with protrusion of the rectum. The bowel was closed up and gristly, and quite clean, as though there had been no passage for some time. I notice one straining; when it gets passage it is not hard. Have given salts and charcoal. I have had trouble other winters from same cause. W. H. S.

Ans.—Your pigs are partially paralyzed from constipation, caused by insufficient exercise and high feeding. This condition never exists in warm weather when pigs are running at large and have access to grass. Give each enough raw linseed oil (from 2 to 6 ozs.) to cause active purgation, then feed sufficient oil or Epsom salts to keep the bowels active. Give raw roots every day, and if you can get sods give some regularly. The protrusion of the rectum mentioned was caused by excessive straining in vain endeavors to defecate. If any more show symptoms of straining, give injections of warm water, with a little soap, in addition to the oil given by mouth. See that they get exercise. J. H. REED, V. S.

VARIOUS LAMENESSES IN FILLY.

A 2-year-old filly fell into a well in May last. In September she went lame in one hind leg. This lameness disappeared in about a month, when she went lame in the other hind foot, with some swelling, or, rather, a puff like a windgall on the hind cords, close to the fetlock. She got pretty well over the lameness in the hind feet, but now is stiff and sore in front feet; seems as if it may be in her shoulder. She feeds well, and her hair is in fair condition. Our local veterinarian gave her some powders for rheumatism, but they hurt her mouth so badly we stopped them. What is the trouble, cause, and remedy? Elgin Co., Ont. W. J. T.

Ans.—In order to give the various troubles, causes, and remedies, it will be necessary to have much more definite symptoms. Each lameness is no doubt due to definite causes, and requires special treatment. The mere statement that the filly is lame in the fore feet, and it seems as if it might be in the shoulder, gives a man nothing to work on. She may recover from this lameness as she has from the others. If she does not, you had better have your local veterinarian examine her personally and prescribe, or else give definite symptoms as to gait and actions, where soreness to pressure is exhibited, etc., and I will prescribe. If you can locate the trouble, treatment can be adopted. J. H. REED, V. S.

ERUPTIVE DISEASE IN MARE

A 12-year-old mare that raised a foal last year (in Aug.) began to bleed at nose. An examination revealed small red spots on the mucous membrane. The local veterinarian called it petechial fever. His treatment effected a cure. A week or two later her body became covered with lumps about the size of pigeon eggs; her mammary gland became swollen, hard and sore; her legs swelled until they became round. This continued until November, when the colt was weaned. Since Christmas her legs, mammary gland and lower part of her abdomen have been swollen. The veterinarian gave her a ball and some powders, which relieved her for some time. Until about a week ago she has been idle and fed on oat straw and a little chop. Now she is doing some work, and gets timothy hay and some oats. Exercise reduces the swelling in the legs, but it reappears during the night, and the lumps have little, pointed dry scales on them, and she becomes quite stiff, especially in hind legs. She is in good health, and eats well. W. M. E. Brant Co., Ont.

Ans.—The first symptoms given rather indicate farcy, but no doubt your veterinarian would have diagnosed this disease if it had existed. She is no doubt predisposed to a disease of the skin known as edema. Give her a brisk purgative of eight to ten drams aloes and two drams ginger. After the bowels regain their normal condition, give three-dram doses hyposulphite of soda three times daily in damp food. Give regular work or exercise, and feed easily-digested food. Give a feed of bran, with a little linseed meal, about three times weekly, and give a couple of carrots daily. If those little lumps reappear, and especially if they become raw at the points and refuse to heal, or if those spots reappear in the nostril, have her examined by your veterinarian, as these symptoms indicate farcy, or glanders. J. H. REED, V. S.

ECZEMA IN STALLION.

My 12-year-old Clydesdale stallion has been scratching and gnawing his legs for about six months. I tied him so that he could not bite his legs, and he is rubbing his head and neck, and even his ears, until they have become sore and discharge pus. His body does not break out except where he bites and rubs. I have fed two pounds of condition powders given by a veterinarian, but he is no better. Hastings Co.

A SUBSCRIBER.

Ans.—Your stallion has a skin disease known as eczema. Horses of this class, with coarse, wavy hair and beefy legs, are predisposed to this trouble, but it may appear on any horse, as a result of high feeding and insufficient work, especially where grooming has been neglected. Give him a brisk purgative of ten to twelve drams Barbadoes aloes and two drams ginger. After the bowels become normal, give three ounces Fowler's solution of arsenic in chop or boiled oats night and morning. Give all affected parts a thorough washing with strong, warm soft-soap suds. Rub him briskly until dry, and afterwards dress the parts twice daily with corrosive sublimate one part, water 1,000 parts. This dressing must be rubbed well into the skin. If the horse were clipped it would be much easier to get the dressing applied, but I suppose you don't care to clip your stallion, and it is rather dangerous in cold weather, unless great care be exercised afterwards to keep him warm. J. H. REED, V. S.

BOG SPAVIN.

I have a yearling colt which was sound in his joints until about two weeks ago, when a bog spavin appeared on one leg. He does not inherit the predisposition to such diseases from either sire or dam. He has not been confined in a stall. What would you consider the cause, and what would you suggest as a remedy? Middlesex Co., Ont.

OLD SUBSCRIBER.

Ans.—While neither the sire nor dam of this colt suffered from diseases of this nature, it is quite probable he inherits the predisposition from some remote ancestor, possibly as far back as the fifth or sixth generation; or the bog may be the result of a sprain from slipping, plunging through deep snow, or something of that kind. Keep him in a box stall and blister the hock every three or four weeks until the puffiness disappears. Blister in the ordinary way, which is frequently described in these columns. J. H. REED, V. S.

TORPIDITY OF THE KIDNEYS IN HORSE.

A 10-year-old horse passes thick, whitish, slimy urine. My man tells me he has been doing so for nearly a year. I have given him a few drops of niter every day on his oats lately, but I don't see much change. He was a stallion until six or seven years old. He has not shown signs of sickness or disease. A. W. S. Stormont Co.

Ans.—Your horse's kidneys require stimulation. Give a tablespoonful of powdered saltpetre every night in damp food for three doses. In a week or ten days, if necessary, repeat. J. H. REED, V. S.

A SUSPICIOUS CASE.

I have a nine-year-old mare with a sore in left nostril about the size of a twenty-five-cent piece. It is about one inch in from lower edge, and has been there for about seven months, and is getting bigger. Kindly tell me, in your next issue, how to heal sore? SUBSCRIBER.

Deleau, Man.

Ans.—We wish our correspondent had told us whether there was any discharge from nostril, and in the meantime would recommend taking the animal to a veterinarian for examination. One of the symptoms of glanders is an ulcerated condition of the nostril lining, and although we do not diagnose the case as such, would advise the careful examination. In the meantime, apply, with a small swab, a saturated solution of boracic acid daily, alternated with a saturated solution of alum. Use one in the morning, the other at night; an ounce of each drug to a pint of water.

WEAK COW.

"Subscriber," Algoma.—Judging from your brief statement of the case, the best you can do for your cow is to induce her to take plenty of nourishment, including bran mashes, etc., and keep her as comfortable as possible, with ample clean straw in a box stall.

Miscellaneous.

PLAN OF CIRCULAR BARN.

Can you or your readers give plan of a round barn that will hold as much as a barn 45x80 feet, cost of material, etc.? SUBSCRIBER.

Stanstead Co., Que.

Ans.—We reproduce, for Subscriber's benefit, a plan of circular barn, with description, prepared by Mr. D. P. L. Campbell, of Prescott Co., Ont., and published in the "Farmer's Advocate" some five years ago.

The rectangular form of silo is rapidly giving way to the round, the latter being better and cheaper. In barn building, however, the round

are required they can be arranged to replace box stall and extend across the building, cutting off part of root cellar, leaving a passage opposite sheep alley. The advantages of two silos are recognized, and the root cellar can be filled from floor above. The dotted line from water tank represents water pipe with taps (X) convenient to water animals or dampen feed. The tank is placed so as to avoid freezing.

Now, as to cost, it will be found much cheaper than the rectangular form. Let us compare the two:

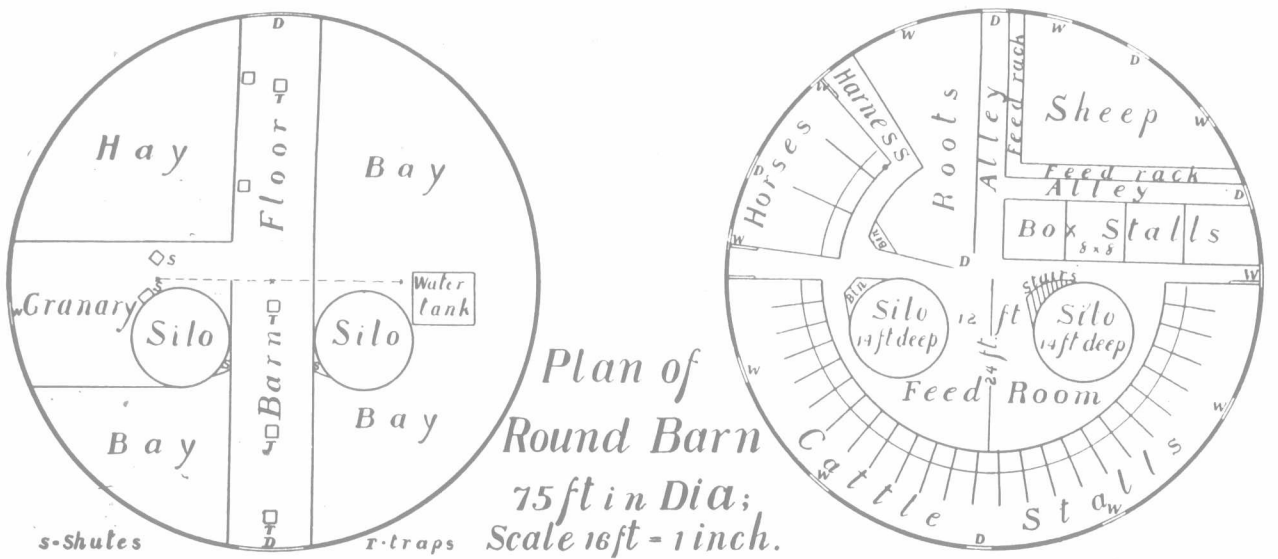
A circle 75 feet in diameter represents an area of 4,418 square feet, which would require a rectangle of a little more than 55x80 feet.

	Length of Wall.	Feet of Siding.	Area of Roof.
Circle.....	235.5-7	7,513	5,178
Rectangle.....	270	9,410	5,890

Amount of material less required: 1,867 feet of siding; sarking, 4,800; shingles, 712. While for the frame of a circular barn a few logs would provide scantlings enough, the frame timber of a rectangular barn would make a raft.

RE CEDAR BLOCKS FOR STABLE WALL.

As I have seen some half dozen cedar-block walls put up in our neighborhood, I think I can say conscientiously they make a good, warm, and much drier stable than stone, when well built. How to build: First dig a trench for foundation, about two feet deep and two feet wide; then fill trench with small stone, and on top of stone build about a foot of good stone-mason work, twenty inches thick. Now for the blocks. To build up corners you require pieces 8x8 and 4 feet long, time about each way, one outside and one inside of wall, and in building up alongside of doors and windows, split the round blocks through the center and lay flat side of block to jam. Where door opens inside, it is advisable to trim off blocks so that inside of blocks will be flaring. Before building with the blocks, remove all bark and limb knots, and when building, put



form does not find the favor it is entitled to, for not only is it cheaper to build, but much less liable to be damaged by storms. Two reasons may be given why so few round barns are to be seen in passing through the country: First, the supposed difficulty of building circular walls; second, the waste of room. With regard to the first, it will be found that a circular wall can be constructed without any real difficulty, as the sills and plates are easily secured by sawing slightly crooked logs into two-inch thicknesses, and by laying a pattern on these and marking them they can be cut with a narrow band saw. Then place two thicknesses on foundation wall so as to break joints and spike together. Next comes studding, 2½x5 inches and 8 feet long, toe-nailed, plumb and stayed. On top of these place two more thicknesses of planks and spike as before. The ends of beams over basements are laid on them. If the siding is to be laid on horizontally, it can be nailed to the studs; but as it will resist the influences of the weather better by being perpendicular, it can be done by nailing scantling, 1½x2 inches, horizontally on outside of studding every four feet. To these nail the siding. Next, for a wall 24 feet high, take 2x4 scantlings 16 feet long; toe-nail on top of first stage, plumb and stay, and proceed with siding as before. Spike on plates and the wall is ready for the roof. Now make a circle half the diameter of barn by bending and nailing together four thicknesses of 1x4 inch lumber. Support this on posts half the pitch of the roof to serve as a purline plate.

The sarking consists of strips one inch square and placed at a distance apart equal to the length of shingle exposed to the weather, which will be about five inches from center to center.

By examining the accompanying plan it will be seen that there will not necessarily be any more waste space than in any other form, as the irregular space is devoted to feed room. At the same time the plan affords considerable elasticity, which can be modified to suit circumstances and requirements. For instance, if more cattle stalls

each block down solid with two or three light taps with an axe. Door jambs should be 6x8 inches, or if they were 10 inches wide all the better, and windows 3x10 inches. As I have seen many questions and answers through your valuable paper which have been very instructive to parties who are going to build, I have written the above with pleasure.

NOAH COTTON,
Carpenter and Builder.

Simcoe Co., Ont.

MIXED GRAIN CROP FOR GREEN MANURE.

I intend sowing my summer-fallow and plowing in what grows for green manure, but do not just know how to proceed as to the kind of grain and the proper time to sow. I intend sowing fall wheat and seeding down. My land is a nice clay loam. Bruce County, Ont.

Ans.—Fall-sown rye and clover are the crops that are generally used for plowing in as green manure, but in this case we should say a mixture of peas and oats, say one bushel of the former and two of the latter per acre, sown as early in May as conditions warrant, would be as good a crop as could be used. The crop should be plowed down just before the oats begin to head out, the land rolled and harrowed immediately after, followed by surface cultivation at intervals, especially after each rain, to check weed growth and conserve moisture. This would firm the land and make a good preparation for fall wheat without any further plowing.

EGG-EATING HENS.

Do you know of any remedy to prevent hens from eating eggs? I feed them black barley and oats mixed, and mangels. I also keep constantly before them fresh beef, lime, grit, and plenty of litter. By answering the above you will greatly oblige. W. D. S. Huron Co.

Ans.—See page 131, Feb. 15th issue "Farmer's Advocate."

CEDAR-BLOCK WALLS APPROVED.

I notice in your last issue a reader asks: Do cedar blocks cut 18 or 20 inches long, laid in mortar, make a good stable wall under a barn? We have a wall of that kind under a building 18x24 feet, and we like it very much, as the stable is warmer and drier than are stone stables, and I see no reason why it will not be durable. We used stone in the trench, and as high as the stable floor. At each corner we built a brick pillar, or a square post would do; either would be much handier than blocks. The rest of the wall is cedar blocks cut 18 inches long.
Ontario Co., Ont. SUBSCRIBER.

SWELLED HEADS IN TURKEYS.

Will you please give me a cure for swelled heads on Bronze turkeys? One old turkey she took it, and we had to kill her, and then another one took it. They roost in an open shed.
Carleton Co., Ont. E. B.

Ans.—Swelled head among turkeys is simply one of the many forms of the early stages of roup. The birds that are affected should be isolated from the rest of the flock, and I would suggest that, if possible, those that are sick, if they recover, be not bred again. It is well to bear in mind that all of these diseases are more or less contagious, and therefore it is of the utmost importance that the birds be isolated. This has been probably brought about by the birds being overheated at night on their roosts, or else the bird is roosting near a crack in the wall of the building, and it is also sometimes caused by a bird roosting in a drafty place. You will kindly bear in mind that it is not at all advantageous to the health of the bird to have it closed in. Your birds that are roosting in the open shed are in as good a place as you could have them, provided it is moderately dry and the walls are not too drafty. I would suggest that you feed the sick bird that is isolated on practically all soft food, which contains more or less onions—the more onions you can get in the food the better—and that you give it no water to drink but that which has either Morgan's or Conkey's roup cure in it. You can procure either of these from A. J. Morgan, London, Ont. It might be well to bathe the head once or twice a day with warm water, to which has been added a little salt.
O. A. C., Guelph. W. R. GRAHAM.

BREEDING TWO-YEAR-OLD MARES.

Some months ago I procured two superior Clydesdale fillies rising two years old, intending to break them to harness in the spring, and more especially to start them breeding, expecting better results from young, sound blood than from broken-down mares. But a visiting friend, of good judgment in many points, has advised me not to breed them so young, saying that the progeny from mothers of such immature age are likely to be weak or defective, or perhaps both. And since I have been much benefited in the past by your advice to others (through the "Advocate") on other issues, I shall thankfully accept your advice concerning the breeding of two-year-old Clydesdales.
Peel Co., Ont. SUBSCRIBER.

Ans.—Some Clydesdale breeders of considerable experience occasionally breed well-developed fillies at two years old, and with fairly good results, but we would not advise it, as it is reasonable to say that a more matured mare will likely produce stronger offspring. A good deal depends upon judicious treatment during the term of pregnancy. Some favor fall colts. Our correspondent might consider the advantages of giving the fillies six or eight months more time to develop, and breeding them to produce their foals a year from next fall.

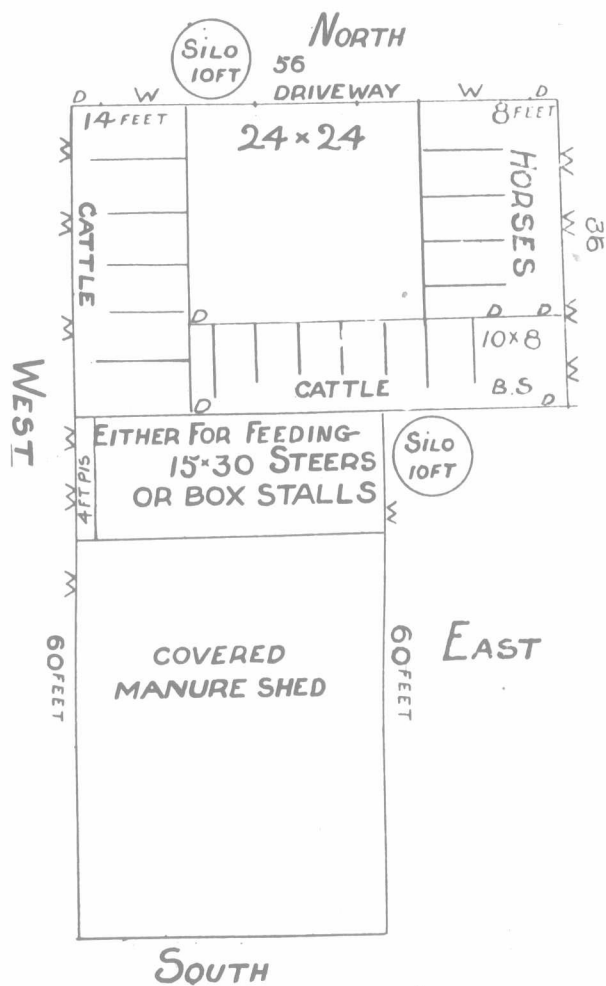
SETTLING FOR A WELL.

A year ago last fall I let the contract to sink an artesian well. The size of casing was to be 4 inches inside, and was started in the bottom of a 31-foot well, to cost \$1.50 per foot from bottom of said 31-foot well, and whatever casing would be required in the old well I was to get at cost. When down some distance in well he struck a rock, and could not get the 4-inch casing down, so he used 3 1/4-inch casing for 53 feet in the bottom of well, with a reducer to connect it to the 4-inch casing. I requested the right of measuring the casing, but he told me it would do me no good. However, I measured the 53 feet before it was put down. He struck water and put in the pump according to agreement, and pulled down his derrick without giving me a chance to know the depth of well. He said the well was 200 feet from the surface, and he demanded \$300 (\$1.50 per foot for work he did not do, for the 31-foot well, which was not right). I asked him what was my purpose in starting him in the old well, so he had to give in and throw off \$31. I wanted all the casing at the price of the 3 1/4 inch, as I was getting no benefit from the 4-inch casing on the top, but he would not. I offered to submit the dispute to arbitration, but he was not willing to do that. Kindly advise me what to do?
Bruce Co. L.J.

Ans.—We do not regard your case as one in which you could reasonably expect profitable results from litigation, and we accordingly advise you to settle it.

LAYING OUT A BASEMENT.

To the Editor "Farmer's Advocate": A question was asked in the Jan. 1st number of your valuable paper for plans of stabling under two buildings. I was watching with interest for plans I thought suitable for buildings that size, viz., 36 x 56 and 24 x 60. When widened, this last is to be 36 x 60. I have two buildings almost the same size, and the plan, submitted herewith, that would suit one might suit the enquirer. Situation is the first consideration. Have the buildings so that you will enter them either from the north or west side. By all means avoid going through the barnyard. Another idea is having the manure covered. According to plan, this long shed can be used for that purpose. I do not think it is any great advantage (that is, taking cost into consideration) to have the straw covered. The objections I have to most of plans submitted are the alleyways. In large buildings I do not see how they can be avoided. With buildings 36 x 56 and near those figures, the stabling can be arranged by having your stock facing the inside. By this plan you feed them



from the center: you have lots of room for your feed and no distance to carry it. This space in center can be partly used for calves, roots, or box stalls. The questioner says he is going to widen his 24 x 60 building (which I take to be a shed) to 36 x 60. I do not intend to widen mine, only that part which is for stabling and can be used for feeding steers or box stalls. This part which is to be widened is the length of one bent, to extend past where the barn door is now. The straw carriers will go up through this to the outside to straw stack. The silos are optional. I have shown where they may be put. I believe two silos are better for a moderate-sized farm than one large one. Doors can be placed to suit, and stalls made of the size desired.
Middlesex Co., Ont. JOHN H. ELLIOTT.

FRENCH-CANADIAN STALLIONS.

I see, in "Farmer's Advocate" of February 1st, a description in detail of an ideal Clydesdale or Shire stallion, which to my mind would be about perfection. Now, I would be pleased if you would give, in your paper, a description of an ideal Canadian-French stallion, which might be of good service to a number of your readers as well as myself.
Dundas Co., Ont. W. A. B.

Ans.—So far as we are aware, there is no distinct breed of horses of the above name, though years ago horses bearing that name were numerous, and at rare intervals one is still heard of in Ontario tracing back to a "French-Canadian" stallion. The latter were probably descended from stallions brought from France to Lower Canada, and crossed with smaller native mares. At the last Ottawa Fair several stallions of the type in question were shown in the "general-purpose" class. They were mostly black in color, about 15 hands 3 in. high, weighing about from 1,350 to 1,400 lbs., of compact build, clean legged, of tippy style and good action, resembling a Percheron rather than a Clydesdale. We understood them to have been the product of a cross between Percheron stallions and the common mares of Quebec. Probably some horseman can throw more specific light upon this question?

STARTING A DAIRY HERD.

Intending to start dairy farming, I would like advice as to which would be the best breed to work upon. Have been working on the dual-purpose plan, of a little beef, a little milk, and very little of either. My herd is grade Shorthorns. There is nothing but Shorthorns and grades for miles around here. I do not know of a dairy sire near. The city dairy is starting a cream-gathering station close at hand, and with the intention of supporting it, which would be the best breed to select, and how would you introduce a herd?
York Co. SUBSCRIBER.

Ans.—It is more a question of individual cows than of breed in starting a dairy herd, as there are several good breeds and many good cows in each, and also too many inferior ones in each. For your purpose it is not necessary to go into pure-breeds, as selections of good milking grade cows of any of the dairy breeds may be found, and by using a good bull of the breed you prefer, and one bred from a cow that you know to be a good milker, you can, by raising the heifer calves from your best cows, work into a useful and profitable dairy herd in a few years. In the meantime we would advise feeding off such cows as you have as are not good workers in the dairy, as beef brings a good price now, or dispose of them the best way you can, and buy a few good milking grades to start with, and if you have a fancy for a pure-bred herd buy one or two good young cows of this type, of the breed you prefer, that you know to be good milkers, and then use a bull of the same breed to these and to your grade cows, keeping the best of the produce and weeding out the inferior ones. If quantity of milk is of first importance, good-testing Holsteins or Ayrshires or their grades should fill the bill. If their milk is not rich enough in fat, put in a few high-testing Jerseys or grade Jerseys, good ones of which should also give a good quantity of milk, and would improve the quality of the whole product of the herd.

A BATCH OF QUESTIONS.

Would you please answer following questions: 1. How many years have I been a subscriber to your valuable paper? 2. What is meant by the term, Shire horse? I mean what is his origin, and where is he bred? Is he superior to the Clyde as a draft horse? 3. When were the first Durham or Shorthorn cattle imported into Canada, and by whom? 4. Is it absolutely necessary for our stock-breeders to continue importing horses, cattle, sheep and swine from the British Isles? We hear a good deal sometimes about the benefit of what some people call the introduction of fresh blood into our flocks and herds. Now, I would like to know where the breeders of Britain get their fresh blood; or perhaps it is our climate that is faulty, though I have always heard it said we have a good country and climate for raising all kinds of domestic animals.
Durham Co., Ont. J. S.

Ans.—1. We do not know. Long enough, we trust, to be convinced that it is good value for its cost.

2. It is supposed that the original stock from which the Shire horses have descended came from Holland, but the honor of providing the oldest pedigreed horse of the breed belongs to Leicester-shire, the animal being Blaze 183, foaled in 1770. The English shires, or counties, notably Nottingham, Leicester, Derby, Stafford, and Lincoln, may be regarded as the nursery of the breed in its early history, but it has since become widespread in most of the counties of England. As a rule, the Shires are larger and heavier than the Clydesdales and make a splendid appearance, but until recently they did not compare well with the latter in cleanness and quality of bone and feet. However, under more strict rules of inspection for soundness, of late years, in judging at the leading shows, very great improvement has been made in this regard, and the best Shire horses compare well with the best Clydes in soundness and in quality of bone. It is generally conceded that Clydesdales trace their origin to an importation of Flemish stallions to Lanarkshire, Scotland, about the middle of the 18th century, and that they derived their name from the valley of the River Clyde, or, in other words, from the most fertile portions of the County of Lanark.

3. In 1825 or 1826, the New Brunswick Board of Agriculture imported four Durham or Shorthorn bulls from England, and these are believed to be the first brought into Canada direct from England. In 1833, the first importation that has been of much value to the country was made by Roland Wingfield, an Englishman, who brought to Guelph six heifers and two bulls.

4. The experience and observation of breeders tends to the belief that to keep up the vigor of the stock and to make steady improvement, it is necessary to make occasional importations of fresh blood, and the records of the prize-lists at the leading shows support this theory. The milder, moister climate of Great Britain may in part account for their success, the animals living more out of doors, but it is largely due to their liberal feeding of roots, the richness of their permanent pastures, and the variety of soils in different sections, a change from one soil to another being often as helpful as from one country to another.

BEEF RINGS AGAIN.

Could you furnish me with any information about starting a beef ring, and how it will be carried on and the carcass be cut up? C. Q. Perth Co., Ont.

Ans.—See illustrated articles in this issue.

CLOVER HULLER WANTED.

Could you let me know, through your valuable paper, where I could purchase a clover huller, and price of same? W. G. LETT. Renfrew Co., Ont.

Ans.—Manufacturers of these machines should make the fact known through our advertising columns. Can some reader furnish the information asked for?

MULE RAISING.

As I am desirous of trying to raise mules, could you afford me any information as to where I might procure a jackass for breeding purposes? Quebec. SAMUEL WALSH.

Ans.—We know of none in Canada. Write Mr. M. A. Scovell, Director Experiment Station, Lexington, Kentucky, U. S., where they are plentiful.

PAYING A MORTGAGE.

A bought a farm a few years ago, and borrowed the money from B, a city gentleman, at the rate of six per cent., to be paid in yearly instalments. A can now get it at five per cent. Can A make B take money before the mortgage runs out, or can B hold the mortgage till it is due? The mortgage will be due Nov. 1st, 1903. Frontenac Co., Ont. A SUBSCRIBER.

Ans.—It does not appear, from the statement of facts, that A is in a position to compel B to accept payment off of the mortgage in advance of the date of its maturity upon terms other than payment in full of the principal money outstanding and interest thereon at the mortgage rate until the expiration of the mortgage term.

WORKS ON HYPNOTISM.

Would you please let me know where I could obtain a reliable book giving practical information about hypnotism?

Prescott Co., Ont. JOHN E. BROWNRIGG.
Ans.—"Hypnotism," by A. Moll (\$1.25); published by Walter Scott, London, Eng.; "Hypnotism: how it is done; its uses and dangers," by J. R. Cooke (\$1.50); published by the Arena Pub. Co., Chicago, Ill.; "Elements of Hypnotism" (\$1.75), by R. H. Vincent; published by Scribner & Sons, New York.

Which of the above works would best suit the enquirer's purpose we cannot say. They can be ordered through a local bookseller or direct from publishers. In your case the former would perhaps be the preferable plan.

HUNGARIAN BROME GRASS.

On the 15th of April, 1898, I sowed one acre with 16 pounds of Hungarian Brome grass. Had a poor catch and cut a very small cut in 1899; plowed it down in fall; put mangels on the field in 1900; last spring (1901) some Brome grass came up along the fence. It made a very early growth; very thick in the bottom; I rather liked the look of it. It was sown on fall wheat and given one stroke of harrow, the ground being very dry and hard, and continued so for some time. 1st. When is the best time to sow? 2nd. Have you or any of your Ontario readers any experience? J. J. W. Huron Co.

Ans.—Will some reader reply to the above?

KALMIA OR SHEEP LAUREL (AUGUSTIFOLIA).
Would you give a description, through the "Advocate," of a weed called Kalmia, or sheep laurel? SUBSCRIBER. Grey Co., Ont.

Ans.—It is a shrub growing to a height of about three feet, found all the way from Newfoundland and Hudson's Bay to Georgia. The leaves are usually in pairs or threes, petioled, usually oblong, obtuse, light green above and pale beneath; bears numerous bright flowers, purple or crimson. It derived its name from Peter Kalm, a pupil of Linnaeus. It is sometimes known as lambkill, being of a poisonous nature.

TREATING SMUTTY OATS.

Please let me know how to prevent oats from being affected with smut, as the oats that I intend to sow have smut in them? W. H. E. Kent Co., Ont.

One pound bluestone (copper sulphate) dissolved in 8 gallons water was the recognized solution for 8 bushels of oats. But formalin is now found to be more satisfactory than either bluestone or hot water (soaking for 5 minutes at 132 to 133 degrees Fah.), and is considered a complete preventive. Soaking the grain 10 or 15 minutes in a solution of 4½ ounces formalin to 10 gallons water is the plan recommended. A good plan is to put the grain in bags of cheese cloth or other open fabric which will allow the liquid solution free passage, and immerse them in the mixture. Formalin costs about 5 cents per ounce. Let the bag drain a few minutes after immersion, and then empty on the granary floor, turn with the shovel a few times, and the next morning the oats will be ready to sow.

LIMIT OF SERVICE FOR YOUNG STALLION.

How many mares will a well-cared-for three-year-old stallion successfully serve in one season? Megantic Co., Que. SUBSCRIBER.

Ans.—From 50 to 60 should be the limit, and not more than two in a day.

IMPORTING POLLED DURHAMS.

I am about buying three Polled Durham calves from a breeder in Kentucky. They can be registered, and are from four to six months old. Can he ship them through to me, or will they be quarantined, and if so, for how long, and what would it be likely to cost me? How is this matter of importing cattle for breeding purposes regulated? An answer, through the "Advocate," I will deem a favor. S. H. B. Simcoe Co., Ont.

Ans.—Under present reciprocal arrangements between Canada and the United States, there is no quarantine, but to secure entry for these cattle and admission, duty free, they must be accompanied with the required customs entry papers, with an official certificate of registration from the Secretary of the Polled Durham Cattle Breeders' Association, J. H. Miller, of Peru, Indiana, U. S. A., and a certificate of good health and having passed the tuberculin test, signed by an official veterinarian of the U. S. Government.

PLANTING POTATOES, AND BEST FERTILIZER.

What is considered the best method of planting potatoes, and the best fertilizers to use? Also, are wood ashes good as a fertilizer for potatoes? Lyn, Ont. SUBSCRIBER.

Ans.—In planting potatoes in an average soil, I would advise placing the rows about 28 inches apart and the potato sets 4 inches below the surface and 12 inches apart in the rows. Potatoes which have been grown on the level have given better results at the College than those which were hilled up. In the average of five years' experiments with thirteen different kinds of fertilizers with potatoes, it was found that the Royal Canadian fertilizer, applied at the rate of 320 pounds per acre, produced the largest yield of potatoes. The Royal Canadian increased the yield of potatoes 41.7 bushels per acre, or a little over 33 per cent. Unleached wood ashes, applied at the rate of 800 pounds per acre for five years in succession, made an annual increase in the yield of 8.6 bushels per acre, or of practically 7 per cent. C. A. ZAVITZ.

HOW TO HANDLE MANURE.

I would like to know which is the most profitable way of manuring — to haul out in the winter (if so, to spread off the sleigh or put in piles and spread in spring?) or to let manure rot in barnyard until all is ready to turn over. Oxford Co., Ont. A. L. HISCOCKS.

Ans.—To haul fresh manure directly from the stable to the field is most economical of labor, and those who have been pursuing this system for years have obtained much better crop returns than under the old plan of rotting it in the yard, under which the losses are known to be very great. Ere this our subscriber will have read Dr. Saunders' letter, on page 126, Feb. 15th issue, in which he gave the results of over ten years' careful investigation, showing that, weight for weight, fresh manure was equal to rotted. Hence the great reduction in weight through leaching and heating would seem to be an absolute waste. Whether it should be spread evenly at once as drawn out, or put in small piles to be spread in spring, will depend upon circumstances.

MIXED GRAINS FOR FEEDING.

In what proportion should barley, oats and peas be mixed to form a balanced ration? Having two of these and not the third, will it pay, at present prices, to buy the third to make it up? Huron Co., Ont. J. E.

Ans.—It is impossible to give a balanced ration for any purpose without knowing what kind of foods are to be used in addition to the grain, as the bulky fodders must always be taken into consideration. If your correspondent has good silage and clover hay, and feeds say 30 pounds of silage per day and what clover hay the animals will eat, then for dairy cows a very good mixture would be meal mixed in proportion of three pounds of peas to two of oats, by weight. About nine pounds of this mixture per day per cow should give good results; or a meal ration comprising say 3½ pounds oats, 3½ pounds barley and 2 pounds of oil cake per day would answer well. For cows, I would prefer oats and peas to the barley mixture, although a very good meal mixture could be made by using about equal weights of the three kinds of grain, and feeding nine to ten pounds of meal per day per cow. It would be better, however, if the peas were fed in rather larger proportion than the other two kinds of grain. For fattening cattle, I would prefer barley and peas, with possibly a little bran, the bran constituting say about one-fifth of the total ration. I do not regard oats as a fattening food, and they are too dear this year to be used for that purpose. G. E. DAY, Agriculturist. O. A. C., Guelph.

MARKETS.

Every reader is invited to write something for this department that other farmers ought to know. Do it while you think of it. Put it on a post card if you haven't time to put it in a letter.

FARM GOSSIP.**Notes from Ottawa.**

(Special.)

THE NEW FRUIT ACT.

Mr. W. A. McKinnon, Chief of the Fruit Division, Department of Agriculture, Ottawa, arrived home on the 20th inst. from an extended trip through Western Ontario, where he visited a large number of fruit exporters, with a view of ascertaining how the Fruit Marks Act is being carried out. Mr. McKinnon states that nearly every fruit exporter he interviewed spoke favorably of the Act, and that the general consensus of opinion was that such an Act should have been drafted many years ago. Mr. McKinnon attended the meeting of the Fruit Association held in Toronto, where the rules of the constitution were changed to a certain extent, and hereafter apples, instead of being classed as summer, fall and winter apples, will be graded as commercial and domestic, the former applying to the foreign market and the latter to the home market.

EXPERIMENTAL CURING ROOMS.

The Dominion Department of Agriculture, acting under the suggestion of Prof. Jas. Robertson, Commissioner of Dairying and Agriculture, has just completed arrangements by which four curing rooms for the proper handling and curing of cheese in cooled air will be erected at four central points in Ontario and Quebec this coming spring. The curing room will be built at Brockville for Eastern Ontario and at Woodstock for Western Ontario. For the Province of Quebec they will be established at St. Hyacinthe and Cowansville, two of the largest manufacturing centers in the Province. Prof. Robertson states that the object of these curing rooms is to demonstrate the superior quality of cheese kept in a moderate temperature. The curing rooms will be solely under the control of the Department. The cheese will be collected daily from ten different factories in the vicinity of each room, and the charge made for the collection will only be a sum equal to the value of the saving in the shrinkage of weight. The Department will provide the boxes and the manufacturers will be asked to pay for them. The cheese will remain the property of the patrons and will be sold by the salesman in the ordinary way. Prof. Robertson is of the opinion that the cheese cured in these model curing rooms will sell for at least half a cent more than the cheese cured in the ordinary curing rooms. All four rooms will be fitted up with plants for mechanical refrigeration.

THE OTTAWA FAIR.

The fourteenth annual meeting of the officials of the Central Canada Fair Association was held in Ottawa on the 19th inst. Mr. E. McMahon, the secretary, presented the annual report, which recommended that the prize list, which had been cut down last year on the score of economy, be restored to the former figures. It also stated that owing to the falling off in the attendance, as a result of the Royal visit, and despite the measures of economy taken to reduce the indebtedness, a deficit still remains. The directors recommend that the fair this year be held from Friday, August 22nd, to Saturday, August 30th. This will bring the Ottawa Fair in ahead of the Toronto Fair. The total receipts last year were \$52,594.53. The assets are put down at \$10,947, and the liabilities are placed at \$25,552. The following officers were elected: President, Wm. Hutchison; Vice-Presidents, Chas. Mohr and G. N. Kidd, M. L. A.; Secretary, E. McMahon; Treasurer, T. C. Bate.

RUNNING THE LOCAL FAIRS.

A meeting was held in Ottawa, on the 13th inst., for the purpose of discussing the improvement of the county fairs of Ontario. Delegates were present from nearly every county society in Eastern Ontario. The meeting was presided over by Mr. F. W. Hodson. He stated that a beginning should be made by organizing the fairs in a circuit so that the judging could be done by experts, and that special features along the line of agriculture should be introduced. In a very short time many of the small township fairs which were at the present time only a "side show" would amalgamate with the county fairs. Prof. Jas. Robertson said that an agricultural society should exist for three purposes: (1) to bring into the locality a sense of reliance on themselves; (2) to promote a spirit of enterprise in the community; (3) to induce locality responsibility.

Superintendent Creelman impressed on his hearers the importance of spending the \$386,000 which amount was given annually by the Government to aid agricultural societies, in a way that would bring best results to the different communities. A committee, comprising Messrs. G. C. Creelman, H. B. Cowan, and Mr. J. Lockie Wilson, Alexandria, was appointed to wait on the different societies with a view of getting them to arrange the dates of their exhibitions so that all the fairs could be held in a circuit. The committee will report at a meeting to be called early in the spring. A resolution was passed, asking the Minister of Agriculture to appoint Mr. G. C. Creelman superintendent of agricultural fairs.

TWO POULTRY ASSOCIATIONS.

The annual meeting of the Eastern Ontario Poultry Association was held in the Russell House, Ottawa, Wednesday evening, Feb. 12th, and was the largest attended and most representative meeting ever held in the history of the Association, over sixty members being present from different parts of Ontario and Western Quebec. President Gisborne occupied the chair. Among other matters of importance dealt with was that of changing the constitution of the Association, and similar by-laws to those of the Live Stock Association were adopted. It was decided that hereafter the dividing line will be Toronto, and all the territory west of that point will be governed by the Western Poultry Association, and all the ground east of Toronto by the Eastern Association. It was also practically decided to hold all future exhibitions at Ottawa and Guelph, as these two points are said to be the most central, and better accommodation can be secured. Mr. A. P. Westervelt, secretary, gave an encouraging report of the work accomplished during the past year. The following officers were elected for the ensuing year: President, F. H. Gisborne, Ottawa (re-elected); 1st Vice-President, J. S. Oldrieve, King-

ston; 2nd Vice-President, C. J. Devlin, Ottawa; Secretary, A. P. Westervelt, Toronto. Directors—W. H. Craig, Cornwall; F. H. Beak, Almonte; L. A. Smith, Ottawa; F. Heney, Ottawa; W. H. McGee, Port Hope; C. J. Daniels, Toronto; and F. C. Hare, Ottawa. Delegates to the Industrial Exhibition—Messrs. Daniels and Heney. Delegates to the Central Canada Exhibition—Messrs. Gisborne and Devlin.

Oxford Co., Ont.

"Never put off till to-morrow what can be done to-day," is a very good motto for this season of the year. In the month of March we should run all the grain we have in the granary through the fanning mill, cut up a lot of feed, wash, oil and repair the harness, see that all the implements are in good order, haul out all the manure to the fields, split up enough wood fine enough for the stove to last a year. Everything should be got ready for the opening of the spring, so that there need not be any unnecessary delay. A friend called on me lately as we were cutting wood, and looking into the woodshed, he remarked: "I see you have quite a stock of dry wood yet," and then he went on to tell me of a farmer that he called on lately who just hauled up a load of logs at a time and cut the wood as it was required, and there were two young men sitting in the house reading, in broad daylight. But— Well, you can see the moral without your specs.

We have had some pretty severe weather lately, but have not had any trouble with our water-pipes. I tell you, it is a comfort to have a sufficient satisfactory water supply. We turn out the cattle every day while we are cleaning out the stables. The animals take a frolic round the yard and get a drink and come in satisfied.

Several farms have changed hands lately, at, I think, an advance in price. One fifty-acre farm brought \$3,500; another, \$3,600. Ninety-one acres sold for \$5,600. All these have fairly good buildings. The price of hogs is not at all firm. No one can tell which way it may go, but we are hoping for the best; last week it was \$5.75. Cattle seem to keep up pretty well in price.

Perhaps, after all, one of the greatest problems of our life is the question of hired help. How are we to get it, good, and at a reasonable rate? That is the question of questions. In most cases co-operation does not satisfy, because while our neighbor is helping us his own work is suffering, and vice versa when we are helping him. There are too many large farms and not enough small ones in the country, and too many bachelor farmers, who are disregarding that Divine wisdom which said, "It is not good for man to be alone," and are neglecting to raise the very best crop that any farm can produce, viz., a crop of boys and girls. We would join in the prayer of the prophet, "Lord, open Thou their eyes."

Farm Work at the O. A. C.

Work on the Experimental Farm at present is mostly confined to cutting and pulping feed, threshing, and drawing manure. The plan adopted at present for handling the manure is to draw from the yard as fast as made, and spread from the sleigh on land intended for roots, corn and peas. The latter is followed with wheat, the roots with barley, and the corn with oats. Such has heretofore been the practice in rotation, but owing to the deprivations of the winter and the belief of the authorities in the efficiency of the starvation method, it is probable that no peas (excepting, perhaps, a few of the bugless variety) will be sown next season. Their place in the rotation will probably be taken by barley, sown early, seeded with clover, which is plowed down for wheat.

The accumulation of manure during the summer (which is not inconsiderable) is spread in the autumn on the land intended for roots and ribbed with the double-mouldboard plow to protect it from washing, as it is decomposed and soluble. That portion of the land remaining to be manured in the winter is not ribbed, but having been plowed out of sod the previous summer, is cultivated deeply in the spring with out inverting the soil. It is doubtful whether the 100-acre system could be practiced by the average cultivatable land farmer, as one-quarter of the whole cultivatable land is plowed out of sod every summer. Of course, it is done shallow, but requires at least one spare man and team in the busy season. Besides, the yield of roots here is not what one might expect from the best system of cultivation, and this crop is of no little importance in a dairy or beef-raising district.

Threshing on the farm is a more or less intermittent occurrence for most of the winter, it being all inside work, very seldom any straw having to be put outside. Straw is scarce here as elsewhere, and the habit of cutting it for bedding is not practiced to any considerable extent. Silage is largely used for the feeding, but is giving way somewhat to roots as the succulent part of the ration for fattening animals. The roots are pulped and mixed with cut straw, hay, etc., at the one operation, and fed in that form.

A new style of ventilator is being freely used on the buildings. It is of the same principle as those used on steamships, with the addition of a vane to turn it to the wind automatically, ensuring a continual downward current of fresh air whenever the wind blows.

Alfalfa Growing.

The pamphlet on "Lucerne or Alfalfa," issued by Prof. R. Harcourt, Chemist of the Ontario Agricultural College, closes with the following conclusions:

- 1. That the composition of lucerne is very similar to that of the clovers, both in food and in ash constituents.
2. That it is quite as digestible as red clover or timothy, when cut at the proper stage of maturity.
3. That, in our experiments, a much larger amount of digestible matter was obtained by cutting when the plants were about one-third in blossom than by cutting either two weeks earlier or two weeks later.
4. That after the early blossoming stage the deterioration, both in percentage composition and in digestibility, is very rapid.
5. That, cut when about one-third in blossom, lucerne yields more digestible protein than either red clover or timothy.
6. That there appears to be danger in feeding lucerne hay that has been made from the plant in advanced stages of maturity.
7. That, notwithstanding the rapidity with which lucerne deteriorates after passing the early blossoming stage, the fact that, when properly saved, it yields a large amount of nutritious food, makes it a most desirable addition to our list of fodders.
From 16 to 20 lbs. seed is recommended, covered with a light harrow or roller. Best results are said to be obtained by sowing with oats or barley, only about half the usual amount of grain per acre should be used. On hard, heavy clay knolls, a top dressing of barnyard manure at time of seeding will aid in getting a "catch."

Prince Edward Island.

The winter still continues mild. Zero weather is very unusual. The fields are well covered with snow this month. There will not be much mud digging this winter, as the ice has not made well on the oyster beds. Most of the creameries here have ceased operations on account of scarcity of milk. There will not likely be much more butter made till May. There is a good demand for good fat steers, at a high price, but cow beef is plenty and cheap yet. This latter kind goes to the Sydney market at from 5 to 6 cents per pound.

Our Institute system is now well organized for work. A great many meetings have been held, at which newer and more profitable methods of crop-growing and stock-feeding have been discussed.

The Provincial Government is arranging for the importation of a number of pure-bred horses and cattle, and the local Institutes are also going largely into the same business. We look for a very vigorous forward movement towards raising the quality of the stock of the Province. A convention of Institutes is to be held at an early date to discuss general agricultural matters and arrange for the importation of agricultural seeds by the Institutes collectively. It is thought by some that a better quality, at a cheaper price, can be obtained this way. Timothy seed is scarce and high, selling now for \$3.75 per bushel. Clover seed is not produced here to any extent, and very large quantities will be required.

A big exhibition is about assured for St. John next September. The City Council has voted \$3,000 and put up a guarantee of \$2,000 against a possible deficit, and the Provincial Government has promised \$5,000. The P. E. Island Exhibition Association held their annual meeting a short time since. They are hopeful that they will be able to hold a show, open to the Maritime Provinces, next fall, but as yet there is no certainty, as the Legislature has not yet met, and the Government has not announced their policy. There is a strong demand made by our farmers for a big exhibition, and we expect that the City of Charlottetown and the Provincial Government will both give good grants for that purpose.

Conviction Under Fruit Marks Act.

Chief Inspector W. A. McKinnon, under the Fruit Marks Act, recently laid information against a Toronto apple exporter named Eben James, charged with having in his possession for sale a number of packages of apples the face surface of which gave a false representation of the contents. The Inspector testified to finding ten barrels on the premises packed in violation of the Act. More than 15 per cent. of the fruit was substantially smaller than the face shown. Mr. James assumed the responsibility for the apples, saying that he represented the shippers. He was convicted, and the minimum penalty under the Act, 25 cents per package complained of, was imposed, without costs, it being the first prosecution of the kind in that city.

The Canadian Fair Association.

The annual meeting of the Canadian Association of Fairs and Exhibitions in Toronto, last week, was well attended, Mr. J. T. Murphy, of Simcoe, president, in the chair. Following his address was one by the Hon. John Dryden, Minister of Agriculture, who intimated that there was need for improvement in many of the agricultural societies. Spectacular amusements as a device to attract patronage had proved a failure, and fairs conducted on educational lines were a success financially and otherwise. The work of the agricultural societies and the Farmers' Institutes should be dovetailed. The societies were now not giving any information to the people, and consequently the burden of the work fell upon the Institutes, which had not the advantages of practical illustration afforded by the societies. He suggested that at every fair competent judges should be employed, who would be able to explain not only why a certain exhibit was given a preference, but how the best class of exhibits could be produced. Agricultural societies had been in full blast for fifty years, and there was still complaint about the incapacity of judges. He suggested that the local fairs might be improved by having a guiding head or superintendent.

Mr. Jas. Mitchell, of Goderich, attributed the lack of success of some fairs to the small attendance at annual meetings, the conflict of dates resulting from multiplicity of small fairs, the professional prize-winners and the lack of interest on the part of the public. He suggested a classified prize list, a set of model books to be prepared by experienced fair managers, an improved system of auditing, and increased competition. He believed that a proper interest in fairs would do much to keep country boys on the farm.

Mr. D. G. Hanmer, of Burford, spoke of the advantages of educational attractions at exhibitions, and of the ruination of them by gambling and other improper devices.

In the discussion the opinion was generally expressed that the lighter forms of amusement at country fairs should be superseded by educational features.

Mr. W. B. Sanders, of Stayner, read a paper on "Township Fairs," in which he made a plea for the continuation of these smaller exhibitions.

Prof. C. A. Zavitz, of the Ontario Agricultural College, read a paper on "The Value of Seed Fairs," in which he regretted that at some fairs no prizes were offered for exhibits of grains and seeds. As showing what could be done in that direction, the success attending the regular seed fairs in connection with Farmers' Institutes was dealt with. In order to make these fairs still more useful, the Professor suggested that "talks" by experts should be arranged.

A motion was passed recommending that the Minister of Agriculture appoint a Superintendent of Agricultural Associations.

Mr. C. C. James, Deputy Minister of Agriculture, explained to the meeting the provisions of the Act. Mr. G. C. Creelman, Superintendent of Farmers' Institutes, in an address on "How the Different Agricultural and Horticultural Organizations Already Existing in Ontario Might Assist the Fall Fairs," recommended that these associations should add flowers to their exhibits at fairs. He also thought the poultry associations should co-operate and give practical demonstrations of killing and plucking fowls.

Mr. Creelman submitted a report on suggested rules and regulations and a proposed prize list, and it was decided to send a copy of these to the directors and officers of the fair associations, with a request that they recommend any alterations they may deem advisable.

Discussion arose on the question of Government grants to fall fairs, some of those present considering that the grants were not equitably distributed and that some of the small fairs got more than their share.

Mr. James explained that the idea of the Government was to help those fairs that could not help themselves and needed the greatest amount of assistance. A resolution was passed referring the

matter to the Minister of Agriculture, with the request that he investigate the complaints of unfairness and remedy such unfairness if it existed.

Officers were elected as follows: President, J. Thomas Murphy, Simcoe; 1st Vice-President, H. Price, Aylmer; 2nd Vice-President, W. B. Sanders, Stayner; Recording Secretary and Treasurer, Alex. McFarlane, Otterville; Corresponding Secretary, G. C. Creelman, Toronto. Executive Committee—W. E. C. Roxburgh, Norwood; J. G. Clarke, Ottawa; W. Laidlaw, Goderich; J. W. Sheppard, Cayuga; Jas. Mitchell, Goderich; H. Foreman, Collingwood; F. Metcalf, Blythe. Auditors—J. D. Murdoch, J. M. Gardhouse.

Toronto Markets.

The attendance at the Western Cattle Market was up to the average. Trade was fairly good. Sixty-seven carloads of stock on offer—1,069 cattle, 1,476 hogs, 470 sheep, about 30 calves. There were not many enquiries for shipping cattle, and no space offered on Atlantic steamers from Halifax.

Export Cattle.—Choice loads of export cattle sold at \$5.40 to \$5.50 per cwt. Many loads of 1,000 and 1,200 lb. cattle sold at \$4.60 to \$4.80 per cwt. The Messrs. W. Levack and Messrs. Dunn Bros. were the principal operators, taking ten loads between them.

Butchers' Cattle.—Choice picked loads of butchers' cattle were in demand, and sold at from \$4.35 to \$4.50 per cwt. Mixed loads rejected. Export cattle and butchers' cattle sold at \$4.25 to \$4.40 per cwt. Good butchers' cattle sold at \$4 to \$4.25 per cwt.; medium to poor sold at from \$3.30 to \$3.40 per cwt. Mr. James Harris bought about 500 head for the Abattoir Co., paying from \$4.15 to \$4.60 per cwt. for choice loads; common to inferior at \$2.75 to \$3.60 per cwt. Mr. R. J. Collins bought 30 butchers' cattle at \$3.90 per cwt., average 1,000 lbs. each.

Export Bulls.—Heavy export bulls not in demand. Those on offer were quoted at from \$4.25 to \$4.35 per cwt. Light export bulls sold at \$3.40 to \$3.85 per cwt.

Feeders.—Short-keep, well-bred feeders, weighing from 1,100 to 1,200 lbs. each, are worth from \$4.50 to \$4.75 per cwt. Light feeders are quoted at \$3.75 to \$4.25 per cwt.

Stockers.—Yearling steers, 500 to 800 lbs., sold at \$3.30 to \$3.60 per cwt. Mixed colors, poor quality, sold down to \$2.75 per cwt.

Milk Cows.—There is good demand for good-quality milk cows. About 40 on offer, only a few of choice quality. Prices ranged from \$30 to \$52 per head. There is a good demand from Montreal; four buyers on the market for this class of animal.

Sheep.—Deliveries, about 500 head. Prices firm, at from \$3.50 to \$3.75 per cwt for ewes, and \$2.50 to \$3.00 for bucks.

Lambs.—Not many on offer. Prices easier than the last two weeks, at \$3.75 to \$4.25 each, or \$4 to \$4.90 per cwt.

Hogs.—Prices for hogs have advanced 12c. per cwt., and are now quoted at \$6.12c. per cwt. for selects, off cars, unfed or watered. Unculled car lots are worth about \$6.00 per cwt. About 1,500 on offer, of very choice quality.

Table with 4 columns: Commodity, Extreme comparative prices to-day, Two weeks ago, Same date last year. Rows include Export cattle, Butchers' cattle, Export bulls, Feeders, Stockers, Sheep (per cwt.), Lambs (per cwt.), Hogs, and Milch cows.

PRODUCE MARKET.

Trade at the St. Lawrence Market was quiet, owing to the break-up of the roads.

Wheat.—Seven hundred bushels of grain on offer; 200 bushels of white wheat; at from 69c. to 77c. per bushel for red; goose wheat, 300 bushels sold at 67c. per bushel.

Barley.—Five hundred bushels sold at 54c. per bushel.

Oats.—Three hundred bushels, sold at 47c. per bushel.

Hay.—Twenty-five loads of timothy sold at \$14 per ton; clover hay sold at \$10 per ton.

Seeds.—The market for seeds shows some activity. Alsike, choice No. 1, at \$8 per bushel; alsike, good No. 2, at \$7.50; red clover seed at \$6.25 per bushel; timothy at from \$2 to \$3 per bushel.

Montreal Markets.

Montreal, Feb. 27.—The butchers were present in large numbers, and there was an active demand, with higher prices paid for good or even moderately good cattle, but there was a larger proportion of thin, dry cows and scraggy bulls than for over two months past, and these were rather slow of sale, with low prices. Choice loads of the best cattle sold at about 6c. per lb.; pretty good brought from 3 1/2c. to 4c. do. the common stock selling from 2 1/2c. to 3c., and some of the leaner old cows at from 2c. to 2 1/2c. per lb. A lot of six ordinary-looking bulls, averaging near 1,000 lbs., were sold at 3c. per lb. Very young calves sold at from \$2 to \$3 each; others at from \$4 to \$13 each; three of the best were sold for \$33, about 6c. per lb. Sheep sold at from 3 1/2c. to 3c., and the lambs at from 4c. to 4 1/2c. per lb. Fat hogs are a little off in price, and sold at from 6c. to a little over 6 1/2c. per lb., weighed off the cars. A number of the milch cows were sold at from \$30 to \$32 each.

Buffalo Markets.

East Buffalo, Feb. 27.—Cattle—Receipts light; steady and about all sold; veals weaker; choice, \$7.75 to \$8; common to good, \$5 to \$7.25. Hogs—Receipts, 1,700 head; 5c to 10c. lower for all grades; Yorkers, \$6.30 to \$6.40; light do., \$6.10 to \$6.20; mixed packers, \$6.35 to \$6.40; choice heavy, \$6.50 to \$6.55. Sheep and lambs.—Dull and lower; choice lambs, \$6.55 to \$6.65; good to choice, \$6.25 to \$6.35; culls to fair, \$5.50 to \$6.20; sheep, choice heavy wethers, \$5.40 to \$5.65; common to extra mixed, \$4.60 to \$4.85; culls and common, \$3.25 to \$4.50; mixed export ewes and wethers, \$5 to \$5.25; yearlings, good to choice, all wethers, \$5.75 to \$5.90.

Chicago Markets.

Chicago, Feb. 27.—Cattle—Slow and 10c. lower; good to prime steers, \$5.50 to \$7; poor to medium, \$1 to \$3.40; stockers and feeders, \$2.25 to \$5; cows, \$1.25 to \$5.25; bulls, \$2.50 to \$4.50. Hogs—(los. l. active; mixed and 1 butchers', \$5.75 to \$5.15; good to choice heavy, \$5.10 to \$5.30; rough heavy, \$5.30 to \$5.10; light, \$5.65 to \$5.80; bulk of sales, \$5.80 to \$6.10. Sheep and lambs—Sheep slow and a shade lower; lambs 2 1/2c. to 4c. lower for week; good to choice wethers, \$4.45 to \$5.25; fair to choice mixed, \$3.80 to \$4.25; native lambs, \$4.75 to \$5.15; western lambs, \$5.25 to \$4.75. Official yesterday: Receipts, 15,323 cattle, 41,275 hogs and 41,753 sheep. Shipments—3,451 cattle, 11,159 hogs and 755 sheep.

British Cattle Markets.

London, Feb. 24.—United States cattle, 63d.; sheep, 63d. Liverpool, Feb. 24.—Canadian cattle, 6d.



"We look too high for things close by,
And lose what Nature found us;
But soon we're taught the world hath nought
Like Home and Friends around us."

The Quality of Mercy.

The clocks were striking six when the editor of "The Great Evening Daily," enclosing a printed slip of thankful regret in the worn folds of a rejected manuscript, tossed the latter across the desk to his typewriter and said he thought he would call it half a day and go home.

He lingered, after changing his coat, to look down for a moment upon the flood of humanity that every day ebbed and flowed in the street below, and what he saw seemed to affect him as Arden's airs affected the fool whom Jacques met in the forest—it set him moralizing. "If people would only reason things out instead of giving way to the momentary impulse of sentiment, we'd have a more comfortable world of it. Your maudlin charity-giver means well, but for want of head work he does a deal of damage. Now, there's that cripple down there on the pavement who walks on his back and has pencils for sale. The sight of him, shoving himself along away down there at your feet, works on your feelings and, though you have a pocket full of pencils already, you are weak enough to feel like buying another from him just to keep the sight of him from haunting you all the way home and spoiling the taste of your muffins. Nevertheless, every cent's worth of such unnatural support serves to encourage him in a course nature has not fitted him for, and withdraws an equal amount of support from the serious worker of whom it is the due."

"He doesn't seem to be getting very rich on it," ventured the typewriter, whose womanly sympathies were plainly with the man who walked on his back.

"No," said the editor, "he doesn't get rich, nor does the old blind woman get rich who waylays you with another stack of pencils in Carter's Alley and unblushingly asks you ten cents for one if you look soft enough to pay it; and neither does the half-legged Jew in the same business get rich who whines out his plaint at you under the City Hall. The sentimental patronizing of this Cooxie's army of lame, halt and blind mockeries of merchants not only does not make any of them rich, but tends directly to keep reputable tradesmen poor—men like my old friend Pounce, the stationer, who is trying to live respectably in the world and bring up his family in a civilized manner, to eat fish with a fork and all that; he can hardly make both ends meet nowadays. It's not right, because it isn't natural. Nature's way is to encourage the strong and mercifully remove the weak from the unequal struggle; and, depend upon it, her way is the best. If men would only let her have her head she would work out life for us on a better plan than was ever dreamed of in the philosophy of any charity board on earth." With the delivery of which dictum the editor departed.

In a moment he was back. "Have you an umbrella?" he asked of the typewriter.

"No," she replied, "I did not bring any this morning."

"You'd better come along with me as far as the car, then," he said; "I have one, and it looks to me as though it would rain in a minute or two."

"I suppose," she remarked, with a mischievous twinkle in her eye as they stepped together into the street, "the natural method would have been to let me go home in the rain and learn through the experience of a bad cold to be more provident in the future."

But the editor's thoughts were on generalities just now. "The thoughtless consider nature cruel," he continued; "but she is only a little cruel in order to be very kind. Take a sick cat, for instance; there's a deal of instruction in the case of a sick cat. She crawls off out of sight somewhere, and if nature does not work a cure the cat dies. That means she is out of her misery, and all surviving catdom is relieved of that much competition for scraps. And so through all the natural world; it's a beautiful system. Nature knows her business, and if not interfered with she would develop the best and weed out the incapables that are a drag on the world's business and a burden to themselves. But, no, the marplot man will put his clumsy fist in the machinery, disarranging the natural order; and so we have a world of unnecessary sociological problems. You never read Spencer's 'Synthetic Philosophy,' perhaps?"

"No," said the typewriter.

"It's beautiful," said the editor.

"If it's like what you have just been talking about," the typewriter observed with some spirit, "I should think so—for well people."

There was a growl of summer thunder, and a few drops of rain came pattering down. The editor raised the umbrella.

The two were in front of a little sidewalk stand whereon an old woman displayed for sale a handful or so of dusty sweets that a couple of dimes would have bought. There were half a dozen sour-balls, some bits of mint twist, a few cinnamon creams, at one cent each—all perishable in the rain—and the poor

soul was troubled. Through the gray hairs blown by the rising wind across her wrinkled forehead, she looked anxiously up at the clouded sky, her trembling hands outstretched to make sure if it were yet dropping. She had no umbrella and no oilcloth to protect her stock in trade; it was a moment of imminent danger.

The editor's eye had taken in the little scene and his step faltered. There was something about the withered hands that had suddenly brought to mind the thought of other hands that had ministered to his needs in years gone by as only a mother's can—hands that were vanished now from the earth forever.

"I am going to buy that old woman out," said the editor.

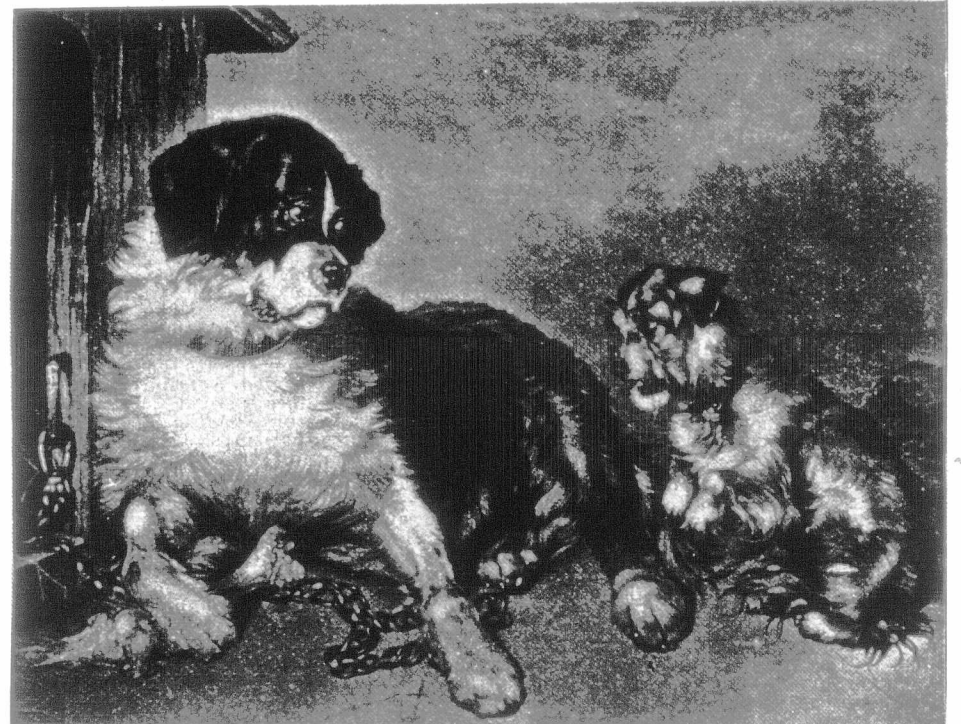
The typewriter laughed outright, and following close upon the heels of the laugh two happy tears rolled down her pretty face.

"I think," she said a moment later, as she tumbled a medley of gritty candies into her bag, thinking the while of certain sweet-toothed little folks at home, "I think there is something in the human heart that has not been taken into account in your 'Natural Philosophy'—something that will last longer, too."—(Charles Francis Saunders.)

Our Pictures.

Perhaps there are no pictures which could be chosen for the pages of the "Farmer's Advocate" more likely to "come home" to its readers than those by Landseer, with which we, nearly all of us, are more or less familiar. There seldom is any need to give name or title to any picture from his brush, whether of a single figure or group. So carefully has he studied the animal he portrays that it tells its own tale. Though dumb, it speaks to us, as it were, in tones sometimes quizzical and droll, sometimes patient and pathetic, but never requiring interpretation. The secret of Landseer's success was, that to his genius he added careful observation and patient study of anatomy. Hayden made him, as a boy pupil, dissect a lion before he painted that king of beasts. But, whilst being content with nothing short of technical perfection, Landseer, as in his group in the "Blacksmith's Shop," and his "Member of the Benevolent Society," so portrays the inner consciousness of the four-legged subjects of his magic brush, that he lets us into the secret, too, without a possibility of missing its meaning.

H. A. B.



"A MEMBER OF THE BENEVOLENT SOCIETY."

Things to Know

TO CLEAN WHITE KNIFE-HANDLES.—Dissolve a little salt in some lemon juice; rub this on the handles with a soft rag till the stains are gone. Rinse in clean warm water, dry thoroughly, and polish with a soft leather.

ICING A CAKE.—To prevent the icing from running off, rub a little dry flour over the cake, then pin a band of oiled paper round, and you will have no difficulty in making the icing stay on as you want it to do.

SILK SUNSHADES.—These are rather apt to split at the seams while stored away for the winter. An excellent preventive of this catastrophe is to put a long roll of tissue paper into each fold before putting them in their winter resting place.

TO CLEAN SUEDE GLOVES.—These, to be really successfully cleaned, must be done before they are very dirty. Put them on your hands. Then take a basin of dry oatmeal, and rub this well into the gloves. This cleans them beautifully, and is very little trouble.

Suggestive Thoughts.

Hope is the word which the finger of God has inscribed upon the brow of every man.

Those who think that money will do anything may be suspected of doing anything for money.

Cheerfulness is also an excellent wearing quality. It has been called the bright weather of the heart.

Diamonds are found only in the dark places of the earth; truths are found only in the depths of thought.

"The foolish and the dead alone never change their opinions," once said that great American, Abraham Lincoln.

Treatment of Colds.

A cold may be brought on by exposure, over-fatigue, lack of sufficient clothing, or lack of nourishing food. Whatever tends to lower the vitality will induce cold, as the system when fatigued or enfeebled is not able to resist disease.

One should dress in such a way as to keep even heat, and preserve an even circulation over the whole body. Women's dress is often very unhygienic, with heavy skirts fastened by means of bands so tightly about the waist that it is impossible to expand the lungs, while the feet are protected only with cotton stockings and thin-soled shoes. On being told to wear thick shoes and stockings in order to protect her throat, a girl asked what her feet had to do with her throat. She did not know that when the blood is driven from the extremities by the cold it goes to other parts of the body, which are sensitive or easily inflamed, and congestion and disease follow.

An eminent physician advises women, instead of burdening themselves with so many heavy skirts, to wear two entire suits of underwear, cotton next the skin and woollen over the cotton, with cotton stockings under woollen ones. In severe cold weather, this manner of dress keeps one comfortably warm. The same physician advises for a cold, a casticum foot-bath, mustard plasters applied to chest, back, abdomen, arms and legs, and a stimulant as follows: To three ounces of pure glycerine add one dram of aqua-ammonia and one ounce of fluid extract of ginger. Take one teaspoonful in a glass of hot water an hour before each meal or when chilly.

One dram of menthol crystals added to four ounces of white vaseline makes an excellent remedy for a cold, either to snuff or to be taken in a microscopic quantity at the end of the tongue,

as the vaseline is healing and the menthol warms the throat.

A glass of sage tea, to which half a teaspoonful of alum and half a teaspoonful of salt has been added, makes a healing gargle for a sore throat. A teaspoonful of listerine, half the amount of salt and quinine the size of half a pea, added to a glass of water also makes an excellent gargle.

A good preventive against cold is to close the mouth and breathe through the nostrils so that the frosty air may be properly warmed by passing through the air chambers of the nose before reaching the lungs. One of the simplest and best remedies to stop a cough is within the reach of everyone, and that is deep, full breathing.

Experts in this country and abroad now declare that consumption is curable and preventable. General cleanliness and avoidance of dust are recommended, but special stress is laid upon sunlight and fresh air as the most effective remedies. Patients are advised to breathe fresh air into the lungs by night as well as day and to sleep with their windows open. The quality of the air must, of course, be considered.—(Frances Bennett Callaway.)

Humorous.

Why is a one-dollar greenback better than a new silver dollar? Because when you fold it you double it and when you open it you find it in-creases.

Why is Buckingham Palace the cheapest piece of property in England? Because it was bought for a sovereign.

Doctor—"Your mother-in-law is in a very bad way—she is at the gates of death." Son-in-law—"Oh, Doctor, do pull her through."

What made the apple turn over? Seeing the sausage roll.

Why was the window curtain sad? Because it could not help the fallen blind.

Travelling Notes.

In my letter which appeared in our Home Magazine of the 1st of December, I gave some account of the magnificent reception tendered to the Duke and Duchess of Cornwall and York (the Prince and Princess of Wales) upon their return from their now historical visit to the loyal Colonies of the motherland. In this letter I want to tell you something of another popular demonstration, somewhat similar in detail, although differing in purpose; and later on, if I should then be privileged to witness that still more wonderful pageant on the occasion of the coronation of His Majesty King Edward the Seventh, for which elaborate preparations are already being made, and in anticipation of which the whole civilized world seems to be standing upon the tip-toe of expectation, I shall hope to tell you about that too. I only wish, in the telling, that I could convey to you who may read my records of these stirring scenes one half of the inspiration they are to those who actually see them, and what an object lesson of love, loyalty and pride of country can be learnt by those intelligent enough to interpret the meaning of each scene as it flashes past. It makes one's heart bound with pride to know that every one of Britain's Colonies has an inalienable ownership in the historical significance of every sign and symbol; that the story told by the colors of each regiment, or by the trophies of each brigade of England's naval heroes as they

and 2nd Life Guards. The latter wore large scarlet cloaks completely covering their white, scarlet and gold uniforms, and indeed they nearly covered the horses too, for the cloaks are purposely made to fit both very neatly as occasion might require. Next came the Foot Guards, taking up their position in front of the police, the officers being nearly all titled men. Some of these young officers tickled my Canadian sense of humor. They were such perfect dudes. Their uniforms, cut after the German fashion, fitted them perfectly, imparting a somewhat ladylike air, but they were also, I knew well, types of many who had looked much as they did, mere play soldiers, until the battle cry sounded in their ears, when they had given proof of the true heroism which was enshrined within. Next in order came the Yeomen of the Guard, marching down with their tall halberds. These were splendidly picturesque figures, in their Tudor hats and slashed doublets, stalwart veterans, with broad, bemedalled and beribboned chests. They had carefully and neatly trimmed their venerable beards, which were nearly all either wholly white or iron-gray in shade. Pathos and dignity were alike represented by these men, who could probably have each told of stirring scenes in their days of youth and vigor. After speaking of such as these, it seems almost invidious to mention how large a feature in this wonderful procession were the coachmen and footmen and generally resplendent flunkeys in their gorgeous liveries.

Then the horses! They were such magnificent creatures!—black, bay, and cream, with trappings of gold and silver, their manes richly dressed with carmine silk. Queen Victoria's eight cream-colored Hanoverian horses, ridden by postillions, drew the State carriage, which, with its Royal occupants, was the cynosure of all eyes. I will not attempt to describe its grotesque carvings, its paint and pictures, its glass all around it, for the very good reason that I had no notice to spare just then for anything merely inanimate, only for our King, in his field marshal's uniform, sitting bare-headed within, and for the sweet Queen Consort by his side, with her ermine cloak covering her full-dress costume, and her small diamond crown upon her pretty womanly head, gracefully bowing their acknowledgment of the homage so freely offered them. As they passed my little corner I waved my handkerchief with frantic loyalty, as a good Canadian should, and my reward was a smile and a bow from both, let who will claim them likewise.

As the King passed through the masses of his cheering subjects, he was to them not only a sovereign beloved of his people, but the living, breathing symbol of a unity which makes the British Empire unique amongst the nations of the earth.

To the Colonial mind, with its practical bent, and its present pathway to hew before it, perhaps all this pomp and circumstance may seem mere froth and bubble—just empty show; but a very little thought and a little careful reading between the lines will bring out the deeper meaning underlying each State ceremonial, and with the knowledge of that meaning, and the inferences to be drawn from the same, must come an ever-increasing sense of personal responsibility towards upholding the integrity of an Empire upon which it is said that the sun never sets.

P. S.—Mollie desires to thank a friend, B. M. H., from Halifax, for her kind words of appreciation of her Travelling Notes, she having quite lately been over much of the same ground. This friend adds: "My father has taken the 'Advocate' for a long time, and we all enjoy reading it very much."

Kissing Children.

Children are kissed too freely by relatives, friends and strangers. I know a lady who insists always on kissing her friends upon the lips when she meets them. The ordeal for her friends is a terrible one, yet not one of them has the heart to refuse the proffered caress, or to give the cheek in place of the lips. They would love her just as dearly and thank her just as feelingly if she pressed their hands merely and withheld her lips. Parents ought to teach their children from their very earliest years to be chary in giving

their lips. Parents themselves ought to avoid kissing infants on the mouth. The sweet cheeks, the dear little soft necks, the dimpled hands, all over tempting nooks for kisses without endangering the child's comfort or health. I have seen a father, whose breath was vile with stale tobacco smoke, press his mouth to that of a tiny infant, never thinking that the poor baby's lungs were being poisoned by the contact, says a writer in the New York Telegram.

The Joy of Coming Home.

"There's joy in sailing outward
Though we leave upon the pier,
With face's grieved and wistful,
Our very dearest dear;
Though the sea shall roll between us
For perhaps a whole round year.
"There's joy in climbing mountains,
In fording rushing brooks,
In peering into places
We've read about in books,
In meeting stranger people,
With unfamiliar looks.
"But the joy of joys is ours,
Untouched by any pain,
When we take the home-bound steamer
And catch the home-bound train;
There's nothing half so pleasant
As coming home again."
—Margaret Sangster.

The Beauty of Wrinkles.

WITHOUT THEM THE FACE WOULD BE MEANINGLESS AND VOID.

In a recent number of the Weekly Scotsman, a lady gave full instructions on "How to Remove Wrinkles." Why should one try to remove them? Wrinkles may mean the "first approach of old age," but that "they make sad havoc with a woman's beauty" is a statement not to be tolerated for one instant.

What makes the wrinkles and why are they there?

We all love the soft, chubby face of the baby because it is part of its very helplessness. All is smooth and clear as a blank tablet, but as the mind of the child develops, Nature, the only perfect artist, pencils softly and delicately, day by day, lines which become an index of the mind, lines without which the face would be meaningless and void. But nature is not self-willed over her traceries. The great mother allows the individuality of each one of her children to guide her hand to engrave, be they the graceful upward curves of the happy, contented mind, which makes the most out of life and sees its best and purest side, or the harsh downward strokes of discontent and bad temper, which but rarely catch a rosy glimpse of the sun through the long or short avenue of years down which all must pass.

What nonsense to say that wrinkles make havoc with beauty!

Fancy our sweet old grandmothers with all their wrinkles obliterated—those lines graven deeply by happiness, by sadness, by pain and suffering endured and hidden with smiles, by trials conquered and overcome! Could we spare one wrinkle from their beautiful old faces? The stages between babyhood and old age have each their separate charms, and no woman need fear to become less attractive by growing old as long as she grows old gracefully.

Time steals from the complexion the soft, peachlike bloom of girlhood, but adds in its stead an indefinable something which tones in exquisitely with the firmer lines of the face, with the silvery strands which discover themselves glistening among the raven or golden locks, and with other but more subtle changes.

The writer wonders to what class of women such advice as "How to remove wrinkles" appeals. Certainly not to the young girl in the first blush of youth and womanhood, nor to the unmarried woman of to-day, who is known for her sound common sense; nor to the happy wife and mother, whose face becomes more beautiful day by day, as she in retiring forgetfulness of self lives again in her children; nor to our peerless old grandmothers, whose sweet faces revel in the profusion of wrinkles.

There may be some women who might take the advice seriously, and go through the ape-like gesticulations recommended, but surely these would be the freaks of womankind and not the average daughters of Eve. Nature brooks no quacks in her domain, and to tamper with her work is simply to mutilate it and to produce ludicrous caricatures.

Our great masters in painting, Sir Joshua Reynolds, Velasquez, and Rembrandt, for instance, how they admired strongly-lined faces of both men and women. They did not spend their time portraying smooth, inane faces of the chocolate-box order. They saw the real beauty and meaning of Nature's tracery, and strove humbly to imitate, not to alter.

Why should old age be treated so discourteously as soon as his shadow falls on the pathway of life? When he is far away, hidden in the long vista of years and of uncertainty, we woo him, and exert our utmost to drive his dreaded adversary away. Yet when he favors us, and comes to meet us, we turn our backs on him to bar and efface his advent, which, after all, is only by favor, for it is not on the many that he smiles, but on the few.
S. D. W.



"THE BLACKSMITH'S SHOP."

march past, is the story of the flag under which they live and prosper and for which their sons are prepared to lay down their lives to-day, as their fathers did in days of yore.

The 16th of January, the date fixed for the opening of Parliament, being an ideal day, with a suggestion of April rather than of mid-January in the air, one of the primary conditions for the complete success of a great pageant was assured. The procession, in which the State carriage was a striking feature, was watched by large and enthusiastic crowds, who cheered with the utmost heartiness the King and the Queen, the Prince and Princess of Wales, and other Royal and distinguished personages, all along the route from Buckingham Palace to Westminster. Although the procession was not timed to start till 1.30 p. m., people began to collect on the line of route as early as nine o'clock in the morning, every hour adding its thousands of spectators. I got a splendid position in "The Mall," between two of London's noble policemen (they number 18,000), who assured me if I would remain under their protection that I would get a good look at the King. Nor was the waiting tiresome, for the whole morning there was a continual blaze of color and excitement. The military display alone was a fine sight, order and precision ruling the marked-out position of every man and horse, from general to private. First came the police, then the Hussars on horses and the commissioned officers with leopard-skin harness; then the 1st

THE QUIET HOUR.

Beauty.

"Wonderful the whiteness of Thy glory!
Can we truly that perfection share?
Yes; our lives are pages of Thy story,
We Thy shape and superscription bear.
Tarnished forms, torn leaves, but Thou canst mend
Them;
Thou Thine own completeness canst unfold
From our imperfections, and wilt end them—
Dross consuning, turning dust to gold."

The love of beauty is very strong in the human heart, and why should anyone try to crush out this healthy instinct? Beauty of face or figure is one of the greatest talents God gives to be used for Him. It may be a mighty power for good or evil, for men in all ages have been greatly influenced by it. The Bible does not hide the fact that Esther's beauty helped very largely to save the Jews when King Ahasuerus had allowed the order for their destruction to be sent into all his provinces. On the other hand, the great beauty of Bathsheba led King David into crimes which seem utterly foreign to his noble character. But we are often told that beauty is only skin deep, and a love of beauty leads to vanity and worldliness. But why should beauty be only skin deep? A true King's daughter "is all glorious within," and the King Himself shall "greatly desire her beauty," as the Psalmist says. God is "the perfection of beauty," and we ought to pray, "Let the beauty of the Lord our God be upon us." The command is given over and over again, "Worship the Lord in the beauty of holiness." Even the plainest face may be transfigured and glorified by a beautiful spirit within, "for character is always writing its name on the face with indelible ink." Those who spend much of their time consciously in Christ's presence cannot help reflecting some of His beauty. As the face of Moses shone when he had been talking to God as a man talks with his friend; as the face of the martyr Stephen was bright with spiritual beauty as he gazed up into his Master's face; so we all know people who show by their appearance, as well as by their words and actions, that they have been with Jesus.

But this lasting beauty must come from within: it is no use trying to cultivate an outward imitation of it. The world is not easily deceived, and scorns mock Christianity, while it respects the real article. Trying to cultivate an amiable expression is something like the plan of the man who brought the hands of his clock to a watchmaker, asking him to "fix them."

"Where's the clock?" said the watchmaker.
"There's nothing wrong with the clock," was the answer, "but the hands won't keep time."

Of course the hands couldn't be regulated, as the trouble was in the works, and it is just as impossible to cultivate the beauty of holiness in the face without setting the heart right. If Christ reigns in our hearts, if all our thoughts and affections are in subjection to His will, we can hardly fail to grow like Him.

"As some rare perfume in a vase of clay
Pervades it with a fragrance not its own,
So, when Christ dwelleth in a mortal soul,
All heaven's own sweetness seems around it thrown."

There is an old legend that when the people living in Nazareth were in trouble they used to say, "Let us go and look on Mary's Son." It did them good even to gaze in that face which was so bright with the beauty of holiness. Surely this must have been a fact, for even to look at the faces of His true disciples, who are reflecting very imperfectly His image, is a help and an inspiration to-day, as it has been in all the centuries since He walked visibly among men. Is there any necessity for Christians to bring dishonor on their religion by making themselves disagreeable? Good manners don't wear out with using, like good clothes. There is no need to keep them for Sundays and holidays. If used every day they improve all the time, and they form a very important part of the beauty of holiness. It has been said that behavior is a mirror in which everyone displays his image. That surely applies to everyday behavior, for anyone can put on company manners for a little while but it is the everyday manners that reveal the true character of a man or woman.

"It was only a glad 'good morning!'
As she passed along the way,
But it spread the morning's glory
Over the livelong day."

What a wonderful parable that first miracle in Cana of Galilee was. Those who obey the order, "Whatsoever He saith unto you, do it," obey it willingly and heartily, as the servants who filled the water-pots up to the brim, soon find that a miracle has been worked. The days filled to the brim with commonplace duties are beautified and transfigured. As the flat, tasteless water, used for purifying purposes, was changed into good wine, so the "trivial round, the common task," become a delight and a joy. But they must be done, "not with eye service, as men-pleasers, but as the servants of Christ, doing the will of God from the heart, with good will doing service, as to the Lord, and not to men."

A beautiful life may be lived anywhere. Even in the worst slums of New York, as Jacob Riis

says, there are thousands of devoted lives laboring earnestly to make the most of their scanty opportunities for good; of heroic men and women striving patiently against fearful odds, and by their very courage coming off victors in the battle; of womanhood pure and undefiled. That it should blossom in such an atmosphere is one of the mysteries of life. And yet it is not an uncommon thing to find sweet and innocent girls, singularly untouched by the evil around them, true wives and faithful mothers, in the worst of the infamous tenement houses.

"We who are of the earth need not be earthy;
God made our nature like His own, divine.
Nothing but selfishness can be unworthy
Of His pure image meant through us to shine.
The death of deaths it is, ourselves to smother
In our own pleasures, His dishonored gift.
And life—eternal life—to love each other;
Our souls with Christ in sacrifice to lift."

"If I could be such a beautiful old lady as that, I shouldn't mind growing old," said a young girl one day, speaking of a white-haired visitor.

"Well, if you want to be that kind of an old lady, you'd better begin making her right away," laughed a companion. "She doesn't strike me as a piece of work that was done in a hurry; it has taken a long time to make her what she is. If you are going to paint that sort of a portrait of yourself to leave to the world, you'd better begin mixing the colors now."

What sort of portrait are we painting day after day, week after week, year after year? Are we reflecting as a mirror the beauty of Christ, growing more like Him every day, steadily preparing for the time when "we shall be like Him: for we shall see Him as He is?" HOPE.

Ingle Nook Chats.

My dear Guests,—

"Ah! March! we know thou art
Kind-hearted, spite of ugly looks and threats,
And out of sight, art nursing violets."

The ever-increasing length and brightness of our still wintry days fill our minds with thoughts of the fast-approaching spring; and spring-time is universally admitted to be synonymous with flower-time, and already we are beginning to plan for our garden. Almost every journal we pick up contains offers of bulbs and seeds at such reasonable rates that we long for space and time to grow them all. It is unwise, however, to attempt too much; a small plot carefully attended to will give more return than a larger one if neglected, as a large one frequently is. It is always well to begin preparations in time, and just here I shall offer one suggestion: buy your seeds from a reliable and tried seedsman, and then, circumstances being ordinarily favorable, you may hope for good results; cheap seeds often prove expensive from the fact that they do not always turn out as represented. Study your catalogues and make your selections now, and order as early as possible, thus avoiding disappointments.

The wise virgins among us will have a reserve store of earth laid by, in which seedlings may be started long before King Frost gives up his reign; but should such provision not have been made, there is usually some sunny corner where a small quantity of earth may be procured sufficiently early to start the ordinary annuals. Have any of you tried planting bulbs for winter flowers? If so, what do you do with them when they have ceased to bloom? I have a few tulips in bloom now, and mean to put the bulbs in the garden, where I hope they will bloom again after a year's rest.

The care and culture of plants can scarcely fail to be instructive and interesting to all who are in any degree given to looking beneath the surface of things. We plant a bulb, a thing possessing in itself no visible beauty; we water it, and after a time some green leaves appear; and then, oh! miracle! some bright morning we find a burst of beauty—the blossom that has suddenly emerged from its prison in the heart of the ugly tuber. Who, gazing daily upon such wonders of nature, is not strongly impressed with the remembrance of that glorious resurrection which awaits humanity, when, its earthly duties done, it, too, rests in the bosom of all-embracing mother earth? Ruskin says: "Flowers seem intended for the solace of ordinary humanity. They are the cottager's treasure; and, in the crowded town, mark, as with a little broken fragment of rainbow, the windows of the workers in whose heart rests the covenant of peace."

The plight of those who fail to appreciate the beauty of flowers because, perchance, they are common, is pitiable indeed; but we number amongst our guests few, if any, of those unfortunate ones who are thus debarred from the enjoyment of one of earth's purest pleasures. Then blow and bluster away, bluff old March, your boisterous winds but assure us that soon, very soon, we may look for the "April showers and May flowers" that always follow in your wake.

Just a moment's chat with a few of my numerous guests. Next "chat" will be largely occupied with the roll-call of Contest XVII. My dear "Ethra," I am pleased to know that our Corner served to brighten the tedious hours of convalescence. I hope you are

fully recovered. "Ewart"—You are quite a nice letter-writer for a boy of nine, and have made a very good beginning in the puzzle line. We have had great storms here, too, but I hope they are over now. "Ethra"—I think some of our guests made a similar suggestion some time ago; I should like to act on it, but it means an immense amount of labor—much more than one would suppose at first thought. Some day perhaps we may do so; in any case I thank you for the suggestion.

I hope the drawing contest announced in last issue will have many competitors, as it is something new in our columns. It should be of special interest to school boys and girls, a large number of whom will, I hope, enter it.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

THE CHILDREN'S CORNER.

Do What You Can.

There's enough for you children to do in the house,
To keep you as busy as any old mouse,
There are errands to run,
Little tasks to be done
That will do much to lighten your mother's hard work,
So children, don't shirk,
But do what you can;
You'll be glad when you're grown
To a woman or man.

There's enough for you children to do all about,
If you try you will very soon find some work out.
There are chickens to tend
Little tasks without end,
You will find you can do if you just take a start.
So, children, be smart,
And do what you can;
You'll be glad when you're grown
To a woman or man.

There's enough for you children to do anywhere,
So hurry around and each do your full share.
And just see how bright
You will feel when at night
You can think you have done what is honest and fair,
So, children, take care
To do what you can;
You'll be glad when you're grown
To a woman or man.

And, children, whatever you do, do it well,
People always in looking it over can tell
If you hurry it through,
Whatever you do,
Not caring at all if it's done ill or well;
So whatever you do,
Do the best you can;
You'll be glad when you're grown
To a woman or man.

Grandmother's Remedy.

Bobby was almost always as happy as he could be; and Beth's fat little face was ever ready to entertain a whole family of smiles, morning, noon and night. But one day Bobby growled and grumbled, and two deep wrinkles in Beth's forehead drove all the smiles away. And what do you suppose was the reason?

"Girls don't have to do anything!" declared Bobby, as he sat down, with a thump, on the shoe-box in grandmother's room. "Girls don't have to feed hens or fill the wood-box! I wish I was a girl, so I do!"

"Girls don't have to do anything!" exclaimed Grandmother Stone, in surprise. "Well, well, well! You come with me a minute, Bobby; and we'll see if you are right."

Bobby followed grandmother into the sitting-room. But when they got there, both were surprised; for sitting in the big rocker was Beth, her eyes full of tears.

"I wish I was a boy same as Bobby!" she said, sorrowfully. "I'm tired as anything of dusting rooms. Boys don't have to dust or mend stockings, or do anything! Oh, dear! dear! dear!" And Beth hid her curly head in the duster, and sobbed.

"Well, I never did!" exclaimed grandmother. "Supposing you do Bobby's work to-day, and he will do yours. I know that he will be delighted to change work with you."

But would you believe it? Grandmother was mistaken, for Bobby shook his head.

"I'm going to feed the hens myself!" he said decidedly.

Beth wiped her eyes in a hurry. "Girls never fill wood-boxes," she murmured.

And then they both laughed, and stopped grumbling for that day. So you see grandmother's remedy was a wise one, after all.

The Stamp.

I stick to my duty, I wish you to know,
The very best thing I could do;
I travel wherever they tell me to go,
And that's an example for you.

I'm put in the corner and willingly stay,
Though weary the journey and long;
The envelope frequently asking the way—
I never have known him go wrong.

But though he's so clever your houses to find,
O'er mountain and valley and sea,
I hope I may beg you to bear this in mind:
He must be attended by me.

Miss Milly wrote down where she wished us to go,
And dropped us right into the box,
And in a few hours at your portal, you know,
We called you with two little knocks.

Yes, here we are now, and we haven't been long,
But, oh, 'twas a journey for me!
Come, open the letter! I've finished my song
And stuck to my duty, you see.

"One of the Girls" Moralizes.

Where nothing blossomed and nothing stirred,
Uprose the note of a little bird.
"Why carolest thou in the death of the year,
Where nobody travelleth by to hear?"
"I sing to God, though there be no corner,
Praise for the past, and the promise of summer!"

Those of us who have been in our winter woods (and most country girls have jumped on a bobsleigh and gone "logging" with the men, for a bit of fun), can never forget the little wood birds, with their tuneful throats, singing from frozen leafless boughs their notes of love and pleasure, clear as the summer songstress. With what incentive I never could understand, but we can accept this pretty idea of the poets and say it is in praise for the past and promise of summer.

While these little birds are singing in our frozen woods, what are we doing in comfortable, warm homes, sure of food, warm beds, and the promise of more than summer? Never a song of praise from us. No, indeed, we won't sing! Because father has a windmill with all the latest attachments, and we haven't a new washing-machine. That is what women write about us in the home department of our agricultural papers, and call us "pack-horses" and "drudges." One woman lately, in her "nerve-wasted" article, holds out the cheerful hope of an insane asylum gathering us all in at the end, because worn-out farmers' wives are filling up such establishments. On the same page with this article was another called "Notes on the toad," and, plebeian as it sounds, I could not help thinking what wholesome reading it was, for it made me try to remember whether our toads do hop, or have they the European mode of locomotion; eat flies, bumblebees, ants, or what? In the spring I mean to watch the ugly but interesting creatures and find out. I know such articles like the one first mentioned are written in the kindest spirit, intending to frighten men into making our kitchens more convenient and getting us up-to-date articles. But there is not a single man who would ever think it was written for his benefit, because he had bought a good churn only twenty years ago! His wife a drudge, the idea! No woman in the country has such a good time as she. Every stormy day in winter, and every rainy day in summer, she can have a horse to go and see all her friends for one hour, if not more. And his sympathy rivets itself upon some poor widow who is trying to grow her pigs and potatoes on a rock in Muskoka, or some other barren land. Our fathers are only men, after all, not inhuman mortals, and if, after a good dinner, a woman would ask for her wants to be supplied, in a straightforward way, being pleasant about it, she would stand a much better chance of getting what she requires than by having a sympathetic friend write up her case in the paper.

Cheerfulness in a home has wonderful power in refining and raising the characters of its inmates, and keeps nerves from going to waste. A cheerful home does not suggest impossible things, not furnishings of costly Persian rugs or Bagdad curtains, but bright, pretty wall papers, clean curtains, and a house where boys and girls are not afraid to laugh and sing.

So many parents think it necessary to have their walls hung with nothing but religious pictures, and only books of a religious nature allowed in the house, and a gospel hymn book the limit to family music. This is to keep the children in the "straight and narrow way." But I think we can live quite as near heaven with surroundings which will cheer weary hearts and soothe tired nerves. Let us have pictures of artistic beauty, not unattractive reproductions from Gustave Dore's famous pictures, in which he would never recognize his handiwork. I did not mean the fact that the pictures were religious made us feel "desolate and oppressed," but because they were ugly. Now, do not say I am wicked!

There is something so noble in contentment, and it seems to me there will be a great big golden crown for each one who takes his part in life's duties cheerfully, standing up bravely to take the storms as well as the rainbows of life, whether we be wives and daughters of senators or of farmers. "If we do what our circumstances allow, we do well. Act nobly! Angels could do no more."

As children of the farm, we have many everyday blessings of which we never think. A blessing for each day of the year, if we were to look them up. The proud privilege of watching the oxen kneel of a Christmas midnight; see the sun dance on the hills Easter morning; and when May-day comes, we can jump our own fences, walk over our own broad acres, and away to the streams and groves to celebrate the feast of Flora! And that old invitation that Herrick sang many years ago, "Come, my Corinna, come, let's go a-May-ing," will repeat itself in the heart of every country girl.

Under the hawthorn boughs we recall the feats of archery in the May-days of long ago, with its daring band—Robin Hood, Friar Tuck, and Maid Marian. But I am getting ahead of time.

It was a happy jump, though, that brought me to the hawthorn boughs, since there is a con-

nection between my first and last—birds and flowers. With the best of wishes, from
ONE OF THE GIRLS.

Our Ideals are the Seeds of Destiny.

Each clock-tick tells the world a man is born
To take his place in Time's infinitude;
To start, aglow, his race, in Life's bright morn;
To close his eyes in Death's cold solitude.

O, teach him right, that, when his sands have run,
He may look back upon the paths he trod,
To know they were illumed by Honor's sun,
And consecrated to the will of God.

Riches and honor are what men desire—
Let them be gained by methods well employed!
Rather a humble cot, a plain log fire,
Than wealth unfairly won and ne'er enjoyed!

Meet every man as if he were a brother—
Since Time's first breath, two things have stood
like stone:
Compassion for the troubles of another,
And courage in the battles with our own.

Seek not vast lore, but know a little well—
Not many lives, but only one have we;
Let Truth and Wisdom fill its too brief spell
And paint the vision of eternity!

An empty purse is bad, and empty mind
Is worse—but never own an empty heart;
In Perseverance court the favoring wind
That brings contentment in Toil's busy mart.

Eternity ne'er won a moment lost;
He serves the best, who true to all will be;
Seek but the truth, whatever be the cost;
The hope of man is whatever be the seed.

Climb not too fast Life's ladder—first of all
Push down your roots, then you can well sustain
The rays of sunlight that upon you fall,
The hours of toil, the pang of passing pain.

Birth never yet foretolden destiny,
No wind-swept vessel twice the same wake led;
And in the time of Time we plainly see
The debts of life are owing to the dead.

—Robert Mackay.

The Winter Nights at Home.

A stretch of hill and valley swathed thick in robes of white,
The buildings blots of blackness, the windows gems
of light;
A moon, now clear, now hidden, as in its headlong
race

The north wind drags the cloud-wrack in tatters o'er
its face;
Frail twigs that click and clatter upon the tossing
tree,

And, like giants chanting, the deep voice of the sea;
As 'mid the stranded ice-flakes the bursting breakers
foam—
The old familiar picture—a winter night at home.

The old familiar picture—the firelight rich and red,
The lamplight soft and mellow, the shadowed beams
o'erhead;
And father with his paper, and mother calm and
sweet,

Mending the red yarn stockings stubbed through by
careless feet;
The little attic bedroom, the window 'neath the
eaves,

Decked by the frost king's brushes with silvered
sprays and leaves;
The rattling sash, which gossips with idle gusts that
room

About the ice-fringed gables—the winter nights at
home.

What would I give to climb them—those narrow stairs
so steep—
And reach that little chamber, and sleep a boy's
sweet sleep!

What would I give to view it—that old house by the
sea—
Filled with the dear, lost faces who made it home for
me?
The sobbing wind sings softly the song of long ago,
And in that country churchyard the graves are draped
in snow,

But there, beyond the arches of Heaven's star-
jewelled dome,
Perhaps they know I'm dreaming of winter nights at
home.

The Nine Muses.

1. Calliope of Eloquence and Heroic Poetry.
2. Clío of History.
3. Erato of Amorous Poetry.
4. Melpomene of Tragedy.
5. Thalia of Comedy.
6. Terpsichore of Dancing.
7. Euterpe of Instrumental Music.
8. Polyhymnia of Lyric Poetry.
9. Urania of Astronomy.

Keep them Busy.

Teach children to do little things about the house. It trains them to be useful, not awkward, in later and more important affairs; it gives them occupation while they are small, and it really is an assistance to the mother in the end, although she always feels during the training period that it is much easier to do the things herself than to show another how. The last exercise has done much to make selfish, idle, useless members of an older society, and should be remembered, in its effects, by the mother while her little ones are beginning to learn all things, good and bad, at her knee. Occupation makes happiness, and occupation cannot be acquired too young.

Third Prize Essay.

THE COLORED FRONT COVER OF THE CHRISTMAS "FARMER'S ADVOCATE," AND WHAT IT TEACHES.

The Christmas "Advocate" cover is the sesame to the treasures it encloses. Meagre of soul must he be who, on viewing it, does not turn aside from the hurry of life, and tarry a while in searching meditation. Too seldom, as we turn over the pages of a book or magazine, do we think of the forces that lie behind them. Too often do we read the lines only, giving no thought to the aims and efforts, and consequent lessons that lie invisibly, yet indelibly, engraved around them. Let us think of some of these lessons now, as taught by this beautiful "Advocate" cover.

True patriotism is one of the first. The "Advocate" aims to serve and defend our King and our own dear maple leaf, and the hand of Time has raised it triumphantly to a higher order of excellence. The influence of the farmer on his country is like that of the motor engine in the great pipe-organ—unapplauded and unhonored, perhaps, yet indispensable. We may not all serve our country as Brocks or Mackenzies, but we can serve it as farmers, and Emerson knew the value of that service in time of peace as well as of war, when he wrote—

"By the rude bridge that arched the flood,
Their flag to April's breeze unfurled,
Here once the embattled farmers stood,
And fired the shot heard 'round the world."

This cover teaches us also of the brotherhood of man. Truly, we serve our King, but does he not serve us? Is he not the farmer's advocate himself? Has he not a knowledge of the tilling of soil, as well as the making of shoes and the ruling of nations? He knows that "a chain is as strong as its weakest link," and we are all dependent one upon another.

Another lesson we learn is the value of time and of perseverance. The "Advocate" has been in circulation for thirty-five years, and consider the superiority of the present Christmas number, and think of the thousands of similar numbers that have gone far over land and sea. Does that not teach what may be accomplished by perseverance and the right use of time?

There is another lesson—humility. The autumn leaves and the stars are the teachers. The early frosts have touched those leaves as they are already touching the head of our beloved sovereign. Autumn is the season of ripened beauty and plenty, but after that comes winter; and what-
ever our trophies and triumphs, we "all do fade as a leaf." And looking into the silent, starlit sky, how small do we feel ourselves and our tiny sphere to be! And yet, there is One who rules our little lives as he rules the star-millions, and to Him we owe all we have. Therefore, to "Ich dien" let us add that wondrous song of the universe, "Laus Deo."
AGNES LAING.

A Reg'lar Bird.

If Ernest Seton-Thompson chose he could write a book on his lecturing adventures that might prove as interesting, though in a very different way, as his "Lives of the Hunted," says the Century. The other evening he was stopped at the theatre door by eleven ragged boys, one of whom said:

"Say, Mister, are you de jay dat talks about de animals?"

"Yes."

"Well, say, won't ye give us a pass?"

"How many are there of you?"

"On'y eleven" (others now appearing).

Mr. Seton-Thompson called his manager, and said:

"Pass these eleven boys."

"There's eighteen now," said the spokesman.

"All right, pass eighteen," said the man of the beasts, for he never sends a child away if he can help it.

During the hour-and-a-half lecture he had no more appreciative hearers than these eighteen newsboys. After it was over he stepped out the back way and here were the eighteen awaiting as before.

Their spokesman now came forward and expressed the sentiments of the others in language more forceful than ornithologically correct.

"Say, Mister, that—was—great! You're no jay. You're a bird—a reg'lar bird."

The Seven Wonders of the World.

1. The Temple of Diana at Ephesus (the old one being burnt by Herostratus).
2. The Hanging Gardens of Babylon.
3. The Colossus of Rhodes.
4. The Statue of Olympian Jupiter.
5. The Lighthouse of Pharos.
6. The Mausoleum of Artemisia.
7. The Pyramids of Egypt.

Do Seeds Talk?



Yes! So do the people who use them. "Steele, Briggs' Seeds" talk by their bountiful product and the planters who use them talk of their satisfaction and profitable returns.

It is the uniform good results that have made Steele, Briggs' Garden, Flower and Field Seeds so popular and in general request by successful growers.

Reliable Merchants who consider the growers' best interest, sell them. When selecting your season's supply ask for Steele, Briggs' Seeds. Should your dealer not carry them, go to the merchant who can supply them, or send your order direct. It pays to use good seeds.

Catalogue free to buyers. Send name. Mention this paper.

The Steele, Briggs Seed Co., Limited, Toronto
"Canada's Greatest Seed House."

WANTED A Practical Shepherd.
W. H. GIBSON,
POINT CLAIRE P. O., P. C.
Huntlywood Farm, Ont.

Extensive Auction Sale

ON
THURSDAY, MARCH 6, 1902,

AT
MAPLE AVENUE STOCK FARM,
2 1/2 miles north of Lucan, Ont.

17 head choice Jersey cows and heifers, and 2 yearling bulls of St. Lambert, Stoke Pogis and Gold Cross families (all registered in A. J. C. C.), and sired by such bulls as Gold Cross 9212, Stars John Bull 18683, Stoke Pogis Cross 36700, and several other choice bred St. Lambert bulls. These cows and heifers have been bred with a view to quantity of milk, and amongst them are some that give 50 lbs. of milk per day in their flush, and several that test over 7 per cent butter-fat, and are due to calve in the months of March, April and May, from that grandly bred bull, John Bull's Exile 61251, a son of John Bull of Grovesend, and out of a worthy daughter of Exile of Glen Rouge, now at the head of Rockledge Jersey Farm, N. Y. 50 choice thoroughbred Lincoln ewes, bred to Imp. ram, Son of Royal Winner 4745. 10 thoroughbred Lincoln ewe lambs. No reserve.

F. H. NEIL, Proprietor.

Lucan is on main line G. T. R., 1 1/4 miles west of Toronto. Ask for Catalogue.

EIGHTH ANNUAL

Canadian Horse Show

UNDER THE JOINT AUSPICES OF

The Canadian Horse Breeders' Association
and The Toronto Hunt, Limited,

WILL BE HELD AT

The Armouries, Toronto, Can.,

ON

THURSDAY, FRIDAY and SATURDAY,
April 10, 11, 12, 1902

Entries close on Saturday, March 29, 1902, and should be addressed to HENRY WADE, Parliament Buildings, Toronto, Ont.

NOTICE.

SPRAYTIME COMING.—Unless all signs fail, say the fruit men, Canada will have a bumper fruit crop this year, but to grow it successfully and of proper quality to pay on the critical markets of to-day, the orchardist must spray. To do this he must have a proper spray pump, and if there is anything better than the Spramator advertised elsewhere in this issue, the FARMER'S ADVOCATE would like to hear of it. Members of our staff can speak personally of the efficiency of the Spramator. It is a splendid pump throughout, and is recommended by not only the leading orchardists, but even the Government inspectors mention it as among the most satisfactory in use; and Mr. George E. Fisher, the San Jose scale inspector for Ontario, states it is the best pump for oil mixtures constructed. Read their announcement and send a card for a valuable descriptive circular free.

GOSSIP.

Horse breeders and fanciers, and the public generally, are referred to the advertisement of the Canadian Horse Show, to be held in Toronto, April 10th, 11th and 12th.

We direct attention to the interesting advertisement of a great horse sale at Grand's Repository, Toronto, on March 11, 12, 13 and 14. All classes of horses are in it—heavy draft, carriage, saddlers, etc.

Messrs. O'Neil Bros., Southgate, Ont., breeders of Hereford cattle, have recently made the following sales: To Mr. Thos. Skippen, Hyde Park, Ont., a choice three-year-old cow, with bull calf at foot by the stock bull, Imp. Sunny Slope Tom 1st 80885; to Mr. Wm. Squires, Amherstburg, Ont., a choice bull and heifer calf. Messrs. O'Neil give the "Farmer's Advocate" credit for bringing them lots of business as a result of their advertisement in its columns.

Messrs. W. G. Pettit, Freeman, Ont., have recently sold to Mr. Guy Bell, Brampton, to head his herd of Shorthorns, the roan 4-year-old imported bull, Prince Cruickshank 40581, bred by Mr. John Marr, Cairnbrogie, Aberdeen. Prince Cruickshank has proved a good breeder, having been used with good success in Mr. Marr's herd and also in that of Messrs. Pettit, who have a number of very excellent young things sired by him.

RAILWAY CATTLE GUARDS.

Mr. E. A. Lancaster, M. P. (Lincoln and Niagara), has introduced his Bill in the Dominion Parliament to amend the Railway Act, by making railways responsible for the destruction of cattle running at large and straying upon the tracks; in other words, to restore the Act to the position in which it stood prior to the revision of 1888. The debate was favorable to the Bill, which, however, after its second reading was referred to the Railway Committee. The existing legislation is anomalous and unjust to farmers.

THE ABERDEEN SHORTHORN BULL SALE.

At the annual sale of Shorthorn bulls at Aberdeen, Scotland, on February 13th, 152 bulls were catalogued, of which 134 were sold at an average of £27 7s. 6d. The highest average of any contributor, £31 13s., was made by the Myreton contingent of three entries. Moneymusk was second with two entries and an average of £32; Bruce Myreton third with £31 17s. for three. Mr. Wm. Anderson's Sentinel, the first-prize yearling bull, brought 47 guineas in the sale, the highest price of the day.

HORSE SHOW ARRANGEMENTS.

At a meeting of the committee of the Canadian Horse Show, on Monday afternoon, in Toronto (February 24th), the satisfactory arrangements made for the holding of the show in Toronto on Thursday, Friday and Saturday, April 10th, 11th and 12th, were confirmed. It is expected that this year there will be a large increase in the number of entries in the breeding classes, on account of the show being held early enough to suit all stallion owners and accommodate all farmers who may wish to attend, as they will not then be occupied with the rush of spring work, while the dealers and individual owners are making extra efforts to meet the earlier date of the show and place the exhibits of high-class harness and saddle horses beyond all previous standards. The fact that the Boston Horse Show follows the week after the Canadian Horse Show will assist the latter, as a number of large exhibitors from the United States and Canada will show first at the Canadian show and then go to Boston. At the meeting the prize list was gone carefully over, and will be ready in a short time. More money than ever will be offered in prizes, and the 8th annual Canadian Horse Show promises to be even more successful than ever. Mr. S. Houston was appointed manager, and Mr. Henry Wade honorary secretary.

GOSSIP.

THE GOVERNMENT SALE AT GUELPH.

The combination stock sale held at Guelph, Ont., on February 28th, was favored with exceptionally fine weather and a good attendance. The only stock entered were Shorthorn cattle, with the exception of three Polled Angus bulls and one Galloway bull. The latter was withdrawn, the bidding not being satisfactory to the owner. One of the Angus bulls, Bobs of Rockdale, was sold for \$75 to H. Dinsmore, Granton, the other two being withdrawn. There were 77 Shorthorn bulls and 37 females entered, of which 74 bulls were sold at an average of \$96, and 32 females at an average of \$104, the average on the whole number sold figuring at \$98 as officially announced. The highest price for a bull was the same as at the Guelph sale last year—\$315—for King Edward, a good red bull, born in April, 1901, contributed by Mr. Chas. Rankin, Wyebridge, Ont., and purchased by Prof. G. E. Day for the Ontario Agricultural College farm. The second highest price for a bull was \$235 for Lord Chesterfield 40610, a handsome roan, calved in February, 1901, bred and contributed by Mr. T. Redmond, Millbrook, Ont., and bought by Mr. Daniel Talbot, Eramosa. The highest price for a female was \$250 for Wedding Gift 14th 41896, a good roan heifer, born in July, 1900, bred and contributed by Mr. Wm. Smith, Columbus, Ont., and bought by Mr. Geo. Johnston, Balsam. Mr. Smith had also the second highest priced female in the handsome red 2-year-old Wedding Gift 15th, purchased by Mr. D. Milne, Ethel, Ont., at \$235. The quality and condition of the cattle, on the whole, was better than last year, but there were some that were quite inferior and no credit to the breed. The buyers were mainly Ontario farmers. One United States breeder bought two animals. About 10 head were taken by two Nova Scotia buyers, and Mr. S. Rennie, Toronto, bought four or five, presumably for a Canadian Northwest ranching company. Following is the list of sales:

BULLS.

Rosedale Victor—H. J. Kerr, Ravenna	\$105
Arnduke—Fred Hannaford, Parry Sound	75
Royal Gem—T. Wilson, Everton	65
The General—F. W. Thompson, Pt. Lawrence, N. S.	80
Gen. French—Geo. Tucker, Drayton	100
Conqueror—Simpson Rennie, Toronto	75
Corporal John—H. Ironside, Puslinch	95
Royal Prince—F. W. Thompson	185
Buccleugh—W. H. Gillespie, Orangeville	50
Red Cloud—Wm. Shafer, Berlin	105
Lord of the Valley—Jacob Zeller, Breslau	125
Chris—Peter Torrance, Lucknow	110
Oustic Rover—John Grant, Waterloo	75
Royal Wellington—E. V. Thompson, Guelph	130
Lord Roberts—Hugh Thompson, Magnetawan	105
Duncan Stanley—V. Switzer, Teeswater	115
Guelph Boy—S. Rennie	95
Sir John A.—Ed. Dowdy, Eramosa	100
Village Hero 2nd—J. C. Mills, Preston, Minn.	100
Roan Sailor—Hugh Gibson, Newcastle	100
Maple Bank Sentinel—A. R. Roberts, Eden Mills	100
Inspector—W. F. Clark, Parry Sound	95
Maple Bank Judge—John Hughson, Chatham	165
Wylie—Isaac Andrew, Lucknow	85
Crimson Cruickshank—Wm. Scarf & Son, Durham	155
Royal Duke—H. J. Kerr, Ravenna	95
Roberts—O. Groves, Chatham	60
Don Donita—Richmond & Hackney, Moore	130
Don Levan—Albert Partridge, Crown Hill	120
Rule Britannia—Jos. Martin, Paris	30
Newcastle—George—H. J. Kerr	95
Mosstrooper—S. Rennie	75
The Doctor—Geo. T. Lackner, Hawkesville	85
Royal Warrior—John Shewan, Palmerston	100
Prince Cruickshank 2nd—H. J. Kerr	100
Roosevelt—T. Wilson, Everton	75
Hugh John—J. Gibbons, Marden	105
Lord Minto 2nd—J. M. McKenzie, Galt	95
Robbie Bruce—H. J. Kerr	85
Duke of Camden—R. A. Fraser, Mt. Forest	95
Sir John A.—J. S. Hunter, Shelburne	65
Fergus Stanley—Jacob Horman	90
King Edward 7th—Jas. Stocker, Waterloo	105
Lord of Aberfoyle—H. Gibson, Dunchurch	130
Lord Chesterfield—Daniel Talbot, Everton	235
Fergus Stanley 2nd—S. Rennie	75
Miniature—Wm. Thompson, St. Mary's	115
Bright Boy—A. Secord, Burford	110
Roan Prince—Jas. Forest, Lebanon	75
White Chief—John Milroy, Galt	65
Sir John—E. W. Lick, Beachville	75
Sir Roderick—D. J. Rose, Embro	65
Stanley's Pride—John Socket, Rockwood	120
Sir Luke—Arch. McPee, Mt. Forest	85
Prince Albert—A. Graham, Westwood	70
Stanley—J. Nichols, Beachville	75
Duke of Marigold 2nd—D. Stewart, Hampstead	180
Maplehurst Ambassador—G. B. Everett, Mt. Vernon	85
Crusader—W. A. Meadows, Newtonville	70
Lord Minto—H. B. Bosburg, Beamsville	130
Indian Fame 9th—Adam Manns, Tavistock	65
King Edward—G. E. Day, Guelph	315
Bold Briton—Richard Luttrell, Oustic	45
Robert Bruce—Walter Adams, Macdon	70
Whitehead—Geo. McIntosh, Guelph	70
Logan Tom—Wm. Hendrie, Hamilton	60

Bannockburn—Jas. Chisholm, Dunlop	70
Patsy—Aug. Weiker, Tavistock	70
Innisfail Boy—T. W. Thompson	80
Red Duke—Hastings Bros., Crosshill	100
Prince George—A. J. C. Shaw, Thamesville	100
Chief—Henry Russell, Millbrook	90
Justice—D. Anderson, Dunganon	80

FEMALES.

Pansy—J. W. Henry, Thornton	85
Lady Lorne—H. J. Kerr	130
Miss Hildrop—K. L. Wilkes, Blair, Vivandiere and b. c.—E. Battye, Gore Bay	110
Maud Colwill—H. J. Kerr	150
Wedding Gift 14th—Geo. Johnston, Balsam	100
Lady Beaverbank 5th—B. Harris, Canning, N. S.	250
Lady Beaverbank 6th—B. Harris	110
Wedding Gift 15th—D. Milne, Ethel	130
Maid of Sylvan 26th—K. L. Wilkes	205
Rose of Eden—Albert Smith, Chatham	100
Clementina of Sylvan—G. Parker & Son, Wallaceburg	105
Minnie Rosebud—B. Harris	160
Fanny—J. H. Gibson, Dunchurch	170
Miss Lizzie—Wm. Hendrie	80
Guinevere—David Barr, Jr., Renfrew	50
Lady Stanley—O. Rhodes, Chatham	80
Rose—R. Harris	110
Pepepa—Joseph Martin, Paris	125
Minnie May 3rd—Jas. Rammage, St. Helen's	55
Verbena 22nd—J. C. Mills	75
Countess of Kirklevington 10th—Jos. Martin	65
Minnie May 4th—B. Harris	95
Lady Rosina—F. W. Thompson	55
Fancy Maid—F. J. Slade, Centreton	100
Morning Glory—Robt. Harvey, Guelph	110
Rose Elvina 3rd—John Tuck, Mossboro'	130
Fashion Maid 11th—J. R. Hux, Rodney	45
Grace W.—Wm. Hendrie	175
Fashion Maid 12th—F. J. Slade	90
Sutton Belle 3rd—O. Rhodes	95
Mina—Albert Smith, Chatham	65

Sheep shearing is made easy and economical by the use of the clipping machines furnished by the Chicago Flexible Shaft Co., whose advertisement, runs in the "Farmer's Advocate." We have seen these at work, run by hand power, and can testify to the excellence of the work done, the fleece being removed without any danger of cutting the skin of the sheep, getting the whole of the wool without loss and leaving the sheep in the best possible condition to prosper, unhampered by an unreasonable burden and thriving in condition. The same or a similar attachment answers admirably for clipping horses, which is a great convenience and serves an excellent purpose. See the advertisement of this Company, and send for their circular.

WESTERN FAIR DATES.

The Western Fair (London, Ont.) will be held this year from Sept. 12th to 20th.

BOOK REVIEW.

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

FARM APPLIANCES.—Inventive talent has done much to improve the processes of farming by devising improved and handy appliances in all departments. A well-printed 200-page volume, with about 250 illustrations, describing a large number of these contrivances, has been edited by Mr. Geo. A. Martin and published by the Orange Judd Co. Many of them have been seen before and have proved useful and labor-saving. Price, 50 cents.

HORSES ON SHIPBOARD.—Capt. M. H. Hayes, of England, who contributed the interesting and instructive article on South African horses in the Christmas "Farmer's Advocate," has just published a timely volume entitled, "Horses on Shipboard—A Guide to Their Management," which all interested in the remount question will appreciate. It is handsomely printed and illustrated with 24 photo-engravings of horse-transportation scenes, appliances for handling horses on board the boats, etc. Among the points which the Captain emphasizes for the welfare of the horses are security of fastenings, absence of overcrowding, ample ventilation, good foothold, suitable food and unlimited drinking water, facilities for exercise and facilities for lying down. In a table of shipments of remounts to South Africa, from November, 1899, to July, 1901, out of 146,501, there were 6,859 deaths. Excellent suggestions are given as to the care and treatment for ailments during the voyage. That the book is thoroughly practical will be seen from the fact that Capt. Hayes went to South Africa in charge of several shipments. A thorough veterinarian and a clever writer, he has given us a book at once readable, concise and valuable. It is published by Hurst & Blackett, of London, Eng.

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An Al Farmer's Knife

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BEAUTIFUL NICKEL HANDLE.**

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Your choice of any two of these for 1 new subscriber, or all four beautiful pictures for only 2 new subscribers.

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

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Books valued at from	\$0.30 to \$0.65,	for 1	new subscriber.
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"	2.00 to 2.50,	for 4	"
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"	6.00	for 12	"

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No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

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Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

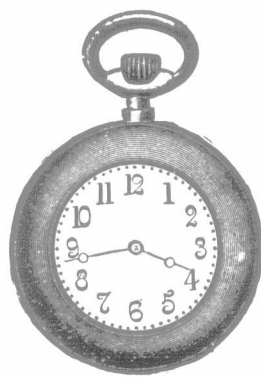
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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

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

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CONSUMPTION Prevented and Cured.

Four marvelous free remedies for all sufferers reading this paper. New cure for Tuberculosis, Consumption, Weak Lungs, Catarrh, and a rundown system.

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- Do you cough?
- Do your lungs pain you?
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- Is your appetite bad?
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These symptoms are proof that you have in your body the seeds of the most dangerous malady that has ever devastated the earth—consumption.

Consumption, the bane of those who have been brought up in the old-fashioned beliefs that this disease was hereditary, that it was fatal, that none could recover who were once firmly clasped in its relentless grip.

But now known to be curable, made so by the discoveries of that man whose name has been given to this new system of treatment.

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It is not a drug system, but a system of germ destruction and body building.

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You are invited to test what this system will do for you, if you are sick, by writing for a

FREE TRIAL TREATMENT

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The Slocum System is a positive cure for Consumption, that most insidious disease, and for all Lung Troubles and Disorders, complicated by Loss of Flesh, Coughs, Catarrh, Asthma, Bronchitis and Heart Troubles.

Simply write to the T. A. Slocum Chemical Company, Limited, 179 King Street West, Toronto, giving post office and express address, and the free medicine (the Slocum Cure) will be promptly sent.

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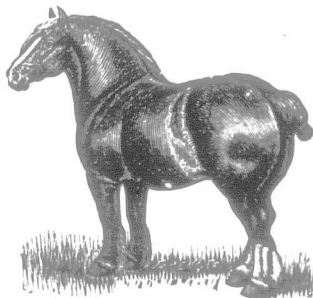
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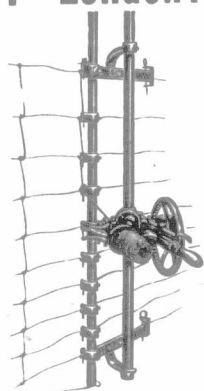
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Farmers cannot afford to fence their farms otherwise. The London will save \$300.00 or more in fencing a farm, and London fences are 25% more valuable by reason of being built on the ground.

Our new spring catalogue contains valuable information on fencing, and thoroughly illustrates our high-class machines, which are models of practical completeness and efficiency. Write for our prices on fencing goods and wire. We want a reliable, enterprising agent in each locality to represent us.

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Lot 21, in the 6th concession of North Gwillimbury. 175 acres under good cultivation; balance of bush and pasture. Good buildings. Two good orchards, well watered. 21 acres of fall wheat; 18 acres of clover. Will sell at a bargain, on easy terms. For particulars apply to

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GREAT Annual Spring Sale

MARCH 11, 12, 13 AND 14. 100 HORSES

Tuesday, March 11th.—Heavy Draft and General Purpose Stallions, mares and geldings.

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Entries for this great sale must be made by March 1st to be in time for catalogue. For full particulars apply to:

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For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by DR. FREDERICK A. PAGE & SON, 7 and 9 YORKSHIRE ROAD, LONDON, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: J. A. JOHNSTON & CO., DRUGGISTS, 171 KING STREET, EAST, TORONTO, ONT.

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For Sale: 16 head of bulls and bull calves; also a large and choice lot of cows and heifers of all ages.

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11 registered mares, 6 of which are in foal to such notables as Royal Cairnton, Prince Patrick and Lord Lyndock; also 2 young stallions.

Myrtle P. O. and R. R. Stn., G. T. R. and C. P. R.

Good Calves Are Raised Where

BIBBY'S "CREAM EQUIVALENT" IS USED.

FOR supplementing the supply of whole milk or for enriching separated or skimmed milk, or if necessary for raising the calves without any milk whatever after a few weeks old. It is by far the most popular calf food on the market.

Price: 50-lb. bag, \$2.00; 100-lb. bag, \$3.50; freight prepaid to nearest railroad station.

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

Have won more challenge cups, more championships, more first prizes, and more value in prizes during the past seven years than all the other Hackneys of America combined.

THIS IS THE PLACE TO BUY FOUNDATION STOCK.

Stallions of all ages, mares in foal, young mares and fillies. The best three carriage horse sires in America at the head of this stud: Langton Performer, Clifton 2nd, and Pandango.

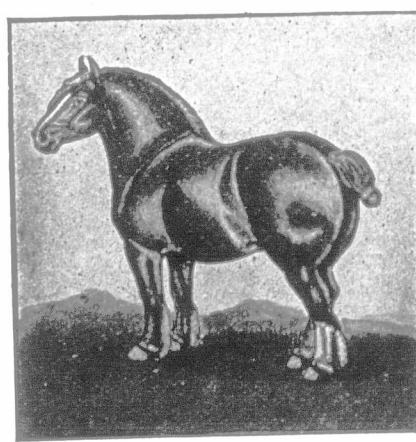
SEND FOR CATALOGUE TO E. T. GAY, MANAGER, ATTICA, N. Y.

LATELY IMPORTED A FRESH LOT OF

Glydesdale Stallions,

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

ROBERT GRAHAM, Ringwood P. O., Ont. Stouffville Station, G. T. R., and telegraph office.



Imported Stallions for Sale.

FOURTH consignment, per steamship from Glasgow, due to arrive end of February, 1902.

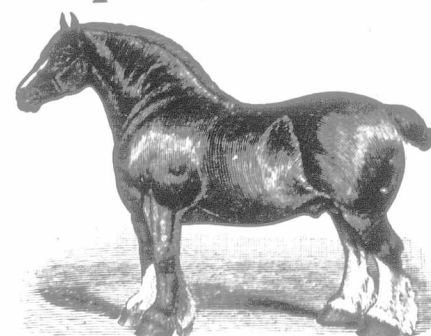
DALGETY BROS., DUNDEE, SCOTLAND, the largest importers and exporters of horses in Canada, have on hand just now a choice selection of above, including several prizewinners. Our fourth consignment this season. Largest and best lot from Glasgow show. They combine size, quality and action, and all good colors; age, from two years upwards; and will be for sale at

BLACK HORSE HOTEL, FRONT STREET, TORONTO, ONT.,

on Wednesday, March 5th, for one week; after that at our own stables, London, Ont. Any one in need of a good stallion should not miss seeing our stock before buying. Prices right. Apply: -om

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PLEASE MENTION FARMER'S ADVOCATE.



FRIED ONIONS

Indirectly Caused the Death of the World's Greatest General.

It is a matter of history that Napoleon was a gormand, an inordinate lover of the good things of the table, and history further records that his favorite dish was fried onions; his death from cancer of stomach, it is claimed also, was probably caused from his excessive indulgence of this fondness for the odorous vegetable.



The onion is undoubtedly a wholesome article of food; in fact, has many medicinal qualities of value, but it would be difficult to find a more indigestible article than fried onions, and to many people they are simply poison; but the onion does not stand alone in this respect. Any article of food that is not thoroughly digested becomes a source of disease and discomfort whether it be fried onions or beefsteak.

The reason why any wholesome food is not promptly digested is because the stomach lacks some important element of digestion. Some stomachs lack pepsin, others are deficient in gastric juice, still others lack hydrochloric acid. The one thing necessary to do in any case of poor digestion is to supply those elements of digestion which the stomach lacks, and nothing does this so thoroughly and safely as Stuart's Dyspepsia Tablets.

Dr. Richardson, in writing a thesis on treatment of dyspepsia and indigestion, closes his remarks by saying: "For those suffering from acid dyspepsia, shown by sour, watery risings, or flatulent dyspepsia, shown by gas on stomach, causing heart trouble and difficult breathing, as well as for all other forms of stomach trouble, the safest treatment is to take one or two of Stuart's Dyspepsia Tablets after each meal. I advise them because they contain no harmful drugs, but are composed of valuable digestives, which act promptly upon the food eaten. I never knew a case of indigestion or even chronic dyspepsia which Stuart's Tablets would not reach."

Cheap cathartic medicines claiming to cure dyspepsia and indigestion can have no effect, whatever in actively digesting the food, and to call any cathartic medicine a cure for indigestion is a misnomer.

Every druggist in the United States and Canada sells Stuart's Dyspepsia Tablets, and they are not only the safest and most successful, but the most scientific of any treatment for indigestion and stomach troubles.—Advt. om

BRITISH COLUMBIA FARMS
If you are thinking of going out to the Pacific Coast, try British Columbia. A delightful climate; no extremes of temperature; fertile land; ample rainfall; heavy crops, rapid growth, and splendid market for everything you raise, at good prices. The celebrated valley of the Lower Fraser River is the garden of the Province. Write for farm pamphlet telling you all about it, and containing a descriptive list of farms for sale.
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Corn Planting
must be well and carefully done, as the future crop depends upon it. For all purposes, in any soil, on all kinds of ground nothing equals the
SPANGLER CORN PLANTER.
It saves time, labor, money and insures the crop. You know when it is working; you can see the corn on its way to the ground. Made with or without fertilizer attachment. New device for sowing peas, beans, ensilage, corn, etc. We also make the famous Spangler Law-Down Grain and Fertilizer Drill. Write for catalog and circular.
SPANGLER MANUFACTURING CO., 518 Queen St., York, Pa.

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

FOR SALE:
CLYDESDALES AND SHORTHORNS.
Stallions from sucking foals up. Brood mares and fillies of superior quality and breeding. A few grand young Shorthorn heifers, bred in the purple. Special mention, the great four-year old stallion "Prince Lyon."
THOS. GOOD, Richmond P. O., Ont.,
B. R. Station, Stittsville, C.P.R. om

GOSSIP.

MR. F. A. GARDNER'S SHORTHORN SALE.

An important auction sale of Shorthorn cattle is announced, on page 192 of this issue, by Mr. F. A. Gardner, Britannia, Ont., who will sell his entire herd of 35 head—28 females and 7 bulls—on March 20th, at his farm, four miles from Streetsville Junction, C. P. R., six miles from Brampton, G. T. R. and C. P. R., and seven from Port Credit, G. T. R. Mr. Gardner has been breeding Shorthorns a good many years, having taken over his father's herd, which was established over thirty years ago, and he has at various times sold animals of his own breeding privately at prices ranging from \$250 to \$850 each to prominent breeders in Canada and the United States. The herd was founded on good sound families, and in late years selections of cows of some of the most popular families, including two or three imported Scotch-bred cows, have been added, while care has been always observed to keep a high-class bull of the best type in service, several imported Scotch-bred bulls having been used in the last ten or twelve years, so that the young stock is all well topped with that sort of sires, and shows commendable uniformity of type, nearly all being built on the approved plan: short-legged, smoothly-turned and thick-fleshed.

Among the imported bulls that have been used in building up the herd, and which have left their impress on the cattle, are: Imp. Eclipse 49526, a Highland Society and Toronto Industrial first-prize winner, bred by Mr. Duthie; Premier Earl 48454, bred by Mr. Cruickshank, from his noted Village tribe; the Cruickshank-bred, Endymion 52847, of the Duchess of Gloster family; the Kinellar Wimple bull, Reporter 6424, by Gravesend; British Statesman 20833, bred by Mr. Campbell, Kinellar; Guardsman, bred by Mr. Duthie, from the Cruickshank Brawith Bud family; the Kinellar Claret bull, Toftills 11113, by Gravesend; and the Lancaster bull, Imp. Prince Louis 32082, of the Lancaster tribe, by the richly-bred Missie bull, Musgrave.

The present head of the herd, Imp. Scotland's Fame 26063, a red four-year-old coming five in April, the sire of most of the young stock, he having been used in the herd for three seasons, is of Mr. Manson's Kiblean Beauty tribe, and was sired by the Collynie-bred Golden Ray, used in the Uppermill herd of Mr. W. S. Marr, a son of the great Scottish Archer, the dam of Scotland's Fame, Golden Rose, being by the Royal Northern prizewinning Pride of the Isles. Scotland's Fame has done splendid service in the herd, his progeny being uniformly of excellent quality and character, and he is a good bull himself, having won many first prizes and headed Mr. Gardner's first-prize herd at county and district fairs. Among the younger bulls is the substantial roan two-year-old, Standard's Heir, by Royal Standard, bred by the Messrs. Watt, and sired by the champion Judge 23419, out of Lady Aberdeen, of the favorite Missie tribe; the richly-bred red yearling, Golden Prince, a Kinellar Claret, by Imp. Prince Louis 32082, dam, Clari-ssa's Fancy 2nd, by Imp. Golden Crown, and grandam, Imp. Clarissa's Fancy, by Gravesend; Scottish Duke, a red son of Imp. Scotland's Fame, coming two in this month, is nicely bred, being out of Mysie 49th and tracing to Imp. Mysie 37th, bred by Amos Cruickshank, being one of the best of the Sittytton sorts. Four other useful young bulls of good type, from 12 to 18 months, are sons of Imp. Scotland's Fame from cows of excellent breeding, and are well worth looking after.

Prominent among the female members of the herd is the roan four-year-old imported cow, Roan Empress 34250, of the Kinellar Rosebud tribe, bred by Mr. Innes, of Aberdeenshire, sired by Roscommon, who was bred by Mr. Bruce, of Heatherwick, and got by Chamberlain, of Mr. Duthie's breeding. Her dam, Northern Empress, was a daughter of the richly-bred Lavender bull, Northern Star, bred at Kinellar. Scotch Thistle, imported, a handsome, smooth and level, red two-year-old heifer, was bred by Mr. John Marr, Cairnbrogie, Old Meldrum. Aberdeen, sired by Imp. Prince Cruickshank 75277, by Emperor, who was by the Sittytton Cicely bull, Coldstream, out of Diamond, by Standard Bearer, a Cruickshank Clipper. Her dam was by Merry Mason, of the favorite Uppermill Maude tribe, by the noted William of Orange, and grandam by Touchstone, a Sittytton Secret, and sire of many prizewinners, including Cornerstone, a Highland Society champion. This is probably the plum of the sale list, and should attract much attention and interest.

Among the home-bred females, which are nearly all young or in their prime, are: Marchioness 5th, by Imp. Prince Royal 6418, bred by Mr. E. Cruickshank, tracing to Imp. Marchioness 4th 5169, bred by Mr. Duthie, of Collynie, and sired by Cayhurst, of the Cruickshank Clipper tribe. Three charming daughters of this excellent cow are in the sale, one sired by Scotsman 18557, a son of the noted Brampton Hero, and out of a Cruickshank Lovely cow; one by Bold Britain 20397, by Imp. Golden Crown, a Mina bull, by Imp. Baron Lenton, and out of Imp. Mermaid, by Vermont, and one by Imp. Scotland's Fame. Mysie 47th is a useful red cow, of the popular Cruickshank family of that name. Others trace to standard families of good breeding, many being of excellent milking tribes and topped with crosses by bulls deeply bred in the

DE LAVAL

WHEN YOU START,
START RIGHT.

A prominent and prosperous dairyman was asked by a new beginner, what two things he considered essential to laying the foundation for dairy success. He answered by saying: "Selected thoroughbred cows and a De Laval Separator."

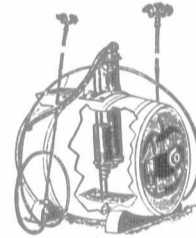
Very many thousand successful users of De Laval Separators can testify to the soundness of this advice.

Write us for some good, sensible separator talk, whether we can sell you a separator or not.

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The De Laval Separator Co.
77 YORK STREET,
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**THE KEY STONE
OF DAIRY SUCCESS**



The Specialist

is the man who succeeds above all others in this age. It should be so. When a man

devotes all his time and energy to one single thing, he usually does succeed. We are specialists in making spramotors.

We have never made cheap machines, knowing that to be synonymous with poor machines. These things being true, is it surprising that the Spramotor is the very best spraying machine in the country? That is the testimony of all who have used the Spramotor. It was awarded First Place in competition with ten other machines in the Canadian Government Spraying Contest.

It is unequalled for painting barns and other buildings, inside and outside, with whitewash, oil and water paints.

We will mail you free an 84-page copyrighted Treatise on the diseases affecting fruit trees, and their remedies, entitled, "A Gold Mine on Your Farm." Ask your dealer for the Spramotor, or write us direct.

SPRAMOTOR CO., London, Ont., and Buffalo, N. Y.



blood of many of the best Scotch families, among the sires being (besides the imported bulls above named) the Nonpareil-bred British Comet, by Imp. British Statesman; the Mina-bred Cavalier 3rd, by Cavalier, a Cruickshank Cecilia, by Imp. Baron Lenton; the Missie bull, White Oak 23300, by Imp. British Statesman, out of the Marr Missie cow, 6th Missie of Neidpath.

The date of this sale, the location, and the prospects for a continued good demand and good prices for cattle are favorable for those who are ambitious to improve their stock, as all should be, and as more need to be if our country is to hold its own in the export-beef trade or the best home trade.

IMPORTED CLYDESDALES

For Sale—4 Imported Stallions and 1 Filly.

Ratepayer, bay, rising 6 years, the largest horse in Canada, sire Prince of Caruchan. **Coyton**, black, rising 4, will make a horse 2,200 pounds, sire Ethiopia. **Balteval Fashion**, roan, rising 3, will make a horse 2,000 pounds or over, sire Prince of Fashion. **Choice Gift**, brown, rising 3, hind pasterns only white, will be a very large horse, sire Good Gift. **Jessamine**, brown, rising 3, a very fine mare, sire Gold Mine. Prices right, and must be sold. Apply to

NEIL SMITH, BRAMPTON, ONT.

Clydesdales for Sale. Imported and Canadian-bred stallions for sale, also registered Clydesdales. Fillies from one to three years old. Terms reasonable.

JAMES PATON, Swinton Park, Ontario.

CLYDE AND SHIRE HORSES, SHORTHORN CATTLE and LEICESTER SHEEP.

One Clyde stallion, rising 3 years old, sired by Lewie Gordon; one stallion colt (Clyde), sired by the unbeaten King of the Clydes, and an imp. prize-winning mare; also four choice Shorthorn bulls, reds and roans, from 10 to 15 months old. Write for prices or come and see us. My motto: "The best is none too good." **J. M. GARDHOUSE,** Highfield P. O. Rosedale Stock Farm. MALTON, G. T. R.; WESTON, C. P. R. Rosedale Farm is thirteen miles west of Toronto.

FOR SALE: A Pure-bred Clydesdale Stallion

Bred from imported stock; five years old; brown in color.

GEORGE MARTIN, CROMARTY P. O.

CLYDESDALES

Shires and Hackneys.



OUR new importation of Clyde, Shire and Hackney stallions, comprising winners at leading shows in England and Scotland, arrived at our stables January 22nd. We have now over 20 imported stallions, all of which we are offering at living prices, including the champion Shire stallion, Belshazzar.

Bawden & McDonell, Exeter, Ont.

Clydesdale Stallions FOR SALE.

One seven-year-old.
One three-year-old.
Three two-year-olds.

Also a few mares and fillies of good size and good quality. **I. Dewitt & Sons, Freeman P. O., Ont.** Burlington Junction Station 1/2 mile from farm.

Wm. Brash, Ashburn, Ont.,

BREEDER OF
CLYDESDALE HORSES and SHORTHORN CATTLE.

4 Imp. Clydesdale Stallions 4

Amphion, Vol. 21, 2 years old, bay; Bucepholus, Vol. 24, 2 years old, black; Voyageur, Vol. 24, 2 years old, brown; Lord Gartly, Vol. 23, 4 years old, brown. Representing the blood of Golden Sovereign, Sir Christopher, Montravel Matchless, and Royal Gartly.

GEO. G. STEWART,
ROSEBANK FARM,
P. O. and Station, Howick, Quebec.

WM. SMITH, COLUMBUS, ONT.,

IMPORTER AND BREEDER OF
Clydesdale Horses & Shorthorn Cattle

OAKLAWN FARM

THE GREATEST IMPORTING AND BREEDING ESTABLISHMENT IN THE WORLD.



PERCHERONS, FRENCH COACHERS.

On hand upward of **500 HEAD.**

Our late importations included the Principal Prize Winners at the Great Shows of France.

At the recent

INTERNATIONAL LIVE-STOCK EXPOSITION

at Chicago, the Oaklawn Percherons won every Championship, First Prize, and Gold Medal and every Second Prize in classes.

Notwithstanding the superior quality of our horses and the amply fair and certain terms of our breeding guaranty, backed by our well-known responsibility, it is a fact that our prices are lower than can be obtained elsewhere in America. Catalogue sent on application.

DUNHAM, FLETCHER & COLEMAN,

WAYNE, DU PAGE CO., ILLINOIS.

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COLUMBUS, ONT., IMPORTERS OF

GLYDESDALE STALLIONS.

Our latest importation of 4 stallions is the best we ever made, weighing from 2,000 to 2,200 lbs., and of the well-known Darnley and Prince of Wales breeding. We have a number of pure-bred mares; also some young Canadian-bred stallions and fillies. Write for prices.

Railway Stations: Oshawa, G. T. R.; Myrtle, C. P. R.
Long-distance telephone at Columbus.

IMP. CLYDESDALES AND AYRSHIRES.

The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentain. Ayrshires all ages; and poultry, utility breeds. Eggs for sale.

4 Imp. Clydesdale Stallions

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

GEO. ISAAC & BROS., BOMANTON, ONT.
COROURG STATION, G. T. R.

Clydesdales

Two stallions for sale, rising two and three years old. Correspondence solicited.

Josiah Hallman & Sons, Washington, Ont.

The Sunnyside Herefords

Imp. Sunny Slope Tom 1st at head. The blood of Lord Wilton, Garfield, Grove 3rd, Beau Real and Diplomat represented. Special offering: 3 bulls, 8 to 14 mos.; 6 young cows and heifers. Inspection and correspondence solicited. 2 choice registered Berkshire boars, price \$10.00 each.

O'NEIL BROS., Southgate, Ont.
Lucan station, G. T. R. Iderton station, L. H. & B.

High-class Herefords

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

A. S. HUNTER, DURHAM, ONT.

INGLESIDE HEREFORDS.

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

Shropshire Sheep and Tamworth Swine.

H. D. SMITH,
Compton, Quebec, Ont.

HIGH PARK STOCK FARM.

GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited.

A. M. & ROBERT SHAW,
P. O. Box 294, Brantford, Ont.

FOR SALE ABERDEEN-ANGUS BULL

A CHOICE ABERDEEN-ANGUS BULL
Nine months old. Sire Fairy Prince No. 307, dam Kyma 2nd O. E. F. No. 123. For particulars apply or come and see.

J. N. J. BELL,
G. T. R. station, Elmvalle, Ont. Waverley P. O.

6-POLLED ANGUS BULLS-6

Six young bulls, from 6 to 16 months old; prize-winners among them. All for sale.

Alex. McKinnon, Hillsburg P. O. and Station.

Riverside Holsteins

Five bulls, 9 to 11 months old, for sale. Victor De Kol, Pietertje and Johanna Rue 4th's Lad head the herd.

MATT. RICHARDSON & SON,
HALDIMAND CO. CALEDONIA, ONT.

ABERDEEN-ANGUS BULLS.

Daubeny oats.—The best very early variety grown at O. A. C. Most suitable for growing with barley. 60c. per bush.; 10 bush. or over, 55c.

Grass peas.—\$1.00 per bush.; entirely proof.
Orders booked now for Pearl of Savoy seed potatoes: \$1.00 per bag; 2-bush. bags, 20c. each; f.o.b. Guelph, C.P.R. or G.T.R.

JAMES BOWMAN, GUELPH, ONT.

STOCKMEN

THE SALE OF

Hersee's Reliable Stock Food

The past two weeks was the largest in its history, the sales being one-third more than any two previous weeks. We like this, showing us that it is doing the work you want it to do. It is made to be of some use, and we ask every stockman to give it a trial, and get some of the profits others are getting. Ask your dealer about it. Stock book free.

E. HERSEE, MANUFACTURER,
WOODSTOCK, ONT.

SHORTHORNS AND BERKSHIRES.

A few extra good heifer calves. Choice young sows bred to Lee Duke—\$733.—One three-year-old stock boar. Barred Rock cockerels.

JOHN RACEY, JR., Lennoxville, Que.

Mercer's Shorthorns for Sale

BULLS and heifers from such families as Matchless, Clarets, Misses, Stamfords, Fashions, Buttercups, Isabellas, Princesses, Bestices, and other choice families. Herd headed by Village Squire—2493—(he by Abbotford), assisted by a son of old Royal Sailor (imp.). Cows and heifers in calf. Four nice young bulls. Our herd stands at the head of the show-ring in this northern country. Over 40 head now in the herd. Intending visitors drop a card and they will be met at the C. P. R. station, Markdale, one mile from farm. Write for prices. No business, no harm. Our motto: "The best is none too good."

THOS. MERCER, MARKDALE, ONT.

COCKERELS FOR SALE.

Barred Rock, W. Wyandotte, Buff and Black Orpington, and Houdan; also Pekin ducks. Prices, \$1.00 to \$2.00. Eggs, \$1.25 per setting.

C. W. BEAVEN, PRESCOTT, ONT.

FOR SALE: TWO EXTRA GOOD SHORTHORN BULLS

Twenty months old; red; also younger ones, as well as a number of heifers or young cows in calf or calf at foot.

YORKSHIRE SWINE—BOARS AND SOWS.

RICH. GIBSON, DELAWARE, ONT.

BELLEVUE SHORTHORNS.

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

EDWIN BATTYE,
GORE BAY P. O. AND PORT.
MANITOULIN ISLAND, ONT.

FOR SALE:

Nine Shorthorn bulls, from 8 to 15 months old. Also pure-bred Clydesdale stallion, bred from imported stock, rising 2 yrs.; brown in color.

McDONALD BROS., WOODSTOCK, ONT.

JOHN DRYDEN,

BROOKLIN, ONTARIO.

BREEDER OF
CRICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

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

A QUICK, SHARP CUT

cuts much less than a bruise, crush or tear. Done with the DEHORNING KEYSTONE KNIFE. It is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of deboning known. Took highest award World's Fair. Write for free circulars before buying.

Owned and Manufactured by R. H. McKENNA, V. S., Picton, Ont.
PLEASE MENTION FARMER'S ADVOCATE.

NOTICES.

BALKING AND KICKING HORSES.

The attention of farmers and horse-men will be attracted by the advertisement in this issue of the Barclay Manufacturing Co., of Brougham, Ont., who are offering an attachment for the control and cure of balking and kicking horses, which is said to be giving splendid satisfaction.

AN IMPROVED PLOW,

 advertised in this issue, is the "Wonder Plow," which it is claimed solves the problem of "plowing made easy." It is an attachment of wheels for regulating the depth of furrow, and will run without holding. It is easily attached to the beam of any plow, and will wear a lifetime. Write the Wonder Plow Co., Room 10, Hiscox Building, London, Ont., for information, price, etc.

SETTLERS' RATES WEST.

—Every day during March and April, 1902, the Chicago and Northwestern Railway will sell one-way second-class settlers' tickets at very low rates from Chicago to points in Montana, Idaho, Washington, Oregon, Colorado, and Utah; also to Victoria, Vancouver, New Westminster, and to Nelson, Rossland, and other points in the Kootenay District. Full particulars as to rates from nearest ticket agent, or B. H. Bennett, General Agent, 2 East King Street, Toronto, Ont.

WIRE FENCING.

—The day of the wooden fence is rapidly passing away. It belonged to the 19th century. Wire is the fencing material of the 20th century, and the Oshawa Wire Fence Co. have a 20th century factory fully equipped with up-to-date machinery, first-class shipping facilities, skilled labor and ample capital. They have just issued their first annual catalogue and price list, showing different styles of fences, gates, etc. It is a very complete and useful catalogue, and persons who have fencing to do during the coming season should obtain a copy at once from the Company, Oshawa, Ont.

STANDARD WEIGH SCALES.

—The farmer who has a set of scales of his own is best prepared to know the value of any stock he has to sell for market purposes, and can feed to better advantage by weighing the animals occasionally to determine whether they are making satisfactory and profitable gains. In selling grain or seeds, he also protects himself against loss through careless or unfair weighing at the elevator or storehouse. The standard scales advertised in this paper by Mr. John Fox, London, Ont., are believed to be reliable and well built and finished, and his prices will compare well with those of any other manufacturer. See the advertisement and send for circular.

THE KITCHEN GARDEN.

—Every farmer and villager who has a plot of ground at all suitable should have a kitchen garden, if for nothing else than to supply fresh vegetables for the table. Thousands appreciate the efficiency of the poultry-yard as an adjunct to the home table, as well as a money-earner. The garden plot should go hand in hand with the poultry-yard. There is no better garden fertilizer than that coming from the henhouse, but the garden itself, how may it be best attended? Put in the seed with a drill and every row will be straight and just right for easy after-cultivation with a wheel hoe. You should not be without these most useful tools, even if you cultivate but one-eighth of an acre. With it you can do as much work in a given time as twelve men can do in the same time by older methods. We are advertising in our columns the Matthews New Universal Hand Seeder and Cultivator, made by the Ames Plow Co., of Boston, Mass. This implement, with its various attachments, combines in one the seeder, wheel hoe, cultivator, rake, plow and marker. It is a wonderful labor-saver, and will pay bigger dividends on its cost than almost anything one could think of. These people also make separate implements for all gardening work on large acreage of onions, beets, spinach, etc. Send at once for their 1902 catalogue, describing some twenty-five styles of these implements. Address: Ames Plow Co., No. 93 Market St., Boston, Mass.

CYPHERS INCUBATOR CATALOGUE FOR 1902.

—This new and complete catalogue consists of 196 pages and cover, is 8 x 11 inches in size and weighs over one pound. It contains a complete description of the Cyphers patent-diaphragm, non-moisture, self-ventilating incubators, with fine color-plate reproductions of all sizes of the Cyphers incubators. It contains also an illustrated description of the Cyphers apartment brooders, and the full line of poultry appliances manufactured by this company. In it will be found beautiful half-tone pictures of over 200 of the largest and best-known poultry plants of America, Canada and Europe where the Cyphers incubators are in use. The Cyphers Incubator Company is now completely installed in its great factory at Buffalo, N. Y. The company also has offices and salesrooms in Chicago, Boston, and New York City, and is in a position, therefore, to serve customers to advantage in all parts of the country at a saving of time and money in shipping by freight. All who are interested in the latest developments in incubator and brooder manufacture should secure a copy of the Cyphers Incubator Company's complete catalogue for 1902. See advertisement elsewhere in this paper.

HORSEMEN!—THE ONLY GENUINE IS GOMBAULT'S CAUSTIC BALSAM.

None genuine without the signature of The Lawrence-Williams Co. Sole Importers & Proprietors for the U.S. & CANADAS. CLEVELAND, O.

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

Wm. Linton, 1902

AURORA, ONT.



Has for sale three imported Shorthorn bulls and a few heifers, various ages; also a few home-bred bulls fit for service. This is one of the herds that the late Amos Cruickshank used to resort to for stock bulls.

Aurora is 24 miles north of Toronto, by Metropolitan R. R. Can leave Toronto any time during the day, and be back in Toronto in two hours and a half.

J. & W. B. WATT,

SALEM, ONTARIO
(POST AND TELEGRAPH OFFICE).

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

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

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

FOR SALE:

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

SHORTHORNS, SHROPSHIRE, COTSWOLDS.

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

JOSEPH BELL ESTATE, Bradford P. O. & Sta.

WE HAVE FOR SALE

10 SHORTHORN BULLS

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

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

J. R. McCallum, Iona Station, Ont.

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

Maple Lodge Stock Farm.

ESTABLISHED 1854.

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

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

MILKING SHORTHORNS.

2 young bulls of good milking strains and A1 quality for sale. Come and see them. Stn. 3 1/2 miles from farm. H. C. GRAHAM, AILSA CRAIG, ONT.

GREEN GROVE HERD OF SHORTHORNS.

This herd is headed by the famous show bull, Spicy Robin—28259—(bred by J. & W. B. Watt), grandson of Imp. Royal Sailor, and of the noted English family, and contains such noted tribes as Nonpareils, Crimson Fuchsias, Mysies, Butterflies, and Langushes. Short-horns of both sexes. Also a choice litter of Yorkshires, about 4 mos. old, for sale. Address: om

George D. Fletcher, Binkham P. O., Ont. Erin Shipping Station, C. P. R.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

SHORTHORNS.

Fashionably bred, of both sexes and all ages. Nothing reserved.
H. PARKER, Durham P. O. and Station.

SHORTHORNS (IMPORTED).

Five choice young bulls, from 6 to 10 months old, by Imp. Capt. Mayfly, out of Indian Chief dams.
JAMES A. CREER, on Shakespeare P. O. and Station, G. T. R.

SHORTHORNS FOR SALE:

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

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

10 SHORTHORNS FOR SALE

Sired by Scottish Chief and (imp.) Chief of Stars, and from prizewinning dams. Also cows, heifers, and Berkshire pigs.
ALEX. LOVE, - EAGLE P. O. BISMARCK STATION ON M. C. R.

High-Class Shorthorns

and **YORKSHIRE PIGS.**

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

SPRINGBANK FARM.

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

SHORTHORNS AND LINCOLNS.

A. D. MCGUGAN, RODNEY, ONT.

Herd headed by the great sire and sweepstakes bull, Abbotsford. Grand crop of calves from imported and home-bred cows. Bulls one year and under for sale—reds and dark roans. Ram and ewe lambs for sale at reasonable prices.

"ORCHARD HILL" SHORTHORNS.

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

LAKE VIEW STOCK FARM.

SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.
Meaford Station, on JAMES BOWES, G. T. R. North, Strathairn P. O.

Shorthorns, Yorkshires and Berkshires

For immediate sale. 2 bulls 10 months old, 1 bull 18 months old; bred right and built right. Also pigs of both breeds, both sexes and different ages.
on C. & J. CARRUTHERS, Cobourg P. O. & Stn.

MAKE THE GROCER'S PROFITS.

Why pay your local storekeeper \$1 for 85 cents worth of goods? Buy direct from the manufacturer and importer and save one seventh of your grocery bills.

The average family spends \$280 a year for groceries; we can save you \$40 of this. At the end of each year put this \$40 in the bank at the regular bank interest of 6% and when you are twenty years older you will have a nest egg of \$141.13 to your credit.

Do not lose any more of your hard-earned money, but write at once for price lists and we will astonish you. Bank references.
on CRIGHTON & CO., Wholesale Grocers, 102 Church Street, Toronto, Ontario.



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

Scotch Shorthorns.

100 HEAD TO SELECT FROM.

Herd headed by Imp. Diamond Jubilee = 28861 = and Double Gold = 37832 =. **March offering:** 10 grand young bulls and cows and heifers of all ages. Farm 1 mile north of town.
on

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Imported Christopher = 28859 = heads the herd of large cows of grand milking qualities. Also a number of Leicesters of both sexes, from imported foundation.
JAMES DOUGLAS, CALEDONIA, ONT.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Fandango (4256) 143, the splendid Hackney stallion illustrated in the Horse department of this issue, is owned by Mr. F. C. Stevens, Attica, N. Y. He is a chestnut, with two white hind feet, stands 15 hands 2 1/2 inches high, was bred by Seth Lofthouse, Tadcaster, Yorkshire, England; foaled in 1890, imported in 1893; won six first and two second prizes before importation; first at National Horse Show, New York, for Hackney stallion 15.2 or over, in 1899 and 1900, and three years in succession for stallion and get; first at the Pan-American for stallion and get—he having sired more National Horse Show winners than any other stallion in the world. The American Horse Society's Challenge Cup was won two years in succession by Fandango at the National Horse Show (1899 and 1900).

Within the limits of the corporation of the village of Markham, Ont., lies the stock farm of Mr. E. D. Robinson, whose herd of imported and home-bred Shorthorn cattle, representing such fashionable families as the Miss Ramsdens, Isabellas, Urys, Broadhooks, and Bessies, are quartered in his magnificent stables. This herd was established four years ago, on some Miss Ramsden bred females out of Mr. John Isaac's imported cows. Since then annually additions have been made to the herd, principally from the herds of the Messrs. Isaac, the major part of which were imported, till at present there are some 30 head of animals, of both sexes and all ages, in the herd, a number of the younger ones being sired by such noted bulls as Imp. Golden Drop King 72615, Imp. Baron Skeene 28856, and Imp. Baronet 36007. The present stock bull is Imp. Rustic Chief, Vol. 47, bred by Alex. Watson, Auchincry, Iken, Scotland, sired by the great Clan Alpine 60495, dam Rully, by Queen's Guard 57953. He is a rich roan of more than ordinary quality and symmetry, and will certainly be a winner. His second in service is Golden Drop King 31174, sired by Gold Digger 23360, dam Ury Garnet 28587, by Village Boy 5th 16352. He is a red, and individually is a splendid type of the present-day Shorthorn, and has proven himself a sire of the first rank. This bull is now for sale. A glance at the breeding of a few of the cows will show that nothing has been overlooked in the establishment of this herd: at once place them among the best: Imp. Jessie, by Merlin 2nd 69119, dam Royal Bessie, by Royal Sceptre; Imp. Roan Rose, by Abbotsford 2nd 69838, dam Groam Dubbs, by Bannockburn; Imp. Dorothy Princess, by Proud Star 73337, dam Lady Dorothy 38th, by Goldspur; Imp. Pride 3rd, Vol. 46, by Fortunatus 76708, dam Caroline, by Gravesend; Imp. Blossom 2nd, by Sittytown Styl 69616, dam Blossom, by Star of Morning. These cows, with the others in the herd, were purchased for their individual merit, and are good ones. There are a number of heifers out of these cows and by the stock bulls mentioned (some in calf, some not), that are for sale, and among them are prizewinners sure. Among the bulls that are for sale is a roan four-months-old calf, imported in dam, sired by Golden Fame and out of the cow, Jessie. This youngster will likely be heard from in the future in the prize-ring, as he is a perfect model and already shows the form and character that gets to the top. Any animal in this herd, with the exception of the stock bull, Imp. Golden Measure, is for sale. In poultry, Mr. Robinson keeps nothing but pure-bred War Horse Games, and is showing something nice in that breed.

For over forty years Mr. Arthur Johnston, of Greenwood, Ont., has been known as one of the most extensive importers and breeders of Shorthorn cattle on the continent. To his indomitable pluck and energy is due to a very great extent at least, the credit of the high and honorable position held by Canadian Shorthorns all over America today. The many excellent animals he has imported and bred have been a very potent factor in bringing our Canadian cattle to their present high state of perfection. His present herd, of about 100 head, is made up of a very choice lot of animals of both sexes and all ages, imported and home-bred, headed by that grand stock bull, Merryman (imp.), the superior of which Mr. Johnston never owned as a sire of typical Shorthorn models. There are a number of younger bulls, some imported, notably among which is the rare good one, Caesar Augustus (imp.), eleven months old, bred by Lady Gordon Cathart, Clunie Castle, Aberdeenshire. This young bull is probably the richest-bred Price Augustus living. Another that deserves special mention is a ten-months-old bull sired by Imp. Merryman and out of Imp. Sunrise. Another, by Prince of Archers, out of Imp. Fortuna, is a grand model, but thus we might go on to any length, for there are dozens that could scarcely be overdrawn, and that can be bought worth the money.

DISPERSION SALE OF IMPORTED AND HOME-BRED SCOTCH AND SCOTCH-TOPPED

SHORTHORNS

The subscriber will sell at auction, at his farm at Britannia, Ont., 4 miles from Streetsville Junction, C. P. R.; 6 from Brampton, G. T. R. and C. P. R.; 7 from Port Credit, G. T. R., on

THURSDAY, MARCH 20, 1902,

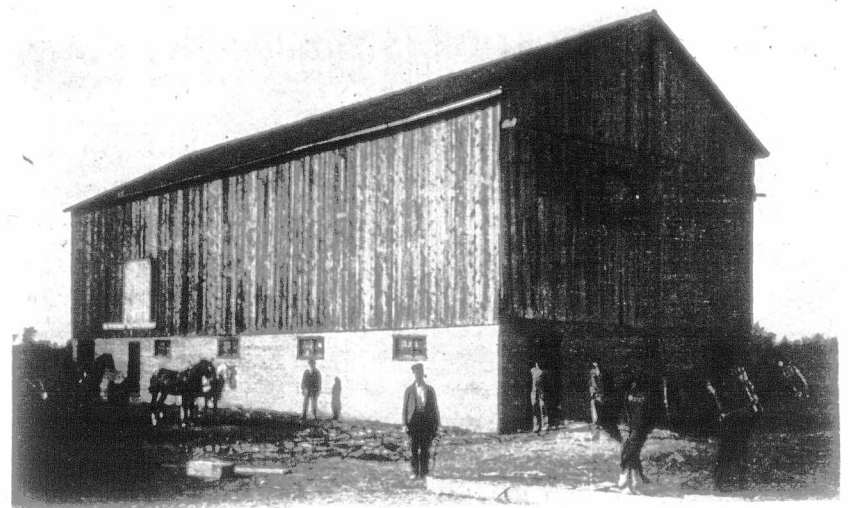
His entire herd of 35 head of high-class registered Shorthorns—28 FEMALES AND 7 BULLS, including the stock bull, Imp. Scotland's Fame = 28063 =, by Golden Ray, a son of Scottish Archer, dam Kibble Beauty 3rd. 18 breeding cows, besides heifers in calf or with calf at foot, including two imported Scotch-bred cows. A grand lot of young bulls fit for service. Catalogues sent on application.

JOHN SMITH, M. P. P., AUCTIONEER, F. A. GARDNER, Britannia, Ont. on BRAMPTON, ONT.

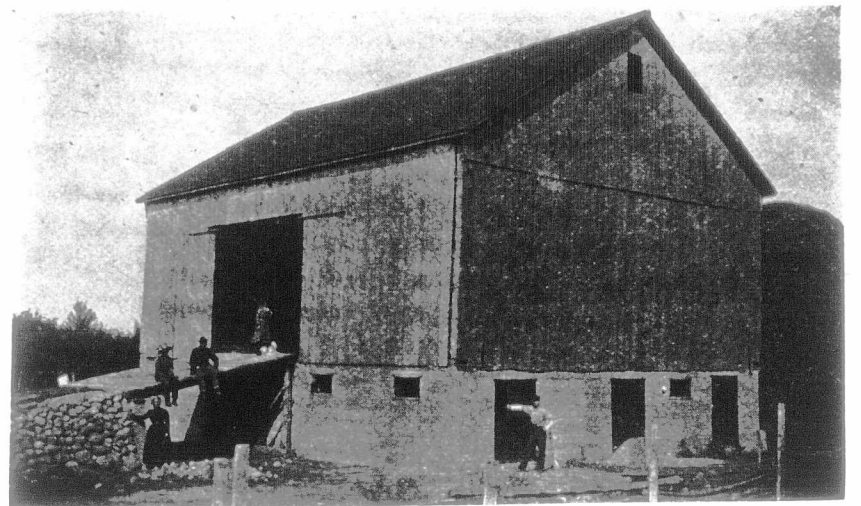
Two Fine Basement Barn Walls at Camlachie, Lambton Co.

BUILT WITH

BATTLE'S THOROLD CEMENT



BARN OF MR. JOHN McCONNELL, CAMLACHIE, LAMBTON CO., ONT.



BARN OF MR. JOHN MORROW, CAMLACHIE, LAMBTON CO., ONT.

Special price and terms for winter shipments. Sales agents wanted where we have none now. Write us for free pamphlet and any information desired.

ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.

MANUFACTURERS OF THOROLD CEMENT.

A BARGAIN! A LARGE CONSIGNMENT OF

Basic Slag

FROM SCOTLAND, TO BE SOLD AT HALF PRICE.

\$17.00 per ton, Toronto.

The best fertilizer for grasses, clover, roots, corn, etc. Used more in Great Britain than any other manure. Write for pamphlets.

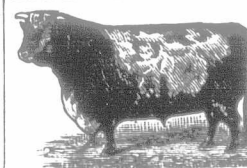
GEORGE KEITH, Seed Merchant, TORONTO.

Send for Seed Catalogue and for samples of pure clover and timothy seed.

Shorthorn Bulls.

Scotch-bred, good color, lots of size and style—rare good ones. Also females all ages. Write for particulars, or, better, come and see them.
DAVID MILNE & SON, ETHEL P. O., Huron Co., Ont., Ethel Station, G. T. R., half mile from farm.

ROSEVALE SHORTHORNS



Are of the up-to-date sort. We have for sale a number of young bulls and heifers of all ages, Marengo Heydon Duke (imp.) heads the herd.
on W. J. SHEAN & CO., Owen Sound, Ont.



DON'T

BUY A SEPARATOR UNTIL YOU HAVE SEEN THE

National.

EXAMINE

The simplicity of the design. All wheels and bearings protected, being perfectly safe in the hands of a child. It has anti-friction ball bearings. Few parts to wash—only two pieces inside the bowl. The National is made by the Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship. In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years. The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day. The National will well repay investment by intending purchasers. National No. 1, capacity 330 to 350 lbs. per hour. National No. 1 A, capacity 450 to 500 lbs. per hour.

AGENTS WANTED IN UNREPRESENTED DISTRICTS.

JOSEPH A. MERRICK, P. O. BOX 518, WINNIPEG, GENERAL AGENT FOR MANITOBA AND N.-W. T.

THE RAYMOND MFG. CO. OF GUELPH, Ltd., GUELPH, ONT. WE ALSO MAKE GOOD SEWING MACHINES.



PLOWING MADE EASY

The Wonder Plow Attachment can be attached to beam of any plow; regulates depth and width of furrow; saves one-third draft on horses; relieves all labor of man, as you need not hold plow handles to do perfect plowing. 10-year-old boy can plow in hardest soil. Agents Wanted. Past seller everywhere. Good money for enterprising agents. Address at once.

WONDER PLOW CO., Room 10, Hiscox Building, London, Ontario.

HAWTHORN HERD

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

SHORTHORNS (imported)

One bull, 2 years old, and 1 imported cow, and 7 home-bred heifers. THOS. RUSSELL, EXETER, ONT.

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

Shorthorns, Berkshires, Leicesters Am offering at present the grand stock boar, Crown Prince; also some young ones. ISRAEL GROFF, ALMA, ONTARIO.

MAPLE GROVE SHORTHORNS. I am now offering 5 bulls from 10 months to 2 years old; imp. and home-bred; of the low, fleshy sort. Write for prices. W. B. CAMPBELL, Campbellcroft P. O., Garden Hill Station.

SHORTHORNS FOR SALE. Three dark red bulls, 12 mos. old, got by Diamond Jubilee (Imp.). One rich roan, 10 months old, got by Favorite 24690. For prices write—E. & C. PARKINSON, Thornbury P. O. and station: G. T. R.

Shorthorns for Sale. 6 heifers (all in calf), from Imp. British Statesman; also two young bulls, 18 months old. Write for prices. LOUIS ELLARD, Loretto P. O., Beeton Stn.

SHORTHORNS.

We are offering three choicely-bred young bulls, 1 yr. old, two 8 months old—heavy-milking strain. JAMES BROWN, NORVAL STN. and P. O.

W. J. WALKER, EADY P. O., ONTARIO, BREEDER OF Scotch and Scotch-topped Shorthorns, Barred Plymouth Rock fowls, and Bronze turkeys. R. R. station: Coldwater. G. T. R. Write for prices.

ASHTON FRONT VIEW STOCK FARM.

Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome. A. J. WATSON, Castleberg, Ont. C. P. R. Station and Telegraph Office, Bolton; or G. T. R., Palgrave.

CHOICE SHORTHORNS.

4 bulls, from 5 to 17 months old, sired by Ashburn Duke; also a few heifers, sired by Indian Duke; for sale. J. R. HARVIE, Orillia P. O. and Station.

SHORTHORNS.

THORNHILL HERD. ESTABLISHED 27 YEARS. Imp. Prime Minister and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls. REDMOND BROS., Millbrook Sta. and P. O.

12 SHORTHORN BULLS.

ALL UNDER TWO YEARS OLD. PRICE, FROM \$100 UPWARDS.

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

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

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

HIGH-CLASS SCOTCH SHORTHORNS

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

PLEASE MENTION FARMER'S ADVOCATE

DR. HESS' STOCK FOOD

IS A GUARANTEED MILK PRODUCER.

W. T. S. Bear, manager of the Oregon Dairy Farm, Franklin, Pa., has the following to say:

DR. HESS & CLARK, ASHLAND, O.: Dear Sirs,—Ten days ago we began feeding Dr. Hess' Stock Food to a dairy herd of 35 cows, part grade Jerseys and part Red Polls. All were suffering from indigestion, owing to heavy feeding of grain through the entire summer; all were falling away in milk; some were so bad as to bloat and refused to eat for several days. Tried all manner of feeds and combinations, but only partially succeeded in checking the decrease in milk. Two days after we began feeding Dr. Hess' Stock Food they began to mend and increase in milk, until they are now gaining an average of two pounds of milk per head per day, without any increase of feed or change of feed or any other conditions. I think the improvement wonderful, especially when we consider that it was done while the temperature was between 10 and 20 degrees above zero, and the first cold snap at that, which is always the worst. Yours truly, W. T. S. BEAR, Manager Oregon Dairy Farm.

Feed Dr. Hess' Stock Food to your cows: If it don't pay, your money will be refunded. 7-lb. sack, 65c.; 12-lb. sack, \$1.00.

SOLD BY DEALERS GENERALLY, OR ADDRESS:

THE GREIG MANUF'G COMPANY, CANADIAN AGENTS, MONTREAL, QUE.

FREE.—Dr. Hess' scientific veterinary work, giving the symptoms and latest treatment on stock diseases, will be mailed you for the asking. Address:

DR. HESS & CLARK, ASHLAND, OHIO.

LESS LABOR AND MORE MONEY ON THE FARM.

BUY A LOW-DOWN, THICK-FLESHED

Hillhurst Shorthorn Bull,

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

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

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

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

H. CARGILL & SON,

Cargill Station, G. T. R. CATALOGUE FREE. Cargill, Ontario.

Shorthorns and Berkshires

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin. MAC CAMPBELL, NORTHWOOD, ONT.

W. G. PETTIT & SON,

FREEMAN P. O., ONT., IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

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

Burlington Jct. Stn. Tele. & Phone, G. T. R.

GEO. RAIKES, BARRIE, ONT.,

BREEDER OF SHORTHORNS & SHROPSHIRE. YOUNG STOCK FOR SALE.

SHORTHORNS—

Scotch and Scotch-topped. War Eagle = 27609 = at head of herd. Young bulls, cows and heifers for sale. Railway station: Coldwater, Midland Branch, G. T. R. Write for prices. S. Dunlap, Eady P. O., Ont.

NOTICES.

STRAWBERRY CULTURE.—Of all the summer fruits, none seem to give such continued and substantial satisfaction as the luscious strawberry. Has the reader a strawberry patch? If not, plan for one this season. R. M. Kellogg, of Three Rivers, Mich., makes an announcement in another column regarding his pamphlet, "The New Horticulture," telling about great crops of strawberries and how to grow them. Look it up.

GOOD ROADS.—One of the essentials for good roads is good machinery for that purpose. At the present time there

A FEW CHOICE SHORTHORNS

YOUNG COWS AND HEIFERS

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

G. A. Brodie, Bethesda, Ont.

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

SHORTHORNS (IMP.)

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

E. D. ROBINSON, MARKHAM P. O. & STN.

Charles Rankin WYEBRIDGE, ONT.,

IMPORTER AND BREEDER OF SHORTHORNS, OXFORD DOWNS AND BERKSHIRE PIGS. Young stock always on hand.



is a very decided and general movement towards improving the highways of the country, and this season will easily see more municipalities than ever before using road machines, stone crushers and cleaners. Where used, these implements have given very excellent results, being a wonderful improvement over the old statute-labor system, with plows, scrapers and shovels. From the personal observation of members of the staff, the "Farmer's Advocate" can bear testimony to this fact. The Good Roads Machinery Co., of Hamilton, Ont. are pioneers in this movement, and their implements are winning golden opinions wherever used.

TROUT CREEK HERD OF Shorthorns

Won first prize for herd and the championship for best bull and best female, any age, at Toronto Industrial and Pan-American Exhibitions, 1901. We keep constantly in our herd a choice lot of imported and Canadian-bred cattle of both sexes. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains if notice is given. Visitors always welcome. Address:

JAMES SMITH,
Manager,
MILLGROVE, ONT.

W. D. FLATT,
378 HESS ST., SOUTH,
Hamilton, Ontario.

ARTHUR JOHNSTON, GREENWOOD, ONTARIO.

BREEDER OF POST OFFICE AND TELEGRAPH OFFICE. IMPORTER OF

SHORTHORNS ONLY.

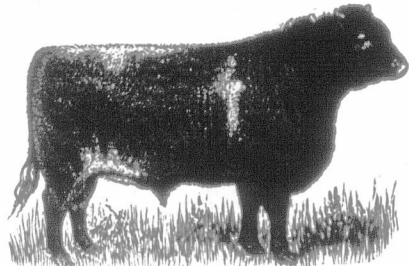
FOR SALE: 9 imported bulls and bull calves. 11 home-bred bulls and bull calves, from imported cows and by imported bulls. 17 home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

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

Spring Grove Stock Farm.

Shorthorn Cattle
AND
Lincoln Sheep.

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



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

T. E. Robson,
ILDERTON, ONT.

NOTICE:

I desire to thank the farmers and others for their ever-increasing patronage. We are changing the process of manufacture and improving the quality of Queenston cement from year to year, and beg to assure my patrons that the improvements I am making this winter will still add to the wonderfully good reputation of Queenston cement. I will do all in my power to assist the farmers in getting up first-class buildings that are cheap and labor-saving, with first-class sanitation by a proper system of ventilation held under my own patent. Until the 15th day of March, 1902, Queenston cement will be sold at a reduced price. On and after Feb. 1st I will add a draughtsman to my office staff, and to all patrons of Queenston cement pencil sketches of the most approved farm structures will be furnished free of charge. For particulars write me at this office, or see my agents.

Isaac Usher, Queenston, Ontario.

Rapids Farm Ayrshires.

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

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

Come and see or write for prices.



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

Robert Hunter, Manager

for W. Watson Ogilvie, Lachine Rapids, Quebec.

GOSSIP.

MR. McCLURE'S SALE OF HOLSTEINS.

We again call the attention of breeders of Holstein cattle and dairymen generally to the dispersion sale, advertised in our last issue, page 146, of the fine herd of 26 registered Holsteins owned by Mr. Wm. McClure, of Norval, Ont., to be sold on March 6th, at his farm, two miles from Norval Station, G. T. R., and five miles from Brampton, G. T. R., and C. P. R. The Holsteins have been forcibly asserting their claim in the last few years to first place as the farmer's and dairyman's cow by the convincing logic of confirmed official and public tests, in which they have made a splendid record both in milk and butter production, coming out decidedly victorious in almost every contest.

In the six-months test in the model dairy at the Pan-American Exhibition, Mr. McClure's beautiful cow, Beauty of Norval, in competition with 50 selected cows of ten different breeds, topped the whole list in milk production and was only second to the great Guernsey cow, Mary Marshall, in the production of butter, yielding 8,140 lbs. milk and 328 lbs. butter in half a year in a public contest, exposed to the confusion and excitement of a constant stream of visitors, and to extreme heat and the attacks of myriads of furious flies. Beauty of Norval is a handsome cow and of the most approved dairy form, and is capable of doing much better work under favorable conditions. She is included in the sale, together with her dam, five sisters, a daughter, and a son fit for service. Most of the other females are bred deeply in the blood of the noted Aaggie family, and bulls of the highest-testing strains have been continuously used in the herd. The sire in use at present is the richly-bred yearling, Sir Pietertje Posch, son of Alta Posch, who holds the record for a three-year-old cow, having yielded, in an official test, in 7 days, 586 lbs. milk, an average of over 83 lbs. per day, containing 21 661 lbs. fat, equal to 27 lbs. 1 oz. butter. Her dam, the grandam of Sir Pietertje Posch, holds the record in a two-days public test, yielding 114 lbs. milk, testing 4.28 per cent. butter-fat. Such high-class dairy cattle are rarely offered for sale, and the opportunity should not be missed to secure some of them. They will be sold without reserve, as the owner has leased his farms.

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

SCOTCH SHORTHORNS.

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

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

SHORTHORN BULLS.

RARE GOOD BULLS. SCOTCH-BRED BULLS.

Write for bull catalogue free.
H. SMITH, Hay P. O., Huron Co., Ont.
Exeter Station on G. T. R., half a mile from farm om

SHORTHORNS.

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

AMOS SMITH, Trowbridge P. O., Ont.

SHORTHORNS FOR SALE.

Two bulls ten months old, two heifers one year old, one three years old in calf. Write for prices. om

JAS. RIDDEL, BEETON P. O. and STN.

R. Mitchell & Son, Nelson, Ontario.

Scotch Shorthorns.

Twenty-five (imp.) bulls and heifers of following families: Jilt, Roan Lady, Augusta, Rosebud, Mayflower, Rosemary, Beauty, Victoria, Orange Blossom and Princess Royal. Also home-bred heifers in calf to imp. bulls and choice bull calves. om

Burlington Jet. Station and Tele. Office.

QUEENSTON HEIGHTS

SHORTHORNS

SCOTCH AND SCOTCH TOPPED

In service: Derby (imp.) =32057=; Lord Montalis, by Collynie Archer (imp.) =28890=. A few young cows with calf at foot or in calf to imported bull. Also two bulls, 10 months. Moderate prices.

HUDSON USHER,

QUEENSTON, ONT. om

FARM 3 MILES NORTH NIAGARA FALLS

Hillside Shorthorns and Shropshires.

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

L. Burnett, Greenbank P. O., Ont.; Uxbridge Stn., G. T. R.

"VIGILANT" NEST

SLIDING-ADJUSTABLE (Patented Can. & U.S.)

The only nest in the World which positively prevents hens from eating their eggs.

Simple-Effective-Durable

No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to L. P. Morin, Inventor, Mfr., 12 Antoine St., St. Hyacinthe, Que. Price 45c. each. AGENTS WANTED.



Wagon World Awheel.

Half a million of these steel wheels have been sent out on our own wagons and to fit other wagons. It is the wheel that determines the life of any wagon, and this is the longest lived wheel made. Do you want a low down Handy Wagon to use about the place? We will fit out your old wagon with Electric Wheels of any size and any shape tire, straight or staggered spokes. No cracked hubs, no loose spokes, no rotten felloes, no resetting. Write for the big new catalogue. It is free.

Electric Wheel Co., Box 253, Quincy, Ills.

Shorthorn Cattle, Lincoln Sheep

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

J. T. GIBSON, om DENFIELD, ONT.

Brookbank Holsteins

16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records.

GEO. RICE, Currie's Crossing, Ontario. OXFORD COUNTY.

4 HOLSTEIN BULLS 4

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

Spring Brook Holsteins, Tamworths, B. Rocks

One bull, 11 mos. old; 2 calves, 6 weeks old; 4 yearling heifers in calf; 2 cows; also heifer calves, all DeKols. Two Tamworth boars ready for service. Sows and young pigs ready to ship. om

A. C. Hallman, New Dundee, Ontario.

Maple Glen Stock Farm.

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

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

SUCCESS WITH HOLSTEINS

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

HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y. om

IMPORTED JERSEY BULL

FOR SALE:

The prizewinning sire, imported

DISTINCTION'S GOLDEN

Is docile and sound. His get have won the family prizes for three years at Toronto Exhibition. om

APPLY

ROBERT DAVIES,

THORNCLIFFE STOCK FARM, TODMORDEN,

or 34 Toronto St., Toronto.

Ridgedale Farm Holstein-Friesians for Sale.

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

F. L. GREEN,

BREEDER OF

Jersey Cattle and Yorkshire Pigs.

Choice stock of each sex for sale. om

PICKERING STATION, G. T. R. GREENWOOD P. O. CLAREMONT STATION, C. P. R.

FOR SALE: A SPLENDID LOT OF Jersey Cattle.

41 HEAD TO CHOOSE FROM.

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

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

CHOICE JERSEYS.

Am offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap.
WM. N. HASKETT,
Avon Manor, Markdale, Ont.

We have now on hand young females sired by **Nero of Glen Rouge 50241,** and cows and heifers bred to him.

E. B. HINMAN & SON, GRAFTON, ONT.

BRAMPTON JERSEY HERD

Offers: 3 St. Lambert bulls from 6 to 14 months old, out of high-testing cows; 1 yearling and 5 bull calves, sired by Brampton's Monarch (Imp.). Four young bulls sired by him won 1st, 2nd and 3rd prizes under one year, and 1st prize under six months, also 1st, 2nd and 3rd at London and Ottawa, in 1901. The best is none too good. These young bulls have never been beaten. Get one to head your herd.

B. H. BULL & SON, BRAMPTON, ONT.
G. T. R. and C. P. R. Stations.

RIDLING CASTRATION.

om- **DR. J. WILSON, V. S., WINGHAM, ONT.,** Specialist in the castration of ridgeling horses and colts. Terms and testimonials on application.

LAWNRIIDGE STOCK FARM.

JERSEYS FOR SALE: Yearling bull, 5 bull calves, also some very fine registered cows, heifers and heifer calves—fresh calved and springers. One hundred head to select from. Cows a speciality.

J. L. CLARK,
Norval station: G. T. R. Norval P. O.

Wm. Willis, Newmarket, Ont.

Breeder of A. J. C. C. Jerseys and registered Cotswold sheep. Have now two fine young bulls from Count, fit for service; also Yorkshire swine.

AYRSHIRES AND LEICESTERS

We breed for milk and quality, and employ only the best sires. Are now offering young Ayrshires of both sexes.
DONALD CUMMING & SONS,
Lancaster, Ont.

AYRSHIRE FEMALES FOR SALE

Carrying the same breeding as our prize-winners, including such offspring as Floss and Tom Brown, the World's Fair winners. We breed for constitution, quality, and production.

DAVID BENNING & SON,
Williamstown, Ont.

AYRSHIRES FOR SALE.

4 yearling bulls and a number of spring calves of deep-milking strains. Prices reasonable.

F. W. TAYLOR,
Wellman's Corners, Ont.

To Rid Stock of Lice

AND ALL SKIN DISEASES.

Also to Keep Poultry Healthy

USE

WEST'S FLUID

Which is also a SURE CURE OF CONTAGIOUS ABORTION, STANDARD SHEEP DISEASE AND POOD. Pedigree forms free to customers. Manufacturers:

The West Chemical Co'y,
om TORONTO, ONT.

"Here's Your Calf. Got Your Tag On."

No need to slit the ear of your animals to mark them. Mark all your stock with the **Aluminum "Stay There" Ear Marker.** Contains your name, address, and consecutive numbers on each tag. No rusting or wearing off. Inexpensive, and perfectly easy and simple to attach. We send free sample and prices upon application.

WILCOX & HARVEY MFG. CO. 194 Lake St., Chicago, Ills.

STAY THERE

FOR SALE: IMPORTED AND HOME-BRED **AYRSHIRES,** including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

WM WYLIE, - HOWICK, QUEBEC.

FOR SALE:

Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Auchenbrain (Imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Collie pups, from Perfection Queen. Address—

T. D. McCALLUM,
Nether Lea, -om Danville, Que.



Cured of Piles.

Mrs. Hinkley, Indianapolis, writes: "The doctor said it must be an operation costing \$800, and little chance to survive. I chose Pyramid Pile Cure, and one 50-cent box made me sound and well." All druggists sell it. It never fails to cure any form of Piles. Try it. Book on Piles, cause and cure, free by mail. Pyramid Drug Co., Marshall, Mich.—Advt.

AYRSHIRES AND YORKSHIRES.

We always have on hand choice individuals, male or female, of above breeds. Write us.

om- **ALEX. HUME & CO, Menie, Ontario.**

Maple Cliff Dairy and Stock Farm.

BREEDERS OF

AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.

FOR SALE: 5 bull calves, a few heifers; young pigs, pairs not akin; 2 boars, 4 months old; young pigs. Farm adjoins Central Experimental Farm, Ottawa.

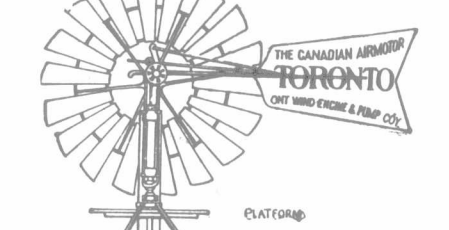
R. REID & CO., Hintonburg, Ont.

HOMECROFT, a farm for dairying

and pure-bred stock: **AYRSHIRES, IMPROVED CHESTER WHITES, BARRED PLYMOUTH ROCKS. SOME FINE YOUNG BULLS.**

J. F. FARNS & SONS, Barnston, Quebec.

WINDMILLS



Have you cheap power? Do you know that a

CANADIAN AIRMOTOR

will yield greater returns for your money than any other farm implement. Has a cast-iron constitution, and is a terror to work. We have other things that save money. Write us.

ONT. WIND ENGINE & PUMP CO.

om LIMITED. TORONTO, ONT.

Tredinnock Ayrshires.

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchenbrain, and Lord Dudley. 3rd imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address

JAMES BODEN, Mgr.,
St. Anne de Bellevue, Quebec.

Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal.

Ayrshire Bulls

from 1 1/2 years to 6 months, from special milking stock, sired by the sweepstakes bull, Cock o' the North—9997—, also females all ages. Shropshire sheep, Berkshire pigs, either sex, and B.P. Rocks. For particulars write

J. YUILL & SONS, Carleton Place, Ontario.

AYRSHIRES.

I offer four choice August (1901) bull calves, two yearling heifers due to calve next August to imported bull, and a pair of March and April heifer calves. All bred from imported stock of choice milking strains.

W. W. BALLANTYNE, Stratford, Ontario.

"Neidpath Farm" adjoins city, main line G.T.R.

GOSSIP.

Monkey Brand cleans and brightens everything, but won't wash clothes.

Mr. A. E. Meadows, of Port Hope, Ont., recently visited the farm of Mr. Arthur Johnston, Greenwood, and purchased an extra choice young bull, sired by Imp. Merryman, who is probably the best bull individually Mr. Johnston ever imported or ever owned, and out of the cow, Imp. Princess Thule 3rd, of the Marr Princess Royal family, a cow that is without doubt the best breeding animal in the herd, as proof of which we have only to mention that for a daughter of hers, at present in the herd, Mr. Johnston refused more money than he was ever offered for a single animal or that he ever sold a single animal for since he has been in the breeding business, which is saying a good deal. Mr. Meadows will place this young bull at the head of his well-selected herd of Shorthorns.

ECONOMIC RECORDS OF HOLSTEIN-FRIESIAN COWS.

The records given below are for three months closing February 1st, 1902. These records are made in connection with official testing by experiment stations. Reports are made of four weeks' feeding, but to economize space we give only that of the last week—the week of the official test. During this week the cow is fed not less than during the previous week, and for the last two days not less per day than during any previous day of the week. The food and products are for seven consecutive days. (We give highest records of cows of various ages.—Ed. F. A.)

Mercedes Julip's Pietertje 39480, age 6 years 22 days: Food—360 lbs. beet pulp, 32 lbs. soaked oats, 25.5 lbs. brewer's grains, 28 lbs. bran, 17 lbs. corn, 8 lbs. oil meal and 37.5 lbs. timothy hay. Products—Milk, 540.8 lbs., containing 21.051 lbs. fat.

Lilith Pauline DeKol 43434, age 5 years 2 months 18 days: Food—109.45 lbs. ensilage, 88.75 lbs. clover hay, 290 lbs. turnips, 34.12 lbs. oil meal, 41.09 lbs. hominy chop, 1.5 lbs. cotton-seed meal, 51.74 lbs. wheat bran and 38.8 lbs. gluten meal. Products—Milk, 613.5 lbs., containing 20.770 lbs. fat.

Johanna Rue 3rd 42167, age 5 years, 6 months 21 days: Food—311.8 lbs. ensilage, 48.8 lbs. hay, 42.2 lbs. bran, 42.2 lbs. ground oats, 42.2 lbs. gluten feed and 1 lb. oil meal. Products—Milk, 491.2 lbs., containing 19.892 lbs. fat.

Johanna DeKol 2nd 42168, age 4 years 10 months 11 days: Food—332.2 lbs. ensilage, 61.3 lbs. hay, 42.33 lbs. bran, 42.33 lbs. ground oats, 42.33 lbs. gluten feed and 10.5 lbs. oil meal. Products—Milk, 523.7 lbs., containing 19.229 lbs. fat.

May Hartog Pauline DeKol 45124, age 3 years 11 months 21 days: Food—78.25 lbs. ensilage, 265 lbs. turnips, 76.75 lbs. clover hay, 46.44 lbs. hominy chop, 13 lbs. cotton-seed meal, 48.94 lbs. gluten meal, 51.75 lbs. wheat bran, 7.56 lbs. O. P. oil meal and 7.56 lbs. N. P. oil meal. Products—Milk, 524.9 lbs., containing 18.830 lbs. fat.

Canary's Mercedes Brightest 49131, age 2 years 11 months 18 days: Food—62 lbs. cornstalks, 18 lbs. brewer's grains, 369 lbs. beet pulp, 5.5 lbs. oil meal, 56 lbs. bran, 35 lbs. oats and 19 lbs. corn meal. Products—Milk, 390 lbs., containing 16.957 lbs. fat.

Bessie DeKol Rue 49766, age 3 years 1 month 26 days: Food—86.4 lbs. cornstalks, 77 lbs. hay, 46.69 lbs. wheat bran, 46.69 lbs. ground oats, 31.57 lbs. gluten feed, 19.74 lbs. corn meal and 7.91 lbs. oil meal. Products—Milk, 426.1 lbs., containing 15.208 lbs. fat.

Jessie DeKol Burke 44122, age 3 years 9 months 21 days: Food—318.8 lbs. ensilage, 61.8 lbs. hay, 38.6 lbs. bran, 38.6 lbs. ground oats, 38.6 lbs. gluten feed and 3.5 lbs. oil meal. Products—Milk, 450.7 lbs., containing 15.177 lbs. fat.

Aulinda Netherland 50127, age 2 years 4 months 24 days: Food—332 lbs. beet pulp, 32 lbs. soaked oats, 24 lbs. brewer's grains, 25 lbs. bran, 15 lbs. corn, 7 lbs. oil meal and 38 lbs. hay. Products—Milk, 331.7 lbs., containing 13.148 lbs. fat.

Beechwood Clothilde 57533, age 2 years 5 months 7 days: Food—62 lbs. cornstalks, 18 lbs. brewer's grains, 373 lbs. beet pulp, 6 lbs. oil meal, 51.5 lbs. bran, 35 lbs. soaked oats and 17 lbs. ground corn. Products—Milk, 255.2 lbs., containing 10.832 lbs. fat.

Netherland Johanna DeKol 53131, age 2 years, 2 months 5 days: Food—67.5 lbs. hay, 43.078 lbs. bran, 43.078 lbs. ground oats, 28.714 lbs. gluten feed, 17.948 lbs. corn meal, 7.182 lbs. oil meal and 51.3 lbs. cornstalks. Products—Milk, 326.4 lbs., containing 10.923 lbs. fat.

S. HOXIE,
Supt. of Advanced Registry.

WHEN THE HEALTH AND FOOD JOURNALS of the country make special reference to the vast superiority over all others of "Salada" Ceylon tea, don't you think you should give it a trial? "Salada" green tea is for Japan tea drinkers.

THE SECRET OF FENCE STRENGTH

You can stretch an American Field and Hog Fence "till it sings" and it will outwear half a dozen slack wire fences. Heat won't loosen it, cold can't snap it because the tension curve keeps it always taut—takes up the tension.

Made of large wires, of the best material and woven perfectly so as to secure the full strength of the wires in the fabric. This ready-built, woven steel wire fence is wonderfully low in price. For a small farm or a great ranch or plantation the

AMERICAN Field and Hog Fence

keeps stock in place and protects crops perfectly, and it lasts all life time. Built of high grade steel, heavily galvanized before weaving. Every rod is guaranteed. Sold everywhere. If your dealer hasn't it, write to

Canadian Steel & Wire Co (Ltd.), Hamilton, Ont.

Free for five wrappers: Lee's book, containing 386 pages, 3,000 recipes for home and farm. Prof. A. V. M. Day's English Tonic Powders (5 separate packages) for horses, cattle, hogs, sheep, and poultry. They make health and flesh. Mail us the front part of five wrappers and receive book FREE.

Price: 35c. a package, 5 for \$1.50.

For Dairy Cows

Feed Day's Butter-fat Producer.

It makes more milk and butter-fat; gives the butter color; imparts a flavor to the butter that is not obtained by any other feed. Write us a post card for free sample. Warranted purely vegetable.

The Day's Stock Food Co., Toronto.

TWO AYRSHIRE BULLS

Eleven months old, fit for service. From deep-milking cows with good large teats. Registered. Prices right. Apply at once. **JAS. A. JAMES,**
Nilestown, Ont.

LIVE STOCK AUCTIONEER.

The undersigned is prepared to conduct pure-bred auction sales. 20 years' experience. References: John I. Hobson and Alfred Stone, Guelph; Jas. Hunter, Alma, and Mossom Boyd, Bobcaygeon. THOS. INGRAM, care Mercury Office, Guelph, Ont.

LIVE STOCK EAR LABELS REDUCED.

Send for a circular and order early, before the rush. Large and small lots and odd numbers supplied. **R. W. James, Bowmanville, Ont.**

DAVID A. McFARLANE,

Breeder of high-class **KELSO, P. Q. AYRSHIRES.**

Young stock for sale from imported and home-bred foundation. Prices reasonable.

AYRSHIRES.

Five bulls ranging from 11 to 25 mos., from such noted cows as Jean Armour, Lady Ottawa, Sprightly and Primrose (Imp.), and from the best sires procurable. Also heifers and cows all ages, and poultry. **WM. STEWART & SON, MENIE, ONT.**

WE OFFER THIS MONTH

FOLLOWING CHOICE BULL CALVES:

Ayrshires: OUT OF	SIBED BY
Nora of Fin (Imp.)	Wee Earl (Imp.)
Gem of Castle Hill (Imp.)	Matchless 7500.
Nellie of Barcheskie (Imp.)	Matchless.
Lady Bute (Imp.)	Napoleon of Auchenbrain (Imp.)

Guernseys:

OUT OF	SIBED BY
Roseland III. (Imp.)	Masher (Imp.)
Princess May (Imp.)	Masher (Imp.)

ISALEIGH GRANGE FARM,

J. N. GREENSHIELDS, Prop. o Danville, Que.

SPRINGHILL FARM.

Importers and breeders of choice, deep-milking

Ayrshires

Males and females for sale.

ROBERT HUNTER & SONS, Maxville, Ont.

5 AYRSHIRE

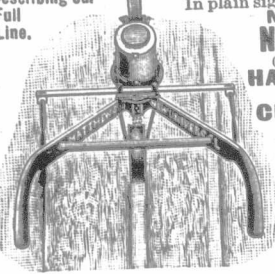
bull calves for sale, from 6 to 12 months old. Sired by Klondyke of St. Ann's 8897. Their dams are heavy milkers, with good udders and teats. Inspection invited. **W. F. STEPHEN, Trout River, Quebec.** (Carr's Crossing, G. T. Ry.)

PLEASE MENTION FARMER'S ADVOCATE.

FIRE Safety
is best secured by using
"Safe Lock" Shingles
on all your buildings.
Prevents many fires and makes others easier controlled. The Safe Lock Metal Shingles are lightning proof too and keep out the snow and rain.
Small Shingle showing construction mailed free.
The Metal Shingle & Siding Co., Limited
PRESTON, ONT.



Send for Catalogue Describing our Full Line.
SEE THE SEED DROP.
In plain sight of the operator.
MATTHEWS' New Universal HAND SEEDERS AND CULTIVATORS.
Used by the most successful gardeners. They do perfect work. Open furrow, drop seed, cover any desired depth. Cultivating machines. Latest and best. Popular prices.
AMES PLOW CO.
93 Market St. BOSTON.



THE MOST NUTRITIOUS.
EPPS'S COCOA
Prepared from the finest selected Cocoa, and distinguished everywhere for Delicacy of flavour, Superior quality, and highly Nutritive properties. Sold in quarter-pound tins, labelled **JAMES EPPS & Co., Ltd., Homoeopathic Chemists, London, England.**

EPPS'S COCOA
BREAKFAST-SUPPER.

SEED OATS

NEW IMPROVED WHITE LIGOWO OATS.
The Improved Ligowo Oat is a large, white, plump variety, with a branching head and stiff straw; a vigorous grower; very prolific and early and free from smut. Price, 75 cents per bushel. Bags, 20 cents each.
GEO. MILLER, MARKHAM, ONTARIO.

American Leicester Breeders' Association.

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

EUROPEAN ADVERTISEMENTS.

English Shorthorns.

Booth and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American Herdbook. Royal and Highland prizewinners included for the last two years. Close on £400 won in prizes last year and this.
WM. BELL,
Ratcheugh Farm, Alnwick, Northumberland, Eng.

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

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

REGISTERED
Southdown Sheep, Suffolk Sheep
AND **Berkshire Pigs.**

THE Cheveley flocks and herds, the property of Col. H. L. B. McCalmont, M.P., are unique for the purity of their blood, typical character, and individual merit. In their foundation, etc., no expense has been spared in securing the best and most perfect specimens of the different breeds. In each case full records are kept of individual pedigrees, so that any selections made from these flocks will, in addition to being of the highest merit and typical character, have also the great advantage of individual pedigrees.

The Southdowns have secured the highest show-yard honors during 1900 and 1901 at the leading English shows; in the latter year, besides winning the champion prize, gold medal and breed cup at Smithfield Show, two medals for best Southdown, six firsts, three seconds and numerous minor awards were won at Royal, Birmingham, Royal Counties shows, etc. The Suffolks are equally well bred, and numerous prizes have also been won. In fact, for individual merit, pedigree, and purity of breeding, it would be difficult to find better and more suitable flocks of either of these breeds from which to perpetuate their high individual merits. Apply to—

H. J. GARROD,
Cheveley, Newmarket, England.

J. E. CASSWELL'S
LINCOLNS. Loughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged £51 each; 14 of the best averaged £23 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearlings for sale; also Shire horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

GOSSIP.

Dr. E. T. Hagyard, V. S., formerly of Campbell's Cross, Peel County, Ontario, died at his residence at Lexington, Ky., Feb. 15th, 1902, aged 82 years. Dr. Hagyard, who was a native of England and a graduate of the Royal Veterinary College, was, on the recommendation of Canadian stock-breeders, called from his home in Peel County, where he had a good practice, when the Bates boom in Shorthorns was at its height. In the seventies, to treat a very high-priced bull belonging to a noted Kentucky breeder, and so impressed was a number of the horse and cattle-breeders of that State with his veterinary knowledge and skill, that a liberal offer was made him to remove there for the practice of his profession, which he did, establishing a lucrative practice, which succeeded to his two sons, graduates of the Toronto Veterinary College, who have also had a very successful career. Dr. Hagyard was a man of fine character and a kind and genial disposition, and had many warm friends in Canada as well as in Kentucky.

Mr. John Gardhouse, Highfield, Ont., reports the following sales of Shorthorns from his herd: To Dr. F. C. Sibbald, "The Briars," Sutton West, the pure Scotch heifer, Clarissa's Gem, by the Duthie-bred bull, Imp. Prime Minister 15280, out of the imported cow, Clarissa's Fancy, of the well-known Kinellar Claret family. To Dr. A. G. Hopkins, Neepawa, Man., Roan Lily, by a son of the Marr Missie bull, Scottish Pride, with her beautiful red heifer calf by the Lancaster bull, Prince Louis 32082 (imp.). To Mr. Walter James, Maple Grove Farm, Rossier, Man., the yearling heifer, Minister's Favorite, by the Duthie-bred bull, Prime Minister; dam Highfield Favorite, by the imported Nonpareil bull, Albert 2668. To Wm. G. Moffat, Teeswater, Ont., the young bull, Prince of Fashion, by Prince Louis (imp.), whose sire was sold for \$2,000 to go to South America; dam Miss Lily, by the Cruickshank Village bull, Premier Earl 1281 (imp.). To Mr. David Harsell, Austin, Texas, the young bull, Fanny's Minister, by Imp. Prime Minister; dam Fanny's Gem, by Guardsman (imp.), sire of the great show bull, St. Valentine; also the heifer, Pride of Highfield, by Prime Minister (imp.). To Geo. Kerr, Franklin, Man., the young bull, Prince Arthur 39689, by Imp. Prince Louis; dam Lillian, by the Brawith Bud bull, Guardsman (imp.); the cow, Lily's Favorite 32081, by Guardsman (imp.); dam Miss Lily by Premier Earl (imp.); also eight very nice heifers—Sybil, Lady Constance 66th, Lorne 12th, Lady Collingwood 16th, Constance Butlerby 22nd, Lorne 10th, Lady Collingwood 15th, Lily's Fancy. To G. W. Stipe, West Unity, Ohio, Highfield Rose, by the Brawith Bud bull, Guardsman (imp.) and his sister to the great, St. Valentine dam, Blooming Rose, by the Cruickshank Village bull Premier Earl (imp.). I have yet for sale a few choice young bulls and heifers, sired by Imp. Prince Louis 32082 (77486) and Imp. Prime Minister 15280 (63104).

Were a man to start out to find an ideal lot of Ayrshire cattle, he would travel a long way to find a better lot than the herd owned by Mr. Donald Cumming, whose farm lies about four miles north of Lancaster, Ont., which is Mr. Cumming's P. O. and R. R. station. This herd is made up of extra large, well-formed animals of true dairy type, with large, perfectly-shaped udders and well-developed teats. Among them are a great many prizewinners, as: Lady Wonder 7893, whose dam, Little Wonder, was one of the first-prize herd at Chicago in 1893. Blossom 11459, who is the dam of superior quality and merit, that Mr. Cumming is using on the herd, although he has refused several very tempting offers for him. On his sire's side this bull traces directly to that great show cow, Nellie Osborne, and on his dam's side he is closely related to that well-known cow, Beauty of Burnside. Other prizewinners in the herd are Snowdrop, Katie May, and Safura, all typical animals. There are also a number of heifers of various ages that are a pleasure to look upon. The second bull in service is Sir Donald of Elm Shade, out of the sweepstakes cow, Imp. White Glen of Holchouse. He is a model of the breed, and will certainly leave Mr. Cumming's herd better than he found it. Another extra good young bull is Glencairn's Prince, sired by Glencairn of Burnside, the sweepstakes bull of Canada; dam Highland Princess, by Imp. White Prince, sweepstakes bull at Chicago in 1893. There are also several other young bulls out of these cows, all of them choice animals, fit for service, and in the pink of condition. Any which have been mentioned are now for sale, and, considering their choice breeding and superior individuality, they should go quickly.

NOTICE.

"FARMER BRIGHTON." Fairfield, Iowa, advertises in our columns his famous "Swine V. Stock Marker and Calf Dehornor," which, it is claimed, prevents swine rooting, marks effectually cattle and sheep as well as hogs, and is unsurpassed as a calf dehornor. For particulars, write to address above.

Shorthorn Cattle
and **Lincoln Longwool Sheep.**

HENRY DUDDING

Riby Grove, Great Grimsby, Lincolnshire.

Has always for inspection and sale the largest flock of pure Lincoln sheep and Shorthorn herd in the country, and many prizewinners. The sheep are famous for their great size, fine, lustrous wool, and 150 years' good breeding, and at the home sales have made the highest prices on record. The Shorthorns comprise the best Bates, Booth, and Scotch blood, including the best prize strains of Duthie, Marr, Willis, and Harrison. During the last year 86 prizes have been taken by the Riby Shorthorns and Lincoln sheep at the leading shows in England.

Cables: Dudding, Keelby, England.

Lincoln Longwool Sheep Breeders' Association.

Lincoln Ram Sales, 1902.

The 14th and 15th sales of Lincoln Longwool rams by members of the Association will be held in Lincoln as follows:

8th August, 400 rams.
5th Sept., 500 rams.

The sheep will be on view during the afternoon of the Thursday preceding each day of sale.

St. Benedict's Square, LINCOLN, Dec., 1901. **STEPHEN UPTON,** Secretary.

FAMOUS ALL OVER THE WORLD
ALFRED MANSELL & CO.,
LIVE STOCK AGENTS AND EXPORTERS,
SHERWESBURY.

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

W. W. CHAPMAN,

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

WALTON HERD
OF
PEDIGREE PIGS,

The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

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

HAMPSHIRE DOWN
SHEEP.

SPLENDID MUTTON, GOOD WOOL,
GREAT WEIGHT.

THIS HIGHLY VALUABLE

English Breed of Sheep

Is unrivalled in its rapid and wonderfully early maturity, possessing, too, a hardiness of constitution adapted to all climates, whilst in quality of mutton and large proportion of lean meat it is unsurpassed. Full information

JAMES E. RAWLENCE,
SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION,
SALISBURY, ENGLAND.

PLEASE MENTION FARMER'S ADVOCATE.

CARRIAGES
AT FIRST COST.



NO. 10. PIANO BODY, PRICE \$52.50.

By our system of selling carriages direct to the customer, you can purchase a buggy, phaeton or other high-grade carriage, or harness, one-third less than from a local dealer. Why not?

Deal Direct With the Maker

and save two profits? We give the broadest guarantee with each purchase. You can return the vehicle, and we will pay freight both ways, if you are not thoroughly satisfied. Our complete illustrated catalogue, showing many styles of vehicles and harness, with detail description of each, mailed free.

ADDRESS:

INTERNATIONAL CARRIAGE CO.,
BRIGHTON, ONT.

SHREDDED
WHEAT BISCUIT.

Doctors Prescribe It.

"As a digestive and in cases of chronic constipation and dyspepsia, it acts as one of the best remedies I have ever prescribed."—
B. P. ANDERSON, M. D., Augusta, Me.

Send postal for our book of Food Facts and Food Values, containing 262 recipes for preparing and serving Shredded Wheat dishes.
Address—
om- **J. C. HEWITT,**
P. O. Box 511, TORONTO.

THE ONTARIO VETERINARY COLLEGE
(LIMITED),
TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto.

Patrons: Governor-General of Canada, and Lieut.-Governor of Ontario. Fee \$65.00 per session. Apply to **ANDREW SMITH, F.R.C.V.S., Principal.** 18-2-y-om

Mr. G. A. Brodie, Bethesda, Ont., writes: "Since last April I have made the following sales in Shorthorns: One bull to Wm. Maritt, Keswick, Ont.; two bulls to A. G. Harriman, Ulverton, Que.; one bull to Mr. Mills, Mich., U. S.; one heifer to John Meritt, Belhaven, Ont.; one heifer to L. A. Armstrong, Falmouth, N. S.; eleven heifers and young cows to F. W. Brown, Portage la Prairie, Man.; one cow to Wm. Leathers, Bethesda, Ont.; four cows and heifers to Bruce Bros., Gormley, Ont.; five heifers to Mr. Mills, Mich., U. S.; two cows and calf to W. H. Ford, Dutton, Ont.; cow and heifer to W. J. Barber, Belleville, Ont.; cow and heifer to Wm. Caruthers, Cashel, Ont.; three cows to J. Bowens, Woodville, Ont."

FARMERS!

KEMP'S INSTANTANEOUS Sheep Dip

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

W. W. Stephen,
MEAFORD, ONTARIO.

SHEEP BREEDERS' ASSOCIATIONS

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

Dorset Horn Sheep

THE largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other. Awarded 5 out of 8 first prizes at Toronto, London and Ottawa in 1900. Flock of 300. Stock for sale always on hand.

John A. McGillivray, Uxbridge, Ontario.

FAIRFIELD LINCOLNS

Imported ewes and lambs. Can supply show flocks.

J. H. PATRICK, ILBERTON, ONT., CAN.

COTSWOLD HILL STOCK FARM

Offers imp. and home-bred Cotswolds of both sexes and all ages, from the champion flock of Canada for the last six years.

JOHN PARK & SONS, Burgessville P.O. and Stn.

IMPORTED COTSWOLDS

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

BROOKS & LANGMAID, COURTICE P. O.

SIX MILES FROM OSHTAWA STATION, G. T. R.

OXFORD DOWNS

Largest breeder of Oxford Downs in Canada. Have still some fine ewes of different ages for sale. Bred to imported rams. Also 50 superior ewe lambs, and 100 ram lambs. All registered. Prices reasonable. Barred Rock eggs for setting, \$1 per dozen.

HENRY ARKELL, ARKELL, ONT.

JOSEPH FERGUSON, UXBRIDGE, ONT.

BREEDER OF

Pure-bred Cotswolds—choice quality

om UXBRIDGE P. O. AND STATION.

CHAS. GROAT, BROOKLIN, ONT.

OFFERS FOR SALE

Cotswold Ewes and Ewe Lambs of good quality and breeding. Also a registered stallion, 1 year old, and one filly foal. Good ones. Write for particulars.

SUMMERHILL OXFORDS.

Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.

PETER ARKELL & SONS, Teeswater P. O. and Station.

BROAD LEA OXFORDS.

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

HENRY ARKELL & SON, TEESWATER, ONT.

MILDMAY, G. T. R.; TEESWATER, C. P. R.

Linden Oxford and Shorthorns

Flock composed of selections from the best English flocks and their progeny. None but the best imp. rams used. Stock for sale.

R. J. HINE, Dutton, Ont.

Shropshires...

At present I offer for sale: Shearling rams, shearling ewes, ram and ewe lambs. Also a few aged ewes. Prices reasonable.

GEORGE HINDMARSH, AILSA CRAIG, ONT.

HIGH-CLASS SHROPSHIRE.

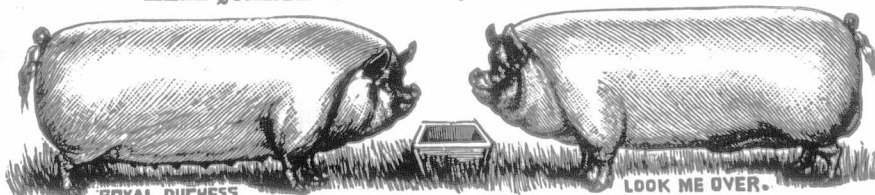
A flock of 75, of good type. Two-shear rams, shearling rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. **Abram Rudell, Hespeler P.O., Ont.**

C. P. R. and G. T. R.

PLEASE MENTION FARMER'S ADVOCATE.

SUMMERHILL HERD OF Large English Yorkshires.

HEADQUARTERS FOR THE IDEAL BACON HOG.



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

Large English Berkshires.

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

JNO. LAHMER, VINE, ONT.

HOLWELL MANOR FARM

SHORTHORNS, SHROPSHIRE, YORKSHIRE, SCOTCH COLLIES.

D. G. GANTON, ELMVALE, ONT.

STOP! LOOK!! LISTEN!!!

International Winnings: Of the home-bred Fairview Shropshires in breeding classes. Of the \$501 offered they won \$204. Of \$301 by Shrop. Ass'n to American-bred, won \$150. They won 20 per cent. more money than any other flock. Had 15 of 32 first premium winners in both classes. All winners bred at Fairview except one third-prize ewe. All our first winners sired by "Newton Lord" but one. And sold out all surplus at the International, except three choice imported rams. Even placed orders for lambs not then dropped.

JOHN CAMPBELL, Woodville, Ont., Can.

W. S. CARPENTER, "MODEL FARM," SIMCOE, ONT.

IMPORTER AND BREEDER OF

Shropshire Sheep.

Ram and ewe lambs for sale. Well covered.

Station One-half Mile from Farm, Wabash and G. T. R.

50 REG. SHROPS. 50 FOR SALE!

Shearling and two-shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade. Foundation stock bred by Mansell, England. Prices moderate. A card will bring them. **ROWAT BROS.,** Phipps station, G. T. R., 5 Hillsdale, Ont. miles east. Simcoe County.

Imported Poland-China Hogs.

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

LARGE ENGLISH FOR SALE.

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

S. DYMENT, BARRIE, ONT.

FOR SALE: Berkshires (both sexes), Shorthorn

stock bull, cows, heifers and young bulls. Prices reasonable. Write or come and see us.

A. J. C. SHAW & SONS, Thamesville, Ont.

Snelgrove Berkshires.

Our herd is unrivalled for its large size and bacon type. All bred from imported stock. We are offering now sows large enough to be bred, sows in pig, boars fit for service, and young pigs from 2 to 4 months old. Can supply pairs not akin. Write us.

SNELL & LYONS, Snelgrove, Ont.

WILLOW LODGE BERKSHIRES FOR SALE

Two boars, 7 months old; several litters, 6 weeks to 3 months. Also a number of young sows ready to breed, sired by Longfellow 10th of H. B. No. 8633, and Gallant Prince No. 7691. Pairs supplied not akin.

WM. WILSON, Snelgrove, Ontario.

LARGE WHITE YORKSHIRES.

Am offering this month a superior lot of Yorkshire sows bred to Ruddington Ensign (imported). Young pigs up to three months of age, furnished in pairs not akin. A fine lot to select from. Write:

H. J. DAVIS, Woodstock, Ont.

Importer and breeder of Shorthorns and Yorkshires.

Chester Boars fit for service.

Also some Dorset ewes and ewe lambs. Prices reduced for 30 days. **R. H. HARDING,** Thorndale, Ont.

Imported Chester Whites

Our present offering is both sexes, all ages, bred from prizewinning and imported stock. We claim to have as good as the country produces, of the true bacon type. We guarantee everything just as represented. Write us, a trial will convince. Pairs not akin. **GEO. BENNETT,** CHARGING CROSS P. O. AND STATION.

PINE GROVE FARM

HERD OF

Large Yorkshire and Essex Swine.

The oldest established herd in America.

We bred Hasket 3rd -1937-, sire of Oak Lodge Conqueror -2475-, and also sire of Look Me Over, the sire of Summerhill Victor, the champion boar at the Pan-American and the late Chicago Exposition, and sold there for \$700. Personal inspection and correspondence solicited. Nine imported and twenty home-bred sows breeding.

JOSEPH FEATHERSTON & SON, STREETSVILLE P. O., ONT.

Streetsville sta., C.P.R. Clarkson sta., G.T.R.

BOARS FOR SALE.

We have a few choice Yorkshire boars to sell at \$15 each. Sows and younger pigs always on hand. Herd headed by the second prize boar at Toronto, 1901. We still have a few extra fine Shropshire and Suffolk Down ewes at \$25 per pair. We also have a number of Aberdeen-Angus bulls and heifers to part with.

W. R. BOWMAN, Mt. Forest, Ont.

YORKSHIRES FOR SALE.

Sows safe in pig; large, smooth type; due to farrow first part of May; will be about 11 mos. old when they farrow. I have a choice sow due to farrow last of March; will be one year old at that time. Also have a few choice boars fit for service, and sows 4 months old. Prices reasonable. Write: **Jas. A. Russell, Precious Corners, Ont.**

Improved Yorkshires FOR SALE.

of the most popular families. All ages and both sexes now ready for immediate shipment. Write for what you want. Prices reasonable—consistent with quality. **E. DOOL,** Hartington, Ont.

YORKSHIRES FOR SALE.

Boars fit for service, sows in farrow and ready to breed, and young stock on hand. Prices reasonable.

WM. HOWE, BRUCE CO. NORTH BRUCE, ONT.

YORKSHIRES AND POULTRY.

Pigs all ages and both sexes; quality right. Eggs for hatching. Barred Plymouth Rocks, White Wyandottes, White and Brown Leghorns, and Buff Orpingtons. Incubator for sale. Also choice pedigree collie pups.

A. B. ARMSTRONG, CODRINGTON, ONTARIO.

FOR SALE: Yorkshires and Holsteins

Best type and quality. Young stock constantly on hand. Prices right. **HONEY,** Brickley P. O., instead of Warkworth.

YORKSHIRES

Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow.

WM. TEASDALE, Dollar, Ont.

Northern branch G.T.R., 15 miles from Toronto.

Tamworths and Berkshires

A choice litter of young Berkshires, farrowed Jan. 10th, at \$5.00 each, registered (when 6 weeks old); order now. Also collie pups, \$3.00 each.

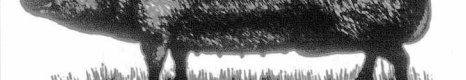
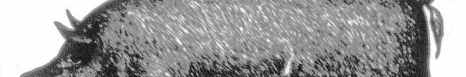
D. J. GIBSON, BOX 38, BOWMANVILLE, ONT.

HAZEL DELL STOCK FARM.

IMP. TAMWORTHS. A few sows 6 months old, out of Imp. English Lady and O. A. C., sired by Imp. Starlight, also the first prize boar at Pan-American, for sale, and young stock from 5 to 7 weeks old. **PETER HORD, Parkhill P. O. and Station.**

NEWCASTLE HERD OF TAMWORTHS

We are now offering several choice boars and sows, 3 and 4 mos. old, and half a dozen choice 2-mos.-olds, all from Toronto Industrial sweepstakes herd. Write us for prices before buying elsewhere. **COLWILL BROS., NEWCASTLE, ONT.**



One hundred Tamworth and Improved Chester

White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices.

H. GEORGE & SONS, Crampton P.O., Ont.

Mammoth Bronze Turkeys.

S. G. and colored Dorkings, S. C. Br. Leghorns, Barred Rocks, Toulouse geese—over 500 grand young birds from winning strains. Pairs and trios mated not akin.

ALFRED E. SHORE, White Oak, Ont.

All prizewinning strains—Bronze tur-

keys sired by imp. tom that won 2nd at Pan-American.

Narragansett turkeys and Pekin ducks. Also Oxford sheep, Tamworth swine and Collie dogs.

A. ELLIOT, POND HILLS, ONTARIO.

Agents Wanted

for the New Pictorial Stock Doctor and Live Stock Cyclopedic, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages to agents. A full-page announcement of this book appeared in the ADVOCATE of the issue of June 1st. Particulars mailed free. Address **WORLD PUBLISHING CO., Guelph, Ont.**

FOR SALE: A few pairs of choice TOULOUSE

keys sired by imp. tom that won 2nd at Pan-American.

Narragansett turkeys and Pekin ducks. Also Oxford sheep, Tamworth swine and Collie dogs.

W. W. EVERITT, Chatham, Ontario.

Box 582.

TURKEYS! TURKEYS!

Grand Mammoth Bronze Turkeys, heavyweights. Nothing but the best toms used.

E. S. BENNETT, GLANWORTH, ONT.

BARRED ROCKS.

A number of choice cockerels: large, strong-boned, robust, healthy birds, bred from my famous National strain, noted for large eggs and persistent layers. For prices write

W. C. SHEARER, BRIGHT, ONTARIO.

Mammoth Bronze Turkeys

Sired by 42-lb. tom. Cayuga ducks, Chester White swine (both sexes) from two to six months old; bacon type. Write for prices.

W. E. WRIGHT, GLANWORTH, ONT.

BARRED ROCKS (EXCLUSIVELY).

— We have a large number of large, strong, vigorous cockerels, bred for utility from \$1 to \$5 each. Also a number of pullets and good breeding hens. **A. E. SHERRINGTON,** Box 100, Walkerton, Ont.

R. G. Rose GLANWORTH, ONT., offers

for sale a choice lot of M. B. turkeys from his 40-pound imported yearling tom. Also Black Minorcas, W. Wyandottes, Barred, Buff and White Rocks. Pairs and trios mated not akin.

BETTER HATCHES WITH HENS

by new method of experienced poulterer; egg-breaking or quarrelling among hens impossible; gives better results than incubators; no night worry; simplifies work with sitters; saves your temper; can set many hens at same time. Plain directions, 20 cents. Using my method you make many times that much on one sitting alone.

VALLEY POULTRY FARM, Helena, Montana.

A FLOOD OF LIGHT


equal to 100 candle lights and comparable only to the light of noon day sun, yet soft and restful to sew or read by, such is the light of the

AUER GAS LAMP

It makes and burns its own gas—is cheaper than oil and as easy to manage—though eight times as bright. Gives out very little heat. Our free catalogue gives full particulars. Write for it.

Auer Light Co., 1682 Notre Dame, Montreal.

Poor Soils



are made richer and more productive and rich soils retain their crop-producing powers, by the use of fertilizers with a liberal percentage of

Potash.

Write for our books—sent free—which give all details.

GERMAN KALI WORKS,
93 Nassau Street, New York City.

Soft Harness



You can make your harness as soft as a glove and as tough as wire by using **EUREKA Harness Oil**. You can lengthen its life—make it last twice as long as it ordinarily would.

EUREKA Harness Oil

makes a poor looking harness like new. Made of pure, heavy bodied oil, especially prepared to withstand the weather.

Sold everywhere in cans—all sizes.

Made by **IMPERIAL OIL COMPANY.**

DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WON'T GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY

CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP

THE **W.A. FREEMAN CO. LIMITED**
HAMILTON ONTARIO

BOYS FOR FARM HELP.

The Managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 214 Farley Ave., Toronto.

PLEASE MENTION THE **FARMER'S ADVOCATE**

GOSSIP.

The National (U. S.) Buff Turkey Club was recently organized at Louisville, Kentucky, with W. H. Booker, Eminence, Ky., as president, and H. F. Work, New Washington, Ind., secretary. A standard of excellence was adopted.

Mr. H. E. Hind, of Spruce Grange Stock Farm, Hagersville, Ont., has purchased from Mr. Joseph McMillan, of Shakespeare, Ont., to head his herd of Shorthorns, the bull, Sir James 40271, got by Captain Mayfly 28858 (imp.), dam Empress 5th 28648.

Mr. Hardy Shore, of Glanworth, Ont., reports excellent results from his advertisement of Bronze turkeys in the "Farmer's Advocate." Of his original large stock he has yet a few choice birds left to part with—gobblers weighing from 22 to 26 pounds.

Three of Mr. T. F. B. Sotham's noted Hereford bulls, Improver, Thickflesh, and Checkmate, and the cow, Golden Lassie, have died of Texas fever, contracted at the Charleston Exposition, and we regret to learn that the owner himself is also in ill health. A number of the prizewinning Shorthorns at Charleston have also, we are informed, died since the show from the same disease, contracted there.

The semi-annual sale of Berkshire swine at Biltmore Farms, Biltmore, N. C., on February 4th, was quite successful, the 48 head sold averaging \$79.79 each. The highest price, \$210, was paid for the sow, Highclere Topper's Lady, by S. B. Wright, Santa Rosa, Cal. Seven other sows brought from \$100 to \$175 each. Five boars sold for \$50 each, which was the highest price for males.

The third annual International Conference of Sheep Breeders will be held on July 5th, 1902, in the Town Hall, Carlisle, at 5 p. m., on the opening day of the show of the Royal Agricultural Society of England. The Council would be very pleased to receive by an early mail any suggestions re subject or subjects for discussion. The address of the secretary, Mr. W. W. Chapman, will be 32 Fitzalan House, Arundel St., Strand, London, Eng., till July 4th next, and from that date to the 10th of July next it will be "Great Central Hotel, Carlisle."

D. C. Flatt & Son, Millgrove, Ont., write: "If not too late, we should like to add our compliments to those you have already received, upon your excellent Christmas number. We believe the 'Advocate' is worthy of a place in every home in Canada, and particularly in those who are interested in the advancement of agriculture. One issue is often worth more than double the price paid per annum for the same. Wishing you continued success, which is justly due you."

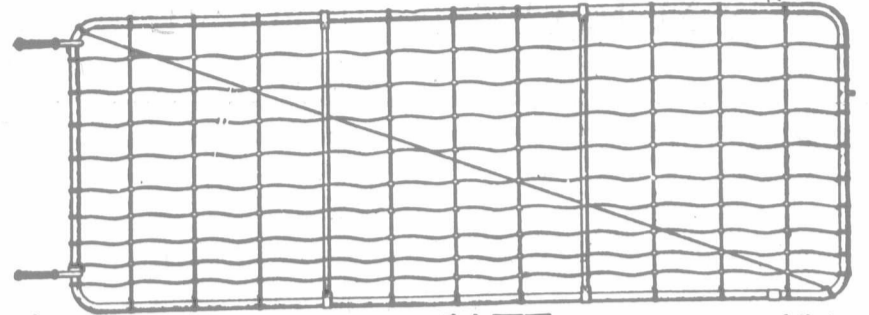
Mr. Wm. Willis, Newmarket, Ont., in ordering a change of advertisement, writes: "I have sold my Jersey bull, Count of Pineridge 56662, to Mr. F. L. Green, Greenwood, Ont. Mr. Green has secured a prize in this bull, who is a grandson of the champion cow, Adelaide of St. Lambert. I have two young bulls fit for service sired by Count, out of very fine young cows, which gave when fresh from 40 to 45 lbs. milk per day." Mr. Willis has also a half dozen good Cotswold ewes which he will sell cheap.

John Campbell, of Fairview Farm, Woodville, Ont., makes rather striking statements in his new advertisement, appearing in this issue on page 197. But, assuming that the facts endorse the claims made, intending purchasers of high-class Shropshires can make no mistake in securing their needed additions out of a flock that during the past twenty years has made and maintained a great reputation as a producer of winners in the keenest of competitions all over the continent; and what is of far more importance to the buyers is the great success which Fairview-bred Shropshires have had with customers, both in the show-rings and in their flocks. The owner reports that the stock carried over to fill orders placed early for August delivery, and orders yet to come, is doing right well, and the youngsters making their appearance daily of late are hale and hearty, with an average of a hundred and fifty per cent. increase.

An Easy Way to Make Money.

I have made \$560.00 in 80 days selling Dishwashers. I did my housework at the same time. I don't canvas. People come or send for the Dishwashers. I handle the Mound City Dishwasher. It is the best on the market. It is lovely to sell. It washes and dries the dishes perfectly in two minutes. Every lady who sees it wants one. I will devote all my future time to the business, and expect to clear \$4,000.00 this year. Any intelligent person can do as well as I have done. Write for particulars to the Mound City Dishwasher Co., St. Louis, Mo.

-om MRS. W. B.



THE FROST STEEL GATE is the strongest and lightest known. Good agents can handle a large number of them yearly. If we are not represented in your district, write us about the agency. One agent in each locality.

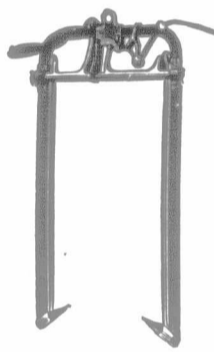
Write for Catalog. **THE FROST WIRE FENCE CO. LTD., WELLAND, ONT.**

Conversion to its daily use is the direct and immediate outcome of a 'Tea Pot' test

"SALADA"

Ceylon Teas, Black or Uncolored Green. Guaranteed to be All Pure Ceylon Tea.

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FOR ROUND IRON, WOOD, OR ANGLE STEEL TRACKS.

Have now become a standard of excellence with the farmers of Canada and the United States. At the World's Fair, Chicago, 1893, the only medal and diploma given on hay carriers, forks and slings was awarded to us on these implements. Following is a copy of the judges' award: AWARD.—"For open trip hook to receive the sling; automatic clutch, adjustable for size of load desired; ingenious design of stop-block, which enables perfect control of carriage; no springs required for locking car, which has motion in all directions; compact form of fork, which can be tripped in any position; the car is reversible and of double action; for novelty, ingenuity and usefulness, excellence of material and construction." Correspondence solicited. Manufactured by

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Many readers of the "Farmer's Advocate" will regret to learn of the death of Mr. Thomas A. Browne, postmaster of the City of London, Ontario, and who was for nearly 20 years secretary and manager of the Western Fair, to whose energy and business ability its success is largely due. Mr. Browne died suddenly of heart failure, on Feb. 20th, while playing at curling in one of the London rinks.

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DEALERS SELL THESE ON A "SPOT CASH" GUARANTEE. **INTERNATIONAL STOCK FOOD, INTERNATIONAL POULTRY FOOD, INTERNATIONAL WORM POWDER, INTERNATIONAL COMIC CURE, INTERNATIONAL HARNESS SOAP, INTERNATIONAL GALL CURE, INTERNATIONAL HEAVE CURE, SILVER PINE HEALING OIL, ETC.**

GOSSIP. Mr. Jas. A. Russell, Precious Corners, Ont., breeder of Yorkshire swine, writes: "The demand for choice boars and sows has been very large. We have shipped to almost all parts of Canada, and several good ones to United States to head herds, and the purchasers are well pleased with the stock. I have received many very flattering letters from people to whom I have shipped. I have always used the very best boars I can purchase, either imported in dam or bred direct from imported sires and dams. The sows offered in advertisement are a good lot, of choice breeding, and so are the boars, all lengthy, smooth, with good depth of quarters and ribs, and guaranteed as described."

MACMILLAN'S SALE OF CLYDESDALES. The advertised announcement of this sale of registered Clydesdales and pure-bred Shorthorns and other stock brought together a large crowd of farmers and breeders of pure-bred stock. The vendue was in charge of Dr. Fisher, V. S., who wielded the auctioneer's gavel efficiently. The prospects of a strong demand for work horses the coming spring did not seem to be inclined to "bull" prices at all, the buyers all getting their purchases at reasonable figures. The Shorthorns were a good average lot, a yearling bull bringing \$165. Several grade cows sold well, one going at \$53. Mr. Macmillan's success in the show-rooms no doubt helped the attendance, although for a time it looked as if people were afraid to bid for fear of the price being run up on them. There was no reserve, and things went off very smoothly. Several of the purchases were made with a view to starting Clydesdale studs, in which particular S. Benson, Neepawa; J. Jones, Elkhorn; Jno. Middleton, Webster, Cartwright; D. Black, Carroll; and T. D. Watson, Moose Jaw, were especially fortunate purchasers. The buyers, animals and prices obtained were as follows:

Mares and Fillies.

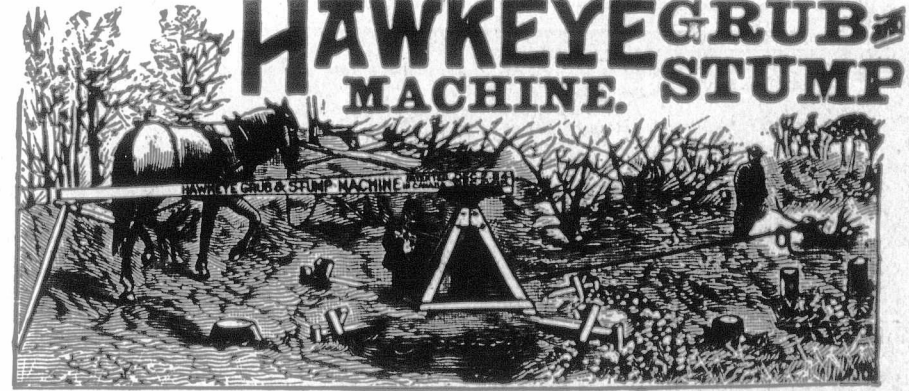
Princess Sonia (8548)—S. Benson, Neepawa	\$330
Jenny June (9051)—J. Jones, Elkhorn	345
Marguerite (8539)—S. Benson	275
Lillian Macgregor (8832)—Greenwood, Douglas	285
Queen Natalie (5669)—W. Chalmers, Hayfield	155
Mosette (8232)—J. Middleton	340
Natalie (851)—Jno. McQueen, Carievale	165
Carmen Sylva—T. D. Watson, Moose Jaw	350
Princess Hamline (8841)—C. Freeman, Elkhorn	300
Gracia (9269)—J. G. weightman, Westhall	275
Gretina (9284)—J. D. McGregor, Brandon	297
Lady Dee (9272)—T. D. Watson	295
Ella (7651)—Lon Thompson, Deloraine	210
Lady Jeffrey (9280)—Cameron, Oak Lake	200
Lady Lipton (9283)—Andrew Elder, Routhwaite	287
Carrie (7469)—L. Thompson	205
Princess Mackay (9286)—Jno. McQueen	185
Canna (9278)—D. Black, Carroll	180
Catrine—D. Black	350

Stallions.

Baron of Avenel (9796)—T. Perdue, Souris	375
Peter the Great (6799)—T. D. Watson	260

Among the lot was Baron of Avenel, the first-prize year-old at Brandon, 1901; Jenny June, a half-sister to the noted Pilgrim, champion at Winnipeg, 1900, and Queen Natalie, the mother of the Bradwardine syndicate horse, Montauk.

Average for 21 head	\$266 02
Average for 19 mares	260 78
Average for 2 stallions	317 50



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Works on either standing timber or stumps. Will pull an ordinary Grub in 15 minutes. Makes a clean sweep of Two Acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the Machine. Send postal card for Illustrated Catalogue, giving price, terms and testimonials. **MILNE MFG. CO., 886 8th St., Monmouth, Ill.** Address Milne Bros. for Shetland Pony Catalog.

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One Ounce is worth more than Two Ounces of impure soap. Ask for Octagon Bar.

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