



# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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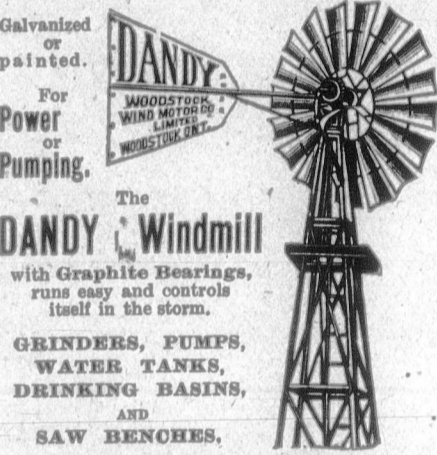
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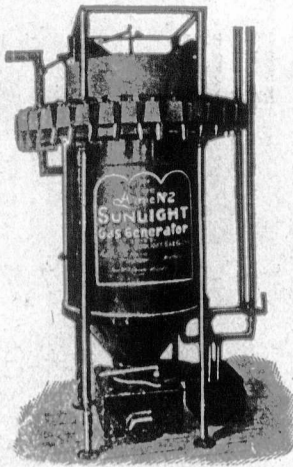
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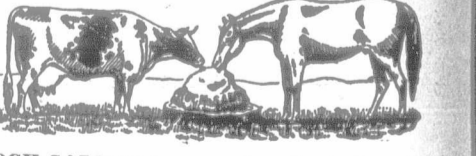
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VOL. XXXVI.

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 1, 1901.

No. 519

EDITORIAL.

**Queen Victoria.**

BORN MAY 24TH, 1819; ASCENDED THE THRONE  
JUNE 20TH, 1837; DIED JANUARY 22ND, 1901.



HE Queen is dead. The Queen is dead. So ran the mournful tidings, with an electric thrill, around the world. Never before in the history of this old earth did such a message awaken so universal a lament in human hearts. Alike in the palaces of wealth and in the humble homes of poverty throughout and beyond the bounds of the greatest empire the world has ever known, the people loved her for her goodness, her kindness, her righteous rule. How Canadians will ever cherish her personal attention to our wounded heroes returning from the South African war, and the people of Ireland her recent self sacrificing visit to the Emerald Isle! Poets, statesmen, literati, irrespective of nationality, have united their panegyrics to her womanly worth and sagacity and the beneficence of her reign, in which has flourished as never before the intelligence and liberty of the common people. But in all the splendid eulogiums of the press, the agriculturist cannot but reflect that one noteworthy aspect of the Victorian Era has not received attention commensurate with its far-reaching significance, and on behalf of the Canadian husbandman the FARMER'S ADVOCATE ventures a few words, however inadequate, in retrospect.

An adapter of Ben Johnson once wrote: "A farmer Queen the world to farming draws," and so it has been. Agriculture, at the coronation of Victoria, through Great Britain and the world was at a low ebb, but in no department of human effort did the 19th century close with more marked evidences of progress than this great industry, particularly in its main department of live-stock breeding. This we may now say without any suspicion of the toadyism with which Anglo-Saxons have been sometimes accused. The love of the Royal Family for the industry was somewhat hereditary. The late Prince Consort (Albert Gotha), though no genius, was a far-seeing, level-headed man, and liked nothing better than his farming operations, in which he was pre-eminently successful, and for which he infused his family with a genuine attachment. We find him an exhibitor at the Smithfield Show as far back as 1843, and probably not a year since passed that the Royal herds were unrepresented in public competitions. The Prince of Wales (born Nov. 9th, 1841)—King Edward VII., we must now call him—is still one of the most extensive and successful farmers and breeders in England, and his son, the Duke of York, is an enthusiastic farmer and breeder, and so with other members of the Royal Family. For over 40 years, the Queen's farms and dairy have been a favorite resort of the family and their visitors. The Princess of Wales has had her dairy at Sandringham, and with her, her daughters have taken great pleasure in dairy work, several of them being adepts as practical buttermakers.

The Royal farms are situated, first of all, at Osborne, on the Isle of Wight, where Clydesdale horses, Jersey and Galloway cattle, Southdown and Dorset Horned sheep have been successfully reared. But it was at the Windsor farms that all the leading breeds and the chief prizewinners have been found. These were: (1) the Home or Dairy

and the Shaw farm, (2) the Flemish farm, (3) the Norfolk farm, and (4) the Bagshot and Rapley farms. The Shaw farm was bought about 235 years ago, from a Frenchman, Mons. de Shaw (hence its name), and here the dairy cattle and great Shorthorn herds were kept. The Windsor Shorthorns acquired great fame at the Royal and Springfield shows, but a few years ago someone raised the cry that the Royal herds were sweeping all before them because William Tait, the manager, had a long purse with which to purchase prize-winners. So this led him to adopt the policy of exhibiting nothing but what was home-bred, but still the Royal cattle were good enough to sweep the boards. As a matter of fact, they simply asked a fair field and no favors, and so it has been all through. In the early days several good Bates cattle were purchased. Then Booth bulls were largely in use, but latterly the Cruickshank type held sway. The Flemish farm has been the home of the celebrated herds of Hereford and Devon cattle, furnishing many distinguished winners. The Queen was always partial to the land "North of the Tweed," and in 1847 the Prince Consort purchased the lease of the Balmoral Estate (some 10,000 acres), and at a later date secured the fee simple, to which was subsequently added the Braemar domains. Aberdeen-Angus cattle have been the chief pure-bred stock at these farms.

We doubt not but that the British Royal House will continue to sustain its active interest in agriculture and stock-rearing. His Majesty, the new king, has a large stud of Shire horses and Hackneys at Wolferton, Sandringham. He is a successful patron of the Thoroughbred horse, and his herd of Shorthorn cattle at the Norfolk farm, as we have seen, has a great reputation; while the Duke of York, with his Red Polled cattle and other stock, has been highly successful alike at summer and fat-stock shows.

In conclusion, we may fairly say, that just as Her Majesty in court and home life set the pace and the ideal for society and the people, so did the Royal Family, by their devotion to agriculture, give a bent to popular tendencies in that direction. Men of wealth, eminence and great intelligence turned their attention in these directions, thus giving an impetus to advancement which the inherent merit and true dignity of the avocation fully sustain everywhere throughout the English-speaking world. The advantages thus accruing to agriculture have been incalculable, and they have come without any patronizing spirit, on the one hand, or dependence, on the other, but rather through the inspiration of intelligent example in thorough accord with the best traditions of the progressive Anglo-Saxon race.

**Government Horse Breeding.**

The exploitation of a scheme for the establishment of a ranch and remount depot in the Canadian Northwest for the breeding and training of army horses for the service of the Empire has been discussed at considerable length in the daily papers by military men in the last few weeks. The proposition, briefly stated, is that a free grant of land in the Alberta district, sufficient to support 25,000 horses, be offered by the Dominion Government to the British Government for the purpose indicated, and that the two Governments co-operate to bring it about, provision being made for the payment of an adequate staff of officers and men, with the inevitable accompaniment of a pension on the event of superannuation. We have seen or heard no expression of opinion by farmers and stockmen in regard to the proposal to take out of their hands to this extent the market for a class of stock which

they are engaged in producing; but we shall be surprised if they regard it with approval or even with indifference. They have hardly yet forgotten the experience of less than ten years ago, when good horses were sold for less than half the cost of raising them, and we judge it will not be a welcome suggestion that just when prices have reached a figure where it pays to produce them the Government shall employ public money to compete with private enterprise in supplying horses for a purpose for which the animals raised by the farmers of this country have proven themselves superior, in quality and endurance, to any other in active service in the South African war. Visionary theorists can readily map out a scheme on paper which, from their standpoint, looks plausible, and farmers can well understand the penchant of the average military man for a soft place in times of peace; but when it comes to a question of successful breeding of horses or stock of any kind, experience has shown no very brilliant successes in Government establishments or enterprises along this line. The scheme adopted by the Dominion Government some years ago of hiring stallions at a high rental from the Haras National Company, of Montreal, and placing them at the various Experimental Farms, where their services were held at a nominal fee in order that the farmers might avail themselves of what was considered by the politicians a favorable opportunity of improving their stock, proved a miserable failure, the farmers knowing better what they needed than did Government officials, and, as a consequence, the stallions stood in their stalls till they were stocked and worn out with waiting for work, while enterprising men with their own means brought in the class of sires they knew were needed, with the result that high-class horses are now readily available in most districts. Even at the Government Experimental Farms, where high-priced imported animals have from time to time been placed, little that is complimentary can be said of the success scored in keeping up the standard of the stock; indeed, it is perhaps not going too far to say that the opinion prevails that in most instances there has been registered a gradual but sure decline in the quality and character of the stock placed in these establishments, so much so that it has become a question whether money is wisely spent in putting high-priced stock into them to any greater extent than is needed for the instruction of students in the study of breeds where there is a school in connection, but that the work of these institutions should rather be in the direction of experiments in feeding, in order to arrive at conclusions as to the cost of production and the relative value of different feed stuffs.

The science and art of breeding comes not from fine-spun theories, but is largely an intuition which comes to the man who lives with his stock, studying their nature and individual characteristics, watching and directing their feeding and development; and about the only successes in stock-breeding worth naming have been the result of intelligent and well-directed private enterprise.

The question of providing a supply of army horses is also being discussed in the English papers, and a letter on the subject recently appeared in the London Times from the pen of Sir Walter Gilbey, himself a successful breeder of horses and a prolific writer on the subject, in which he states very clearly that he is no advocate for Government supervision or control of horse-breeding in England. He says: "It is not, I think, desirable that the British Government should embark upon costly horse-breeding operations in emulation of foreign Powers. Private enterprise in England has succeeded in producing domestic animals of all kinds

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THE WILLIAM WELD COMPANY (LIMITED),  
LONDON, CANADA.

so far superior to those bred in other countries that the best of our English stock, whether horses, cattle, sheep, or swine, are purchased, at 'fancy prices,' to improve their kind in every civilized part of the world; and breeding industries would not benefit were the independence of the individual undermined by Government help which relieved him from the necessity to exercise his own energies and judgment."

While the present aspects and prospects of the business of breeding horses are favorable, and there is every encouragement to produce the best class of saddle and harness horses, it should not be forgotten that good judgment is required in the selection and mating, in order to breed the proper type to bring the best prices, and that, with the mixed classes of mares in this country, unless great care is exercised in this regard, we may look for a very large percentage of misfits, which must be sold at low figures: so that while men who have studied the needs of the market for the best class of light horses may, with a fair degree of success and profit, engage in producing that class, the rank and file of farmers will find themselves on safer ground by breeding and raising a good class of heavy drafters, for which there is always a fair demand at good paying prices. In this class there are fewer failures, and a slight unsoundness or blemish does not so heavily discount their value. These are needed in times of peace as well as of war, while the army horses bred this year will not be available for sale for five years to come, and there is no certainty what the demand may be at that time.

Mr. C. W. Peterson, Secretary of the Northwest Horse Breeders' Association, proposes that the Dominion Government for five or six years buy horses periodically, and when enough are collected at points in the Territories, have an Imperial remount officer select those up to the army standard, and the culls be sold in Toronto, Montreal or Ottawa.

### An Imperilled Industry.

The acute form assumed by the now thoroughly discredited tuberculin test required by Government regulations to be applied in the case of cattle imported for breeding purposes calls for heroic handling, and being fully persuaded that the stockmen have, in this connection, a genuine grievance, we have had no hesitation in declaring ourselves fully in sympathy with them in their fight for freedom from the galling yoke which has been forced upon them by a despotism which subjects them to unreasonable inconvenience and expense, seriously hampering their trade, and from every point of view doing vastly more harm than good.

If it is necessary as a protection to our cattle from disease to enforce this test, why should it not be required in the case of animals passing from one Province to another, and to be logical, why not apply it to cattle going from one county to another, or from one farm to another. There is no hypodermic campaign against the ordinary milk herds of the country—no city or town in Ontario, so far as we know, enforcing such regulations—and none are compelled to submit to the test but the enterprising importers, who invest large sums in the very best pure-bred animals they can find to improve the stock of the country, and who surely are not going to put their money into unhealthy animals.

The fact is that the people do not believe there is any more of this disease among cattle than there was thirty years ago. There are no evidences that it has increased. There is no healthier country for stock under the sun. It is a very rare thing to see an unhealthy-looking animal on the farm or in any of our herds of pure-bred stock, and, as a matter of fact, very few are lost from disease that has any similarity to tuberculosis. In fact, the attempt to fasten this test upon the stock interests of the country has diverted attention from all the reasonable sanitary precautions which should be pursued in order to the maintenance of sound health. As the English *Live Stock Journal* points out, it has not helped, but rather hindered, the reduction of bovine tuberculosis, because, but for the very high claims made by its advocates, there can be little doubt that long ere now a law would have been passed in that country for the compulsory slaughter of animals visibly diseased, with compensation to their owners, and by that means any really dangerous cases would have been got rid of. Instead of this, nothing has been done, and nothing effectually will be done until the test is given its proper place—that is, to be used at the option of anyone who believes in it and chooses to put in into operation.

Furthermore, we have ample evidence that it has done much harm to healthy animals, causing in some cases blood poisoning, impotence in male animals, and other derangements of the system from which they have not in all cases recovered, and, in many instances, when applied to pregnant cows, both young and old, has caused abortion, which is beyond question the most serious and alarming disease with which the stockmen of this country have to contend. The experiments of Maffucci, as early as 1879, indicated that sterilized cultures of the bacillus in the animal body exerted such a marked influence on the tissues that they induced emaciation, atrophy of the liver cells and of the cells in the different parts of the spleen, and that they set up certain changes in the circulation, the result of which was seen in marked congestion of the lungs, kidneys, spleen, etc. United States breeders want our cattle, and want them badly, but are hampered by the test, for which they have no respect, and have repeatedly declared that they would far rather have them without the test, which is liable to have an injurious influence on them.

That there may be grave doubts as to the fluid "lymph" called tuberculin prepared from cultures of the tubercle bacillus itself, one might gather from an official report of the Quarantine Department, in which breeders are advised to study the test and see that "reliable tuberculin only" is used; and it is further claimed that the product is sterilized, and by a new crushing process the living organisms of tuberculosis are eliminated (?) One need not be surprised, therefore, at the vagaries of the test, and men cannot be too cautious in taking the hazards of injecting this dubious substance into their animals, either in weak or strong doses.

While the contention that the test as an agency for the discovery of the existence of tubercles in cattle, when reliable and properly applied, may have been reasonably well sustained, yet, as applied in Great Britain and Canada, evidence accumulates

showing its unreliability. There is no middle way. It must be either reliable, or not reliable. As evidence of its unreliability, we have the statement of one of the most reliable of Canadian importers that of 12 animals tested for him by a British veterinarian, nine were declared to have reacted to such an extent that they could not be passed as free from tuberculosis. They were all sent back to the country, and in five weeks re-tested, when all of the nine formerly rejected were passed as free from any traces of the disease, while one of those passed at the first test was condemned.

Another equally honorable breeder and importer states that in a bunch of cattle tested, several showed the reaction, and yet in six months' time all the condemned ones passed, while one of two that passed the first test reacted under the second trial. According to experiments carried on at Dublin, Ireland, it both condemns the innocent and lets off the guilty, the extent of error amounting to 17½ per cent. Even the European expert, Nocard, will not say that reacting animals are always tuberculous. He carefully qualifies it by using the word "almost," and in another place states that "at least 90 per cent. of those that show no reaction are free from tuberculosis." Hence, the remaining 10 per cent. afford the opportunity of introducing the disease, despite this unreliable test, which is therefore of no real protection to the breeder. Surely this sort of thing is not to be palmed off upon the public under the guise of a scientific test!

The people are not now, and never have been, asking for the imposition of this alleged protection in the absence of direct proof that tuberculous contagion is carried or conveyed from animals to man, and in the face of the differences noted by bacteriologists existing between the bovine and the human tubercle bacilli. In a recent treatise on this subject, Prof. Marshall says: "The study of the tubercle bacilli in man and animals, comparatively, may lead to far-reaching results, and may also lead to an elucidation of many features of tuberculosis which are little or unsatisfactorily understood at the present time."

The fear that contagion to the human being might develop by being conveyed through milk from a tuberculous udder has excited attention in England and elsewhere. Recently, the Medical Office of Health of Manchester has had all the cows from which milk was sent to Manchester examined critically for tuberculosis. Professor Delpierre, with T. S. Lloyd, M. R. C. V. S., made a most careful examination and have submitted their report. In the city itself, amongst Manchester cow sheds, of 603 animals reacting and examined, 12 were found with diseased udders, and of these 12 only one was found to be tuberculous. Of those outside the city boundaries, 555 were examined, and of 39 udders, only two were tuberculous. The final examination included 2,000 cows on 108 farms, the milk from which came by railway. Of the large number tested, only 12 were found tuberculous in the udder. The significance of these figures is great. One may accept all that has been said about reacting dairy cows and see with it all how small a ground there is for any danger to the health of the general public from the milk supply. Three thousand two hundred and eighteen cows, carefully examined by experts, gave 15 cows whose milk, if used alone, would be suspicious. The report has given great satisfaction to the general public in England.

The number of deaths from human tuberculosis, or consumption, as it is called, is deplorably large in Canada, and yet it is lamentable the indifference of the public, and even medical men, to the precautions that should be taken to prevent the spread of the disease from one person to another, or to induce the observance of those reasonable precautions that will fortify the system against it. Only lately has the idea of consumption hospitals or sanitariums received any proper degree of attention. Scientific men brand the disease as contagious, and yet, while other ailments that claim not one quarter as many victims are scheduled and the houses placarded, no ban is placed upon the great "white plague." What physician raises a voice in protest while one member of the family contracts it from the breath or sputa of another? Said a leading physician and medical health officer to the writer: "We dare not: there would be a howl of indignation if we attempted to placard consumption. The law does not warrant us in so doing." And while this negligence little short of criminal goes on, the inoffensive cow is made the scapegoat, and, by means of an unreliable and injurious test, the great live-stock industry of the

country, just now emerging into an era of expected prosperity, stands in jeopardy of being driven to the wall. We speak advisedly when we say the situation is extremely grave, and if the Government is well advised they will avert the danger brought about through drifting into an untenable position, and one which, while serving no good purpose, either to human beings or animals, has already wrought very great damage.

This is not the occasion for regrets or recriminations, nor technicalities regarding official consistency, but, as Hon. John Dryden elsewhere clearly and forcibly points out, the time for decisive action has come for doing now what is right and just, and the sooner steps are taken by

experience with the disease, that the test is no criterion whatever of the seriousness of the disease or otherwise, even if any be indicated.

Another objection to the test is that, in the purchase and sale of animals, it is necessary to apply it under all kinds of circumstances—when the animals are naturally unfitted to receive the test, and at such times as no experienced and skillful veterinary surgeon would desire to apply it. It can be of service only when employed properly by a competent man, and when the cattle are tested at appropriate seasons. Much harm is reported from various quarters to pregnant cows and also to young bulls. A valuable yearling bull sold by me last summer was impotent for some four months after, but is now all right. At the same time a yearling heifer was sold in calf, and a short time after aborted.

Under all the circumstances, therefore, my mind is clear that the test, as applied, affords no real protection whatever, and is a considerable source of embarrassment and annoyance to those who are seeking to build up the cattle interests of this country.

None of us can quite understand why those who are investing large sums of money in superior cattle should be thus hindered and tormented, while those who deal in comparatively worthless or inferior animals are not molested in any particular.

I have no hesitation in saying that it is the duty of the Dominion Government to at once cancel the regulation requiring this test on imported animals. The Canadian Government was the first to institute it, and for years after the arrangement had

been made with the United States Government for the imposition of the same test on cattle coming into that country the regulation was not enforced against cattle from Great Britain, as was the case in Canada. As our Government was the first to institute it and to request a conference with the United States authorities leading to a similar regulation in that country, I am strongly of the opinion that they ought to be the first to acknowledge the utter futility of the test as at present being applied in both countries. If such a course were taken, I have no doubt that it would serve as a strong incentive towards a similar course being adopted in the United States. Recent issues of English periodicals show that the same state of feeling and objection to the test exists in that country as elsewhere.

JOHN DRYDEN.

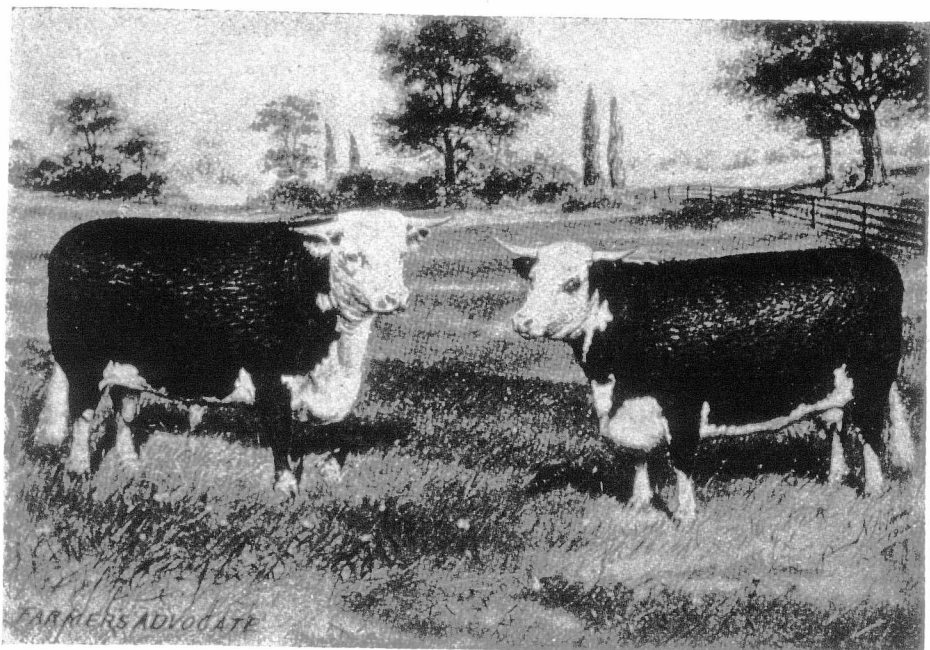
**Shall Tuberculin Hinder Live Stock Improvement?**

To the Editor FARMER'S ADVOCATE:

SIR,—It is not necessary to discuss the question

whether the imposition of the test does or does not hinder live-stock improvement, because, owing to the fact that such a test imposed on importers produces in them a fear of consequences, which may mean financial hurt, is evidence enough that the continuance of the test for imported stock will undoubtedly hinder live-stock progress, such progress being dependent to a large degree on the influx of fresh blood from Great Britain. The agitation for and against the test has no doubt forced otherwise reasonable people to go to extremes in their statements, and from which they cannot be entirely excused. The stockman has undoubtedly a grievance, whether he exaggerates or not in stating his grievance. If it is necessary and advisable to test imported cattle, why is it not just as necessary to test with mallein all horses used for breeding purposes imported from other countries? Such a procedure would be far more reasonable, because glanders is undoubtedly capable of being transmitted from horse to man; in fact, more logic would be shown in enforcing a test with mallein, because glanders in man is practically only got from diseased (glandered) horses or mules. The motion of Arthur Johnston and Alex. Smith, at the Guelph meeting, is eminently fair and correct in its statements. Among other things, they draw attention to the fallibility of the tuberculin test.

In this connection, readers of the live-stock papers will doubtless have noticed the results of investigations by the Royal Agricultural Society of England—not a body of extremists, by any means. The results obtained by them are as follows: In a test of 34 head, 18 failed to react, three (3) of which were tuberculous, an error of 16.4 per cent.; of the 16 reacting, 3 were found not to be tuberculous, an error of 18.7 per cent., a total error of 17.64 per cent. A cow can now be seen at the dairy barn of the Wisconsin Experiment Station, twice tested and twice said to react, by the student bacteriologists conducting the test. Three subsequent tests, by the animal husbandry staff, at intervals of six months or more, showed her to be a non-reactor, and tests of her neighbors show that they also are free. Marshall (Michigan), writing of the management of tuberculosis, says: "When we consider the generality of tuberculosis, testing of imported animals seems to be of questionable utility! The wisdom is only seen in the rare possibility of some imported tuberculous animal getting into a herd free from tuberculosis, and this we maintain is something which each individual stockman should be held responsible for. I wish to repeat right here, however, that repeated tests may show an animal to be all right!"—an instance of which is mentioned above, in the W. E. S. herd, and which Dr. Marshall says he has shown in previous statistics. Many cases when slaughtered show the intestinal lymphatic nodes only to be affected, the animal often being in good flesh, etc., the chances of infection from such cases being at the time practically nil. As to veterinary authorities, we cite the most recent, and the text-book used as an authority in the veterinary colleges of Canada, United States, Great Britain, France and Germany, namely, the work of Freidberger and Frohner. They state that the making of a positive diagnosis during life (*intra vitam*) is impossible, and that slaughter of all cattle affected would demand very extraordinary sacrifices. The same authorities also state that they venture to doubt the wisdom of veterinary police regulations, of which the enforced use of the tuberculin test is one form, against tuberculosis. As to the infection of man from animals, five such cases are reported, cited by Scherming; of Copenhagen; Pfeiffer (Weimac), Law, Rich and Ravenel (Phila.), all such being the result of wound infections got at post-mortems. As a result, one might lean to the opinion that the bovine germ would cause the disease in the human being. Let us, however, review the statistics: Tuberculosis in all its forms in England and Wales has decreased 39.1 per cent. in thirty-five years. At the same time, intestinal tuberculosis in children under one year has been said to have increased 27 per cent., due, as some would have us believe, to the use of milk from tuberculous cows. Autopsy statistics with regard to the above show those lesions (intestinal) to be secondary, the primary lesions being in the lungs, thus weakening the case against milk. With regard to the danger from milk and udders, let us consult the report of the medical officer of Manchester, Eng. Six hundred and three (603) city cows were examined, only twelve udders being affected, and only one (1) of which was tuberculous. Of the other five hundred and fifty-five (555) cows examined outside the city, only thirty-nine (39) udders were affected, two (2) only being tuberculous, and eight were indurated. Going further, seven hundred and twenty-nine cows, on twenty-nine farms, were examined. Thirty-three (33) showed udder affections, three



DALE AND DOLLY 5TH.

Champion Herefords at the International Live Stock Show, Chicago, December, 1900.

the Minister of Agriculture to relieve the tension, in so far as he has authority, the sooner may we hope for reciprocal action on the part of the United States Government and a removal of the barriers to business which are at present exasperating the stock breeders of both countries.

**STOCK.**

**Hon. John Dryden on the Tuberculin Test.**

To the Editor FARMER'S ADVOCATE:

In answer to your request for a statement of my views on the question of the desirability or otherwise of the continuance of the tuberculin test on imported cattle, I have to say that my opinions are so decided and clear to my own mind that I have no objection to give them to you for publication over my own signature, if it is thought desirable.

It is my opinion that a mistake was made when, by order of the Department of Agriculture, this test was first instituted many years ago. Whoever was responsible for its conception no doubt had before his mind the possibility, by the employment of the test and the butcher's knife supplemented by a grant from the Government of several thousand dollars, of ridding the country entirely of bovine tuberculosis. This being accomplished, the testing of cattle coming into the country would, in his opinion, prevent its introduction.

Since that time no attempt has ever been made to entirely destroy the diseased cattle at present existing in the country, and I assume none ever can be made. Such a scheme would provoke a rebellion among those whose interests would be affected, and, in addition, it would be undertaking an impossibility.

This being the case, the application of the test to imported cattle is of no real service. There is no more reason why animals purchased in countries outside of our own territory should be tested than those that are purchased within our own borders. No man can satisfactorily tell me why I am permitted to buy an animal, say in Manitoba, without notice or hindrance, and yet am not allowed to buy a similar animal in Scotland without the interference of governmental authority, as I am as likely to buy disease in one country as the other.

It is now admitted and is perfectly clear that the test as ordinarily applied is not authentic. Even the best authorities in Europe will not say that it is always reliable. It may frequently prevent the purchase and reception of a very valuable animal which would undoubtedly live to old age without the possibility of communicating the disease to any other member of the herd, while at the same time it permits an animal to pass unnoticed which may be diseased in such organs as would make it possible for the disease to be communicated.

It is also admitted by those who have had some



LINCOLN YEARLING WETHERS.

Winners of first prize and silver cup as best pen of Longwools at the Smithfield Club Show, 1900.

only of which were tuberculous. The final examination had to do with the milk of 2,000 cows, out of which only twelve cows were shown to have udders affected with tubercular trouble and capable of conveying the disease. On twelve farms visited, only five cows were found with tuberculous udders. Freidberger and Frohner state that in post-mortems many cases are termed tuberculous when they are not, and they also state that a positive diagnosis cannot be made, unless backed up by a microscopical examination. Yet, how many cases post-mortemed ever reach the stage of a microscope? The list of diseases apt to be mistaken for tuberculosis need not be recapitulated here. Some time ago, in company with a bacteriologist, the

writer injected tuberculous material from a tuberculous subject into the udders of two cows, and, after allowing some time to elapse, the milk being examined at intervals, no effects were shown either in the milk or the udders. It will be remembered that the udder is said to be an ideal spot in which to grow germs. In the 16th and 17th annual reports of the Wisconsin Station, Farrington and Russell state that pasteurization practically limits the probable or possible danger as far as milk is concerned, and when we consider the danger from meat we find it classed as practically nil! Repp, in the *Phila. Med. Journal*, Aug., 1900, states that the transmissibility of tuberculosis to man by means of meat is only presumptive, and, if such was the case, an efficient system of meat inspection would practically eliminate the danger! We have shown the liability to error in the tuberculin test, and the comparative freedom from tuberculosis of cows' udders; also, that tuberculosis is decreasing in the human family, and that efficient pasteurization and meat inspection render any probable danger to man from animal products from this disease practically nil! We are forced to deprecate the attitude of several newly-fledged veterinarians, in which they advocate slaughter based on the tuberculin test, men whom we know to have had practically no experience with the disease. It is well to again draw attention to the fact that owing to the reliance placed on a test proved to be fallible that proper precautions with regard to hygienic rules, etc., have been neglected (Christmas number *ADVOCATE*, quoting *London Live Stock Journal*), as have rational methods of handling the disease! Again, we must draw attention to the contagiousness of tuberculosis as between man and man, and it is the acme of folly to overlook that fact and endeavor to fasten the major responsibility on the domestic animals. If the same zeal was only shown in the education of man *re* tuberculosis, how soon should we note even greater changes? To debate further the chances of error in the tuberculin test would be futile, as we know positively that such may occur, such chances increasing, of course, when the test happens to be in the hands of incompetents! Many influences tend to impair its absolute reliability; by so stating we do not claim that it is valueless, but do state and affirm that it is not infallible, consequently the test should not be used as a part of the Governmental machine. Let each individual use it or not, as he pleases; and let us endeavor to promote a system of education and investigation so that more exact knowledge may be available. Considering the various phases of the question, we are *unhesitatingly* one with the stockmen in asking for the abolition of the tuberculin test as a part of a quarantine system.

VETERINARIAN.

### Tuberculin Testing.

To the Editor *FARMER'S ADVOCATE*:

As I have had a little experience in having cattle tested with tuberculin, kindly allow me to lay that experience before your readers. About two years ago I had nine cattle tested for exportation to the U. S. A. Amongst the number was a cow and calf, said calf five days old when tested. As the creature, I might say, was just beginning to live, its temperature fluctuated very much, but after injection was a little lower than before. The first day after injection it did not take over one quart of milk, the second day it did not take any, the third day a little. After this it gradually improved, but was not in normal health until about the tenth day. I verily feared at one time that the vet. had done it to death. The cow was very little better. All through the test her temperature varied over a degree and three-quarters, but, like the calf, a little lower after than before injection. For over a week her milk-yield fell off more than one-half, and after the fourth day the showing evidenced signs of blood poisoning. The others being heifers, and being in a normal state of health, passed the ordeal without the least sign of sickness. But what a barbarous and, I might say, disgusting thing to compel a freshly-born calf and a cow that has just undergone the ordeal of parturition to submit to such an unnecessary infliction. I had five that underwent the test last summer. The whole five were evidently sick for nearly two weeks, although not so bad as the cow and calf. I attribute the sickness in this case to the tuberculin being *not properly prepared and poisoning* the system. But not one of them reacted. Two of them were four months gone in calf, but it had no injurious effect on them in this respect, for they both produced healthy calves. But any treatment that would make pregnant cows as sick as they were would, to say the least, have a tendency to make them abort. As to the reliability of the test, we are surrounded with evidence on every hand that not the least dependence can be placed in it. While in Britain last summer I was told of a breeder who sold two cows for export which failed to pass the test. This was in the summer of 1899. Last summer they were again sold for export. When tested neither of them reacted in the least. Being sold to an American, they were again tested in the quarantine station at Point Levis, when they both reacted. Now, what credence can be placed in a test that will say that a cow is tuberculous, will again say that she is not tuberculous, and not satisfied with this, will stultify itself by again saying she is tuberculous? Another case I call to mind of two cows that had to undergo the test. While the vet. was testing these, the

owner, for his own edification, took the temperature of one that was not undergoing the test. Her temperature was normal the first day, but on the second day she had reacted nearly two degrees, while those that had undergone injection did not react in the least. Is it not a wonder that such a blooming farce as this should have lived into the 20th century? As to the disease being propagated by this test, I doubt it, because there is nothing in it. If there was, by using lymph that was *not thoroughly sterilized*, it undoubtedly would. No doubt lots of other poisonous substances, which if injected into the system when it is in a vitiated or humorous condition, would produce like results. I very much admire the stand taken by the *ADVOCATE* in trying to remove this incubus from the shoulders of the farmers and breeders of our Dominion.

Middlesex Co., Ont. STEPHEN NICHOLSON.

### Winter Management of Brood Mares and Weanling Colts.

Experience teaches, and is, in most cases, the only school in which a man learns—so, whatever I write on the above subjects, your readers may put down as coming from an everyday, practical man, who has had years of experience in this line and feels better able to manage a stud of brood mares and colts than to write and tell others how it should be done. But if I can, through my experience, warn others how to avoid disappointment and failure, then my object will have been attained. When the brood mare is taken up from pasture in the fall and put into winter quarters, it is well to see that she is comfortably "housed," or, at any rate, thoroughly protected from the inclemency of the weather. Wherever possible, she should have a roomy box stall in which she can take exercise on those days when the weather is too bad for her to go out, for there is nothing more conducive to abortion than allowing a mare to stay out hour after hour, humping up her back, in bad, stormy weather, and particularly during a rain or sleet storm or in a rapidly-falling temperature. It is quite a good idea not to run too many mares together when out, and only those accustomed to each other, and it is absolutely necessary they should have daily exercise in the warmest part of the day. If in a grass field, so much the better, as a "nip" of green, even if the snow has to be "pawed" away to be got at, is quite beneficial and much relished, otherwise a little well-cured corn fodder or clover hay strewn on the ground will keep them busy for an hour or two daily and enable them to get all the exercise requisite. It is not unusual for persons raising only one or two colts annually to work their brood mares to some extent. If care and judgment be used there is no reason why light work should not be a benefit to them; but beware of "backing" your pregnant mares, especially in muddy places. This is another frequent cause of abortion. It is not desirable to keep "in-foal" mares too fat, still it should always be borne in mind that the mare must be fed enough not only for her own sustenance, but for the proper nourishment of the "fetus," so that when the proper time comes a good strong, healthy foal is the result. If, in addition to what is given outside when in pasture, brood mares are given a good feed morning and night, or, say, two quarts each of ground oats, bran and cut hay, with the usual allowance of loose hay, they will probably keep in excellent breeding condition. Where this ration is not practicable, a liberal feed of cut corn fodder made damp and mixed with a couple of quarts of ground oats and a little bran will answer in its place. In any case, brood mares need plenty of "roughness," and this must be free from must or mold. They should have access to water at least twice a day. It is by far the best plan to have your colts come at "grass." They are far less trouble and liable to "do" better than if "dropped" in the stable, where there is danger of constipation, joint ill and other troubles. To obviate the former, many people make a point of administering an ounce of castor oil to the newly-born foal as soon as he is able to stand up. This plan is to be thoroughly recommended, and nothing but good can result, and many a future prize-winner's life has been saved by this common-sense practice right on the start.

Weanlings should never be allowed to lose flesh on leaving their dams, and in order to be ahead on this point, it is a good practice to teach the colt to eat a little ground oats and bran before weaning, having it so placed that the mothers can't get at it. In this manner they get accustomed to eat grain and sooner get over the loss of their dams. They should have daily exercise in a yard or paddock free from icy places where they can fall and injure themselves when playing around. They should have warm, roomy box stalls, where practicable, and not more than two or three colts together. On cold or wet days they are better kept inside—if left out too long on such days they are apt to get a touch of colic, often accompanied with chills, which if not taken in time may result fatally. A good ration for youngsters is ground oats and bran in the morning, a ration of carrots at noon, scalded feed at night, with a little oil meal in it. Nice sweet hay night and morning.

Particular attention should be given to trimming the colt's feet regularly, say every month, letting the heels well down so the frog can touch the ground, and taking off the toes as the foot remains good and round and neither too long nor

too short, thereby avoiding stilty joints, "cocked" ankles, and the like, which are much easier gotten than got rid of. At this period all colts should be halter-broken and become accustomed to be tied in the stall. This will save much trouble afterwards and is never so easily done. Feed regularly and liberally, give daily exercise and keep feet trimmed, and you have laid the best kind of foundation on which to build up good sound horses.

JOHN WYLLIE.  
Maplewood Hackney Stud, N. Y.

### Breaking Horses.

Sir Walter Gilbey, in a letter to the *London Live Stock Journal*, on the subject of handling young horses, writes:

There is but little doubt that the chief cause of there being so many badly-broken horses is the lack of knowledge on the part of horse-breakers themselves.

It is most important to state that the essentials of a good horse-breaker are intelligence, patient endurance, and complete control of temper. Xenophon, more than two thousand years ago, says, "Never approach the horse in a passion"; and the Duke of Newcastle, in the year 1657, reports: "I have seen very few passionate horsemen get the better of a horse by their anger. On the contrary, I have seen the horse always get the best of them." First of all, then, teach your scholar what he should do, repeating it often to him in a mild manner.

This excellent advice is worth remembering when commencing to instruct the unbroken colt, assuming him to be at that age—four or five years old—when he is coming into useful work. Before, however, he arrives at this age he should have been handled and taught to be led, and the best time to commence such lessons is when he is taken and weaned from his dam. All foals should be taught to lead at this period of their life. It only requires about fifteen minutes with each foal for five or six days to train them to be as tractable as you may desire, and such tuition is never forgotten.

### Bacon Hogs.

A DIFFERENCE OF OPINION.

To the Editor *FARMER'S ADVOCATE*:

SIR,—I read with interest what was said in Jan. 1st issue in reference to the bacon hogs and dressed carcasses at the Guelph show, and I cannot let this opportunity pass without congratulating you on your very excellent and impartial report of the show. Your remarks on the bacon classes convince me that you are on the right track and are not afraid to speak out, even though your report does not agree with the reports of so-called bacon experts. I, as one that noted the general excellence of the best carcasses of the different breeds at London in 1899, as well as at Guelph, 1900, beg leave to give my opinion as well as to make a friendly criticism of Prof. Reynolds' article on the block tests. He says there was considerable improvement made by those breeds that are capable of improving along the bacon type. I would like for him to tell us what breeds those are? I will admit there were not as many thick ones killed this year as last, but I do not think the best were much, if any, ahead of the best of last year, excepting in two classes, namely, Chester Whites and grades. He says the American breeds are not improving in quality. Now, I have nothing to say about any of the so-called American breeds except the Chester Whites. This breed I claim is improving along the bacon type, and I believe they showed greater improvement this year than any class in the carcass test excepting the grades, and I think any person that has examined the carcasses at the different Fat Stock Shows, and done so without prejudice, will agree with me. No prizes were awarded to them, however, as the judges claimed they were unsuitable. Does it look as though the judges understood their business, when four out of the six Chesters graded No. 1 at the packing house (a better showing than some of the bacon breeds made)? He says that the grading at the packing house was based on the commercial standard. I would like to ask how many standards they want the hog-producer to live up to. I thought that was the standard that the packers were trying to teach us by their decisions at Guelph (and at our expense, too). The packers may think they are working in their own interests when they refuse to award prizes to certain breeds, whether they are worthy or not, but my opinion is that bacon will go still higher in price if they are determined to drive the Chester White out of existence, because hog-feeders pretty nearly know where the profits are if they produce bacon from just such breeds and crosses as some of the packers advise. I do not claim that the Chester White is an ideal bacon hog, yet I claim that good individuals of the breed are equal to any for crossing on other large breeds, if the aim is to produce bacon at a profit. I believe the facts are that some packers are so wedded to Yorkshires that if they get a good bunch of Chester grades, which are generally pure white, they give the Yorkshire all the credit. I do not mention the Yorkshire to seek to discredit them, but simply because these two are the only white breeds in the ring.

Middlesex Co., Ont.

R. H. HARDING.

### The Relation of the Shorthorn Breeders of Canada to Those of the United States.

[A paper by W. D. Flatt, prepared for the annual meeting of the Central Shorthorn Breeders' Association, at Kansas City, Mo., January 29th.]

I am only a young member of the fraternity of Shorthorn breeders, but during the few years in which I have been engaged in the cattle-breeding industry I have met Shorthorn breeders from almost every country in the world. I find them generous and open-hearted almost without exception. I find that wherever they live they are working along the same lines—that they are planning similar conquests and reaching forward to similar results. I find also that in every country they recognize their dependence upon those beyond the borders of their own clime. They seem to be in agreement as to the need of some interchange of blood, and that therefore it is not best that an individual breeder or group of breeders in any particular locality should undertake to live entirely unto themselves.

There seems to be a general consensus of opinion that Shorthorns for these modern days must be bred not merely to be looked at and to give pleasure to the man of means, who may care nothing for their usefulness, but that they must possess real merit, and that they must be bred with the thought of pleasing the consumer, who is the final judge of the quality of the product.

Breeders from the United States and Canada have been from the very commencement of Shorthorn breeding on this continent on the most intimate terms. In the early days, many of the herds in Canada were started from importations from the United States, and an interchange was as common between Canada and the United States as between one county and another. In later years the trend has been to secure foundation blood from Scotland, and many of our herds of recent date have been founded upon animals bought in that country. Breeders in the United States have not been slow during the past twenty years to take advantage of their opportunity to purchase additions to their herds in Canada. The result is that breeders living in the two countries are as familiar with each other as those who live nearer at hand, and sometimes more so; so that so far as Shorthorn breeding is concerned, we are practically one people; and now, as the twentieth century commences, in which the battle of the beef breeds will wage fiercer every year, it seems clear that the best work can only be done by the union of Shorthorn breeders of every country, regardless of boundary lines, in self-defence, and in order to be helpers of each other, with the view of furnishing the greatest possible number of superior animals.

We have an example of the efforts of the proprietors of some other breeds of cattle in organization. The Shorthorn breeders ought now to follow that example. The influence of the breed may be enlarged and increased in power by a combination of interests and organized effort.

We believe that Shorthorns, as improvers of the common stock of either country, have no equal. While we say that, we have no word of disparagement to offer in connection with any other of the beef breeds, but we believe that crossing with Shorthorns produces better quality and better results than can be obtained in any other direction.

While this is true, it must be remembered that the value of the breed for beef-producing purposes will be judged by the average quality of that which is seen generally throughout the country. This we think is rising rapidly year by year. Nor must it be forgotten that from the very beginning of the work of our most noted breeders, Shorthorns have been famous for their milk-producing qualities. The result is that as a general purpose animal for the ordinary farmer they have no equal.

This continent has now received some of the best blood that can be found in Great Britain. If the herds established upon this blood be utilized to the best advantage, there seems no reason why in the near future some of our choicest animals should not go back to the land from whence they originated to strengthen the herds existing there. This has been done within the last fifty years, and it would appear that Shorthorn breeders were never in a better position than now to work out a similar problem. But if these possibilities are within our reach, they will be accomplished only by combining our forces and working harmoniously toward the same goal.

Again, may I say that the relations between the United States and Canada should be harmonious and cordial, because on both sides we are met with common difficulties. At the present time, through the influence and power of a few prominent veterinarians, the business of Shorthorn breeding is endangered by the use of the tuberculin test on animals transferred from one country to the other. If something cannot be done to relieve the inconvenience now caused (which will probably spread still further, resulting in restriction still nearer each individual), many of our best men will undoubtedly quit the business. This would be an unfortunate circumstance, as it is manifest that in order to do the best work in Shorthorn breeding, two things must be combined, capital and skill. There are those who would make skillful and famous breeders who are handicapped because they have not the capital to buy where and when they see it is to their best interest to do so. Men of capital, therefore, will not consent to put their

money into a business where they cannot have greater freedom than is now accorded in this respect.

I believe that breeders on both sides of the line are unanimous in their opinion that this test, as at present applied, is of no service whatever, and that it has not given security or protection to any of us. The present regulations were brought into effect by a conference of the Governments of the United States and Canada. It appears to me that, if my contention is right, it ought to be removed by the same authorities, operating at the same time in both countries. In this matter the relation of the breeders ought to be one of perfect harmony and unity. Immediately after the resolution was passed at the Shorthorn Breeders' meeting in Chicago relative to this question, a meeting of the Cattle Breeders' Association of Canada was called and a similar resolution was passed by that body with perfect unanimity. At the present time, almost every breeder who has had any experience is complaining of injuries which have been the result of the test when applied. I am of opinion that reliable tuberculin, when applied with care, may be injected without injury; but, unfortunately, when cattle are sold at all stages of pregnancy and under all conditions, and require to be tested at the moment, these evil results are most likely to occur; and inasmuch as cattle must be tested at the time, whether they are in the midst of nervous excitement or otherwise, the probability of a reaction is much increased.

Of recent years I have had much experience with this test, and have come to the conclusion that, administered as it is, it is almost certain in many cases to bring about serious results. I have known cows to receive an injection of tuberculin in the morning and abort their calves the next day. A neighbor of mine had five cows tested, and three of them aborted the following day. I find that others have had a similar experience, and will no doubt add their testimony. The experience of several of our breeders with whom I have conversed on this subject leads me to the conclusion that many young bulls have become impotent for many months on account of the test.

All this wanton destruction of some of the most valuable animals is caused by this test without an ounce of profit or protection to anybody interested, except it may be the veterinary surgeon who performs the operation. The test is confessedly not absolutely reliable, and therefore ought not to be imposed on one of the most important branches of agriculture in either country.

This, then, I conceive to be an important question, demanding the united action of the Shorthorn breeders of both countries. In Canada, a strong demand is being made for a change by the cattlemen, headed by that friend of the Canadian farmer, Hon. John Dryden. We believe we shall succeed, and I do not think I am going too far when I say that we have assurances that no objection will come from the Canadian Government if a mutual understanding is arrived at to remove this test altogether.

Another question presents itself to which unity of action will be needed: The American and Canadian standards are similar, and both now are higher than that now obtaining in England. It would be a boon to Shorthorn breeders if the standard could be made the same in Great Britain as it is on this continent. If this matter is to be dealt with at all, it can only be dealt with successfully by the united action of both these Associations. I would suggest that negotiations should be opened up by a committee appointed from both Associations that could present the matter from our point of view, and would have power, after negotiating, to make such recommendations as might in their judgment be necessary.

There is still one other matter that should receive attention: The same standard of registration exists in Canada and the United States, but where animals are sold in either country to be transported to the other, the customs authorities demand the registration certificates of the country to which the animal is being sent. These animals will undoubtedly be registered in the country to which they are going, but it is often extremely inconvenient and causes unnecessary annoyance to be obliged to wait until the pedigrees are forwarded for registration before the animals can be shipped. These are matters which demand the most intimate and fraternal relations between those living in Canada and the United States.

We are now started on the 20th century, and many of us are wondering as we look back over the past and see the great advances that have been made, what the 20th century will reveal as to progress in the various lines of human industry. We who are gathered here to-day are more deeply interested in asking the question, What progress will be made in the breeding of Shorthorns—what forward steps will be made in that direction? Men of wealth and keen perception are now engaged in this industry in both countries. It is fair, therefore, to expect that with the added knowledge which has come to us in recent years, much improvement will be made. Let us all, therefore, having this object in view, not seek to separate ourselves into State or Provincial groups—which are certain to be antagonistic to each other in some degree—but let us in all parts of this continent continue to fraternize with each other as we have always done in the past. Let us take advantage of our splendid soil and climate, and by a wise interchange of animals put American Shorthorns to the front in the World's market.

### More of the Strange Doings at the Fat Stock Show.

To the Editor FARMER'S ADVOCATE:

"Simplon Simon's" froth remind me of the Englishman's trite saying, "Tis cheap and nasty." I scorn replying to such contemptible jargon. Let the wretched, illegitimate thing die a natural death, as the misguided parent is evidently ashamed to publicly own it and come for it. Turning to Mr. A. W. Smith's explanation, I will ask him if the sheep he refers to was not as fully entered and as eligible for the block test as any one of the five the owner, Mr. Wright, had slaughtered. If Mr. Smith can show from rules and catalogue that he was barred, then he has scored a point. If he cannot, I will hold that he is attempting to screen that which I am exposing. For Mr. Smith's information, and others interested, I make the following statements to still further reveal the game played, and challenge successful contradiction:

1st. Mr. Richard Gibson was the judge's director, instructor and bookkeeper in the ring when class 28 was judged.

2nd. It was at Mr. R. Gibson's special request that Mr. J. G. Hanmer was appointed fourth judge for that class.

3rd. The order of judging, as given in prize list, was changed. Sec. 4 was called out before Sec. 3. That was one move in the game.

4th. In Sec. 4, wether under one year, Mr. J. T. Gibson won 1st, J. Campbell 2nd, W. E. Wright 3rd, J. Campbell 4th, L. Parkinson 5th, and Richard Gibson nowhere.

5th. In judging Sec. 3, three wethers under one year, next, which should have been done previously, Mr. Hanmer was so determined to have Mr. R. Gibson's pen first that a referee had to make the award.

Did Mr. Hanmer think the first-prize lamb in the former competition was in the pen of three for which he labored so hard, or DID HE KNOW, and can he now say?

For I suppose we must not for a moment think that Mr. Richard Gibson, with his sharp, critical eye and vast showyard experience, would allow his brother's first-prize lamb to be put in his own pen in order to win.

How, then, did Mr. Hanmer so strenuously try to place first a pen of which not one won a place in the ring previously. If such doings are not a farce, what is it?

It is high time fair play should prevail. Were there as determined efforts made in breeding and fitting sheep as there are in getting pet judges appointed, the excellence of some exhibits would be materially increased.

"Let the best win," should be the universal motto.

JOHN CAMPBELL.

Victoria Co., Ont.

### Raising Pigs.

CARE OF BROOD SOWS.

In regard to the care of brood sows during cold weather, it is very essential to success to provide a dry, warm pen for them. Ample exercise is important, and it is better to have a good-sized pen if they cannot be let out of doors, which they should be if possible. They should be fed on shorts and oat chop (ground fine), and some roots or other green food. The sow should be shut up two or three days before farrowing, so as to get used to the pen.

See that the pen is warm, clean and dry, and the sow is free from vermin. If not, get rid of them by applying a little oil. After farrowing, feed her three times a day on some good milk-producing food, lightly for a few days and increase gradually as pigs grow older.

When the little pigs begin to eat, make a place where they can go, but where the sow cannot follow. In this place a shallow trough, and put a little shorts and warmed milk into it. The little fellows will soon learn to eat.

Wean the pigs at from six to eight weeks old. Feed them a few turnips, mangels or some kind of roots, in addition to shorts and milk, if in the winter; and, if in the summer, give the run of a grass patch with the shorts and milk. But do not give them more than they will eat up clean.

When they are about four months old, add a little pea and oat chop (ground fine), and keep increasing it until they are fit for market, when they should be receiving all chop. Pigs raised in this manner ought to be fit for market at the age of six months.

Pigs are the better for having charcoal, ashes, salt, sulphur, mixed together and placed where they can have free access to it.

S. W.

Huron Co., Ont.

### A School of Agriculture for the Maritime Provinces.

A school of agriculture and horticulture for the Maritime Provinces of Canada has been under discussion for a considerable period. Some time ago a delegation visited the Ontario College at Guelph, with a view to further considering the matter. Now it has been decided to establish such a school for the three Provinces. The decision was arrived at, a few days ago, at a meeting of the premiers. The location has not yet been decided upon, but it will likely be Wolfville or Truro, N. S. Such a school, if well conducted, should be of great benefit to the farmers and fruit-growers down by the sea.

### The Slaughter Cure Condemned.

Dr. Edward Moore, V.S., a widely-known practitioner of Albany, N. Y., contributes to a contemporary the following letter, which specially emphasizes one or two points to which attention has frequently been drawn in the FARMER'S ADVOCATE:

"You are well aware that the slaughter cure for tuberculosis was started on the excuse that the tuberculosis of cattle was commonly communicated to the human subject, and it was therefore imperative that the disease should be stamped out in order to save the human race. Most of the leading advocates of general slaughter were the students of Prof. Law, or men closely associated with him. Thus Law, Pearson, Salmon and one or two others frightened the people into acquiescence with the methods they proposed. New York State passed a bovine tuberculosis law and put it in the hands of the State Board of Health, inspectors were appointed and slaughter commenced. Other States copied New York, and many veterinarians throughout the country took it for granted that the doctrine preached by Law and the others was correct. Now, they had no facts of their own to show that the disease was communicable to the human subject from the bovine; they simply accepted the teachings of Prof. Koch and three or four veterinarians, who many years ago arrived at this conclusion. Thus men in high positions simply accepted theories

### Lines on the Death of Queen Victoria.

BY FRANK LAWSON.

O Queen! the monarch widely great—  
O Queen! the woman and the wife—  
Emblem of Good in home and state:  
Could death o'ertake so grand a life?  
A nation weeps—the world is bowed:  
And sympathy binds land to land:  
And Britons, prosperous and proud,  
Reach each to each a kindlier hand.

Thy subjects felt a common thrill  
At Triumph's shouts—at Envy's breath,  
And feel but one pulsation still—  
Thy power could not pass with death.  
How'er the Empire Fate expand,  
Fruit of thy love will not be vain;  
Briton shall grasp a Briton's hand  
In kindlier kinship for thy reign.

record was kept of the amount of water drunk daily. The pigs also had access to ashes and salt. The pigs were fed about 7 a. m. and 5.30 p. m., and were weighed once a week, about 11 in the morning. The pigs were fed in pens 7x8 feet in size, and occupied separate quarters for sleeping rooms. The animals were generally in first-class health during the experiment.

Lot A gained 634 pounds in 146 days, or 4 1-3 lbs. per day.

Lot B gained 644 1-2 pounds in 146 days, or 4 2-5 lbs. per day.

Lot C gained 650 1-2 pounds in 146 days, or 4 2-5 lbs. per day.

Lot D gained 614 pounds in 146 days, or 4 1-5 lbs. per day.

The amount of food consumed in relation to gain in weight is an important matter, as is also the amount of water drunk.

Lot A ate 2,282 lbs. corn meal and shorts or hominy, half and half.

Lot B ate 2,450 1-2 lbs. corn meal and shorts or hominy, half and half.

Lot C ate 2,436 1-2 lbs. corn meal and shorts or hominy, half and half.

Lot D ate 2,302 1-2 lbs. corn meal and shorts or hominy, half and half.



HIS MAJESTY KING EDWARD VII.



HER MAJESTY QUEEN ALEXANDRA.

handed down to them, and have not attempted to verify them, but foisted them upon the people of this nation. The cost has been something awful, and up to date has been a damage rather than a benefit.

"If it were true that tuberculosis in cattle caused any amount of tuberculosis in the human, there could be some palliation for such methods; but that is not so. And again, if it were true that by the methods they have pursued they could in a short time eradicate tuberculosis from this country at anything like a reasonable cost, people everywhere would favor the plan, but tuberculosis is entirely different from the contagious pleuro-pneumonia which was eradicated from this country a few years ago by the stamping-out process. There is no possibility that they can handle tuberculosis in a similar way, and all the slaughter, expense and loss that we have thus far gone through have not resulted in ridding any one county, state or section of tuberculosis. While no one desires to cast reflection upon the veterinary profession for what a few of its members have done, people who pay taxes and stock-owners generally are entitled to protection. We must therefore condemn slaughter and expense and woeful waste of much of the best cattle blood in this country, when such methods absolutely fail to give the results aimed at. Therefore, before any general slaughter is allowed, it should be shown very clearly what is to be accomplished by it."

The suggestion that more attention should be given by the ADVOCATE to the subject of horse-breeding in its various phases meets with a generous response in this issue, and several excellent articles have been held over for future issues, owing to excess of matter in hand.

### On the Amount of Water in Slop Fed Fattening Pigs.

From time to time the question arises, "How thin or how thick should the slop for pigs be made?" Many persons think that ground feed should be moistened just enough to pour it well from the pail to trough, yet not be very watery, while others desire the slop to be quite liquid. No one, however, seems to have thus far published any facts of importance in this interesting field. With a view of studying this subject, the following experiment was begun at Purdue University, Indiana, on January 24, 1900, and continued till June 19, a period of 146 days. The animals used were sixteen in number, consisting of eight pure-bred Chester Whites and eight Berkshires. These were divided into four lots of four each, with two of each breed in each lot. The foods used were a mixture of equal parts of pure corn meal and shorts till the period beginning May 9th, after which hominy feed took the place of the corn meal, and they were fed under these conditions:

Lot I was fed the food dry in the trough.

Lot II was fed the grain mixed with its weight of water.

Lot III was fed the grain mixed with twice its weight of water.

Lot IV was fed the grain mixed with three times its weight of water.

Each lot of pigs was given all the water desired additional to that mixed with the grain, and a

If these figures be compared with the gains in live weight, it will be seen that—

To make one pound of gain, Lot A ate 3.59 lbs. of grain.

To make one pound of gain, Lot B ate 3.80 lbs. of grain.

To make one pound of gain, Lot C ate 3.74 lbs. of grain.

To make one pound of gain, Lot D ate 3.75 lbs. of grain.

As the cost of the food fed averaged about 80 cents per hundred pounds:

The cost per pound of gain was 2.87 cents in Lot A.

The cost per pound of gain was 3.04 cents in Lot B.

The cost per pound of gain was 2.99 cents in Lot C.

The cost per pound of gain was 3 cents in Lot D.

The amount of water given the different lots is especially worthy of notice. No water was given with the grain in lot A, but such water as might be desired was weighed out and turned in the trough after the grain was eaten up clean. Neither did lot B receive sufficient water with its grain to meet natural demands, so that extra water was weighed to the pigs in this lot, while lots C and D required no more water than that in the grain.

There was no material difference in the appearance of the pigs in either lot, so far as quality is concerned, and so far as this one experiment goes, the use of about two times the weight of water to grain indicates a satisfactory proportion. In view of the fact that the pigs fed dry grain made slightly the best gains, it would appear that there is really no gain in feeding the pigs a slop instead of a dry grain, excepting as a feeder may regard it a matter of convenience.



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(Supplement to the FARMER'S ADVOCATE.)



OUR LATE QUEEN VICTORIA.

On the right, King Edward VII., and Czar of Russia; on the left, Queen Alexandra, Duke of Connaught, Duke of York, and Emperor William.

### Wintering the Stock Stallions and Brood Mares.

In the first place, there can be no fixed rule of feeding and fitting stock through the winter, preparatory for the breeding season, as different temperaments and constitutions require different feeding. My methods for a horse of a nervous, excitable temperament are liberal rations, as follows: In the morning, dry oats, whole or chopped, fed with bran; at 11.30 a. m., three to four fair-sized carrots or two turnips; and at 12.30 p. m., cut sheaf, with bran, until near season time, then add a little chop. About 6 p. m., repeat roots; about 7 o'clock, more cut sheaf, mixed with boiled oats, and bran enough to absorb the hot water, with what hay they will eat clean. Have them eat all up clean at each feed under all circumstances. The caretaker must be the judge of the quantities to suit the constitutions of different animals. For a stallion of a rather dull, sluggish temperament, give dry oats in the morning, roots and dry oats at noon, with a little bran, and roots and cut sheaf, with chop, at night. Substitute boiled feed for the chop once or twice a week. Well-saved clover hay is by all means preferred. This rule applies to heavy stallions or geldings fitting for market also. A horse being well fed should have a large box stall on clay floor, with outside yard, the larger the better. The box should be only moderately warm during winter, as I find the legs keep in better form during the winter in a stall not too warm. About the middle of February begin to give them exercise at the line, beginning say two miles, and increase to five miles per day if possible. Plenty of exercise is absolutely necessary in all cases for health and to have him in fit shape for the season. By no means overfeed during idleness. Have them fed so when they start on their season's route you can increase their ration with a good keen appetite. This is a general outline of our winter treatment of draft stallions.

Regarding breeding mares in winter, circumstances differ so much that it is almost impossible to give anything like a regular system of care, as some must work their mares right along; others have nothing for them to do until spring. I would certainly say give a breeding mare gentle work right along, and a box stall also if possible. If you are working them, keep well shod sharp, as bare feet on slippery ground is most fatal to success with breeding mares. If you have no work, be sure to turn them out every day, unless wet or stormy. Letting them out only once in a while is dangerous, as they are more apt to overexert themselves and cause trouble. We generally feed brood-mares straw in idleness, a small feed of oats, dry or chopped, in the morning; turnips at noon; and cut feed, with chop and bran, at night. A small quantity of ground flaxseed two or three times a week is good for either mares or stallions—say a tea-cupful. But plenty of exercise or gentle work, right up to the time of foaling, is the greatest means of success. We have found to our cost that pampering and high feeding is almost sure to bring failure. After foaling, milk the mares and keep the foal hungry for the first ten days, for the health of both mare and foal. By no means milk the mare before the foal sucks. Let the foal have the first, and when you think it has a moderate supply, stop it and do your milking. I believe there is many a foal lost by too much milk the first few days, by disordering the stomach. If your foal takes joint disease, knock it on the head at once and save yourself trouble and annoyance, as nine times out of ten it will die or be a deformed good-for-nothing, practically.

Now, Mr. Editor, I have told you my methods, and if it does no other good, it may open up a discussion so we can learn from one another, as no one knows it all.

A. INNIS.

Huron Co., Ont.

### Grand Sweepstake Wether.

HOW BRED AND FED.

In reply to your enquiry as to the breeding and feeding of the winning sheep carcass in that competition at Guelph, I beg to state it was that of a grade Shropshire shearling wether, bred by Mr. S. Hoar, Woodville, Ont. His dam was a half-bred Shropshire, her dam being a good common-grade Leicester ewe. The wether's sire was the registered Shropshire ram, Fairview Sort 98519, whose sire was the well-known Newton Lord, and whose dam was Campbell 508, 58804, a first premium ewe at several Canadian shows, as well as at Madison Square Garden Show, New York City. We bought the wether in August, 1899. Till then he ran all summer on the roadside with his dam, and had no other feeding but what he helped himself to. When bought, he was weaned and given a run on rape and grass, with two feeds of grain daily. The grain feed was usually one part bran, two of oats, and one of split peas, with a trifle of barley, and sometimes a little wheat for a change. Five per cent. of ground flaxseed was added in October and November, when turnips took the place of rape in part, and most of the feeding was done in the barn. He was exhibited at the Winter Fair in London in 1899 and placed second. During the winter following, the feed was unthreshed peas in the morning, a liberal allowance of cut turnips at noon (mangels instead after April 1st till June), and clover hay and cut roots at night. In June, vetches and rape were ready for use. The latter was fed off in the field, and the other in the barn at noon. A small feed of grain was allowed, about half a pound,

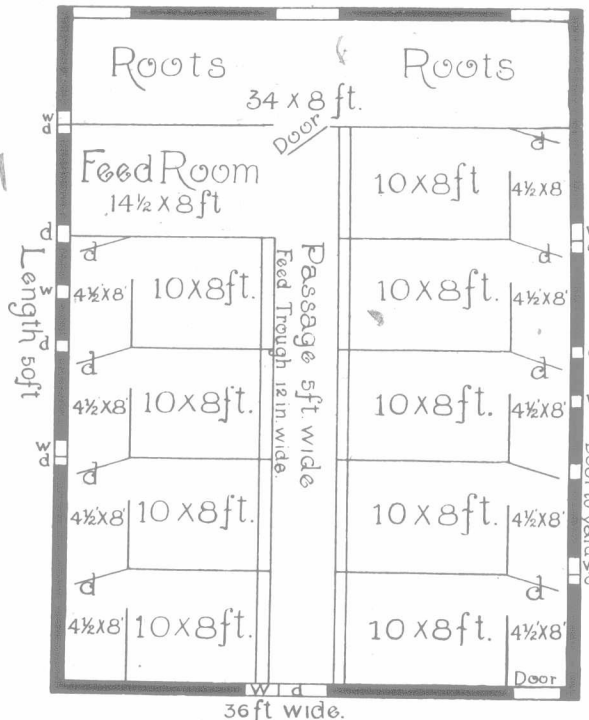
twice a day. He was on grass and rape morning and evening, and carried on in that way till October, when the care and treatment were about the same as during the previous fall. During November, the grain was increased, when about two pounds per day of the mixture was fed. As he was fed the same as our pure-bred yearling wether, the carcass of which was "faulted" for being overdone, at the Guelph Show, I suppose the conclusion we must arrive at is that the breeding has as much if not more than the feeding to do in making up toppers.

JOHN CAMPBELL.

### A Well Planned Hogpen.

To the Editor FARMER'S ADVOCATE:

SIR,—In reply to Mr. Fuller, I also send plan of pigpen, roughly drawn up, 50 feet long and 36 wide, intended to stand with root-house end into bank to protect from frost and allow driving into loft. The door going into loft can be from end over roots or side over roots to give chance to put in roots and fill feed bins. The doors that separate pens are to shut pigs in 10x8 pens when cleaning out and when moving pigs from one pen to another. All underground walls should be made of stone and come from six to twelve inches above ground, remainder wood with dead-air space. Stone walls are very bad, as they draw too much frost and act like an ice house. Pen should be seven feet high, at least, from floor to ceiling; loft can be made to suit. Floor should be cement, also troughs; floor to slope two inches from trough to



GROUND PLAN OF GEO. GIER'S HOGPEN, 50 FT. LONG BY 36 FT. WIDE.

inside of back passage, and the entire pen slope six inches from root house to cleaning-out doors. Leave no raised step at the door, in order to clean out easy. The posts for the partition door to be cedar and put down three feet in ground, and holes filled with gravel or small stone well pounded down. Floor of sleeping and eating room to be covered with 1 1/2-inch lumber—tamarack cut green and dried. Windows to have four lights 12x14.

The cost of material will vary in different parts of the country, so the builder will have to use his own judgment.

If feeding pigs is Mr. S. E. Fuller's intention, and he has a bank along the north side, he had better make the pen longer and feed from one side and his little pigs will yard on the south side. Each pen will hold about six feeding hogs. Windows should be over partitions to do two pens.

I hope this will meet with your approval.

GEO. GIER.

### Shorthorn Prices in Britain in 1900.

According to the returns, compiled by Mr. John Thornton, the average price realized for the 1,906 head of Shorthorns disposed of at the leading sales of the breed held throughout the kingdom during the past year worked out to £32 19s. 9d., as against the £31 17s. 9d. realized by 1,844 head included in the previous year's dispersals. The top price of the year was 455 gs., obtained at the draft sale of Miss A. de Rothschild's herd in Buckinghamshire early in July. The distinction of making the highest average of the year fell to H. R. H. the Prince of Wales, whose draft of 54, disposed of at Sandringham on the 29th of June, averaged within a few shillings of £70 apiece. Next to this came the average of £63 10s., made by the draft of 55 disposed of at Mr. Dudding's sale in Lincolnshire at the end of July. Like so many of the animals which have been making big prices during the past few years, the bull which topped the past season's prices was secured by a South American buyer.

### Common Sense in Horse Rearing.

To the Editor FARMER'S ADVOCATE:

SIR,—As time rolls on and changes come, the old rule never fails—one extreme brings another. In regard to horses, we find that there is a scarcity in Canada and the United States. We can easily trace this to two reasons: First, the farmers almost, if not altogether, ceased to raise them in some sections because of an over-production. Second, the number that was exported to Africa to serve in the Boer war. In my opinion, when others cease raising any commodity on the farm, then is the time to keep right on. The first duty in this important enterprise is to use nothing but sound, healthy sires and dams. As like begets like, let us use a little common sense. Common sense, thou art a jewel!

The mare, in order to be a sure breeder, should always be in a nice thrifty condition. It seems to be a fact that a goodly number of foals when dropped are in a weakly condition, and a certain per cent. die. Now, speaking from my own experience, I must conclude that proper plain feed, exercise and fresh air play a very important part in this matter. After breeding horses for twenty years in a moderate way, allow me to tell you that I have yet to see the first weak foal. Our method of wintering mares is to feed on straw, roots and hay, more straw than hay, and about one gallon of pats at two feeds daily. The straw and hay is not cut. I like it better uncut. We grow about one-eighth wheat and a little flax. This mixture makes a grand feed when ground together. Flax is very much better than oil cake, as the flax contains all the oil. We all know the benefit of linseed oil.

By using a little all the time it acts as a preventive of many complaints. "One ounce of prevention is worth a pound of cure." If I find an animal not thriving, we use a little Epsom salts occasionally in their chop. Please do not forget a little salt daily. My custom is to allow plenty of fresh air to circulate through the stable. Oh, for more fresh air and light in our stables! In regard to exercise, I think it advisable to allow horses not working to run out two or three hours every day. When the weather is fine, turn them out together and allow them to run together if they are so inclined. Let us follow nature as closely as possible. We all like liberty. It is a bad plan to allow horses to eat all the hay or straw that they like. About as much as they will eat in an hour is enough. When the spring opens, we work the mares right along until the time of foaling. Motto: Moderation in all things.

Wintering Foals.—The first winter in a colt's life is a very important one. If the mare is in foal, it is a bad plan to allow the foal to suck too long, as it weakens the next one. After being weaned, it is an excellent plan, if one can, to use some warm skim milk along with some ground oats, the same as for grown horses, about 1 1/2 gallons divided into three feeds, or a little less, and a turnip or two or carrots; but do not forget the fresh air and exercise. I allow them to run out every day along with the other horses. If handled in this way, they will come out in fine condition in the spring. Do not forget a little grain right along through the summer.

DAVID BURNS.

Ontario Co., Ont.

### Keep the Colts Healthy and Growing.

In regard to raising colts, they should be kept healthy and growing all the time, and in order to do this they must have sufficient food and exercise. The first winter is probably the most important of the colt's life. If you have any skim milk to spare, by all means give it to him; it is easily digested, will make bone and muscle, just what the colt needs to develop into a strong, vigorous horse. For the feed I prefer clover hay, oats and bran, with a few roots, a little ensilage or something of the kind for a change sometimes; about four quarts per day of oats and bran will do very well for ordinary colts. At present the mares in foal that are not working, and all the colts over a year old, get a feed of hay in the morning, cut straw and ensilage with a little oats and barley meal mixed in at noon; oats or bran and uncut wheat straw or the cut feed at night. We try to have them outdoors at least half the day, so that they get plenty of exercise, and they are all healthy and doing well. The mares are just as well working if you need them, but, of course, should be used carefully and will require better feeding. In early summer they will do very well on good grass, but as soon as it begins to dry up and flies get troublesome put them in during the day and feed a little grain.

Middlesex Co., Ont.

A. B. SCOTT.

The cow's stomach resembles a clock in one particular—its machinery is arranged to mark time; it is wound up to strike the feeding hour, and it strikes that hour almost to the minute. If the feeding time is changed for even an hour, the yield of milk will decline, and the flow of milk once lowered, is very difficult of restoration. Regularity in feeding and in milking are of the highest importance with good cows; the better the cows, the more important. It makes the difference between success or failure, gain or loss. Select whatever hours are most convenient, but when once selected, adhere to them rigidly.

**Breaking Vicious Colts.**

For breaking stubborn colts, take a thin, sharp rope thirty feet long. Form a loop at one end large enough to slip around the lower jaw. Have the knot on right side. Draw the rope overhead to left side and pass through the loop at the jaw. Pass back again to right side and under upper lip. Draw over head again and again through the loop at jaw. By this means, the wickedst colt can be entirely conquered, and will make a decidedly handy horse. They can be made to stand on hind legs by a single hard jerk of this rope

FARMER.

Grey Co., Ont.

[NOTE.—A frightened, nervous colt is too often mistaken for a vicious brute needing most severe treatment, whereas patient, intelligent handling, alongside of a steady, intelligent horse, is all that is necessary to get the youth going along the right line. The severe rope tackle above recommended, placed in the hands of a careful trainer that can control his temper, may be all right for some spoiled colts, but placed in the hands of many hot-headed fellows for general colt breaking, it is too cruel to be sanctioned. The most successful trainers seldom find it necessary to adopt any method that will cut the mouth of a colt even in a slight degree.—EDITOR F. A.]

**Symmetry and Quality in Breeding Stock.**

Mr. John Treadwell—than whom there are few better known breeders in England—tendered some interesting advice to his brother stock-owners in the course of an address which he delivered at a luncheon in connection with a fat-stock show recently held at Aylesbury. Mr. Treadwell, who is himself a well-known breeder of Oxford Down sheep, and whose appearance is so familiar to frequenters of the sheep section of the Royal Shows, laid special emphasis upon the necessity for cultivating type and symmetry in the animals kept by them if they wished to maintain the status and breeding type of their herds and flocks. "If," said Mr. Treadwell, "breeders listen to all that is told them by their good friends the butchers, they will be soon led astray." Unless the symmetry of animals is studied they will not be of much use to breeders. He had had a pretty extensive experience of breeding for the last fifty years.

**FARM.**

**Threshing Peas with Straw Cutter.**

To the Editor FARMER'S ADVOCATE:

SIR,—I have tried a new plan in my experience of threshing peas that may not be new to some others, viz., by running them through the cutting box or ensilage cutter. I have a three-horse tread power and cutting box and a grinder, with which I have done all my cutting and chopping for the last four seasons. I had a large load of Crown peas on the scaffold of barn, that I sowed late last spring, expecting to escape the bugs and keep them for seed, intending to thresh with the flail; but later on I found the bugs had played havoc with them, so I told the boys to run the peas through the cutting box. I was afraid the knives would split or cut a good deal of the grain, but found no more split than if they had been threshed with the flail. I had let the knives get dull, and only put on two horses. I fed gradually, and the feed rollers seemed to shell the peas out before they reached the knives. We put the cut stuff through the fanning mill and cleaned the peas satisfactorily.

Oxford Co., Ont.

JOSHUA BOBIER.

**A Round Cement Silo—How to Build it.**

To the Editor FARMER'S ADVOCATE:

SIR,—At your request I will let my brother farmers know how we build round cement concrete silos. Lumber is so dear, and the action of the silage on the lumber causes it so soon to decay, I would say build a concrete silo. First, I will suppose that you all know how to mix gravel and good cement. The gravel has to be free of dirt or loam. By using one of our model cement mixers, there is no difficulty about getting the cement and gravel mixed right, for it only takes one minute to mix a batch of the mixture. It is fully covered by patent, so I will not say anything more about it. By writing to me I will give full information about it. In building a silo, first get a good foundation. The inside rings for a round silo are made in five pieces, hinged together so that they will draw together to lift upon the one that you have just filled. The outside rings have to be as much larger than the inside ones as to leave a 12-in. wall at bottom. The outside rings are to be made in five pieces, the same as the inside ones, to open out to spread to lift. These pieces are hinged together at opposite sides, in outside rings to leave space about one foot. Fill up with pieces of 2-in. lumber, then take out one piece on one of the sides to batter the outside of silo from 12-in. at bottom to 6 in. at top. By making two sets of these rings, we can build a silo much faster. While one round is hardening, we are filling another round. Make them of iron or wood. Saw a circle of wood to match the size of silo. Take inch lumber two feet long, put circle of wood at bottom and top, nail inch lumber up and down all the round of circle, ending at hinges every time. Then start again. Make outside and inside the same. Hinges outside and inside of each set of rings. In building keep

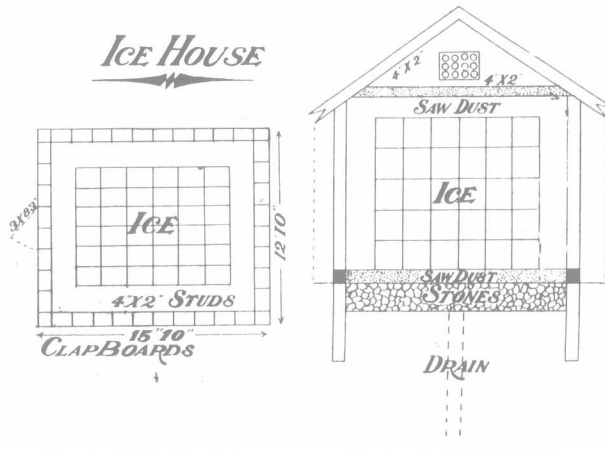
rings level and you will build plumb. The rings are hard to describe so as to understand. Make five doors 2x3 feet in silo 30 feet in height. Build in iron to keep from spreading. Number seven wire, one strand, not twisted, is quite sufficient. Every three feet put wire all round the silo, hooking them at both ends. Build wire as near outside as you can. Old buggy tires will do. Make them in pieces and bolt them together. A silo of this kind, 11x30 feet, will cost about \$100.

A. E. HODGERT.

Huron Co., Ont.

**Farmer's Ice House.**

Ice in the summer is still a novelty in most rural districts. In cities and villages ice has become a necessity, and almost every family keeps a refrigerator and has the daily or biweekly visits of the iceman. It is not quite so convenient to have ice in the country, but it is entirely feasible, either by the association of near neighbors or by every farmer providing for himself an ice house. I consider ice a necessity in every house. It is among the greatest luxuries in the hot weather—slakes thirst better than any other drink—and if it could be universal, would be a strong rival force to the saloon and the grog shop. I have found ice a great help in the dairy business, saving milk, cream and butter. Packed with ice in the cooler, butter goes to market in the best condition, and secures a better price. Ice saves a multitude of perishable articles of food, that would otherwise be lost. It not only saves strawberries and other small fruits, but the lower temperature makes them much more palatable. Last summer I picked the small fruits I needed for the table in the morning, cleaned them, and set the dish containing them in the refrigerator. They were so cool and nice, and we all seemed to relish them so much! A friend of mine, while taking tea with me in strawberry time, remarked when I served the berries, upon their sweetness. She inquired what variety I grew. I told her, and she said they were the best she had ever tasted. I remarked that it was the low temperature which gave them such a sweet, cool and delicious taste. She could hardly believe me; but I notice they now have a new ice house. The good housewife who has ice and a refrigerator has no fear of losing her



beefsteaks, mutton chop or veal cutlets. On the ice they are safe for a week after the purchase. Cooked meats are kept in good condition until they are consumed. If the head of the house could only follow the daily waste that goes from his table, his pantry, and his dining-room, for the lack of ice, as his wife is obliged to, he would no longer delay the ice house and the refrigerator. The time and timber to construct them are within his reach. It requires but little mechanical skill to construct them.

Now, farmers, can you not go to work and make your wife an ice house after my plan or someone else's? You will consider those few days you were building the ice house among those most profitably spent.

An ice house can be made of any size required for the holding of ice for a creamery, refrigerator, or other purposes. When packed, fifty pounds of ice will occupy one cubic foot of space. Therefore, every forty cubic feet of capacity in a building is equal to the holding of one ton of ice. Where the walls of the ice house are not insulated, the ice should be packed in the building twelve inches from the inside of the walls, and that space should be packed full of thoroughly dry sawdust. Where that is not convenient, an eighteen-inch space may be left and packed with cut hay or straw entirely free from ice chips and snow. The illustrations shown are of an ice house 15 ft. 10 in. by 12 ft. 10 in. and 9 ft. high. The ground plan (fig. 1) shows the framework, made of 4 by 2 in. studding, boarded with 1-inch stuff inside and clap-boarded outside. The door in front is 3 feet wide by 8 feet 3 inches high. A cross section (fig. 2) shows the ice in position and the appearance of the roof, with ventilator, which is in each end. The door is of double matched stuff, and divided. Pieces of plank fit across the opening inside, being placed in position as the house is filled, and removed as emptied. The section through the sill shows the floor of stone and sawdust, studding and construction at eaves. The size of material is shown so plainly that it explains itself. We have used an ice house built after this plan for four years, and like it very much.

F. W.

**Experiments for the Farmers' Benefit.**

The work of the Experimental Farms of Canada is not only extending continuously, but becoming more and more definitely advantageous to Canadian farmers. During a recent visit to the Central Farm, at Ottawa, by a member of the FARMER'S ADVOCATE staff, many lines of activity were brought to notice. Dr. Saunders' chief personal work at this season of the year is seed testing and seed distribution. This is of incalculable worth to farmers who will avail themselves of their benefits. Small samples of grain are being received from farmers who have doubts as to the germinating qualities of their seed grain. From each of these samples 100 grains are indiscriminately taken and planted in a row in a box of soil kept warm and moist. At the end of a certain period, those who sent the samples are advised as to their germinating qualities.

The annual seed distribution is now in full progress. A staff of men are busily engaged in cleaning, weighing and sending out 3-pound samples of seed grain for testing on farmers' own land. By this means, farmers are enabled to get a start in first-class seed of the best known varieties of crops. The greatest demand for several years has been for oats. In addition to this, a sort of Experimental Union is getting into operation, similar to the Ontario Experimental Union, having its center at the Guelph Farm. The work of the Dominion Union is intended to touch every locality as far as possible. The farmers who engage in it are of Dr. Saunders' own choosing, from their proved fitness for the work as seen by their reports from year to year upon tests conducted with the three-pound samples of grain. The grains sent out in this work must be grown according to instructions, so that intelligent reports can be made upon them.

In the barns, under Mr. J. H. Grisdale's supervision, several tests in calf-rearing and cattle-feeding are in progress. In April, 1900, ten calves of about equal quality and age were divided into two lots. They were fed alike on new milk for three weeks and skim milk and good fodder through the summer following, with the exception that one lot received a grain ration up to three pounds each per day, and the others up to one and a half pounds per day. Late in the autumn, the grain was taken from the lighter fed lot and increased with the others. The test will be conducted until either lot is sold, one as baby beef at about two years old, and the others as more mature animals, at, perhaps, three years old. On Jan. 11th, the five better fed calves averaged fifty-five pounds per head more than the others.

There is also a series of tests in progress with steers of different ages. Yearlings, two-year-olds and three-year-olds are tied in rows and fed the same classes of foods. The test is to determine the comparative cost of producing beef with animals differing in age. Tied and loose steers are being compared as to economy of feeding, as well as other lines of investigation. Unfortunately for the test, the best class of steers could not be secured; in fact, some of those in the stalls and in the pens show unmistakable signs of possessing dairy blood, which must to a considerable extent reduce the value of the experiment. Considerable pig-feeding is in progress, different lots receiving different classes of roots and grains, in order to ascertain what are the best foods for the economical production of firm meat.

Soft bacon has engaged the attention and time of the Chemist, Prof. Shutt, for several months. Portions of soft carcasses fed on known foods have been analyzed in order to ascertain the consistency of their fats, also the foods and conditions that produce soft bacon. These tests are still in progress, and when concluded will throw considerable light on the hog-feeding question. Already it has been ascertained that all corn-feeding invariably produces bacon containing an excess of soft fats or oils, while other known foods and combinations yield more firm fats, and, therefore, bacon having a desirable consistency. Much good work is going on in the other departments, which we cannot now refer to.

**Carrying Water by Siphon.**

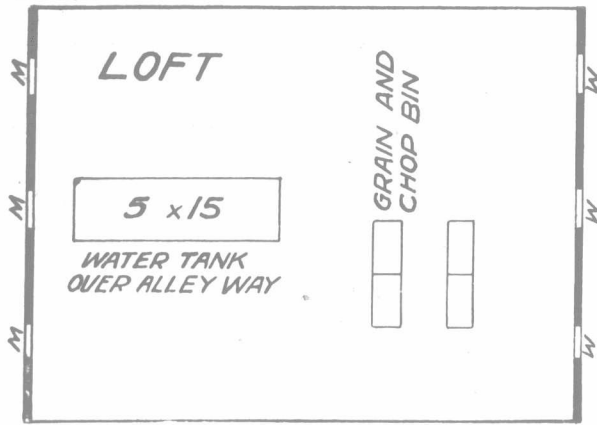
To the Editor FARMER'S ADVOCATE:

SIR,—I notice a question by J. L. Grey Co., re conveying water by siphon. We have a siphon conveying water from a tank 4x6 feet and 4 feet deep, at a spring in the bank opposite my house, on the other side of the road. Eighteen feet from top of bank is a 3-inch galvanized pipe, laid over 3 feet deep in the ground, 300 feet to the well in stable, and down 30 feet in well. The pipe has to be primed with a small pump attached to pipe in tank, and when primed, screw it off and put a plug in pipe, so that not over one-third of the capacity of pipe is running, as the spring is not strong enough to allow the full capacity of pipe being taken, as the tank would be emptied before the well would be filled up to within 20 feet of top. If the spring was strong enough, it would fill the well 6 feet or more in an hour. By allowing only one-third the capacity to run, it takes over half a day to fill our well to the height of level between tank and well. It works well, and we have no trouble in keeping a supply of water for sixty-five head of cattle, besides a large number of hogs.

Peel Co., Ont. JOSEPH FEATHERSTON & SON.

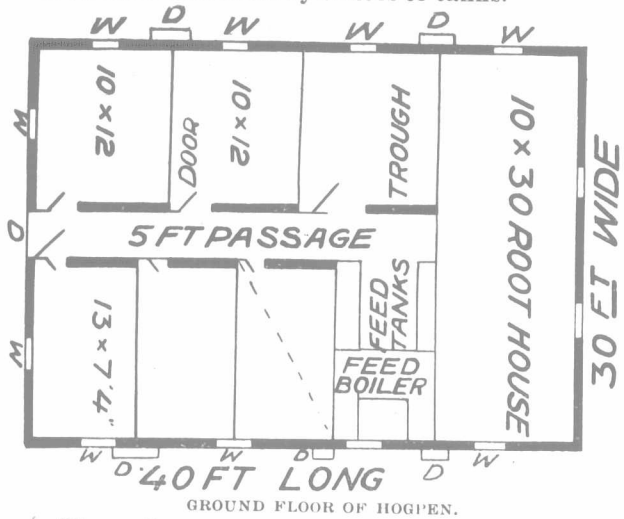
**A Hogpen Illustrated and Described.**

SIR,—I noticed in your paper a gentleman asking for a plan of a hogpen with "ten pens" or stalls. The plan I enclose shows three pens 10 feet by 12 feet, and three smaller ones 13 feet by 7 feet 4 inches. But if he does not wish a root house or boiler room, he can then have the ten pens by making three 10x10 of root house and one 13x7 of boiler room. By having a root house and pen together, you kill two birds with one stone: because your boiler cooks your feed, heats your pen in very cold weather, and your roots are near at hand. There are two doors to each pen, one opening to alleyway, by which you may enter or change hogs from one pen to another, or be used to load hogs by passage. The other is a double frame door; that is, two separate swing doors (one for each pen) in one frame. To clean out the manure, you have to throw the manure out the entrance door, or you may make a large door with a small one inside the larger, by which the hog may leave or enter. In this way the house may be used for cattle or other stock if need be.



PLAN OF LOFT OVER HOGPEN.

The floor (cement) slopes to one corner, by which all water runs away through a tile in the wall, which is on a level with floor. There should be one tile to each pen. Some use pens with elevated beds. Each pen is ventilated by a 6-inch tile or ventilator passing through the roof. In the loft there is a water tank over passages. This brings the weight on the uprights between stalls. The tank may be just a large trough built wedge fashion. One water pipe runs to the tanks (feed tanks) and boiler. This enables one to fill them easy. Another pipe, to which is connected a rubber hose, is used for washing pigs, pens, etc. Above the soaking tanks are chop and grain bins, which are connected by chutes to tanks.



GROUND FLOOR OF HOGPEN.

The walls may be built of brick, stone, timber, cement or concrete (cement and stone). One cannot say which is the cheapest. Some people have part of the material, and prices differ in different localities. A 3 or 4 foot wall of brick, stone or cement, and then timber, makes a good pen. Of course, the boarded part would need to be double boarded and tar paper between, or you may use casing such as used on houses. An 8-foot wall is plenty high enough, but be sure and have a good amount of light. This shows 12 windows with four panes 12x14. The windows in root house are used as chutes by which roots are put in. Always get your floor a good deal higher than outside ground, say 1 1/2 feet more. This enables you to bank up your wall so as to keep the pen dry. If you do not it is sure to crack; and also give good drainage for all water coming from pen.

Lambton Co., Ont.

**Experiment with Oats.**

In the year 1890, I received from the Experimental Farm, Guelph, three pounds of Bavarian oats. From these I threshed 123 pounds, or 3 bushels and 21 pounds. In 1900 I sowed 112 pounds of these same oats, and after they were threshed and cleaned with fanning mill, I had 4,500 pounds, or 135 bushels. Each year they were sown with grain drill on land that had yielded a crop of potatoes the previous year. The land was fall-plowed and cultivated with spring-tooth cultivator before sowing in the spring. I approve of the system of separating all small and light grain from all kinds of seed: the sample will not only be better, but the yield will be greater.

Simcoe Co.

Geo. Crawford,

**A Novelist as Agriculturist.**

Mr. Rider Haggard, the novelist, has had another successful year as a farmer. As readers of his charming work, "A Farmer's Year," are aware, Mr. Haggard now owns a small estate in Norfolk, and since entering into possession of it some years ago his experiences have been somewhat of an inconclusive character. In 1898 he made a profit on the farm (the rent of which is about £200) of £422 15s. 4d., but in 1899 he not only had no surplus wherewith to pay his rent or the interest on the money invested, but he was £40 out of pocket as well. Last year, in 1900, the pendulum took another swing to the right side, with the result that the profit of 1898 was surpassed by a few shillings, the increase of the total receipts over the expenditure—everything included—being £423.

By way of comment upon the returns for the year, Mr. Haggard writes:—"That these gains are not on paper merely is, I think, demonstrated by the fact that on October 11 last (Michaelmas) there stood to the credit of the farm account in the bank a sum of £464 13s. 3d. It will be noted that this year I print a third balance sheet, that for the poultry. Something over a year ago from last Michaelmas, in order to spare the steward's time and if possible increase the return from this source, Mrs. Rider Haggard took over the management of the fowls on the two farms, except a few which run at the home farmstead, whereof the increment is included in the item 'Miscellaneous produce sold.' The results of her first full year's enterprise show a gain of over £35."—*Farmer's Gazette.*

**Spelt Again—A Better Showing.**

To the Editor FARMER'S ADVOCATE:

SIR,—After reading the article in last FARMER'S ADVOCATE, entitled "Tests with Spelt at the Guelph Agricultural College," I was about concluding spelt was not a cereal for the Ontario farmer; but as my neighbor alongside of me had a piece of ground in spelt last year, next my fence, I stepped across the field and interviewed him on his experience with this new grain. I found his report quite different from the result at the College. From 1 bushel of sowing he threshed 28 bushels as it came from the machine. There was no breaking of the beads in threshing, no claspings of the chaff to the grain after threshing. The threshing machine was of the ordinary kind, such as he did all his other threshing with, and on inspecting the bin I found the grain as clean and free of awns and chaff as ordinary barley coming from the machine. He is well pleased with the result, and intends to put in 8 or 10 acres the coming season. As he is keeping all the yield for seed, he can say nothing about the feeding qualities of the grain, but has no idea it is inferior to common barley. The farmer he bought the seed from last year raised 40 bushels from 1 1/2 bushels sown, while that one's neighbor raised 44 from the same amount of seed. I intend trying it, but will certainly give it up if I can't beat the O. A. C. in growing spelt.

Lambton Co.

JOSEPH OSBORNE.

**DAIRY.**

**The Dairy School Graduate.**

The status of the graduates of our Canadian dairy schools was illustrated by an incident at the close of the Western Ontario dairy convention. These great gatherings of factorymen, makers and patrons are utilized to a considerable extent for making arrangements for the ensuing season's work between the two first-named parties. At this convention a successful young maker of some four or five years' experience, both in cheese and butter making, and who would have no hesitation in undertaking to run a factory himself, was engaging with an eastern factoryman. Said he to one of the FARMER'S ADVOCATE staff: "The bargain was just about satisfactorily completed, when the factoryman asked if I were a dairy school graduate, and I had to confess that I was not. That settled it. He shook his head, saying that he preferred one having the additional advantage of the special training to be obtained in that way. I have therefore decided to take such a course, and have but little doubt that the time is not far distant when it will be very difficult, if not impossible, for any but those possessing certificates from these schools to secure situations of a desirable character."

Such is the tendency of the times in dairying. The makers who are to-day forging ahead are those who are qualifying themselves most thoroughly for the work. Each year the demands for general as well as special intelligence and skill are becoming greater. The trade becomes more exacting, the tastes of the consuming public more variable and critical, and to meet these, makers must qualify themselves. The problems of milk testing, bacteriology involved in the care and ripening of milk and cream, the curing of cheese, etc., ventilation, cold storage, as well as the fundamental principles involved in the proper care and feeding of dairy cattle, if the best results in milk are to be available—

all these present a wide and necessary field for study on the part of every young maker who has any desire to rise in the profession. During the past twenty years the writer has been closely observing the progress of many of those who are now in the very forefront of the industry, and while the foregoing observations are true regarding the past, we believe they are more than ever applicable to present and future conditions. At these schools not only the lectures and technical training are of the utmost value, but the students come in contact with the wider knowledge and experience of the members of the staff, and in friendly competition with the bright, enquiring minds of fellow students from all parts of the country, which in itself is no small part of a liberal dairy education. The cost involved is so moderate that no one can afford to neglect the opportunity thus presented, and those who do so are simply standing in their own light.

**Convention of Western Ontario Dairymen.**

The work laid out for a four days' meeting by the Western Dairymen's Association was concluded in three days, Jan. 15th, 16th and 17th, at London, Ont. This was the 34th annual convention of this Association, and was one of the best ever held. During the last year this Association amalgamated with the Cheese and Butter Makers' Association. On this account considerable time was given to addresses and discussions on the making of cheese and butter. There was also provided a good fund of information for the dairy farmer, as Messrs. John Gould, of Bureau of Animal Industry, U. S. A., and C. P. Goodrich, President Wisconsin Dairymen's Association, were engaged to talk advanced dairy farming. There was a good attendance of cheese and butter makers and buyers, but too few farmers, especially of the class most in need of light. In the absence, through illness, of the president, Mr. R. M. Ballantyne, the chair was occupied by the first and second vice-presidents, Messrs. Aaron Wenger, Ayton, and Jas. Connolly, Porter Hill. The meeting opened with the reports of officers.

**DIRECTORS' REPORT.**

The work done by the directors was reported in 12 clauses. The work of instruction was laid down similar to that of former years. An important accomplishment was that of establishing an experimental and illustration station at Milverton, Ont.: 1st, for conducting experiments in cheesemaking under the ordinary factory conditions; 2nd, to illustrate the renovation of an old factory at moderate cost; and 3rd, to illustrate by practical use the method of disposing of factory washings on the plan recommended by Dr. Bryce, Provincial Health Officer. The cheese selected for the Paris Exposition by the directors was reported to have won the Grand Prize, an honor of great distinction. The usual grant to the Toronto Industrial was made on condition that a suitable building for dairy produce be provided. The suitable building was not furnished, and the grant was withheld. Other business of minor importance was attended to.

**SECRETARY'S REPORT.**

Mr. Geo. Hatley, Brantford, presented the report of the finances, which showed a balance on hand of \$1,073.69. This is a trifle over the cash balance on hand one year ago.

**PRESIDENT'S ADDRESS.**

The president, Mr. R. M. Ballantyne, being ill his address was read by his father, Hon. Thos. Ballantyne, Stratford, Ont. The Association was congratulated on the fact that the last year of the century was the greatest yet for the producers of dairy products. The value of exports from Montreal alone exceeded that of any previous year by \$2,500,000. The amalgamation of this Association with that of the Cheese and Butter Makers was referred to as a wise action, since either Association worked along similar lines. The show of cheese and butter in connection with this convention was referred to as a valuable educator. The address concluded thus: "Let the 20th century methods be better than the 19th century methods, and let everyone that has to do with the handling of the milk and the manufacture of cheese and butter realize that they are handling the most delicate article of human food, and we will march on to greater victory."

**INSTRUCTORS' REPORTS.**

Jas. Morrison's territory contained 120 factories, but only 40 of them asked for instruction. These received from 1 to 8 visits each. Seven of the 40 factories had no Babcock testers. Fourteen patrons were found guilty of either watering or skimming milk. Four were fined, and the others let off with a warning and a reprimand. An increase in paying for milk according to quality was reported, as well as an improvement in the condition of factories. Fifteen factories used ice for the curing room, and two had sub-earth ducts. Many patrons still carry home whey in the milk cans. Many boxes of cheese were shipped out too green.

Mr. John Brodie, Mapleton, visited 25 of the 100 factories in his district in the south-western portion of Ontario. Just 2 of the 25 factories were without the testing machine. Thirty-four samples of milk were found to be tampered with. Dividing the factories into four classes, 7 were pronounced

1st class, 7 2nd class, 10 3rd class, and 1 unfit for cheesemaking. Many bad curing rooms were encountered. Two used ice for cooling and 4 had sub-earth ducts, all of which were successful. All the whey is returned in the milk cans.

Mr. George McDonald was asked by 12 factories only to give instruction. Four cases of tampering with milk were discovered; all the offenders were let off with a warning. An improvement in the condition of factories and curing rooms was reported.

Mr. Arch'd Smith, instructor for creameries and a small area of cheese factories, had six fines imposed for doctoring milk by watering or skimming. He reported that too much milk is being sent to the factories in poor condition. The returning of whey in the cans was condemned, and a cotton covering for the milk cans recommended. Many factories have defective drainage. The use of formalin and good ventilation were found to work well in preventing mold in the cheese. The successful ventilators consisted of two twenty-inch square box tubes extending through the ceiling five feet above the roof. The creameries visited were conducted on the cream-gathering plan.

Mr. J. N. Paget, Canboro, in discussing the foregoing reports, referred to the necessity of getting to the patrons with instruction in properly caring for and delivering first-class milk. Makers, too, were urged to improve, especially in cleanliness. It was regretted that so few factories had asked for visits from the instructors. Mr. Geo. H. Barr, Stratford, advised that all the instructors recommend the same method of making cheese, and that part of the money spent on instruction be devoted to instructing patrons. He advised strongly that makers keep their factories and themselves clean, and wear clean suits of washable clothes, which should be washed weekly. Hon. Thos. Ballantyne, who was the first man in Canada to recommend this system of instruction, spoke very strongly against the practice of returning whey in the milk cans. To emphasize his contention, he remarked that if city or town milkmen were to carry home sour whey in their milk cans, their customers would cease to patronize such men. He contended that it was as important to have clean milk for cheese as for direct consumption. He read a letter from an English dealer, showing that there was a strong preference in Britain for cheese made in districts where whey is not carried in the milk cans. Mr. C. P. Goodrich strongly recommended the use of the Babcock test in deciding the value of milk for cheesemaking. It encourages the production of rich milk and stops patrons from skimming and watering.

#### THE FARMER, THE DEALER, AND THE TRANSPORTER.

Hon. John Dryden, Minister of Agriculture for Ontario, delivered an eloquent and stirring address. He said that he was not a practical dairyman, but as an onlooker he was public-spirited enough to desire to see Canadian dairy products take first place in the markets of the world. The dairy industry was one which must be conducted by hundreds of people working separately. They could not all work together, but all should work to win the prize and to reach the same goal. To attain this end there were three important essentials: First, to organize; second, to instruct; and third, to co-operate. There were four classes concerned in the production and exportation of Canadian cheese. These were the farmer or the producer, the manufacturer, the dealer, and the transportation companies. The farmers should be the first to organize. The manufacturers were mostly young men, and should be thoroughly qualified for their business. To attain this end, dairy schools had been established at Guelph, Kingston and Strathroy. The dealers were in business for the dollars that were in it, yet they are anxious to get a good article because they could make more money on it. The transportation companies were accounted the hardest-hearted of all. These people did not care for the quality; but the quantity was what they were after, how many tons, etc. It was, however, quite possible, the speaker said, to interest them in the welfare of the country, as he had found them, upon different occasions he had visited them, ready to respond and reasonable in their demands. Moreover, we certainly needed their assistance. All these people should co-operate to attain the best results possible. Each must do his part, but they would not deny that the man who lives on the farm was the one who held the key to success. They could not do without him, and if he gave them bad material they could not make a success of the industry. The man on the farm might not look much, but he was no fool. It was human nature everywhere to resent coercion. And yet the farmer, like everybody else, liked the extra dollar, and if he could be shown how to earn it, he would soon try to do so. What was wanted was fair dealing and honest service. A person's reputation could easily be lost in a day, and it was just the same so far as the country was concerned. Canada had made an enviable reputation for her cheese, but she could lose it in a year. The man who adulterated milk saved a dollar for the time being, but would lose one hundred dollars later on. The speaker appealed, in conclusion, to his audience to act as patriots and to join in improving their reputation for the manufacture of first-class cheese. Their motto, he said, should be "What we have we'll hold."

#### CARE OF MILK FOR CHEESEMAKING.

J. McHoover recognized the importance of good milk for making good cheese. This cannot be obtained from a cow that is not thoroughly healthy. Since milk contains 87 per cent. of water, only pure, wholesome water should be consumed by the cows. Cows must not be allowed to drink water from a stagnant pool. Turnips should not be fed to cows, nor should they get any other food that imparts a taint to the milk. All foul weeds should be removed from a cow pasture. Milk with dry hands, after brushing the udder. Aerate milk as soon as milked, in pure atmosphere, and cool as low as 75 degrees. A uniform quality of milk is all-important. Some patrons send nothing but first-class milk of uniform quality, and others occasionally have their milk sent back. In the former case the maker has no difficulty to make good cheese every day, whereas the careless patron causes no end of trouble.

W. W. Waddell led in the discussion following. He remarked that frequently bad flavor can be traced to unhealthy cows, with perhaps injured or diseased udders. He considered it very unsafe to recommend that turnip flavor can be satisfactorily eliminated. Milk should be cooled to 70 degrees.

Prof. Dean recommended for cooling milk a large tank, in which the milk cans are set. Water is allowed to run in and out continuously. He considers it safe to cool as low as 60 degrees. If all milk is cooled to this temperature, the maker can control the milk by the use of a properly-prepared starter. Much trouble is caused by patrons sending milk from newly-calved cows. As a rule, milk is not fit for cheesemaking until the 9th or 10th day after calving. To remove food flavors, aeration is the remedy. When the cows are given a new field of rank feed, such as clover, they should be turned in only a short period at first. Feeding apples decreases the milk flow, and gives bad flavor in milk, also in cheese made from it.

#### FERMENTS FOR CHEESEMAKING.

Mr. Moses Knechtel told how he prepares a first-class starter for ripening milk for cheesemaking. He explained that the object of a starter was to cause the development of lactic acid, and give it a precedence over other fermentations, thus controlling the flavor of the cheese. To prepare a starter or ferment, use a double can—one inside the other. Select, for example, 100 pounds of good flavored milk; to this add from 30 to 35 pounds of pure water. Heat to 160 degrees, and retain at that temperature for 30 minutes, stirring occasionally. Cool down to 70 degrees, and add from 6 to 7 per cent. of old starter from the previous day. Set it away in a clean room, and hold at 70 degrees till next morning. Before adding starter to a vat of milk, skim one inch from the surface, and break the thickened milk up fine.

Mr. A. T. Bell, Tavistock, led the discussion that followed. By exercising great care, he has been able to perpetuate the same ferment for over a year. He considers a proper ferment a blessing to the cheesemaker when wisely used. It is not wise to use a starter in milk that is already sufficiently ripe for setting, except, perhaps, to overcome a defective flavor. Prof. Dean recommended diluting the starter to be used in a vat of milk with a quantity of milk from the vat, and letting it stand for a short time before pouring it into the vat of milk. In this way the ferment acts more satisfactorily.

#### MILVERTON ILLUSTRATION FACTORY.

Mr. Arch'd Smith, who had charge of the station, reviewed his season's work. The factory was put in good condition at the beginning of the season. Among the experiments conducted were those with milk containing colostrum, or first milk, and with washing curds. Colostrum was found to be injurious to cheesemaking in every case. Washing curds was found advantageous in producing a larger quantity of cheese by preventing loss of fat from the curd, and in giving a better and more uniform quality of cheese. Washing firms the curd and hastens it for salting. Twelve pails of water at 97 degrees were used on the curd from 6,000 lbs. of milk. Have curds at 94 degrees.

A test between careful and rough handling of curd showed the former to save 2½ pounds of cheese from 1,000 pounds of milk, and to make cheese of better quality. The effects of returning whey in cans was tested. Pasteurized milk was seeded with sour whey and the cheese made from it gradually deteriorated after curing commenced. Cheese was made from pasteurized milk—one lot set over night in a hogpen and another lot near a dirty cow stable. The cheese scored well when new, but it gradually deteriorated in flavor until when 8 weeks old the hogpen-flavored cheese scored 83 and the cow-stable-milk-flavored 79½ points out of 100.

#### SEPARATING MILK.

Mr. Fred. Dean read a paper on the running of cream separators and the best methods of preparing milk for separating. The right temperature for separating varies with the season of year and other conditions, but from 90 to 100 degrees in winter may be considered satisfactory. Set separator on solid foundation. Have separator that has a reputation, and keep it in good working order. Take quite 15 minutes to get the speed up. In his creamery practice Mr. Dean ripens cream at 75 degrees and cools it down quickly. Add starter when down to 75 degrees. In winter, use 10% of starter made from pasteurized skim milk. For

heating milk for separating he uses a tempering vat of galvanized iron, preferring it to tin, even with wooden jacket. Tinned copper was recommended by Mr. J. A. Ruddick, who also recommended using galvanized iron pipes, as they are much more satisfactory and lasting. Milk is not heated for separator in summer. Churn at 52 to 54 degrees in winter cream that contains 30 per cent. fat. Wash butter with water at 58 degrees. It is not policy to have excess of water in butter, as it injures its keeping quality.

#### CANADIAN DAIRYMAN.

Mr. D. Derbyshire dwelt upon the outstanding defects of the dairy industry in Canada. The wisdom of remedying every defect was emphasized. The old factories, the poor curing rooms, the poor unsanitary stable, the poor cow, and all that makes for defect in the struggle of competition, were referred to. We need education. Our dairy schools, that give free tuition and training, can promote our business if our people will go up and possess the valuable learning there offered. We can produce first-class cheese and lots of it, as we have proved in our competition. But the facts brought out this year prove that far too much poor cheese is being made and cannot be better so long as poor factories and curing rooms are used. The better boxing was urged for our cheese. We need the best man, so well educated that he may be able to advise patrons how to produce the maximum milk of best quality at the most economical cost. Upon all this the future reputation and success of Canadian dairying depends. A strong plea for paying best men suitably was brought forward.

#### KNOWLEDGE IN BUTTERMILKING.

Miss Laura Rose, of Guelph Dairy School, addressed the convention on the subject of practice and knowledge as applied to buttermaking. We must accept every fact, no matter how it may conflict with our dearest notions. Knowledge will add pleasure to our work, and helps materially. It enables us to do things better, more gracefully, and secure better results. Knowledge enables us to give reasons for our actions. Practice alone cannot do this. Buttermaking is no longer the guesswork it used to be. It is a serious fact that young educated men are taking the places of men who have grown old in the business. Perplexities in buttermaking arise out of lack of knowledge concerning the commodities concerned in buttermaking. Science has done more for dairying during the last few years than for any other industry. The Babcock tester, the separator, the microscope, have revolutionized the industry. Experience counts for nothing except we have our eyes open seeing the cause of successes and defeats. The practical man can detect a fault, but it is only the educated practical man that can point out the cause and provide a remedy. People who have practical knowledge only follow their ancestor's methods, without any introduction of modern ideas.

#### COW TYPES.

Mr. John Gould talked on this subject, aided by charts bearing illustrations of beef and dairy types. We start the century with a wealth of invention, facility and knowledge. Still, nine-tenths of us milk no better cows than our grandfathers milked. The average cow supplying milk to 1,200 creameries in W. States gives only 3,200 pounds of milk in a year. Her food costs \$35. At 90 cents per cwt. for milk, the dairyman owning this cow gives \$90 per year for the privilege of associating with her. We understand the types of all other animals of the farm better than we do the cow. The lymphatic temperament was set over against the nervous active temperament in cattle, horses, sheep, hens and dogs. The conformation of the dairy cow was likened to the Thoroughbred horse. She has no dull, flat, sleepy eye. An animal that excels others in a class possesses a form suitable for that specific purpose. The beef cow was termed a miser, since she hoards up all her product under her skin, and does not give it up till she is killed. A good dairy cow should have wide forehead, full bright eye, dishing face with muzzle, thin neck, sloping shoulder blade, sharp back, giving long, low, wide spring of rib. She should have a slim, incurving thigh and thin leg. Depth of body is necessary to hold food. Width between the front legs gives large heart-girth and good lung room. We must have special cows for special purposes. A cow should know what to do with her food. A combination cow won't do. A pound of beef costs the same as a pound of butter—one worth twenty cents, the other four cents. We can't sell beef without killing the cow. Combination cow boards with her owner six months of the year.

#### CURING CHEESE.

Mr. T. E. Nimmo, of Ripley, discussed this subject. This section of cheesemaking, he said, was generally the most neglected. It was just as essential to have cheese properly cured as to be careful in the manufacture. The greatest difficulty was to know how to cure cheese under all conditions. To do this the cheesemaker should have some idea how long the cheese were to be held in the factory. Another point was to be acquainted with regard to the particular make of the article on the shelves, as on this depended whether it should be cured fast or slow. Some days' make of cheese might be dry and stiff, while others might show considerable moisture. The latter would cure faster than the dry cheese. Having these necessary conditions under control, there were four principal

points to be considered, namely, temperature, air, moisture, and light. The first was the most important. The temperature should always be kept even, at about sixty-five to seventy degrees for a short time, then gradually lowered to sixty degrees, or even to fifty degrees. Spring cheese should be kept at higher temperature, as they required to be cured faster. The curing room should be thoroughly ventilated, and too much moisture must not be allowed. It should also be light, which combined conditions prevent mold. The sun should not be allowed to shine directly on the cheese. Venetian blinds, awnings, or frosting the panes, will keep out direct rays of the sun. The shelves should frequently be scraped, scoured and scalded. The cheese should be placed on the shelves uniformly, and turned every morning without bruising or breaking the corners. The dates of making and the number of vat should be plainly stencilled on each cheese. When mold appears rub it off.

#### SUB-EARTH DUCTS.

Mr. J. N. Paget, Canboro, who has had considerable experience with the sub-earth duct for curing rooms, pronounced them satisfactory. During the past summer the temperature of his curing room stood usually at 65 and never ran over 72, except for a few hours on two occasions of extreme heat without motion of air. At those times the room heated up to 78 degrees, but the cheese did not suffer in consequence. Mr. Paget's curing room has well-insulated walls, having double air spaces formed with lumber and building paper. The duct is 150 feet long and consists of four rows of 5-inch tile laid two on two about 6 feet underground. At the outer end it has a stand pipe about 40 feet high, built of wood, on top of which is a cowl  $3\frac{1}{2}$  feet across the face and a tail so arranged on a pivot that it always turns to the breeze. The duct enters the curing room through the floor. There is a ventilator through the roof of the room to allow the escape of warm air. Mr. Paget found this system of ventilation to prevent mold in the cheese, since the air comes in dry. He would recommend the duct 200 feet long and consisting of larger than 5-inch tile. It is very important that water be not allowed to accumulate in the duct, else the cold air coming in will be laden with moisture.

During the discussion that followed, Mr. E. D. Tillson, of Tilsonburg, remarked that he had adopted the sub-earth duct system of ventilating his creamery 30 years ago. He also uses it to conduct fresh air into his cow stable and hogpen. In order to get a draft into the creamery through the duct on calm days, Mr. Tillson entered the outlet ventilating pipe into the smoke pipe from engine room. This caused a constant current of air out of the creamery, and therefore a continuous inflow through the duct, whether there is a breeze outside or not.

#### AGRICULTURE IN NEW ZEALAND.

Mr. J. A. Ruddick considers New Zealand attracts more attention for its size than any other country in the world. It has three islands 1,200 miles from Australia. Its area is 104,471 square miles. Its population, 750,000 whites and 40,000 natives. The climate resembles that of British Columbia. Its temperature varies from 31 to 70 degrees Fahr. Seeding extends over a long period. The foliage remains on the trees the year round. The farmers are sheep-raisers, cattle-raisers, dairymen, etc. Sheep-raising is the main industry. Wool is their largest export, along with frozen mutton. Butter goes to England in the same cold chambers with the mutton; \$3,280,000 worth of butter and \$991,000 worth of cheese was exported in the year ending March 31st, 1899. Butter is chiefly made in co-operative factories. Some dairy farms, however, have as high as 500 cows. There are 125 butter factories and 65 cheese factories. These factories are very much larger than ours. As much as seven tons of butter is made in single factories daily during certain periods. Many of the butter factories have skimming stations to supply them.

New Zealand is a favorable country for cheese-making, in having a favorable climate and succulent pasture. The tendency is not along the line of cheesemaking, but rather inclining to buttermaking along the lines of big central factories with skimming stations. The herds are larger than here, fifty cows being considered a small one. The cows are allowed to shift for themselves, no winter feed being provided. The dairymen do nothing but milk the cows and take it to the factory. Patrons receive from 60 to 70 cents per cwt. for milk for the creamery, and 70 cents to 80 cents per cwt. for the cheese factory. All milk is paid for by the test system. All the butter is frozen before being shipped, and the Government furnishes the freezing plant. Inspectors are also paid by the Government. Every churning of butter and every lot of cheese is graded 1, 2 or 3 by an inspector before being exported. The law prohibits exporting ungraded goods.

Mr. Ruddick also repeated here his address on defects in Canadian cheese, given at the Eastern Dairymen's Convention and reported in Jan. 15th issue of the FARMER'S ADVOCATE.

#### BACTERIOLOGY IN RELATION TO CLEANLINESS.

Dr. W. T. Cornell, Queen's University, Kingston, repeated his paper given at Smith's Falls the previous week on this subject. It was followed by a keen discussion, led by Hon. Thos. Ballantyne,

who dilated on the importance of this subject. He claimed that if patrons and makers understood that uncleanliness seeds milk with harmful bacteria, more care would be taken to exclude all filth and decomposing or fermenting matter. Sour whey is a frequent cause of trouble, producing a "bucky" flavor in cured cheese. The system of returning whey from factories to the farms in the milk cans was strongly condemned, and pronounced a serious source of deterioration in cheese. If only sweet whey were taken home, and it were emptied and the cans thoroughly washed and scalded at once, it would do no harm, but more often than otherwise the whey is sour before it leaves the factory, it stands for hours in the cans on the milk stand, and the cans are partially washed and never scalded. The result is, the milk is seeded with bad fermentation before it arrives at the factory. In reply to questions put to Dr. Cornell, it was pointed out that food or water taints in cow's milk do not increase after the milk is drawn from the cow, as they are not of bacterial origin. On the other hand, all flavors that develop as the cheese or butter increases in age are caused by the presence of bacteria, that get into the milk from an external source. Dr. Cornell advised patrons who do not consider it necessary to thoroughly cleanse the cow's udder before commencing to milk, to heat a small quantity of milk up to 160 degrees so as to kill all existing germ life, then allow it to cool down to 90, and add a piece of cow dung the size of a pea. Keep this warm in a corked bottle for 12 hours, and then smell the milk. This will teach the most sceptical.

#### FEEDING DAIRY COWS.

Mr. C. P. Goodrich read and talked upon feeding and caring for dairy cows for profit in a very convincing manner. The speaker laid it down as a rule that the poorer we feed our cows the greater will be the cost of a pound of milk, a pound of butter or a pound of cheese. A cow, in order to maintain her body, demands a certain quantity of food. This she will take out of her ration before putting any into the milk pail. Up to a certain point a cow can convert the food she gets above the food of support into milk or flesh. It is not well to force a cow beyond a reasonable limit. This was proved by the conduct of the cows tested at the World's Fair at Chicago, as, with one or two exceptions, none of them ever did much afterwards. The year after that test, Merry Maiden gave only 5,000 pounds of milk, the following year 7,000, and by the third year she had recovered so that she gave 10,000 pounds of milk.

In feeding cows they require a certain amount of rough food to encourage mastication and aid digestion, but concentrated food is also essential, from which the solids of the milk are produced. She should approach every meal with a keen appetite and should consume all that is given her. It should be noticed that she digests her food well and turns it to good account. Food should be varied, palatable, easily-digested, and contain the elements that go to make up milk and waste in the animal body. Food lacking any of these characteristics cannot give best results. Cows that incline to fatten while milking should receive less corn and more bran, oil cake and other nitrogenous food than one that turns her food into milk without gaining in weight. The character of the grain ration should depend somewhat on the class of coarse fodder given. When clover hay is being fed, corn meal will serve well as grain; but with corn silage or timothy hay, bran, oil cake or peas should form the grain. For profit it is necessary to provide succulent feed in winter as well as in summer. Silage and soiling crops were recommended. Mr. Goodrich feeds his cows three times a day on warm fodder and twice on grain, all in practically only three meals. He sees that they are always comfortable, knowing they cannot do their best work in any other condition. He contends that a man must love his cows in order to dairy profitably. Water for cows should never be colder than 20 to 30 degrees above freezing, and it is better given in the stable as the cow desires it. The folly of allowing cows to remain out in cold fall rains was demonstrated by referring to his own herd managed by his son. The day was drizzly and bleak, but not really wet—just such weather as most people would hesitate between housing and not housing. Up till the day they were left out, the herd gave 28 pounds of cream daily; but the day following their yield was only 25 pounds of cream, and they could not be again raised to the 28 during that season even with the best of care.

Cows should be milked so as to get all their milk in the quickest manner. No rule can be laid down for all cows. It is well to make it a rule to always commence to milk at the same end of the row of cows, and always milk them in the same order. Mr. Goodrich has noticed in his own herd that when this is done, the cow standing next the one he is milking will commence to drop her milk just before he goes to her. She expects to be milked and prepares for it. Were she passed and not milked for some time, she would actually give less milk, and of a poorer quality. All cows that can conveniently be dried, should be allowed from six to eight weeks' rest. Even persistent milkers can be dried if carefully watched a few weeks before calving. She invariably tends to slacken off then, and if encouraged to quit, her drying is an easy matter, but if she is milked on for a time past that period, her drying is not so easy. The milk of a cow close to the calving is not fit for human food.

#### SILOS AND ENSILAGE.

Mr. John Gould addressed the convention on this subject along much the same lines as the FARMER'S ADVOCATE has preached for several years. He claimed that in the State of Ohio, about his home, all prejudice against silage has disappeared, but it required the making of first-class silage to do that. Even condensed-milk factories, and firms supplying certified milk, allowed ensilage to be fed to cows producing the raw material. Good ensilage is produced from corn matured to the glazing stage, with some of the grains commencing to dent. If corn stands a week longer than this, six per cent. of its food value is lost, and that amount of its nutritive material will have changed to indigestible fiber. Corn in the shock loses 24 per cent. of its digestible matter, whereas well-cured ensilage has lost only 5 per cent. of the nutrition contained in the corn crop just cut from the field.

Mr. Gould predicted that in ten years the common stave silo would no more be seen in the land. To make stave silos durable and air-tight, they should be painted outside and be lined with thin lumber bent around and painted. A silo should be filled expeditiously in order to get sweet silage.

#### HANDLING TAINTED CURDS.

W. A. Bothwell, Hickson, Ont., urged in a paper on the subject that as far as possible it is best to avoid having tainted curds to deal with. It is a fact, however, that taints cannot always be detected in the milk until it has been heated up. Then it must be dealt with in the best known method. When this is done, usually a passable but not a first-class cheese can be made. When taints are found to exist in milk set for cheesemaking, most of the whey should be run off as soon as the acid commences to develop. Run off the remainder of the whey early, and wash the curd at once with pure water at 96 degrees Fahr. This gets rid of the sour whey. Then pile the curd high to save loss. Grind early, and again wash with water at 96 if in a warm room, or at 98 if in a cool room or in cold weather. Now prevent matting by keeping the curd well stirred. Mr. Arch. Smith found a slight gain in cheese from washed curds, by reason of the curds firming. Prof. Dean observed in his experiments a slight loss by washing, but the difference in yield between washed and unwashed curds is very slight.

#### THE DAIRY EXHIBIT.

There were forty exhibitors of cheese and butter, making in all 100 entries: 24 of August cheese, 33 of October cheese, and 43 of creamery butter. The judges were: for cheese, I. W. Steinhoff, and for butter, Prof. H. H. Dean. At the closing session of the convention, one of the first-prize cheeses was donated to the Association by Mr. Bothwell and distributed in liberal pieces to those present. At this session, also, the judges submitted their reports, which dealt with the excellencies and faults of the exhibits.

The prizewinners were as follows: For export butter in 56-pound boxes—1st, J. R. A. Laing, Avonbank; 2nd, Thos. Malcolm, Kinlough; 3rd, E. M. Johnston, Innerkip.

Butter in pound prints—1st, Thos. Malcolm, Kinlough; 2nd, E. M. Johnston, Innerkip; 3rd, S. P. Brown, Burman.

Cheese (August)—1st, W. A. Bothwell, Hickson; 2nd, W. Hamilton, Ethel; 3rd, Miss M. Morrison, Newry.

Cheese (October)—1st, A. F. Clark, Poole; 2nd, J. A. McIntyre, Palmerston; 3rd, T. O'Flynn, Tavistock.

#### RESOLUTIONS.

Moved by Robt. Johnston, seconded by J. N. Paget, and resolved.—That the manufacturers of cheese and butter in Western Ontario request their board of directors to represent to the several transportation companies, through their chief officers: 1st. The extent to which they are handicapped in their business as manufacturers of cheese and butter by the extreme rates charged by the railway companies from the outlying points in the districts of which Ingersoll, London, Woodstock, Listowel and Brantford are the market centers. 2nd. That the rates charged from some of these outlying points to the seaboard are exorbitant. 3rd. That in the opinion of this Association the rates should be somewhat in proportion to the distance the freight is carried, the rates from Chicago to the seaboard being in many cases as low as from places in the above-mentioned districts. 4th. That the cars provided for transportation of cheese and butter from factories to the seaboard are often so very dirty as to be quite unfit to carry either cheese or butter in. 5th. That the supply of double-lined and ventilated cars is quite insufficient for the requirements of the dairy industry. And to request such transportation companies to give their serious consideration to these matters with a view to endeavoring to give both better rates of freight and a more ample supply of cars suitable for the purposes of carrying cheese and butter.

Moved by A. T. Bell and seconded by I. W. Steinhoff, and resolved.—That this Association is of the opinion that the appointment by the Department of Agriculture of Ontario of a chemist should be made for the purpose of conducting chemical investigations by which many of the problems connected with the manufacture of cheese and butter can be solved, and also that steps should be taken to provide for a close co-operation between the chemical and bacteriological investigators and the men practically engaged in the manufacture of

cheese and butter, and that a copy of this resolution be transmitted to the Minister of Agriculture of Ontario.

#### OFFICERS ELECTED.

Hon. President, Hon. Thos. Ballantyne, Stratford; Hon. Vice-President, John Prain, Harriston; President, R. M. Ballantyne, Stratford; First Vice-President, Aaron Wenger, Ayton; Second Vice-President, James Connolly, Porter Hill; Third Vice-President, J. N. Paget, Canboro. Directors—W. T. Petrie, Holstein; Harold Eagle, Attercliffe Station; Robt. Johnston, Bright; Geo. H. Barr, Sebringville; A. F. McLaren, M. P., Stratford; John Brodie, Mapleton; Geo. E. Goodhand, Milverton. Sec.-Treas., George Hatley, Brantford. Auditors—J. A. Nelles, London, and J. C. Heglar, Ingersoll. Representatives: To the Industrial Exhibition, Toronto—R. M. Ballantyne and Harold Eagle; Western Fair, London—T. B. Millar, London.

#### Dairymen's Methods.

1st.—Kindly outline your method of improving your milking herd, having reference to breeding, selection and development of heifers; also testing cows and discarding the unprofitable ones?

2nd.—How do you feed and care for your milking cows? Kindly refer to kinds of feed, how prepared, how and when fed, method of stabling, watering, exercise, cleanliness, etc., which you find give you most satisfactory returns? (Health of cow included.)

3rd.—What do you find to be the best use to make of skim milk? In case of calves and pigs, respectively, should it be fed sweet, sour, warm or cold, alone or mixed with other substances?

4th.—What have you found the best substitute for the cream removed from the milk and the best method of feeding it?

5th.—How long should dairy cows go dry, and what do you find the best season to have them come in?

#### MANAGEMENT OF AN OXFORD DAIRY HERD.

1st.—My cows are all either Shorthorn or Holstein grades, but I prefer the Shorthorns. We raise our own heifers, seldom buying a cow. We raise from our best cows, believing in the theory that like produces like. We feed a little meal and roots along with coarse feed during the winter season, sufficient to keep them growing. We have them come in at from two to three years old. Regarding testing, the only test we use is the scales.

2nd.—Our cows run in the pasture during the summer months. As soon as the pastures begin to fail, we feed corn at night, and about the first of October feed white turnips. As soon as the nights begin to be frosty, stable them, letting them out in the pasture during the day, until it freezes up. We then keep them in the stable all the time. Let them out to water, remaining out fifteen or twenty minutes. Always let them have fresh pumped water. We let the water out of the trough as soon as the cows are done drinking. By this means, they do not get ice water to chill them. Our stables are the ordinary bank barns, with root cellars connected. We have no silo, but grow enough corn to last till February usually. We thresh early, and as soon as the corn is dry enough, we fill our barns, and then use what is left in the field first. We grow mangels, sugar beets, and turnips. We feed corn morning and night as long as it lasts; after that, hay. If roots are plentiful, we feed them twice a day; if not, only once, always immediately after milking. If bran is not over \$12 per ton, we feed considerable mixed with other chop. We grind all our grain at the barn, hiring an engine and grinder to do it, and find it more convenient and cheaper than taking away to the mill. We save all our wheat chaff and feed it mixed with bran or chop, and find it makes good feed. We feed oat straw at noon, and if any is left in the manger at night we use it for bedding. Always clean out the stables twice a day, and never feed after supper during the winter, and milk as near the same time as possible every day. Treat the cows kindly, each milker milking the same cows all the time.

3rd.—We feed our skim milk principally to young pigs, along with shorts and other feed. For calves, it should in all cases be fed sweet.

4th.—We use oil cake for our calves, along with the milk.

5th.—We let them run dry two months, and have them come in during March, April and May. We do not like to have them in June or July, as there is risk of milk fever.

To sum up: feed all they will eat clean, at the same time every day; let them have plenty of salt before them always; give them plenty of pure water; treat them kindly, and you will receive a fair reward for your labor. W. G.

Oxford Co., Ont., Jan. 10th, 1901.

#### SEPARATED MILK REQUIRES TO BE CAREFULLY FED TO CALVES.

1. The method to be pursued in forming a herd depends much on the amount of available pasture land. If limited, I would buy the best milking cows to be got, even at a high price. If the area is large I would raise them all, feeding liberally the first two winters, having them to come in at about thirty months old, carefully handling their teats and udders at least two months before calving. If this is practiced a little whenever near them, they will never be any trouble to milk. With regard to breed, I would prefer a selected herd of grade Durhams to any other when both cheese and butter is made.

2. Feeding.—In winter feeding we cut most of the hay and straw, mixing with pulped turnips or mangolds enough for two or three days at once,

feeding with oatmeal and bran. We prefer turnips to mangolds for the yield of milk, and fed in this way they do not affect the quality. The cows are fed three times a day with this, and the mangers filled with hay or straw at night. They are watered in the stable in the coldest weather. For the summer we turn out to pasture about the middle of May, feeding the cows bran and cut hay at night as soon as the grass begins to fail, then corn in its season. For fall feeding, nothing can surpass green oats sown on the wheat stubble directly after harvest. We have not yet used ensilage, but know it to be of great benefit in the dry part of summer.

3. Skim milk from the separators is of more use to pigs than calves, as considerable caution must be exercised in feeding it to the latter. If fed to calves, it must be sweet and warm, and about a third part of new milk added to it. If it is at all sour and fed cold, they are greatly injured by it. The sour milk can be fed to pigs with benefit if mixed with meal or boiled roots.

4. As a substitute for cream in skim milk, ground oats with a little flaxseed meal, fed dry in the manger, seems the best that we have tried. If mixed in the milk, the calves do not chew it and it passes at once into the last stomach, almost always causing indigestion.

5. A cow should be completely dry for at least two months before calving. Except in a few cases, all milk taken after this will be more than lost in the next year's product. With regard to the time of calving, I would say that where cheese is made in the summer and butter in the winter at the factories, say in a herd of fifteen cows, have ten to come in about March or April and the other five about December. The calves of these last will get a good size before spring and go on the pasture in the summer, and will always be less trouble to raise than in hot weather. JOHN H. MITCHELL.

Oxford Co., Ont.

#### Dairying Up to Date—Breeding.

BY GEORGE RICE.

Although dairying is one of our main industries—and nobody doubts that the business is here to stay—yet, if you come to think of it, it is very strange that there is so much apathy in regard to growing the "raw material"—that is, the dairy cow. Every pound of milk, butter and cheese must come from the cow, and yet very little attention has been paid to her development in this Canada of ours. The majority still plod along, satisfied to follow in the same old rut. Still, there are many instances of herds that have been brought to a high state of production. But this only emphasizes the need for more general effort to breed, develop and feed the dairy cow aright. "What man has done, man can do." There is no "royal road to success" in dairying. But a sure reward awaits all who apply themselves aright. There is no business on earth that calls for and responds to thorough, painstaking management like dairying. Look about and see the difference in product from cows developed to great production, and compare these with the "average cow." There are still too many people who think it does not pay to feed a cow much but straw through the winter. No doubt this is a step up, because our fathers used to tell us how they brought their cattle "through" the winter mostly on brouse.

But "the world moves," and dairymen must "get a move on." Don't pay to feed grain to a cow, eh? Well, fancy a man trying to fat a steer on straw; of course it can't be done. Now, if it pays to feed a steer for a gain of two pounds a day, worth 5 cts. per pound, won't it pay to feed a cow that produces two pounds of butter, worth 20 cts. a pound? Perhaps your cows won't produce that; certainly not on straw alone. I feed all my straw, but that is not all I feed. It is not, however, a question of feed altogether. Feed will not make all cows produce two pounds of butter-fat a day, let alone three pounds a day, as we sometimes get. It is a question of breed, care, feed, from start to finish. The two-pounds-of-butter-fat-a-day cow can be produced with a reasonable degree of certainty. She is not a "sport." There are whole herds capable of that. Possibly when we grow in knowledge we shall be able to breed the three-pounds-of-butter-fat-a-day cow with more regularity. But the two-pounds-a-day cow calls for the exercise not of skill so much as common sense, all the way through. As a chain is just as strong as its weakest link, so will our success be in proportion to the closeness with which we follow certain fundamental principles in breeding and developing. It is really not necessary that one should purchase pure-bred cows to attain to a high-class herd. The two-pounds-of-butter-a-day cow must be bred, and can be bred in a few years from grade cows. The first step is, of course, to get a dairy-bred bull in the true sense of the word. Now, this does not mean that one must buy a bull from a dam who is a record breaker. Such a bull would be all right, but too expensive to breed on grades, as such bulls are wanted at extra prices to breed on pure-bred herds. Neither does it mean that one should buy a bull to use because he is registered, or even traces to some great-granddam, whose blood in him is bound to be weak in any case, and perhaps all good may have been starved out. The length of the pedigree is important, but the records of the nearest dams is of first importance. If the price for a bull from a cow with one of the highest records is beyond you, don't be discouraged. For instance, if you buy a bull whose

dam has a record of from 15 to 18 pounds butter a week, a breeder with such cows will likely have at the head of his herd a bull of superior breeding; and you get in your animal half his blood, so that your animal should be even better than his dam. The day will soon be here when herds of registered dairy stock will be tested officially. Some breeds are doing so now, and others must follow if they would "keep up with the procession." Then will dairymen be able to tell exactly what they are breeding from, and whether breeding pure breeds or grades, will breed with more intelligence. "The bull is half the herd," but remember, *only half*. In breeding from the best cows one has, there is still more required. The physician's advice to mothers is, be cheerful if you would have your children so. Similarly, if we would have the best result from the bovine mothers, we must keep them in proper condition, and the same may also be said of the bull. This may appear to be going deeper than most think necessary, but it seems to me all-important. This is the rock upon which so many sink their craft in starting out as breeders, and become discouraged. Before I tell how to raise a dairy cow, I want to know that the calf is worth raising. No system of education can make a scholar of a degenerate. No system of feeding can make a great cow from a calf born into this world with a lack of vitality—thrif. But with a calf from a dam in full vigor, and sire likewise, then as surely as like follows like, we have a calf worth raising. In fact, the calf is more than half raised. It is no trouble whatever to raise a calf born with full vitality. Whilst this would be true of breeding any kind of stock, it is of first importance in breeding the dairy cow, as so much depends upon her nervous energy. That is one of the reasons a cow cannot be satisfactorily judged from her form, as her performance will depend upon her energy, among other things. In fact, when we begin to study the dairy cow, we have a subject of absorbing interest. It is true that calves from same dam, and even from same sire and dam, have not proved of equal merit, and it is equally true that cows have not given as much milk some years as others, and if you but study the matter, you will find that the calf preceding the largest milk yield was in turn the better performer. I could give several instances, but lack of space forbids. It is a question of vital importance. It is a very simple matter to rear a properly-bred dairy calf. Keep it growing every day until two years old. I like to give new milk for four weeks, half whole and half sweet skim milk for two weeks more, then all skim milk, being very careful not to give too much the first two or three months. Some linseed meal may be put in the milk, but even that is not absolutely necessary. Give a handful of wheat bran to the calf at a month old, and gradually increase, with a little fresh hay. At two months old give a few whole oats with the bran. Feed so the calf will never leave anything. When a calf is three or four months old, and has been judiciously fed, it will be so vigorous that it can handle more skim milk. And if there is plenty of it, it can be increased gradually up to 30 or 35 pounds a day at eight months old; then they grow. Keep the calf thriving rather than fat. We can't develop thriftiness on a starvation ration, nor build and develop good digestive organs by alternate stuffing and starving.

#### Important Points in Cheesemaking.

(SPECIALLY REPORTED FOR THE FARMER'S ADVOCATE.)

The Wisconsin cheesemakers were in session January 23rd to 25th, inclusive, the occasion being the cheesemaking contests and convention. Addresses were given by Prof. Ruddick, Ottawa, Canada, Assistant Chief of Dairy Division; R. A. Pearson, of Washington, D.C., and others. Prof. S. M. Babcock gave an address on "The Influence of Low Temperature in Cheese Curing," and showed cheese cured below 40 degrees F. and some cured below the freezing point, in the first case taking eight months to cure, and in the latter, eighteen months. This fact is destined to have an important bearing on the cheese industry. The cheese exhibited as made under such conditions was of good quality. Prof. Farrington's paper demonstrated a source of error in the turbine testers, due to too high a temperature, the readings of cream and whole milk tested being too high, for testing which a temperature of 140 degrees F. is high enough. For skim-milk testing, the higher temperature is advantageous, giving a more accurate test. In order to overcome the objection to the turbine holes, slides are now put in them by the manufacturers. A cheesemaker attending the convention stated that he overcame the difficulty by the steam through the exhaust of the turbine. In the cheesemaking competition, Canada again scored, R. A. Murray, of Brookside, Ont., winning the gold medal, with a score of 99. Mr. Murray is a graduate of the dairy department of the Ontario Agricultural College, Guelph. Second prize, silver medal (score 97), went to Wm. Nesbit, who learned cheesemaking at Ingersoll, Ont. These men won in strong competition, which numbered thirty-one contestants. Madison, Wis., Jan. 25, 1901.

Mr. Robt. M. Ballantyne, of Stratford, Ont., recently re-elected president of the Western Ontario Dairy Association, is removing to Montreal where he has accepted the position of Canadian partner of the firm of Lovell & Christmas, London, England, one of the largest wholesale dealers in dairy produce in the world. On the occasion of his departure he was tendered a complimentary banquet by the leading citizens and business men of the city.

Admirers of the "noble animal," the horse, have no cause for complaint on the score of lack of literature relating to the object of their admiration. We have it on the authority of Sir Walter Gilbey—who is himself no mean contributor to equine literature—that up to the year 1886 over 4,000 books relating to the horse had been written, and since then the number had been added to at the rate of two per month.

## GARDEN AND ORCHARD.

## A Summer's Gardening in Nova Scotia.

For the benefit of the readers of the FARMER'S ADVOCATE who look at gardening, even for home use, as a bore and uninteresting, on account of the tedious labor involved, I give an account of my experience in a part of the Dominion usually regarded as a very favorable place to horticulture or general home gardening, namely, the south-east coast of Nova Scotia, in the suburbs of the City of Halifax, hoping that it will encourage those living in more favored portions of our Dominion.

The piece of land, consisting of six city building lots, or half an acre, was broken up in the spring of 1897, out of pasture that had not been plowed for thirty years, but the fertility of which was kept up by copious applications of stable manure as top-dressing every year. The soil was at first of a brown, turfy nature, but by three years' working has become a dark loam, rather heavy and full of gravel, but seems to be well adapted for the purpose it is used for. The first year, that of 1898, but a third was planted, but my success encouraged me, so that now it is all in cultivation. I may add that only my spare time and evenings are spent in gardening, so that though the results have been most satisfactory, they might have been more if I had had more time at certain stages of growth. The following methods of planting, weeding, etc., I have found to be the best for me, as I have tried different methods before without much success: I lay off the piece I intend planting in small roots, such as carrots, parsnips, beets, salsify, onions and White Early turnips, in long beds about 4 feet wide, with a path a foot wide between. I sow the seed usually in four rows 1 foot apart, so that after they start growing I can keep the weeds in check by the use of a Crescent hand cultivator, which I keep in good order by the use of a file. I find the best manure for roots to be sifted hen manure and coal ashes three parts, spread on the beds about 2 inches deep and worked in thoroughly by a four-pronged digging fork, and before sowing, rake into the bed a few pounds of phosphate or wood ashes. Well-rotted manure is also good, but as manure in this locality is thrown out to the sun and rain, it is pretty well leached out. That this method works well, I may say that from a bed such as I have described, 4x30 feet, I pulled 5 bushels of carrots, and from two more the same size, 5 bushels blood beets and 4 of parsnips. I took three prizes on carrots and one on parsnips at the last Nova Scotia Exhibition, and highly commended on beets and salsify, among close competition. Cabbage, tomatoes and other like plants I start in a hotbed in March and April, and set out about the 1st of June. I manure in the drill principally, making the rows about 2 feet apart for cabbage and dwarf tomatoes, and further for larger varieties, and set the plants apart at a corresponding distance in the rows. I dust a little dry lime or soot on the plants as soon as up, which prevents the cabbage fly from depositing as many eggs as she otherwise might. The tomatoes I tie to stakes as they grow, or use the hoop support. This keeps the vine or fruit from the mud or dust and permits of a larger number of plants to the piece. I find that the tomato does best when cultivated like the potato, though not quite so deep. A little hen manure hoed around each plant when the fruit begins to set seems to hasten their maturity. My tomato plants this past season averaged a peck and over per plant. I have not had much success with peppers and eggplants. For very early potatoes, I find a good plan to fill a box with sand or old manure and set the potatoes in layers whole, without cutting, placing the box near a fire or in a warm place. In a week or so the potatoes are full of sprouts about 2 inches long, which if carefully cut out and set in the rows with a dibble or transplanting tool they soon take root and grow much faster than if they had been put in the cold ground to sprout. About one-third of the potato plot was planted with an extra early kind, and the rest with a second early and late variety, and makes a good succession till they get so cheap that with limited land it will not pay to raise them. For early cucumbers I use unsoldered tin cans, set in a frame under glass, the seed being planted about the 1st of May. When wanted to transplant, I cut the string that holds the can together. It flies open, leaving a good-sized ball of earth attached to the roots, which, if set carefully in the prepared ground, will start at once to run. Melons, early squash and corn can be successfully grown in the same manner.

I usually make a liquid manure for forcing anything for earliness, and it may be also used in growing Mammoth pumpkins or roots for exhibitions. A tight barrel is taken, and in the bottom is put several shovelfuls of fowl manure, mostly duck or goose, as they mix with the water better than hen manure would. The wash-day slops are put in next and the barrel kept covered, when it is diluted to a safe strength. This liquid, when applied near the roots, forwards plants wonderfully, if not used too often, about twice a week in dry weather being sufficient. String beans, green peas and sugar corn are the three summer delicacies next in order. The peas, usually a dwarf early variety, are sown about the 1st of May, on the ground where I intend setting late celery or tomato plants. These are followed by a second early and late variety, so that by the time one is failing, another comes in, ensuring a supply all summer.

Bush beans are sown a week or two later than the peas, usually one of the wax-podded kinds, although some prefer the green pod. They are sown as the peas—in rows 2 feet apart. I have not been able to grow Lima beans, the season not being long enough. I usually sprinkle pole beans when sowing in a wide drill. I drop in a circle, and set the poles after they are up about 2 or 3 inches. The poles are set with an iron bar, and if inclined on an angle facing south, the vines appear to cling better to the poles, and are rather earlier than if the poles were vertical; besides, the wind does not rack them so much.

Corn I plant in rows 3 feet apart and thin to about a foot in the row. I find it more productive in rows than hills. I use mostly sifted hen manure, well mixed in the drill, and also hoe a little around the plants when a foot or two in height. It does not seem to forward their maturity by cutting off their tassels, as often practiced. A few rows of Yellow Flint is also worth planting, many preferring it to sugar corn when green. Cucumbers, squash, pumpkins and citrons I plant alongside of early potatoes, peas, rhubarb, etc., so that after they are done producing, the vines take up the ground, thus in a way getting a double crop out of the one piece of ground. Over 1,000 table cucumbers and 250 squash and pumpkins were grown this past summer by this plan; otherwise I could have hardly spared room for them. Some of the squash weighed 40 and 50 pounds, and the two first-prize cucumbers were 15 inches long and 11 inches in circumference. The season is too backward for musk and water melons, though I grew a few muskmelons by starting the plants in a hotbed. Onions, except pickling, do not thrive, but all plants of the cabbage tribe I have had good success with, including Brussels sprouts (exhibition prize), kohlrabi, and kale.

A good bed of herbs is not neglected, and lettuce, spinach and radishes are grown on ground as a first crop, before setting out late plants. I usually sow radish seed in with winter beets, and pull them as wanted, the beets soon taking up the room. Besides vegetables, there are twenty 3-year-old fruit trees and 150 gooseberry and currant bushes, which bore over 60 quarts last summer. Between these bushes after I set a number of tomato plants. The bushes acted as supports, and several bushels were raised. Around the fences raspberry bushes are trained, which yielded 3 quarts per day for weeks.

As for the profits arising from a half acre planted and cultivated properly, if turned into money, might not be a very large sum, probably a hundred dollars' worth at city prices, but the fact of a family of five not buying anything in the way of garden or farm produce, except winter potatoes, and the good effect on the health of all concerned, made it more of a necessity than ever before.

In regard to the fertilizers used, I find a good compost made of the tops of vegetables, potato stalks and tomato vines. Add about one wheelbarrow of well-rotted sods to every four of this mixture, with a little air-slaked lime sprinkled on the mass. When properly decomposed, it takes the place of stable manure for some crops. As to varieties, I have tried a hundred or more, but find the following to do best: Beets—Eclipse or Egyptian (early) and Long Smooth Blood (late). I think that the old-fashioned Long Blood beet does not get the credit it deserves. It is a good keeper, sound when others are withered, cooks quicker and is of better quality than many new varieties for winter use. I consider it the best, though turnip varieties sell better. Carrots—Oxheart, Danvers and Long Orange make a succession, one being fit to use before the other. Cabbage—All-Head Early and Jersey are good early, the first-named being a flat-head; the Brunswick and Drumhead varieties for late. Kohlrabi is more of a curiosity than a delicious vegetable, yet when young it is very like white turnips. Any of the Early Sweet corns do well here, and Compton's Early and Longfellow Flint, but Dent corn won't mature. The Giant White is a good table cucumber, as well as a curiosity, but the color seems against it, the two cucumbers before mentioned being of that variety. The White Spine and Green varieties are smaller, but more salable. The Long White and Hollow Crown parsnips do not seem as good for table use as the shorter kinds, although they yield better. I pulled one in September, the root of which was 2 ft. 6 in. long. Pumpkins and squash are grown in abundance. The small kinds of pumpkins, such as Golden Oblong, Sugar, Jap. Pie, etc., seem better for pies than any other kind of pumpkins or squash, while the Turban, Marblehead and Marrow squash and the well-known Hubbard are all of good quality. The season is too short for any of the large late varieties of tomatoes to ripen, but for green pickling they are two or three times as productive as the Early Dwarf kinds. The Early Flat turnip is generally grown in this locality, and the P. T. swedes for late, but there are several varieties of yellow English turnips that ought to be grown to be appreciated, such as the Golden Ball, Yellow Egg, and Amber Globe. I find those varieties to do best for me, though they might not in some sections of the country. Still, the pleasure and profit of experimenting with different varieties pays for all the failures, which are few. Always procure good seed, from some reliable seedsman or of your own raising, if you can depend on it being as good as that raised elsewhere.

I will end this article by saying that this is not theory, but practical experience, learned by hard work and close attention to details. The produce of this half acre not needed was sold from time to time,

totalling \$25 cash, the prizes on exhibits amounting to \$10 (5 firsts and 5 seconds), and the satisfaction and comfort of having everything in season recompensed me far more than if I had treated my piece of land as a mere money-making object.

Halifax Co., N. S.

E. MACKINLAY.

## POULTRY.

## Toronto Poultry Exhibition.

The successful show held by the Toronto Poultry, Pigeon and Pet Stock Association a year ago encouraged the numerous well-wishers of that enterprising body of men to hope that the next exhibition would mark a further advance in progress. This, unfortunately, has not proved to be the case. The causes alleged for the great failure which has attended the show which was held on January 15, 16, 17 and 18, 1901, are numerous: Dissension among local breeders, resulting in a large abstention from showing; doubts as to the ability of some of the judges appointed, and as to the payment of prize money; and the inconvenient distance from the center of the city of the building in which the show was held. The last-named disadvantage certainly killed the attendance. The show had been advertised to be held in the Pavilion, but the City Council had gone back on their word, and the poultry building at the Exhibition grounds had to be utilized. As no street cars ran nearer than King street, this necessitated a long walk, which few people fancied.

The total number of entries did not exceed 1,000. None of the London breeders were present; in fact, scarcely any of the larger breeders, except some local men, had entered their birds. Barded Plymouth Rocks were not numerous, but there were some good birds, including A. H. Lake's fine winners and J. E. Bennett's exhibit. The Oakwood Farm was also a prizewinner. Buff Rocks were few in number. George Whillans, W. T. Pearson, Mrs. Logie, C. Jamieson, and G. Harrington, all local exhibitors, were all winners. In White Rocks, W. H. Bersey, Coleman, won nearly everything, leaving a few minor prizes to the East Toronto Poultry Farm. R. Durston was the principal prize-taker in Black Minorcas, D. S. Colville and G. Harrington being his opponents. In White Minorcas—a small class—H. Dunn and G. Harrington took the prizes. J. H. Sutton, Toronto, had no opposition in Black Wyandottes. In Buffs, H. A. Small, Mrs. Shales and C. Grimsley were the exhibitors. The White Wyandotte class was better than the others. Here Mrs. Shales, Hawkes & Blain and J. Foster divided the honors. Orpingtons, which are highly thought of in Great Britain, were represented by Blacks and Buffs. J. F. Stone showed the former, while S. Wicks & Co. showed both, and W. H. Kerr was conspicuous in Buffs. None of the Wyandotte classes had a very creditable entry. Buff and Whites were the best, C. Grimsley, John Isbell and Mrs. Shales showing Buffs, while Mrs. Shales, John Isbell, East Toronto Poultry Farm and Hawkes & Blain had Whites. The other Wyandotte classes could be easily counted on the fingers of one hand. The best-filled classes were those of single-comb Buff and White Leghorns. Spry & Mick, Toronto, were unbeaten among the Buffs, while John Chambers, Wolfe & Mason, J. Ramsay, D. Patterson and F. Travers scored honors in the Whites. Black Leghorns were few and only fair. Dorkings and all the Cocker classes, with the exception of Buffs, were just represented and that is all. Dr. Bell showed a few nice Buffs. Light Brahmans were fair. T. J. Sheridan, Oshawa, and A. C. Blyth, won the prizes. Dark Brahmans were very poor, and only three in all. There was a fair show of games. In single-comb Brown Leghorns, James Bradley, Milton, had a very fine cockerel and pullet. There was a pen apiece of Rhode Island Reds, one a single-comb variety; the other, rose comb, a breed well spoken of in its place of origin. They are clean-legged, and apparently owe their origin to Buff Wyandotte blood. The novice classes, while not well filled, contained a few birds of some promise. These classes, which were inaugurated last year, certainly encourage youthful amateurs to bring out their birds, which they would not care to do if they had to enter the lists against old-time exhibitors.

The show of turkeys, geese and ducks was slim indeed. S. Wicks & Son, Mt. Dennis, won for Rouen and Indian Runner ducks; the Dentonia Park Farm for Embden geese, Pekin ducks, and White turkeys. There were no Bronze turkeys or Toulouse or Bremen geese entered.

## Hints on Breeding Poultry.

A great many poultry breeders make a mistake in putting too many females with one male. This is altogether a wrong method, especially in the Asiatic and American breeds, for many reasons: First, the fertility of the eggs is not as strong, and thus the chicks are not so vigorous, and a smaller number of the eggs will hatch. Every poultry-raiser will agree that it is better to raise 50 strong chicks than 100 weak ones. In breeding American or Asiatic fowls never mate over six or seven females with one male. The progeny will then be strong, and if the male is a good one (which he should be) he will reproduce himself in his offspring, whereas, if he were mated with twelve females he would not have the vitality he would when mated with six.

Perth Co., Ont.

PERRY W. DOUPE.



### Fattening Poultry for Best Trade.

Mr. F. C. Hare, director of the Dominion Department of Agriculture poultry-fattening stations, spoke on Fattening Poultry and the Improvement in Table Quality of Canadian Chickens, at the Eastern Ontario Dairymen's Convention, Smith's Falls. As the requirements of every market determine the special quality of goods sold on the market, hence, in catering for the high-class market trade of England, we must carefully consider the qualifications sought for in the best English table poultry. These qualifications are: plumpness of breast, whiteness of skin, smallness of bone, fineness of flesh, absence of offal.

In regard to the breed of chickens that is to be made use of, he said the Barred Plymouth Rocks had fattened very profitably, and had given the best satisfaction at the Government fattening stations. White Wyandottes fatted well at Whitby, Ont. The plump appearance, when fatted, of cross-bred chickens from a Dorking male and Barred Rock female, pleases the trade. Either of these breeds suits the best English buyers, and Mr. Hare advised all farmers to raise this class of poultry. The chickens can be quickly disposed of on either Canadian or English markets, whilst the early pullets are the best layers we have during the winter months.

Chickens are ready to fatten when four months old, and should then be fed for four weeks to bring them to the best market condition. They are fed very finely-ground oats and skim milk, mixed to the consistency of thin porridge. The hulls of the oats are removed. The first week they receive a small quantity of this mixture three times a day, but after that are fed all they will eat up clean twice a day. Water and grit are also given them. After starving 36 hours to free the crop and intestines from food, the chickens are killed by dislocating the neck. Dry plucking commences at once; the feathers from the head half way down the neck are not removed, as well as a ring of feathers around the hock joints. The rest of the chicken is plucked clean. Take out all stubs and pinfeathers, and make chickens look as attractive as possible. He impressed the point that chickens should present a good appearance when the English buyer removes the cover from the box. As soon as plucked, the chickens are placed in a shaping board, which blocks them up and greatly improves their appearance. When perfectly cold, they are packed into boxes and sent in cold storage to England. The boxes are made of spruce or basswood, and hold twelve chickens each. They are lined with parchment paper, and the chickens are packed in very tightly to prevent their being bruised in transit.

Mr. Hare said that chickens fatted in the manner he had just spoken of, and which was the plan of work at the different Government fattening stations, would reach the best poultry markets in England, and would bring from 14 cents to 16 cents a pound there. The Dominion Department of Agriculture gave the necessary assistance to several private fatters last month, saw that their poultry was sold on a reliable market, and that returns were promptly made to Canada. One of these fatters, Mr. Hillson, of Prince Edward Island, told him he intended fattening several thousand next year. This season he sent over two hundred chickens, and was very well satisfied with his returns. The poultry industry was extending and enlarging very rapidly, and he expected to see it within a very short time rank in influence and in power and have as important a bearing on the agricultural welfare of Canada as the two other branches of agriculture in which they as dairy farmers were especially interested, butter and cheese.

### Black Head in Turkeys.

We had a flock of thirty-four fine healthy turkeys till about the middle of October, when we noticed the first one ill, sitting around with head and wings drooping and having diarrhea. Next day it was dead, and a couple of others seemed to be acting just the same. They could hardly stand up. I fed extra and shut them all up, but in a couple of days two more were dead, and several others were showing the same symptoms, so I determined to do something at once.

I put the sick ones in a fresh building, gave each one from three to six drops of castor oil, and from seven to ten whole black peppers. In half an hour I gave bran, mixed with warm milk and water, and to it I added a dessertspoonful of sulphur and about one teaspoon red pepper. They did not seem any better the second day, so I gave two or three more black peppers and warm feed and warm drink. But the third morning they were beginning to hold up their heads, so I gave a little wheat and a few bits of raw apples, but continued warm food and drink, and added a little more sulphur and red pepper. On the fourth day the diarrhea seemed stopped, but I kept them in for a week. The second day I had treated the entire flock, and gave each and all three or four drops of castor oil and five or seven black peppers. I let them have their run, but fed them the warm soft feed, mixed with the sulphur and red pepper, and in about eight days I had the great satisfaction of seeing the sick ones better and no more taking sick.

I enjoy working with my turkeys. Do not think that they are any harder to raise than chickens, but we live in town, and must not keep too many on a small farm. I give one black pepper when one day old, and one extra every week till five or six

weeks old, then use castor oil and sulphur if they seem down or dumpish, and have pretty healthy birds.

M. L. G.

Huron Co., Ont.

### Practical Poultry Talks and Demonstrations at Ontario Farmers' Institute Meetings.

THE SUPERINTENDENT VISITS SOUTH WENTWORTH INSTITUTE.

The people of Saltfleet township are among the most progressive in the Province. Probably the first Farmers' Institute meeting was held there, and there also the first Women's Institute had its beginning. The president, Mr. Thos. Yeo, is a well-known stockman, dealing both in horses and cattle. He makes a splendid presiding officer, and had the meeting well in hand all the time.

The first speaker at the afternoon session was Mr. Alex. McNeill, of Walkerville, who discussed the "Farm Water Supply." Mr. McNeill has made a study of this subject for years, and has prepared some splendid charts illustrating his subject.

The feature of the afternoon, however, was an address and practical demonstration on "Poultry," by Mr. G. R. Cottrell, of Milton. Though a young man, Mr. Cottrell has had a vast experience in the poultry business. He breeds Brown Leghorns and Barred Plymouth Rocks. He has his hens commence to lay about the middle of January, when eggs are a good price, and he sells all his fattened chickens to Toronto commission merchants at ten cents per pound. When asked what breeds were best for the Ontario farmer, Mr. Cottrell replied without hesitation: "Plymouth Rocks or Wyandottes." These are what are known as American breeds, and have proven themselves to be the very best all-round birds for our ordinary farmers. They are a good size, are good layers, mature early, and are quite hardy.

#### FEEDING FOR EGGS.

"Are there not breeds that are better layers?" asked a member of the Institute. "Yes," said Mr. Cottrell, "there are some breeds that will probably lay more eggs in the year, but, after all, egg-laying is a matter of individuals rather than breeds. By this, I mean that hens are like cows. You know that in some dairy herds, when you come to apply the Babcock test, you find that some of the cows are more valuable than you imagined, while others that you thought were all right are scarcely paying for their keep. You know in that case which calves you would rear for dairy purposes. So it is with chickens. You must, by the use of nest-boxes, find out just which hens are laying well and which are not. Then weed out those that are not paying for their keep, and keep for hatching the eggs of those hens only that are producing the largest number of eggs."

"Is it desirable to have hens lay all winter?" someone asked. "That just depends," replied Mr. Cottrell, "on what you purpose doing with the eggs. If the eggs are all to be sold, I would have the hens laying their best when eggs are highest in price, which is usually November, December and January. If, however, the eggs are to be used for the raising of chicks, I would pursue a different course. After a hen has laid forty eggs, only a small proportion seem to be fertile. Therefore, if you want eggs for hatching in March and April, I would not start hens laying before the middle of January."

"How do you make your hens lay in water?" someone asked. "I find no trouble at all," said Mr. Cottrell, "in this respect. I keep my henhouse clean, the walls whitewashed, and the chickens free from vermin. I allow eight square feet for each hen, and give them plenty of room for scratching in the daytime. The henhouse should not be too warm, about 45 degrees Fahrenheit being the proper temperature. Where you have a large room, and find the temperature falls too low in severe weather, you should place the roosts all close to one wall and arrange a curtain so as to drop it in front of the chicks, thus shutting them off into smaller space during the night. In this way you keep them quite warm while roosting. During the daytime they will keep themselves warm in the scratching pens."

In reference to food, Mr. Cottrell stated that he fed them nothing until about three o'clock in the afternoon, when he gave them a liberal supply of bran and oatmeal mixed, in the proportion of two parts bran and one of oatmeal. After this was eaten up, he then scattered whole wheat among the straw and chaff in the pen, and made them scratch for it. "It is necessary to keep them at work," said Mr. Cottrell, "if you want them to lay eggs. Too many farmers make the mistake of believing that hens will lay if given plenty of food. Too much feed causes them to put on excessive flesh, and they become lazy. They may not scratch much that night, but coming from the roost hungry next morning, they will spend the entire forenoon scratching for every grain that may be in the straw and chaff."

"How about animal food?" someone asked. "They should have a little," said Mr. Cottrell. "Ground green bone is probably the best, but as bone cutters are more or less expensive, the aver-

age farmer has got to find some substitute. I buy cows' heads at 15 cents apiece, boil them thoroughly, and throw in to the chickens to pick to pieces. I also hang up a liver once or twice a week in such a way that they have to jump for it. This gives them exercise, and at the same time does not allow them to gorge themselves with one kind of food."

"Two things I would like to emphasize," said Mr. Cottrell, in winding up the subject of egg production: "1st, keep only thoroughbred males, and, 2nd, each year select eggs for hatching from your best and strongest layers. If you do this, you will be surprised in a year or two to find that your flock has increased in production one, two or even five hundred per cent."

#### CHICKENS FOR MARKET.

"Chickens are prepared for market in four different ways," said Mr. Cottrell. "First, the farmer makes up his mind that he will sell a dozen hens. He goes to the barnyard and takes those that are most easily caught. This class constitutes the bulk of chickens that are offered for sale on our local markets to-day. Second, the farmer's wife selects the chickens that she wants to kill, puts them in a pen by themselves and feeds them for a week or two (usually on grain) before killing. Third, the chickens are selected from the flock in the same way, but are put in close boxes or crates and fed soft foods for three or four weeks before they are killed. Fourth, the chickens are treated exactly as last lot, but in addition they are forced to take their food by means of a cramming machine for a week or ten days after they have shown evidence of being tired of taking their food in the usual way."

"Of course, the first method has nothing to commend it. Where the chickens are picked up haphazard from the barnyard there will be no uniformity. Most of them, from having to hunt their food, or from being loose and chasing grasshoppers, etc., will have developed hard muscles, even in the younger birds, and they will be in the very poorest shape for table consumption."

"The second method of shutting them up in a box has much to commend it, but they are apt to take to feather picking, for lack of proper mixed diet."

"The third form is probably the most desirable, where the birds are shut up in close crates absolutely without exercise and fed on soft food. The muscles become soft and the whole flesh tender and nutritious. Enough fat is added to make them plump and present a good appearance in the market. The flesh does not tear so much in plucking, and the actual gain in weight more than repays for the time and labor spent on them."

"The cramming process has much to recommend it, but as it has not become universal, and most farmers have not this machine, it is hardly worth discussing at this time."

#### A PRACTICAL DEMONSTRATION.

At this stage Mr. Cottrell donned his overalls, and in the presence of the Institute members gave a practical illustration of killing and plucking a chicken. Before proceeding, Mr. Cottrell stated that for our home markets the trade demanded that the chickens be bled. The best way to do this was to take the chicken's head in the left hand, open the mouth by slipping the thumb into it, and with a sharp narrow-bladed knife penetrate the brain through the roof of the mouth, then by cutting the jugular vein in the neck just back of the ears the deed was accomplished. Mr. Cottrell explained that the moment the brain was penetrated all sensation ceased. There might be some flapping of the wings afterwards, but it was explained that this was due to the involuntary action of the muscles. For the British market the trade demands that the neck be broken, but the bird be not bled. Mr. Cottrell illustrated this by using the bird he had in his hands. By holding the bird's head firmly in his right hand and grasping both legs in the left, a steady pull soon dislocated the neck. "Hold the head still," said Mr. Cottrell, "and pull only with the left hand. In this way you will never pull the chicken's head off, which you would frequently do if you were to pull the head and hold the body firm." As soon as the neck was dislocated, Mr. Cottrell commented to pluck, first on the back, then on the breast and legs, finishing up on the wings and neck. The whole operation did not take more than five minutes, the bird being completely freed from feathers before the flesh was cold.

In answer to a question, Mr. Cottrell stated that it was no trouble to get ten cents a pound for properly fed birds on the Toronto market. There was a demand for both the yellow and white meat. For the Old Country trade, however, they would take nothing but white meat, whereas in the American market, notably Boston, the preference was decidedly in favor of yellow. "Can you influence the color by feeding?" someone asked. "Yes," replied the speaker, "you can make a white-fleshed fowl yellow in ten days by feeding yellow corn, and, on the other hand, you can clarify the skin and make it much whiter by feeding skim milk and oatmeal."

This practical work in poultry was very much appreciated. One man said he had attended many poultry meetings, but had never received so much information of a practical nature before. Mr. Cottrell; Mr. Grabam, of the Ontario Agricultural College, and Prof. Gilbert, of Ottawa, will attend many of our meetings this winter. Arrangements have already been made for one of these gentlemen

to address meetings and give practical demonstrations at

Foxboro.....	January 11th.
Havelock.....	" 12th.
Pakenham.....	" 19th.
Finch.....	" 23rd.
Uxbridge.....	" 24th.
Bloomfield.....	" 26th.
Cobourg.....	" 28th.
Lansdowne.....	" 29th.
Aurora.....	" 30th.
Oakwood.....	" 31st.
Oakville.....	February 8th.
Clandeboyne.....	" 14th.
Simcoe.....	" 23rd.
Wheatley.....	" 27th.

Do you know how important the poultry industry of a country is? Take the State of Missouri for instance. The chief clerk of the labor commissioner's office of that State reports as follows:

"Ordinarily, the study and analysis of figures is an irksome and uninteresting task, but some of the figures given in Labor Commissioner Rixey's surplus shipment may present an interesting topic for the student of industrial and economic questions.

"The farmer and grain shipper of the Northern and Western States have been wont to crown corn as king of the agricultural products. In the South, cotton was given that title, and in some of the south-western States tobacco was vested with kingly robes. But conditions have changed, and the patient, unassuming, oft-neglected, but always persistent, Missouri hen has won the commercial race and the right to be crowned queen of the wealth producers, so far, at least, as the State is concerned.

"After crediting to each county all of the commodities, of whatever kind, shipped by the railroad, express and boat companies during 1898, Commissioner Rixey has compiled a total of all the said products for the whole State, and has computed their value at the average current prices which prevailed during last year, which, by the way, were lower in many instances than the prices current to-day.

"Over 70,000,000 pounds of poultry and almost 36,000,000 dozen eggs were hauled by the aforesaid transportation companies during the last year, the aggregate cash returns for which were \$8,200,222. To more fully realize the importance of this 'Infant Industry,' compare its achievements with some of the others. The gross value of Missouri shipments of poultry and eggs in 1898 exceeded the value of the shipments of lumber, logs, cross ties, piling, cooperage, and cordwood. Group together this total value of all the shipments of coal, nickel, iron ore, pig iron, charcoal, stone, gravel, fire clay, lime and cement, brick tile, sewer pipe, and stoneware, then add pig lead and spelter, and our hen will beat the aggregation and have half a million dollars to spare. Here is another comparison: Combine the values of the shipments of corn, castor beans, pop corn, buckwheat, apples, peaches, strawberries, raspberries, blackberries, dried fruit, whisky and wine, cider and vinegar, molasses, fish, game, and feathers, and Missouri's new queen will be several thousand dollars to the good. But the last comparison is the most amusing 'cackle' of all:

"Missouri has outranked the world in the production of lead and zinc. Aggregate the value of the combined tonnage of lead and zinc ores loaded on the cars during 1898, and the hen will have earned the right to crow first. Hurrah for the Missouri hen!"

### Warm Feed and Drink and Cleanliness for Winter Eggs.

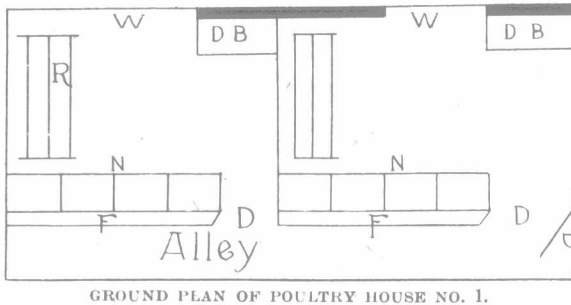
We always kept hens, but could never make them pay their board in the winter. The henhouse was cold; it stood on the north side of the barn, and was poorly lighted. I had eight pure-bred Brown Leghorns and fourteen others. So early in the fall I started to feed for eggs. I had read all the items in FARMER'S ADVOCATE on poultry-raising, and I knew if I was to make a success of it, it meant work. I kept warm water before them most of the time and gave skimmed milk once a day, at noon. Their morning meal consisted of boiled potatoes—small ones and the peelings. When these were done I left the water they were cooked in on them, took the kettle (one I kept for the purpose) to the henhouse, where I stirred all the shorts and bran I could in it. This I put in two flat pans, and the chicks would eat it while steaming. I take out a pail of warm water at the same time, which I put in two other tin pans; these I always empty before adding fresh water. I then go to the other end of the henhouse and scatter a few handfuls of grain in the litter on the floor. This would keep them busy. At noon I take out a quart of skimmed milk and feed some pulped sugar beets, apples or chopped cabbage, and on fine days I let them run out in the afternoon. About four o'clock I feed all the grain I think they will eat, throwing in the litter; this gives the exercise which is so important. I feed barley three times a week, wheat and corn twice. I take the corn to the house and heat it before feeding. The Brown Leghorns layed the best, but the others did fairly well; they averaged me ten eggs a day from November to the end of March. I kept chaff on the floor about six inches deep in one end of the

henhouse. In the other end I kept a box of road dust, and another box with gravel in. I occasionally put a pail of ashes in the dust. I fed some meat occasionally; saved all my eggshells and dried them; these I also fed. The house was cleaned once a week and kerosene put on the roosts. I attribute my success to the warm feed, keeping drink before them, and cleanliness. L. R. F. Norfolk Co., Ont.

### Poultry Houses.

The first thing to be done in establishing poultry quarters on a farm is to select a location. A great deal depends on whether or not the selection is made judiciously and for the best interests of the fowls. A good location would be on the side of a hill that slopes to the south; trees on the north and west provide a good protection. There is no best plan for a poultry house. The best plan is the plan you prefer. Much depends on the cost, the location, the breed, and the number of fowls.

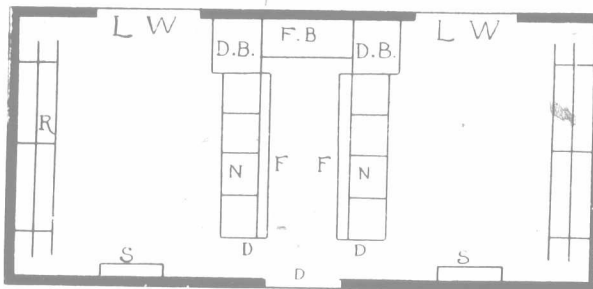
The ground plan of house No. 1 can be extended to any length desired, with the same interior arrangement. The dimensions of house No 1 are 14x24 feet. In the ground plan, the alley at the north side of the building is 4 feet wide, and in houses of greater length should extend the entire



GROUND PLAN OF POULTRY HOUSE NO. 1.

length. F is the feed trough, being placed in the alley to prevent the fowls from getting into it and for convenience in feeding; N is the nest boxes, which are placed on a shelf 18 inches from the floor, and arranged to open into the alley, so that the eggs may be gathered without entering the pens. The cover over the nests should be placed at such an angle that the fowls cannot roost on them. The space under the nest boxes is lathed up, leaving space enough between the lath for the fowls to feed through. The partitions between the pens and over the nest boxes may be made of lath or wire netting. R is for roosts, which are placed one foot above a tight platform, the platform being placed two feet above the floor of the house. D B is for dust bath. D stands for each door, and W for each window. Floor may be either ground or boards, but good drainage is necessary.

Poultry House No. 2.—The dimensions of ground plan of No. 2 are 14x28, with a 6-foot alley running crosswise between the two departments, and will accommodate 25 to 35 fowls (according to the size of them) in each department, and should be at least 7 feet high. The building should face with windows towards the south. It may be built of double boards with tar paper between. Roosts are placed at far side of each department, 10 inches above platform,



GROUND PLAN OF POULTRY HOUSE NO. 2.

it being about 2 feet from floor. The roosts may be cleated to crossbars lying across the platform. The crossbars may each be hinged to the wall, so that both they and the roosts may be lifted up and fastened to the wall while the platform is being cleaned. S is a small box containing small grit for the fowls. F B is feed bin. L W is large window on south side. D B is dust box. D D D is doors leading from the outside and into the two departments. N N is for nests, placed 20 inches above the floor on a platform, and are made to pull out same as a drawer, to gather the eggs, and may also be inverted so that setting hens can come off the nest to eat in the alley and no others can get on the nest to disturb her. The space between the nest platform and the ground should be lathed up, and fowls eat from trough that is in the alley. Elgin Co. CLAUDE BLAKE.

### Poultry Sires.

Many poulterers claim that when one breed of hens is with a cockerel for some time and then taken and put with a cockerel of their own breed, the stock bred from them is pure within a week; others claim two weeks, and others six weeks. I deny any of these claims, and can prove by experience. I had a Black Minorca pullet which had been with a Brown Leghorn cockerel until January 15, 1900. I then took her to the Black Minorca pen

and saved her eggs up till May. I had the last eggs hatched, and when grown, the chicks showed at least one-half brown color. I know of another instance, where a man had a flock of hens and just one cock, and this one died. He saved the eggs from one hen to the number of twenty-six, which puts the time at least fifty-two days. The last egg proved to contain a chick, and so this ought to be convincing that different breeds should be kept apart from other birds at least three months before breeding. A cock kept with different breeds cannot leave as good stock with his own breed as others that are kept entirely with their own class. Grey Co., Ont. POULTRYMAN.

### APIARY.

#### Bees and Fruit.

BY MORLEY PETTIT.

The final trial and decision of the celebrated Utter vs. Utter case in New York State, which took place in December last, shows the value of definitely deciding the relation of bees to fruit. It will be remembered that Mr. Utter, who is a fruit-grower, charged his brother's bees with puncturing the skin and destroying the inside of peaches while still on the trees.

To ascertain whether bees actually puncture the skin of small fruits, a series of experiments has been conducted by the Agricultural Department at Aurora, Ill., and has been described by Prof. Slingerland, in a recent number of the *Rural New Yorker*. I am indebted to Prof. Fletcher for calling my attention to this article, by quoting from it at some length in his address at the Ontario Beekeepers' Convention.

A house was built bee-tight, but having light and ventilation to make the conditions as near as possible those of outdoors. In it were placed three hives of bees without stores, so as to be quite dependent upon what they could find within the house outside the hives. Distributed about the room, in the sunlight, were different varieties of fruit at various stages—from green to dead ripe. With a stove in the room—the physical conditions which would ordinarily prevail in nature during a protracted and severe drought were artificially produced and steadily maintained. The bees were brought to the stages of hunger, thirst and starvation by these artificial conditions. Every inducement and opportunity was afforded the bees to satisfy their hunger and thirst by attacking the fruit exposed. They daily visited the fruit, and wherever the skin was broken from any cause, sucked up the exposed juice, but made no attempt to grasp the skin with their mandibles or claws. They regarded the skin of peaches, pears, plums and other fruits having a thick covering simply as subjects for inquiry and investigation, and not objects for attack. Even with the most thin-skinned varieties of grapes they could not get at the juice unless the skin had been broken already. They also appear to be unable, even when impelled by the direst necessity, to penetrate the film surrounding the berry (grape), to even after the skin is removed.

Bunches of grapes were dipped in honey and given to the bees. They licked up the honey and "lapped the grapes until the skins were perfectly smooth and shining, and no taste of sweet could be detected by touching the tongue to the grape. The skins of the grapes were left intact." Grapes hung right in a hive of bees for fifteen days were undisturbed and "appeared to have kept better hanging in the hive than they would have kept on the vines."

"Again, the entrances to several hives containing good-sized colonies, both in the apiary and in the wire-covered house, were closed by pushing sound grapes into the opening so close together that the bees could not pass through. By this means the bees were confined to the hives for days in succession, not being able to break down and remove the grapes, and, although the skins of the grapes next the inside of the hive were polished smooth, none were broken or injured."

Mr. Utter's bees were accused of stinging the peaches and causing them to rot; but they sting only in self-defence or when excited from any cause, and never to procure food.

In Prof. Fletcher's address he showed that bees are not only harmless, but of value in orchards. They perform the most important function of assisting in the fertilization of blossoms. They are "the marriage priests of the flowers." In some plants the male and female organs, the anthers and pistil, are found in the same flower. In others they are in separate flowers, and require the assistance of wind or bees to carry pollen from one to the other. In any case much better fruit results from cross-fertilization.

Secretary Couse, in discussion, said he had observed that the nearer a field of clover seed is to an apiary the better the yield of clover seed. He had applications from two men who wished him to locate bees near them.

It should be the aim of keepers of bees to educate people to the advantage which their pets are to all kinds of flowering plants. "Ignorance and ugliness," on both sides perhaps, are the cause of much trouble between them and their neighbors.

VETERINARY.

Weed or Monday Morning Disease in Horses.

Weed or lymphangitis is a disease of frequent occurrence among heavy horses, more particularly at that time of the year when they are kept in the close, stuffy stables during very hot weather. It is of but rare occurrence among light horses, but it is notorious for being specially prevalent among certain strains of draft horses—animals of "soft" substance or inherent constitutional weakness. Animals which are known to be subject to this disease are commonly known as gummy-legged. Because of the fact that it occurs with such frequency among horses when left standing in stables from Saturday night to Monday morning, the disease has got the name of Monday morning malady. The disease generally manifests itself in a sudden enlargement of one of the hind legs; this enlargement has the appearance of being of a dropsical character, and when the animal is moved it manifests considerable pain. If the swollen portion of the inside of the thigh is pressed, great pain is evinced, and the animal shows great disinclination to move. In some cases there is very little constitutional disturbance, and the appetite is not much interfered with, but in others all inclination for food seems to disappear. When "weed" becomes chronic and recurs several times, there is a risk that the leg may become permanently swollen. To guard against this it is a good plan to arrange for having animals which are known to be liable to the disease regularly exercised for about an hour every Sunday. Such treatment is often found to keep animals which are prone to weed free from attacks of the disease. In mild cases the only treatment necessary may be a fair amount of gentle exercise. In those that are more severe, a purgative ball (aloes, 6 to 8 drams) must be given, warm fomentations applied continuously to the limb, and walking exercise as soon as the patient can be made to move. The purgation should be followed up by active diuretics (nitre, iodide of potassium), and when the inflammation has somewhat subsided, tincture of iodine may be applied over the swollen glands.

Moore vs. Miller.

To the Editor FARMER'S ADVOCATE:—  
SIR,—In your issue of Jan. 1st I find that Mr. Robert Miller, Stouffville, Ontario, charges me with injecting a double dose of tuberculin to his herd of cattle. This is absolutely untrue. If you will kindly publish the enclosed extracts from the Cattle Quarantine report for 1897-98 you will find the particulars referred to. One cow which was too far advanced in the disease was not tested, but she died in quarantine from acute milliary tuberculosis. I was present at the post-mortem examination of all of Miller's cattle which were killed, as were Mr. Robert Ness, a well-known cattle and horse breeder and importer; Dr. Catillier, medical health officer of Quebec; James A. Cochrane, of Compton, also a well-known importer and breeder; Dr. McEachran, Dr. Couture, and the staff of the Quarantine. Every animal killed was found tuberculous. Yours truly, A. E. MOORE.  
Montreal, Jan. 21st, 1901.

EDITOR'S NOTE.—The printed extracts above referred to give no particulars whatever as to the alleged "double dose" of tuberculin, but contain a lengthy and familiar argument in favor of tuberculin testing, the repetition of which is unnecessary.]

QUESTIONS AND ANSWERS.

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

Veterinary.

INDURED UDDER.

T. HARTLEY, Oxford Co., Ont.:—"I have a valuable Holstein cow which has been milking two months, and her bag is still caked, although I have given salts, bathed with hot water, rubbed with white liniment and lard. Sometimes it seems better for a day or two, then gets just as bad as ever. She has been kept in a good warm stable; only out once or twice on a fine, mild day. Her food consists of about 20 pounds of ensilage, 3 quarts of bran, besides hay and mangels. What would you advise?"

[Place cow in box stall and give good supply of bedding, in order to prevent as far as possible injury to the udder while she is lying. I find that Holsteins, being large and having large udders, are very liable to injure their udders while lying, by the legs dropping into the gutter and resting more or less on the udder, pressing it against the edge of the gutter. When this is the case, and a box stall cannot be provided, the length of the stall should be increased. Would advise you to give this cow 2 lbs. Epsom salts, and feed lightly for some time; give 1½ drs. pulverized iodide of potassium in her food night and morning. Continue to bathe the udder with warm water, and rub the affected parts twice daily with the following liniment: Tincture of iodine, 1 oz.; iodide of ammonium, 1 oz.; alcohol, 10 ozs.; water to make 1 pint. The case will probably be tedious. J. H. REED, V. S.]

REMOVAL OF THE PLACENTA FROM COWS.

AMATEUR, Compton Co., Que.:—"In your May 1st number you speak of removing placenta from cow by hand.

"1st. Do you remove the cotyledons along with placenta, or not?"

"2nd. In case it is not removed, how long will it taint the milk?"

[1st. In removing the placenta (afterbirth) from a cow, all possible care should be taken to not remove the cotyledons; the membranes should be carefully separated from each cotyledon. If a few should unavoidably be removed, as is sometimes the case when a few days have elapsed after parturition, serious results are not likely to follow, but if many be removed it might prove serious.

2nd. The non-removal of the placenta does not necessarily cause a tainting of the milk, but interferes with the animal's health and causes a decrease in the secretion of milk. In some cases it causes death from blood poisoning, caused by absorption of the decaying membranes into the circulation. In mostly all cases the general health of the animal becomes affected, and the length of time it requires for all matter to escape varies greatly. J. H. REED, V. S.]

FRACTURE OF RADIUS AND ULNA IN COLT.

S. W., Albert Co., N. B.:—"What treatment would you suggest for a 6-months-old colt which had its fore leg broken short between the knee and elbow? If bandaged, would you recommend bandaging from the foot to elbow? Would you recommend putting in slings or box stall, with short bedding, or would you advise killing? The colt is not halter-broken, and has been handled very little."

[If treatment were attempted in this case, the limb should be very carefully set and enclosed in a plaster-of-Paris bandage from knee to elbow (this is a very hard place to bandage, on account of its form), and the animal kept as quiet as possible. It would be better in slings, as if allowed to lie down it would in all probability injure itself in rising. If you can contrive some means of keeping it quiet, and its weight off the affected limb, the bones will unite in a few weeks, but this is almost impossible to do, and I think the least loss is the first one, and I would advise its destruction. J. H. REED, V. S.]

WORMS IN PIGS.

J. T., Elgin Co., Ont.:—"I have three or four pigs in my bunch that have a cough. I am satisfied it comes from worms. Do you know of any simple remedy, and how do young pigs contract worms? Is there any chance of them inheriting them from their mother?"

"I see by your paper that some are not in favor of concrete floors in hogpen. This is the second winter I have had mine, and am extra well satisfied with it. I have elevated sleeping places."

[Cough in pigs frequently comes from constipation, and prevention is better than cure. A good proportion of mangels, sugar beets or other roots in their bill of fare, also greasy swill with some salt in it, helps to keep the bowels open. We have had no experience in treatment for worms in pigs, but would say that if given access to hardwood ashes and charcoal in addition to the class of food above named, and a run out in the yard in fine days, they should get relief. We do not think there is any probability that the pigs inherit worms from the mother.]

RINGWORM ON CALVES.

W. J. P., Dromore, Ont.:—"I would like to know through the FARMER'S ADVOCATE the cause of ringworm, also the best remedy for same? Our spring calves are badly affected, while the rest of the cattle are entirely free from it. Is it a parasite, and why are calves more affected with it than grown cattle?"

[Ringworms are due to a fungus that affects the surface skin of cattle of all ages, but is frequently seen on calves. It produces spores, and spreads its infection from one beast to another. The spores will retain their vitality for months on walls, manglers, etc., where affected animals have rubbed. Pens that have contained ringwormy calves should be disinfected, or the disease may be carried over from year to year. To treat a ringworm, wash the spots with warm soft water and soap, rubbing off the surface scurf; then apply sweet or linseed oil three parts and carbolic acid one part, well mixed together. One application usually cures, but two may be necessary in some cases.]

LUMP JAW.

J. F., Elgin Co., Ont.:—"During last July, three lumps appeared on one of my cow's jaws. I had them cut out by a V. S. In a short time three more appeared, which I removed with lump-jaw cure, leaving the jaws apparently sound and smooth. The cow is due to calve now in a short time, and I would like to know whether or not her milk will be fit for human use?"

[If all appearance of the disease has been removed, it is probable the disease no longer exists, and in that case there is no reason why the milk should not be fit for human food. It is a disputed point whether or not the milk of a diseased cow be healthful, but in the case you describe, I do not consider there would be any risk. J. H. REED, V. S.]

ECZEMA IN HORSE.

A. McT., Grey Co., Ont.:—"Would you please give me a cure for 'mange.' Have a horse that has been troubled for about four months with it. Have been doctoring him, but he does not seem much better—in fact, he is worse than when we started. He has hair all rubbed off under part of body, breast and inside of front legs, and his mane all rubbed out. I would like if you would tell me what would be best to make the hair grow on the affected parts?"

[Your horse doubtless has a form of skin disease called eczema. Mange in horses does not exist in this country. Cases such as you describe are difficult to treat. If your stable be warm and you are prepared to take very good care of the horse, I would advise you to clip him, as it makes it much easier to apply dressings to the skin. But horses that are clipped at this season require very careful attention. Give him a brisk purgative of 6 to 9 drs. aloes, according to his size, and 2 drs. ginger. Give all affected parts (better include the whole body) a thorough washing with warm soft soap suds applied with a scrubbing brush; then apply twice daily a solution of creolin, 1 part to 50 parts water. This must be well rubbed in, and be sure it reaches the skin. Wash as described, once every 10 days. Give the following powders: Nitrate of potash, 3 ozs.; sulphur, 6 ozs.; arsenious acid, 4 drs. Make into 24 powders, and give one night and morning in damp food. Continue giving the powders until a cure results. It would be well to alternate the dressing, say every week, with one composed of corrosive sublimate 1 part, water 1,000 (one thousand). The hair will grow spontaneously when disease ceases. J. H. REED, V. S.]

PIGS TAKE FITS.

L. W., Grey Co., Ont.:—"Have two litters of pigs about ten and eleven weeks old, apparently in good health and thriving, except when fed will commence to eat, take a few sups of milk and chopped oats and barley mixed, and will fall on floor as if in a fit or cramps, lying for a few minutes, sometimes longer, and then recover. Sometimes will resume eating as if nothing had happened. Others will stand in a dazed, stupid condition for some time."

[This is an old complaint, which most pig feeders have had more or less experience with, and is one not easily accounted for. Perhaps the most reasonable diagnosis is that it is a sort of epilepsy induced by indigestion due to the nature of the food, and want of exercise. In all animals the brain is liable to be affected from stomach trouble, and as in this case the pigs are thrifty, it may be caused by a rush of blood to the head. It is claimed by some that blood-letting by cutting off a piece of the tail or slitting the ear gives relief, and if they are not fancy breeding pigs, it is worth while to try so simple a remedy. It will be well, also, to give for each pig Epsom salts or linseed oil 2 ozs. in their feed, once daily, till purgation takes place, and make some changes in the feed. If it is being fed thin and sloppy, try a thick mixture or dry meal in one trough, and the drink in separate trough. The pulped mangels you have been feeding should tend to keep the bowels of the pigs in good condition, but as something is not agreeing with them, we would try a change, such as cooking the mangels and adding a few potatoes cooked. After you have caused purgation, we would advise a little of the following mixture, say a dessertspoonful for each pig in food, once daily: Equal parts Epsom salts and powdered charcoal, and let them run out for a few minutes on fine days for exercise.]

EPIZOOTIC CELLULITIS IN STEER.

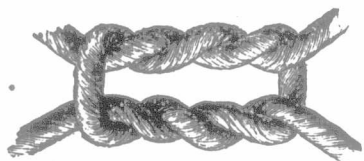
T. G. S., Kent Co., Ont.:—"I have a steer, three years old, which had a scum come over both of his eyes last October. The scum disappeared after a little while, but the eye turned red, and he has been blind for nearly two months. He was on grass at the time. He discharged very little water out of the eyes, and seemed to be in no pain. The most of his hair came off, and he got covered with hard scabs on the shoulders and back. I washed him with "Hayward's Liquid Sheep Dip," and took most of these off, but there seems like a thick dandruff forms on him now and peels off. I keep him in a box stall, feed clover hay and chop (corn, oats and barley). He is in good condition and feels good, and is hearty. Can you please tell me what ails him and what I can do for him, and do you think the meat would be good for beef?"

[The cause of blindness in your steer is a disease known as epizootic cellulitis, or infectious ophthalmia, which has been quite common in cattle for some time, and it is singular that your other cattle did not suffer from the same. When not properly treated during the first stages, permanent blindness sometimes results. I am afraid the sight cannot be restored now after two months' blindness, but you might try the following: 10 grs. sulphate of zinc, 15 drops fluid extract of belladonna, 2 ozs. distilled water. Drop a few drops into the eyes twice daily. The skin trouble is not common in these cases, and may have no connection with the other, although it sometimes is present. Give the steer a good purgative of, say, 1½ to 2 lbs. Epsom salts, and wash the body with some good sheep dip. I do not consider the flesh would be unhealthful. J. H. REED, V. S.]

## EVERSION OF THE VAGINA.

G. V., Rouville Co., Quebec:—"I have a cow I bought last October, and she appeared all right till about middle of November, when she cast her vagina. After a lot of trouble I got it back, after having been washed with warm water and peppered. I then tilted her hind quarters up a bit, and she kept all right for a time. When I placed her back amongst the other cows, she cast her vagina again at about the third day. Since then I have kept her raised up behind, as before, and she has been to all appearances quite well. She is in calf, but I do not know when she is coming in. Would you advise me to sell her? Some of my friends advise that, while others say she may be all right after calving, but I do not like to run the risk of losing her at that time. I should be glad to know your opinion on this matter and if you think there is any remedy?"

[This trouble is known as eversion of the vagina. We have had experience of cases of it in both cows and ewes, and in every case they have given birth to their young at the proper time without any difficulty and with no after trouble, and have bred again without a repetition of the trouble, though we must confess we have not known a case where the protrusion was so great as it appears to have been in this instance. It is more liable to occur in the case of well fed animals in hot stables. The adjustment of the slope of the stall, as practiced by our correspondent, together with careful feeding to obviate either costiveness or diarrhea, is generally a sufficient precaution, but in a bad case a rope truss may be used to advantage. Take two ropes, each more than double the length of the animal. Bend each double, and intertwist them at this bend so as to circumscribe an oval opening a little



TRUSS FOR COW.

larger than that of the vulva. This having been adjusted to this orifice, the two upper ends are carried around the rump, crossed over each other repeatedly in their passage along the back, and finally tied to a collar previously arranged around the neck. The lower ends are carried down between the thighs, one on each side of the udder, and forward on the sides of the abdomen and chest, to be fixed to the collar. It may be made as tight as seems necessary, and will tighten with every effort at straining, so that eversion becomes impossible. It may be made more secure by attaching the ropes to a surcingle as well. This truss must, of course, be removed when true labor comes on. It may be also used in a case of eversion of the womb after parturition, in which something of the sort is more likely to be a necessity.]

## EVIDENTLY SORE FEET IN MARE.

L. E., Cardwell, Ont.:—"I have a sick mare. She is able to work and eat, but seems in pain after work. She stands with the front feet as far from the hind ones as possible. She eats well sometimes, and sometimes not so well. Sometimes I think she has indigestion and sometimes I think it's the water, but can't tell. She seems worse when driven—is in pain for some time after."

[The symptoms you give are very indefinite. You give no particulars at all, except the manner in which she stands, which indicates pain in the feet. I would advise you to give her a good purgative of, say, 8 drs. aloes and 2 drs. ginger, either made into a ball with a little soap, or shaken up with a pint of cold water and given as a drench. Remove her shoes, pare the feet well down, and, if you can, give her a long rest; blister around the coronet every three or four weeks all winter. Use as a blister 2 drs. each of biniodide of mercury and powdered cantharides mixed with 2 ozs. lard or vaseline. Clip the hair off, rub blister well in; tie head up. In 24 hours rub well again, and in 24 hours longer wash off and apply lard every day until the scale comes off, when you will tie head up again and blister as at first. Let head down as soon as you wash blister off. If you cannot give long rest, poultice the feet with boiled turnips for a week or two, and after getting her shod keep up the poulticing at nights. J. H. REED, V. S.]

## ABNORMAL OESTRUM.

E. P. W., Norfolk Co., Ont.:—"A cow that lost her calf at seventh month and came in heat ten days after, was not in proper state for service, was she? And would it damage the bull?"

[I do not consider that a cow that had aborted would be in proper condition to breed in ten days, and it would certainly be unsafe for a bull to serve her. In ovarian diseases in cows (which can only be suspected), heat frequently occurs shortly after abortion, and in some cases, if served, she will conceive only to abort again. The same occasionally occurs in infectious abortion. It is probable the abortion in your case was accidental, but it would be well to breed the cow for three months. J. H. REED, V. S.]

## Miscellaneous.

## TROUBLE IN RAISING CALVES.

DAIRYMAN, Prince Co., P. E. I.:—"We have had much trouble for years in raising calves, especially since sending our milk to the butter and cheese factory. We feed our calves new milk ( $\frac{1}{2}$  gallon three times a day) until about a month old, then gradually change to skim milk (factory milk, if it is good), adding a little oil cake or oatmeal porridge (about  $\frac{1}{4}$  pint, increasing to  $\frac{1}{2}$  pint) to the milk. When they begin to eat hay, we feed milk only twice a day. When about 5 months old we gradually wean them and turn out to pasture. Some years, after stopping the milk, or, in fact, before doing so, we gave them ground oats, cooked like porridge, in their milk or mixed with water. Another year we gave them dry ground oats (about  $\frac{1}{2}$  pint per calf) after their milk, continuing after stopping milk. This year we had four calves. We fed them no ground oats in any form, just milk and oatmeal or oil-cake porridge. Two of them are dead; the other two are fine calves. We also had four more, which we kept in the barn until the middle of September (when they would be about 5 months old), when we turned them out. They were fed the same as the other four, excepting that at noon they got a few roots with their hay. They all appeared smart when turned out except one, which has since died; another will soon follow (unless you come to his assistance), another is looking thin, while the fourth is a splendid calf. They were all fed exactly alike. The time they seem to be all fed going back is when we wean them. They become gaunt, and their hair stands up and looks dry. These are the first symptoms noticeable. If outside, they begin to pick around the fences. They have no life, and their appetite fails, except for drinks of any kind or whole oats; these two things they will take until the day they die. They will not eat hay or roots, or at least only a few mouthfuls. They will eat dirty straw or bark off fences, old dry grass or ferns, and all such rubbish, which seems to make them worse. I have tried all the remedies we have ever read, heard of, or could think of, without any good results, with one single exception. Last year we had two calves which were scarcely able to get up about Christmas. I gave them the following: Castor oil, 8 ounces; pepsin, 1 ounce; carbonate soda, 1 ounce; mixed. One ounce at a doze. One of them got quite hearty and smart, but began failing again towards spring, but the grass came in time to save him. The other died a few days after getting medicine. I have tried this same remedy this fall, but without success. We have one cow whose calves always do well. Now, if you can tell the cause and give a remedy, I will be most thankful. Do you think the oatmeal porridge in their milk would hurt them? If you cannot give a remedy, perhaps you could tell me how to feed them another year so as to escape this trouble. Some of my neighbors, who take no care of their calves, seem to have no trouble, while we take every care and have trouble."

[The natural way to raise a calf is on its mother, so that when skimmed milk is used, nature must be followed closely or derangement of the digestive system will follow. By following nature closely we adopt the best treatment for indigestion—prevention. Skim milk is without the cream or fat, and this has a good substitute in starch, as starch takes the place of fat and serves the same purpose when eaten. Starch cannot be used to support life until it has changed to sugar. The saliva of the mouth has the power to change starch to sugar, and the more slowly the grain is masticated, the better it will be mixed with the saliva and the greater the proportion of starch that will be changed to sugar. Now, the cause of all the trouble with the calves has been the starchy food, in the form of porridge, they have taken with the milk without having a chance to masticate it. It has also passed the mouth and first stomach without being digested, not only doing the calf no good, but irritating the system, bringing on indigestion, scours, constipation and stunting. The remedy, then, is to feed new milk at blood heat till the calves are three weeks old, gradually changing to skim, always fed warm and sweet. Feed all the chop they get dry. Ground oats, with a small proportion of peas, corn chop or oil cake, is good. Calves are easily taught to eat chop by throwing a few handfuls into the pail just after they have finished drinking the milk. Careful watching will usually prevent any serious trouble. At first indications of scouring or loss of appetite, immediately cut down the feed. Milk pails and cans should be washed and scalded. For scouring, give one or two ounces of castor oil, or if the case is bad, ten or fifteen drops of laudanum each day until the trouble is checked. A cupful of lime water in the milk at each feed is good. Change feeds very slowly, as a sudden change often causes derangement. Avoid giving chop or meal in drink form, as it seldom fails to derange the system. A calf with an exceptionally strong digestive system may escape injury, but even it would do much better on chop fed dry and well masticated.]

## BEARLESS BARLEY WANTED.

ALFRED DAVISON, King's Co., N. S.:—"Please let me know through the ADVOCATE where I can get some bald barley for seed, if you can?" [Write C. A. Zavitz, Ontario Agricultural College, Guelph, Ont. It will pay those who have good seed for sale to advertise it in the FARMER'S ADVOCATE.]

## BULL WITH SCURFY SKIN—DRAINS FOR CELLAR.

A CONSTANT READER., Muskoka Dist.:—"I have a bull 2 years old: has some kind of skin disease; was bad with lice when I got him, but I cleaned them off with coal-oil emulsion; his skin is very rough and scurfy, in places hard and stiff, almost like a board; when I washed it with the emulsion it raised up in places, like big water blisters; have dressed it with lard, sulphur, tar and carbolic acid mixed, but cannot get rid of it. Kindly tell me what is the matter, and what I can do for him?"

"2. Would like information regarding drains for dwelling, what kind to use and where to get them? Should think, would need a pipe to carry off drainage from house with trap in it, but would need tile drain to take off soakage from cellar. How can it be arranged for both? Any information would be gladly received. Have read with interest plans and descriptions of farm dwellings."

[1. From the description given, we believe Bull's skin was blistered with the coal-oil emulsion, as either horses or cattle blister very easily with coal oil. The after-dressing too has been too strong and irritating. Cease applying the mixture referred to, and wash carefully with warm soft water and a little castile soap. Then apply occasionally sweet oil or clean lard, with a small proportion of carbolic added, say one part carbolic to thirty parts oil or lard. Keep the animals comfortable in a clean box stall.

2. Tile can, no doubt, be obtained in your nearest town, and iron or lead pipe and traps from any local plumber. Iron or lead pipe, with trap, should be used to carry waste water from sink, etc., outside of the dwelling, when it should connect with a glazed; socket, vitrified tile, and the joints should be cemented. It should have a fall of not less than one inch in ten feet. In no case should this pipe be connected with the tile drain carrying water away from the cellar, on account of the dangers of damming up and sewer gas. If your soil is gravelly and very porous, the waste water from the sink, etc., may be allowed to run into a cess pit a few rods from the house. Cess pits are usually made by putting an oak barrel, without bottom, five or six feet in the ground, covering with planks and earth, and ventilated with a two or three inch pipe extending upward above ground so as to carry off gas that may be formed. If soil is not porous, the pipe must be carried away from the house till it reaches a natural outlet.]

## WANTED, INFORMATION ON TURKEY RAISING.

MRS. FARMER, Lambton Co., Ont.:—"I have been taking your paper for some time and we all like it very much. I enclose my subscription with much pleasure for so valuable and up-to-date an agricultural paper. I would like to see more in your paper about raising turkeys. I want to try raising them next summer, and I want to find out all about them before I begin. I have noticed a great many of the people here trying to raise turkeys, and some sickness would come into the flock and most of them would lose their whole flock. They told me that the birds had a diarrhea. Sometimes they would have it when they were only a few days old, and some would have it when they were four or five weeks old. One of our neighbors told me her birds had it when they were four months old, and she lost several of them. I would like to know the cause?"

[In the Poultry Department of this issue Mrs. M.L.G. deals with her experience with "Black Head in Turkeys" in a manner that should be of interest to Mrs. Farmer. In the opinion and experience of many poultry raisers, turkeys are difficult to rear year after year in considerable numbers. The numbers raised in Canada, however, show clearly that many succeed admirably in bringing up their flocks to good salable condition. We invite some of these successful ones to contribute their experience to the FARMER'S ADVOCATE for the benefit of those not so successful.]

## BUCKWHEAT PER ACRE—RATTLEWEED.

H. E., Huron Co., Ont.:—"I have five acres of heavy clay that is infested with wild oats. My plan is to cultivate in the spring about three inches, and when oats came up, say three inches high, plow about six inches and repeat the cultivation, but deeper, when oats are up. I wish to raise buckwheat on this plot. How much seed per acre and how late will it do to sow for a crop?"

"I have been experimenting some with rattleweed. I find salt is sure death to it. I dig about eight inches deep around the root, put in about one quart of salt and fill up hole with earth. I have not known one plant to grow after the application. I have worked three years at it."

[From June 25th to July 5th is a good time to sow buckwheat on well-prepared moist soil, such as this should be after the cultivation for the wild oats. About four pecks to the acre is a good seeding with the common variety, or five pecks of the large Japanese sort.]

## DOUBLE-HOUSE PLAN WANTED.

THOS. CAMERON, Perth Co., Ont.:—"Please publish plan of house to be used by two families?"

[Would some of our readers who have a satisfactory house of this description in use kindly send us the plan of same for publication. It has been popularly supposed that the house had yet to be designed that would contain two families in a harmonious and satisfactory manner; but perhaps someone has solved the difficulty.]

STANDARD OF PERFECTION IN WHITE WYANDOTTES.

NEW SUBSCRIBER:—"Please give standard of perfection for White Wyandottes in early issue of FARMER'S ADVOCATE."

[STANDARD WEIGHTS.

Cock..... 8½ lbs.  
Hen..... 6½ lbs.

THE MALE.

**Head:** Short, crown, broad. Beak, well curved, clear, bright yellow. Eyes, clear, bright bay. Face, bright red.

**Comb:** Rose, low, firm on the head, top oval in shape, and its surface covered with small corrugations, terminating in a small spike at the rear, the entire comb and spike curving slightly to conform to the shape of the skull; in color, bright red.

**Wattles and Ear-lobes:** Wattles of medium length, fine in texture, pendent, bright red. Earlobes, well developed and smooth, bright red.

**Neck:** Short, well arched; with abundant flowing hackle.

**Back:** Short, broad and flat at the shoulders. Saddle, broad, full, and rising with a concave sweep to the tail.

**Breast:** Broad, deep and fully developed.

**Body and Fluff:** Body, short, deep and well rounded. Fluff, full feathered, and well rounded.

**Wings:** Of medium size, well folded, or not carried too high or too close.

**Tail:** Well developed, well spread at the base. Sickles, of medium length, gracefully curving over the tail, the ends projecting slightly.

**Legs and Toes:** Thighs, short, stout, well spread, and well covered with soft feathers. Shanks, rather short and stout, free from stubs or feathers, and in color, bright yellow. Toes, straight, well spread, and in color the same as the shanks.

**Color and Plumage:** Pure white throughout. Black, gray, red or any shade of yellow in any part of the plumage to be considered a serious defect.

THE FEMALE.

**Head:** Short, crown broad. Beak, well curved, clear bright yellow. Eyes, clear, bright bay. Face, bright red.

**Comb:** Rose, similar to that of the male, but much smaller; in color, bright red.

**Wattles and Ear-lobes:** Wattles, rather short, fine in texture, evenly rounded, bright red. Earlobes, well developed and smooth, bright red.

**Neck:** Same as in the male, except being a trifle shorter and more compact.

**Back:** Short, broad, and flat at the shoulders, slightly cushioned, plumage abundant.

**Breast:** Broad, deep and fully developed.

**Body and Fluff:** Body, short, deep and well rounded. Fluff, full-feathered and well rounded.

**Wings:** Same as is described for the male, except the variation in shape of feathers on the wing-bows, characteristic of the sex.

**Tail:** Well developed, well spread at the base.

**Legs and Toes:** Thighs, short, stout, well spread, and well covered with soft feathers. Shanks, rather short and stout, and free from stubs or feathers, and in color bright yellow. Toes, straight, well spread, and in color the same as the shanks.

**Color of Plumage:** The same as is described for the male.

TURNIPS ROTTING - COW'S UDDER INFLAMED.

SUBSCRIBER, Perth Co., Ont.:—"I have taken your paper for a number of years, and I like it very much. I wish to ask a few questions for my own information:

"1. What is the reason of turnips rotting at the top, and what could be done to prevent it?"

"2. If a cow takes inflammation in her udder after she calves, will bathing it with warm water have a tendency to put the milk away?"

[1. According to our own experience, there is seldom any trouble from turnips rotting in the fall, except they were sown early in the season, and had become much infested with plant lice before harvesting. Rotting in the cellar or pit is another question, and is due to too warm quarters, lack of ventilation, or to too much earth at the place where they drop into the cellar, preventing air circulation and causing heating.

2. Bathing the udder with warm water has no drying effect on a cow. It should be followed with careful treatment, as she is liable to take cold after bathing. She should be kept blanketed and in a warm stall away from drafts, the udder rubbed dry, and given water to drink slightly warmed. A 2-pound dose of Epsom salts will hasten recovery. The udder should be frequently milked out clean and be well rubbed by hand.]

CEMENT OR STONE, WHICH?

J. A. MCD., Dundas Co., Ont.:—"I have taken your paper for the last five years, and would not like to do without it. I am thinking of raising up my buildings and putting stables under them. Would it be cheaper to put cement walls instead of stone? I can get stone one mile, sand about ten miles and gravel about two miles distant. Does cement make as strong a wall as stone?"

[A properly-constructed cement wall is stronger, drier and more durable than a stone wall. It is much warmer, because it is a non-conductor of frost, while stone freezes through. Since the sand for a stone wall would require to be drawn ten miles, and gravel for a cement wall only two miles, we would recommend the cement wall. Cement becomes more and more united as it grows older, which is not the case with stone and mortar.]

MARKETS.

FARM GOSSIP.

P. E. Island.

We have had snow on the ground since the latter part of November, and no thaw yet. The grass fields are well covered, and if things continue like this, we will look for good grass next season. Yesterday, the 20th of January, was the coldest day this season, with the thermometer at 18 below zero. Feed for cattle is scarcer here than for some years. (The hay crop was not a full one, and as there is more and more stock being kept every year, a little shortage in the crop is felt. This shortage is causing a falling off in the winter dairy output. A good many of the smaller factories are closing down. Beef and pork are a good price, and much of it is being shipped in quarters and carcasses to other Maritime markets. An order was received here from Brantford, Ontario, for a carload of hogs a few days ago, but we understand that it can not be filled, hogs being too scarce. Live hogs sell at \$5.75, and carcass pork at about \$7.50. Good beef is \$11, and poorer qualities 5c. to 6c. Hay sells for \$10 loose, and 7c. to \$12 pressed. Straw is scarce and worth \$5 per ton.

The annual meeting of the Provincial Fruit Growers' Association takes place on the 6th and 7th of February in Charlottetown. Prof. Macoun, of the Experimental Farm, will be present, and will also address a few meetings throughout the country.

The semi-annual meeting of the F. & D. Association will be held on February 8th, at Middleton, Prince County. Prof. Macoun, R. Robertson, of Nappan Branch Experimental Farm, and others from abroad will be present.

South Perth.

The remarkably mild weather is helping farmers in getting outside of those who are building barns or houses are busy putting the raw material on the ground, and the wood-cutter is getting in his work. The winter threshing is now a relic of the past, and instead we have the preambulating grinder, straw cutter, and wood-sawing machines. Quite a number of our farmers are making use of these, particularly the straw cutter. We have one in the neighborhood with blower attached, and some are having their straw stacks cut up and blown into the barn for bedding, but the majority use it for cutting corn, straw, hay, etc.

Last week was given up to the Farmers' Institute, at the towns of Mitchell and St. Mary's. At the latter we were fortunate enough to have two fine addresses from Dr. Mills, President of the Ontario Agricultural College, and also two from Mrs. Hoodless, of the Hamilton Cooking School. There was a good attendance; in fact, St. Mary's has always been noted for the good Institute meetings. The townspeople took an active interest in the evening meeting, and seemed favorably impressed with the idea of starting a cooking school in connection with the Collegiate Institute. Dr. Mills afterwards visited the large Co-operative Creamery, and expressed himself as being well pleased with its equipment. But although the Creamery is well managed and capable of handling large quantities of milk, and with a good supply of separator stations, it has not met with the patronage that its promoters hoped. J.H.B.

Northumberland County, Ontario.

THRASHING FROM THE FIELD.

I made an experiment last year which I consider quite profitable to myself, and I will give it to your readers. It is in the matter of farm threshing. Last season I purchased a two-horse tread power threshing machine, and I have found that by its use I can do my threshing at the same expense as it formerly cost me to do my harvesting, thereby doing away with the usual cost and labor of threshing. I accomplish it in the following manner: I place the tread power and thresher on one side of the barn floor, with thresher elevated to the level of the granary. I then drive in the loads of grain as they come from the field, and instead of putting them in the mow in the usual way, I put them through the thresher. I find that the same help will do the threshing, namely, one man on load, one to feed machine, one to take care of the straw and allow the grain to run down a spout to the granary. JOSEPH WATT.

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Following is a record of top prices for week ended January 23rd, with comparisons:

Cattle	Past Week.	Previous Week.	Year Ago.
1500 lbs. up.....	\$ 5 60	\$ 5 90	\$ 5 00
1350 to 1500 lbs.....	6 00	6 10	6 00
1250 to 1300 lbs.....	5 90	6 05	6 55
1050 to 1200 lbs.....	5 45	5 75	6 25
900 to 1000 lbs.....	5 25	5 60	5 80
Stockers and feeders.....	4 70	4 60	4 75
Fat cows and heifers.....	5 00	5 35	5 00
Cows.....	4 75	2 70	3 00
Bulls.....	4 50	4 75	4 60
Calves.....	6 00	6 35	7 75
Texas steers.....	4 35	4 85	4 90
Hogs—			
Mixed.....	5 45	5 47½	4 75
Heavy.....	5 45	5 47½	4 75
Light.....	5 37½	5 42½	4 67½
Pigs.....	5 00	5 20	4 45
Sheep—			
Fat wethers.....	4 60	4 65	5 00
Ewes.....	4 00	3 90	4 50
Western.....	4 50	4 65	4 80
Yearlings.....	5 15	5 30	5 25
Native lambs.....	5 60	5 60	6 25
Western lambs.....	5 50	5 50	6 25
Colorado lambs.....	5 60	5 00	.....

A Chicago cattleman says: "Best cattle will sell at \$7 before they do at \$5 again." At the same time big, ripe, thick fat cattle, fed 18 to 21 months, have been selling at \$5.50 to \$5.60, and not giving producers enough to pay for the feed consumed; and the market is glutted with short-fed cattle, selling around \$3.60 to \$4.75, and being sacrificed with little or no profit or satisfaction to feeders, salesmen, packers or consumers. Some cattle sent in for "fat" cattle are being bought by feeders and returned to the country. Many more of these "warmed up" cattle would be sent back to the country if the quality justified.

It is a significant fact that while the cattle averaging 1,500 lbs. and over are 60 cents lower than a year ago and the 1,200-lb. cattle are 80 cents lower, the 1,350- and 1,500-lb. cattle are only 50 cents lower. Last week's average price of hogs at Chicago was \$5.27½, being the highest since September 29th last and 67½ higher than a year ago. This week's average price is about 5c. lower than last week. The average weight of hogs dropped 3 lbs. to 225, but was only 1 lb. less than a year ago. The present average weight of hogs is the lightest since the week ended May 12, 1900. The quality of the hogs this week has improved, but there is a great scarcity of heavy hogs and packers are not at all reassured as to the future supply of hogs.

Prospects favor stronger prices for hogs. Hog prices a year ago were on the advance and advanced 30c. from about this time to the middle of April. Many look for repetition of history in this regard, but it must be remembered that hogs are already a good deal higher than a year ago.

Sheep are only selling fairly. Best wethers are fully 40c. lower than a year ago, with lambs 60c. to 75c. lower. The export sheep being delivered at \$1.65 to \$5.00 are as high as a year ago, but they were contracted a month to two months ago.

Heavyweight sheep and lambs do not seem to be in strong demand for American market. It is very evident that Americans are not willing to pay the price for best muttons; that is, they will buy comparatively lean mutton in preference to the prime luscious meat that can only be had from the animal that has been allowed to get really fat. Good ripe mutton or lamb, of course, means considerable waste. Prospects are that the Colorado feeders, who have over 700,000 lambs on feed, will be disappointed on prices for heavy weights.

Toronto Markets.

The offerings of poor-quality cattle utterly demoralized the market. The demand for choice cattle was steady, but very few offered. Hogs declined 30c. per cwt.

**Export Cattle.**—There were very few good cattle offered. Trade dull and prices steady at quotations. There is some inquiry for good export cattle, but drovers reported that they were selling for less than they cost in the country. The highest price paid to-day was \$5.00 per cwt., but they were wanted to fill space, and had there been any quantity on sale, we doubt if they would have gone over \$4.85 per cwt. Choice lots of export cattle sold at from \$4.50 to \$4.85 per cwt. Messrs. Dun Bros. shipped four carloads of export cattle via Boston.

**Butchers' Cattle.**—The principal demand is for good, choice butchers' cattle. The poor, common stuff drags the market, and buyers look for the best. Several loads were taken on to Montreal. It is not often that we venture to forecast this branch of the cattle trade, as the conditions are so varied, but we look for much better prices for beef cattle in the near future. Best ripe, smooth butchers' cattle will sell at a good advance even now. Choice picked lots of butchers' cattle, equal in quality to export, weighing 1,000 to 1,100 lbs., sold at \$4.25 to \$4.40 per cwt. Loads of good butchers' cattle sold at \$3.50 to \$3.75 per cwt.; common to inferior at from \$2.50 to \$3.25 per cwt.

**Bulls.**—Prices for export bulls firm, at from \$3.75 to \$4.25 per cwt. There is a good steady market for choice stock. Light are quoted at \$3 per cwt., a few taken to fill space at \$3.60 per cwt. Yearling bulls, weighing from 700 to 900 lbs. average, sold at from \$2 to \$2.35 per cwt.

**Feeders.**—A few short-keep, good-quality feeders in demand, at from \$3.75 to \$4.25 per cwt. Heavy coarse bred are not wanted, quoted at \$3 to \$3.75 per cwt.; average weight 1,100 lbs.

**Stockers.**—Offerings very light. Buffalo market dull. Prices unchanged, at \$2.25 to \$3 for yearling heifers, 500 to 800 lbs. average; black and white mixed colors at from \$1.75 to \$2 per cwt.

**Sheep.**—This branch of the live-stock trade is dull. Prices remain steady, but very little enquiry for export. Best select ewes are quoted at \$3 to \$3.50 per cwt.; butchers' sheep at from \$2.50 to \$3.50 per head.

**Lambs.**—The demand not keen, and prices are steady at quotations, at \$3.75 to \$4.50 per cwt., or at from \$2.50 to \$4.50 per head.

**Calves.**—There is a good demand for veal calves. A few choice butchers' calves sold well, at \$10 per head; inferior, poor scrub calves at from \$2 to \$8 per head.

**Milk Cows.**—A Jersey cow and calf sold at \$45. The demand is for choice milkers and springers, at from \$40 to \$50 per head. Inferior old great-grandmas not wanted, and sell at any price from \$20 to \$25 per head.

**Hogs.**—\$6.25 was the top price. Many of the outside packing houses closed down, as the higher prices for hogs did not warrant any profit to the packers. We have received over our normal quantity and look for a further decline next week. Best singers, 160 to 200 lbs. live weight, off cars, unfed and watered, \$6.25. Light and thick fat hogs are quoted at \$5.75 to \$6; sows at \$4; stags at \$2.

	Comparative prices.	2 weeks ago.	Same date last year.
	Jan. 25, 1901.	Jan. 11, 1901.	Jan. 25, 1900.
Expert cattle.....	\$ 4 85	\$ 5 00	\$ 4 85
Butchers'.....	4 40	4 25	4 00
Bulls.....	4 25	4 25	4 25
Stockers.....	3 25	3 25	3 25
Feeders.....	3 90	4 25	4 00
Sheep.....	3 50	3 50	3 50
Hogs.....	6 25	6 80	4 75
Lambs, each.....	4 50	4 50	4 50
Milk cows.....	50 00	45 00	50 00

**Grain Market.**—Receipts of grain on the street market small. Prices steady at the quotations.

**Wheat.**—200 bushels of White and 200 bushels of Red sold at 68c. per bushel; 400 bushels of Goose sold at 65c. per bushel.

**Peas.**—There is a good demand for clean peas, at 6c. per bushel.

**Oats.**—A small advance was paid for a small sample—32c. per bushel.

**Dressed Hogs.**—When live hogs are selling at any price over \$6, it is noticed that very few dressed hogs come on this market; prices unchanged and did not decline in sympathy; \$8 to \$8.50 per cwt. Our pork butchers say that just as soon as dressed hogs rise over \$7 per cwt., sausages and bacon are cut out of the bill of fare at the boarding house; beef takes its place.

**Hay.**—In good supply; price firmer; demand good, at from \$13 to \$14.50 per ton, and baled hay \$9.50 to \$10 per ton in car lots.

**Straw.**—Clean sheaf straw wanted; two loads on the market; \$9 and \$9.50 per ton. Loose straw at \$7; baled in car lots at \$4.75 per ton.

**Dressed Beef.**—Mr. A. R. Speers, of Sault Ste. Marie, shipped a carload of dressed beef from the abattoir via G. T. Railway.

Beef—Fore quarters, per cwt..... \$5 50  
Hind quarters, per cwt..... 5 00  
Lamb, per lb..... 08  
Mutton, per lb..... 06½

**Butter.**—There is an easier feeling in the market; pound rolls are quoted at 18c. to 19c. per lb.; creamery is quoted at 22c. to 24c.

**Eggs.**—Offerings are large; demand good; prices easier; fresh-gathered new-laid are quoted at 19c. to 20c. per dozen.

Market Notes.

A general meeting of the cattle dealers engaged in the local and export cattle trade took place on January 25th. After a good deal of discussion, it was resolved to form an association of live-stock dealers, for mutual protection, to be called the Dominion Live Stock Dealers' Association. About thirty gave in their names as members, paying the fee of \$3.00. Mr. John Dun was elected President for the ensuing year; Mr. E. Snell, First Vice-President; Mr. Thomas Robertson, Second Vice-President; Mr. Hunnicutt, Secretary-Treasurer. Executive Committee—Mr. B. T. Coughlin, London; Alex. White, Guelph; W. Levaek, Toronto; S. Halligan, Toronto; John Brown, Galt; James Fallis, Brampton; Thomas Crawford, M. P. P., Toronto; F. A. Maybee, Toronto; Mr. Braken, Guelph. Arbitration Committee—Joseph Lunness, W. H. Deane, George Dun, H. Bracken, and W. Crealock. The meeting closed with a vote of thanks to Mr. Snell for calling the meeting together.

British Apple Market Report.

Messrs. Simons, Shuttleworth & Co. quote the Liverpool market for choice, sound, well-packed apples as follows: Baldwin, Spies, Seeks, Can. Reds, Ben Davis, Mann apples, Cooper's Market, Phoenix, American Pippins, 17s. 6d. to 20s.; Golden Russets, 18s. to 21s.; Rox and English Russets, 15s. 6d. to 18s.; Talman Sweets, 18s. to 14s.; Greenings, 12s. to 15s. Common grades and fruit out of condition ruled from 3s. to 4s. less. Market opened firm, and closed the same. Demand active. Good sound stock in demand; inferior still neglected. No doubt the low quotation for Greenings is due to their having been badly scalded. Liverpool, Jan. 23, 1901.



## Victoria the Good,

AS QUEEN, WIFE, MOTHER, AND FRIEND.

"Sans peur et sans reproche."

IN MEMORIAM, 22ND JANUARY, 1901.

Before the *ADVOCATE* can be in the hands of its readers, the sad news which has thrilled the world will have already reached them, that Victoria the Good—Victoria, Queen of the United Kingdom and Empress of India—Victoria, the example to the womanhood of all nations, as well as the mother of her people—has passed away. Column upon column of our daily papers throughout the Dominion will have been filled with details of the marvellous events which have happened since the formal announcement was officially conveyed to the royal maiden that into her weak young hands was to be committed, as her birthright, the sceptre of England, and that she was to be its Queen. The pages of past history record with what sweet humility, with what prayerful reliance upon a *Strength* greater than her own—a strength which she has ceaselessly invoked ever since, and which has never failed her—she accepted her responsibility, and how nobly and faithfully she has, through her long reign, fulfilled every duty it entailed upon her. Tributes have over and over again been paid to the unexampled sagacity and intelligence with which she has grasped the meaning and importance of each crisis as it has arisen, and to the accuracy of judgment which has prompted her either to action or inaction thereupon, her influence always having been thrown in the scale for peace, where peace could be possible, and in more than one instance that influence has been acknowledged as a pacific factor in the destinies of all Europe. In the year of Jubilee it was said of her: "Even amongst our most distinguished parliamentary leaders, there is the man whom we would have willingly trusted to rule the empire with anything like the caution, the reticence and calm historic sagacity which the Queen has displayed, both in yielding to popular wishes where it would have been folly to withstand them, and in delaying her sanction to them when there was evidence to her mind that they were dangerous and premature? We have reason to be grateful to a Sovereign who has not only known when to yield with grace to her subjects' wishes, but when to oppose a steady, though mild, resistance to abrupt or unwise change." Labouchere, the editor of *Truth*, a paper of democratic views and one given to very outspoken comment—more often adverse than not—of royal speech and action, does not stint his meed of commendation, which makes his words the more valuable and significant. He says: "Amongst the millions of her subjects there are but few who will not mourn for her loss as for one of their own household. It is not too much to say that never in the history of the world has a single death caused such universal grief. Alike in happiness and sorrow, she lived a life beyond reproach, without thought of self and unreservedly devoted to the duties of the hour. She has been indeed the mother of her people, and as a mother she will be mourned by them." Can we wonder, then, at the gloom which seems to have fallen like a pall upon every corner of her wide dominion when the tidings flashed across the wires that our Queen was dead? Can we wonder at the impulse which drew together as one that large crowd of mourners to the now historic spot below the steps of St. Paul's Cathedral, where at the moment of the crowning triumph of her life, England's Queen, during a breathless pause, stayed the procession that she might again invoke the blessing of God upon her people, as she had invoked it when He had first committed to her that wonderful stewardship—those ten times ten talents for which she is now, at the end of sixty-four long years, called to give an account?

Upon the wider issues of her reign we will not presume to enter, but surely there is a lesson for us all in this wonderful personality, its influence upon the homes and hearts of every woman who has read the sweet stories of her domestic relationships, in which, whether as daughter, sweetheart, wife, mother, or friend, she has idealized—nay, realized—for us the very truest and best in womanhood, and has become an example which we severally can, even in our most limited sphere and amidst the most restricted surroundings of even the very narrowest of each of our lives, at least attempt to follow. And in so striving to do, what more fitting tribute could the women of Canada pay to the memory of Victoria the Good? H. A. B.

## A Canadian Girl in Dresden.

NO. II.

DEAR NELL,—

I promised to tell you a funny fact I learned about Dresden the other day. I was reminded of it by the small boy who has a chronic cold in the head. It seems that the handkerchief was unknown as an article of the toilet till 1540. In that year a Venetian lady appeared in public, carrying a *pazzoletto* (i.e., a pocket handkerchief). The fashion once set, soon became common in Italy. From there it crossed to France, where it was immediately adopted by the courtiers of Henry II., but it was fifty years later before it reached Germany, where its use was a sign of royal birth or of great wealth. The people of Dresden in 1595 were forbidden by an edict to emulate their superiors by the adoption of a handkerchief. Picture to yourself the unfortunates who possessed neither birth nor wealth during an epidemic of la grippe. It is too horrible to dwell upon. The Germans are manifestly slow to rebel against custom, for even now the women of the lower classes seem to rank with the dogs. They pull the huckster's carts up and down the streets, shovel coal into the cellars, and, out in the Grosse Garten, they work with rake and spade, keeping the paths and pleasure grounds tidy. It is certainly a healthier life than being shut up in an office of a factory, and these sturdy dames are an advertisement of the fact.

Last week we persuaded Frau Bohn to leave her saucepans and go for a sleigh drive. She secured a kütischer, or coachman, and arranged the trip. We crossed the beautiful old Augustus bridge, built in the twelfth century, which is a quarter of a mile long and rests on sixteen fine arches, through the Neustadt, or New Town, and out into the Heidemüller, which is the King of Saxony's hunting ground. The country was lovely, and the frosty air so gay with sunshine and sleigh bells that Alice and I were in raptures, but much to our dismay, the kütischer landed us at an inn a few miles out and informed us we were to rest there half an hour. The room was crowded with clattering men and women smoking and drinking, answering perfectly to our idea of a "Kaffee Klatsch." The atmosphere was awful, and the unexpected entry I made by falling headlong on the slippery steps sent us in rather hysterical mood. However, the place was clean, the floor sanded, and the guests respectable—indeed we were the only ones misbehaving. I am sure Frau Bohn was in terror lest some acquaintance should recognize her with two badly-behaved "missies." By mistake, we asked for tea instead of coffee. The tea caddy may have been kept in the same room with the kettle, but Alice was not sure even of that. There was absolutely no taste of tea in the stuff.

On New Year's Eve, Frau Bohn climbed the three flights of stairs to our étage, and brought up hot punch and cake. Just as all the bells in the city were ringing the years out and in, she kissed Alice and me, wished us luck and good husbands, then left us to enjoy the refreshments. Frau Bohn's impromptu collations are very dreadful. Alice took a sip of the punch. "H'm," she said, reflectively, "it tastes as if it were very good for you!" The cake was calculated to make any floating rib stationary, and as for sandwiches, whenever the good woman makes those particular dainties for us, we just tie them up into a neat parcel and throw it as far into the next courtyard as we can. Never into the street, because a policeman would be sure to bring it back to us the next morning, and we should have to sign no end of papers, stating why and when we lost it, and Frau Bohn would probably be called in as a witness. At least, that is what Alice says.

You would enjoy the Grosse Garten, where I walk almost every day. It is beautifully wooded—nearly laid out in the paper-of-pins style of so many of the forests here—and every little while you come upon exquisite groups of statuary nestling among the trees. The paths wind most seductively, and lead to all sorts of charming spots, pretty ponds lively with skaters, picturesque cafés, and everywhere little green-painted stands covered with rowan-berries and seeds for the poor birds.

Alice and I were buying hairpins in a queer shop the other day, and the appearance of the young man who served us was, to say the least, peculiar. Our entrance had interrupted the curling of his hair, half of which hung quite straight, while the other half was curled in tight little rolls. A girl with smoking curling tongs in her hand stood close beside him, impatiently awaiting our departure. But before we could leave, another disturbing element entered—a gentleman so ugly and so ill-dressed that Alice whispered, "He's either a duke or a saint!" His object was evidently far removed from toilet frivolities, for he silently handed both clerks and ourselves a printed notice, and then left the shop. "He's almost both," whispered Alice again, as we followed his example, leaving the *artiste* to her labor of love. "Look here," she continued, and sure enough, the notice was to the effect that Baron Matkowski would deliver a lecture on the Second Advent in the parlor of the Stadt Prag hotel on the following Thursday. We decided to go, but I'm afraid it was no hunger for the mystery of godliness, but rather to see what our uncouth friend was capable of in the way of a hortatory discourse. The lecture was for the benefit of the English community, but the invitation was but sparingly responded to. Some

day I will tell you all about it, as I hope to do about many other incidents, both grave and gay, which combined to make our Continental trip so thoroughly enjoyable, but even at the risk of my letter being over weight, I must make one more mention. There is one thing about Frau Bohn's establishment which makes it unlike most German houses, and that is that you can get a decent bath by using a little persuasion. Alice says that at the last pension in which she boarded, the Hans Frau used to rub her hands with delight over the big bath tub, because it was such a "lovely place to keep the potatoes in!" So no more for the present.

From your affectionate friend,  
FAN.

## To the Girls.

I am sure we have all read with great interest the article upon "Domestic Science" in the December number of the *ADVOCATE*. It is all only too true, and we only too keenly feel that women are the unpaid drudges of the farm. That woman's is the unconsidered work, and simply because she is a woman, is a foregone conclusion that she shall have small consideration, that she shall keep up appearances, and must be everlastingly trying to solve the problem of making one dollar do the work of five. It has been so for generations, probably ever since "Adam delved and Eve spun." So it is no use worrying, for, after all, life on the farm is the same as life in any other sphere: it is what we make it. We can live in the kitchen and work, week in and week out; scold about the men, live amid the small worries, small cares, and troubles; turn our backs upon beautifully-tinted sunsets; never listen with open hearts to the story the stars and birds are ever trying to tell us; always think of home as mother's and father's home, never as our home; never, perhaps, even try to brighten that home, but always be striving after the unattainable. Then we can be as miserable as we deserve to be. I shall never forget, one spring morning about twelve years ago, I was out in my garden feeling very disconsolate, for the chickens had scratched out my bulbs: the poor hyacinths with their budding spikes were lying half buried in soil, and the little crocuses completely out of sight. These lost treasures I was doing my best to restore when Mr. Weld, the founder of the *ADVOCATE*, drove up. I remember so well trying to hide behind a small shrub, but he saw me and asked me "why I was ashamed, being caught working among my flowers? I should be a proud and happy little girl to have such beautiful flowers to work among." Do you think he told me it was no use trying to grow flowers because we had chickens? No, indeed! He went to father and made him promise to get wire netting for the chicken yard, and encouraged me to work away in my garden. That morning, too, he showed me the beauty in the little catkins of the birches and flowers of the maples, which I never forgot. It awakened in me a sense of looking for beauty in the common things of every day, making me love my country home.

"There is but one life. The soul came from the same source whence came the golden-rod on the ground and Arcturus yonder in the sky. Thought and music are brothers of the oak and flowers." If we could only realize that it were so, living closely in touch with nature, having the sunrises and sunsettings become part of our everyday existence, then we should surely be happier girls. By reading the works of John Burroughs, the American author and naturalist, we should soon grow interested in these common things of every day. This spring I would recommend every girl in the country to keep a book wherein to note the first flight of the bluebird; to mark in what month there first appears our first spring flower, the skunk cabbage. Will you believe me when I say its round, green spear point is above the mould in December? Let her note in what month the katydid cry emphatically, "Katydid it," and when they dwindle to a hoarse, dying "Kate, Kate." Let her little book record when the evening air is first made vocal by the frog's love calls to his kith and kin in the marshes, as well as the thousands of other things of interest which come in the "annual cycle of animal and vegetable life." I hope the readers of the *ADVOCATE* will not think this a mere flight of fancy, only to be carried out by the ideal country girl we read of in books, who goes about in summer meadows plucking daisies. No, it is for the real girl, one of those who bake bread, churn, wash dishes and work every day of their lives, amid many discordant notes and jangles, but who can yet become "kith and kin to every wild-born thing that thrills and blooms." She may have to carry on her daily work amongst discordant notes, maybe, but only such as can be made to fade into a sweet symphony in which every note rings true, and a symphony which I will leave as my message for this our New Year: "Let the spiritual, unbidden and unconscious, grow up through the common." So instead of drudgery may you find new interests and pleasures in your farm homes.

ONE OF THE GIRLS.

A boy, entering a hotel in the village of G—, asked for a gill of whiskey. The barkeeper put it in his bottle, and the boy, putting it in his pocket, said—"My mother will pay you herself." The barkeeper, not knowing the boy, said "And who's your mother?" "Oh, she's fine," was the reply of the disappearing urchin.

THE QUIET HOUR.

Trifling Annoyances.

"Walk thy way greatly! So do thou endure  
Thy small, thy narrow, dwarfed and cankered life,  
That soothing Patience shall be half the cure  
For ills that lesser souls keep sore with strife."

Let us look to-day at two pictures, painted thousands of years ago. In the first we see a man who has been flying from an unpleasant duty and is suddenly arrested in his flight by the resistless power of God. He is brought face to face with death. As far as he can see there is no way of escape. He shows no sign of cowardice, but bows with a grand and noble submission before his God.

Now look at the other picture. Here is a man indulging in angry, petulant words, not because a great calamity has befallen him, but only because he is uncomfortably hot. Instead of rejoicing over the fact that through his preaching an "exceeding great city" has been saved from destruction, he complains that God has been too merciful. He would rather see many thousand people perish than be proved in the wrong.

It seems hardly possible, and yet it is true, that the hero of the first picture and the petulant grumbler of the second are one and the same person. More than this, it is hardly necessary to go back to the prophet Jonah to prove that "the hero who has faced a battery without shrinking may be unable to take a cup of lukewarm coffee from his wife's hands without a grumble." Many a man proves himself a hero when he has to bear great troubles, and yet makes his family uncomfortable by constantly grumbling over trifles.

"The man worth while is the man who will smile when everything goes dead wrong." Even our Canadian soldiers, who have been so praised for the gallant way they endured great hardships and faced terrible dangers, may fret and storm if their collars are not stiff enough, or if they have to wait half an hour for dinner. They could wait many hours for dinner, or manage to live without collars at all—in South Africa! They could march cheerily in defiance of blazing sun and scorching wind! Why is it that the trifling annoyances—at home—are so much harder to bear? It is not only the men who find it so. Many a woman is grand in her silent endurance of pain, mental or physical, who gets irritated at once if somebody leaves a muddy footprint on her freshly-scrubbed floor, or spills a cup of tea over a clean tablecloth. Many a mother would die for her children, and yet makes their lives miserable by constant fretting and faultfinding. Now, there are two ways of looking at things, as a quaint old story shows:

"How dismal you look!" said a bucket to his companion, as they were going to the well. "Ah!" replied the other, "I was reflecting on the uselessness of our being filled, for let us go away ever so full we always come back empty."

"Dear me! How strange to look at it in that way!" said the other bucket. "Now, I enjoy the thought that however empty we come, we always go away full. Only look at it in that light and you will be as cheerful as I am."

Sometimes the irritability comes from overwrought nerves. The body is out of sorts, and that affects the temper. In such a case the Irishman's advice might be useful: "If you can't take things aisy, take them as aisy as you can." As a clever old lady once said: "If one person is cross, I suppose he is out of temper; if two people are cross, I still think it may be their own fault; but if everybody is cross, I go to my medicine-chest." Many small worries can be avoided altogether. "If thou hast a bundle of thorns in thy lot, at least thou needst not insist on sitting down on them." Many people not only insist on sitting on thorns themselves, but also insist on making other people sit on them. Men of genius are said to be often careful to display all their brilliancy to the outside world, keeping their ill temper for home consumption; but we need not imitate them in this particular. I think one great reason why people often bear great troubles grandly, and can hardly be said to bear small annoyances at all, is because they see God's hand in

the first and not in the second. How often we have heard it said that a narrow escape from death or an unexpected opening in life was "providential," as though God only interfered occasionally in the affairs of this life. Let us look again at the history of Jonah. Not only the mighty tempest and the great fish are said to be "prepared" by God, but also the gourd that sheltered the prophet from the sun and the worm that destroyed it. If we only realize that these petty trials are "prepared" by God to test and strengthen our powers of patient endurance, we can accept them cheerfully as part of our training. A habit of fault-finding and grumbling at every little discomfort often produces more domestic misery than many a more serious vice.

"Since trifles make the sum of human things,  
And half our misery from those trifles spring,  
Oh! let the ungentle spirit learn from thence,  
A small unkindness is a great offence.  
To give rich gifts perhaps we wish in vain,  
But all may shun the guilt of giving pain."

HOPE.

In reply to "Enquirer," I would suggest that anyone who ventures to write on a matter of world-wide interest, within the limits of a newspaper column, is liable to be misunderstood. I did not mean to infer that he could not read the ancient Hebrew documents, but referred to ordinary people like myself, who find translations more useful than the original MSS. Writing, as I supposed, for professedly Christian readers, I did not think it necessary to "prove" the inspiration of the Bible. Although men may differ about the meaning of the word, surely no professed Christian ventures to contradict St. Paul's statement that "all scripture is given by inspiration of God." The *Quiet Hour* is

with as much confidence in its facts as if we saw the scene from a carriage window in the "beautiful Pays de Vaud." Here are no impossible beauties, no studio models in costume strange to them. Art is here a photographer, introducing us to the real aspect of life itself. We cannot but feel a reverence for the painter who observed so closely and reports so truthfully.

A few, though not many, of Vautier's highly-popular pictures have found their way to America. This, until lately belonging to the celebrated collection of Mr. G. I. Seney, is the most important.

THE CHILDREN'S CORNER.

Story Competition.

We are giving four prizes this time, as there were so many stories sent in—about fifty altogether. For the sake of convenience, I have divided the competitors into four classes, according to age. The winners are: Class I., Thos. S. Knight, Renfrew; Class II., Harvey E. Potter, Montgomery, N. W. T.; Class III., Ruby Carr, Trout River, Que.; Class IV., Ada B. Graham, Pomeroy, Man.

Nearly all the stories sent in were fairly good, but competitors especially deserving honorable mention are: Class I., Linda Hunter, Martha Kelleher, Cora Carr, Janet Williscroft, and A. D. Weir. Class II., Laura A. Shaver, Hilda Beaumont, Class III., Mabel Kitchison, Annie Bradley, Sarah Murphy, Mary A. Potter, Ruth B. Gibbens, and Bert Sutton. Class IV., Harold B. Lyon, Joseph Bety, Helen Gibson, Fred Gibson, and Nola E. Lyon.

The stories will be published in order of age. We shall not have room for all the prize stories in this issue.

The names of three new recruits—Harold B. Lyon, Nola E. Lyon, and Sadie Kinnaird—were accidentally omitted last month. I am sorry you have been so long overlooked, children, but "better late than never," you know.

PRIZE STORIES.

CLASS I.—A LESSON FROM WATERLOO.

A good many years ago, a battle was fought between the French and English. It was the famous battle of Waterloo. The Duke of Wellington commanded the English army, and Napoleon Bonaparte the French. In the arrangements which he made before going into battle, the Duke of Wellington ordered one of his officers, who commanded a large body of men, to take position by a bridge, on a road leading off from the field where it was expected the battle would be fought, though some distance from it. He was ordered to occupy that position, and on no account whatsoever to leave it without orders. The officer marched his men there, and held the position assigned him.

The battle began. It was a long and bloody one. The officer at the bridge was too far off to see what was going on, but he was within sound of it. He could hear the roar of cannon and the rattle of musketry, and as the day wore slowly on, he felt very restless at the thought of idling there while the rest of the army was fighting bravely. He wished with all his heart that he could join them. The longer he thought of it, the more impatient he became. At last he made up his mind not to stand idle any longer. He called out to his men, "Forwards—march!" and led them into battle. At length the English gained the victory, and the French were defeated and driven from the field. Their only way of retreat was along the road and over the bridge where the Duke of Wellington had stationed the captain and his company. This was just what he had expected. For this very purpose he had ordered the officer with his troops to occupy that position. If he had been faithful to his duty as a soldier, the Duke would not only have defeated the French army, but would have taken them prisoners. This was prevented by the misconduct of a man who had not learned the duty of faithfulness. The Duke was very angry when he found his orders had been disobeyed. He reproved the officer for what he had done, in the presence of the army. The sorrow and shame of the officer were so great that he died of grief. And here we see how useful this man would have been if he had been faithful. THOMAS S. KNIGHT (aged 15).

CLASS II.—LITTLE SCOTCH GRANITE.

Burt and Johnnie Lee were delighted when their Scotch cousin came to live with them. He was little, but very bright and full of fun. He



"THE WELCOME HOME."

"The Welcome Home."

BY BENJAMIN VAUTIER.

Vautier is one of the most popular of the Swiss painters. Born in Morges in 1830, his education makes him a disciple of the Dusseldorf School, his instructor having been Robert Jordan. His admirable scenes of Swiss and German peasant life have rendered him a welcome member of the academy of Berlin, Munich, Antwerp, and Amsterdam. "The scenes which he places before us," says a German critic of Vautier, "are never superficially treated. He never expects us to be satisfied with the costumes in place of the characters of the people he represents. On the contrary, his figures, in their faces and in every line of detail, express with marked force their peculiar individuality."

In the present picture, amid a beautiful scene of chalets and blue mountain, a young bride is brought home by the groom to his father's house. The old man totters down the steep external staircase to meet her. The mother-in-law—no harsh caretaker in this instance, at least—is the first to smile upon and embrace her; her new sisters run from the fountain to greet, to welcome, to admire her. The new auspices are favorable indeed for this gentle but sturdy-looking girl, who brings into her lover's home her costume of another canton, the long braids of her silken hair and her engaging blushes. We look upon this picture

not written to convince doubters, but rather to cheer and encourage those who are honestly trying to copy the one perfect Life. H.

could tell curious things about his home in Scotland and his voyage across the ocean. He was as far advanced as they were in his studies, and the first days he went to school they thought him remarkably good. He wasted no time in play when he should have been studying, and he advanced finely. At night before the close of the school, the teacher called the roll and the boys began to answer "ten." Willie understood that he must say "ten" if he had not whispered during the day, so he answered, "I have whispered."

"More than once?" asked the teacher.

"Yes, sir," said Willie.

"As many as ten times?"

"Maybe I have," faltered Willie.

"Then I shall mark you zero," said the teacher sternly; "and that is a great disgrace."

"Why, I did not see you whisper once," said Johnnie, that night after school.

"Well, I did," said Willie. "I saw others doing it, so I asked to borrow a book; then I lent a slate pencil, and asked a boy for his knife, and did several such things. I supposed it was allowed."

"Oh, but we all do it," said Burt, reddening. "There isn't any sense in the old rule; nobody could do it, nobody does."

"I will, or else I will say I haven't," said Willie.

"Do you suppose I would tell ten lies in a heap?"

"Oh, we don't call them lies," muttered Johnnie.

"There wouldn't be a lie in my uterus if we were so strict."

"What of that, if you told the truth?" laughed Willie, bravely.

In a short time the boys all saw how it was with them. Willie studied hard, played with all his might in play time; according to his own account he lost more credits than any of the rest. After some weeks the boys answered "nine" and "eight" oftener than they used to, yet the schoolroom seemed to have grown quieter. Sometimes when Willie Grant's mark was even lower than usual, the teacher would smile peculiarly, but said no more of disgrace. Willie never preached at them or told tales; but, somehow, it made the boys ashamed of themselves, just the seeing that this sturdy, blue-eyed boy must tell the truth. It was putting the clean cloth by the half-soiled one, you see, and they felt like cheats and story-tellers. They talked him all over and loved him, if they did nickname him "Scotch Granite," he was so firm about a promise. Well, at the end of the term Willie's name was very low down on the credit list. When it was read, he had hard work not to cry, for he was very sensitive, and he had tried hard to be perfect. But the very last thing that day was a speech by the teacher, who told of once seeing a man muffled up in a cloak. He was passing him without a look, when he was told the man was General —, the great hero. "The signs of his rank were hidden, but the hero was there just the same," said the teacher. "And now, boys, you will see what I mean when I give a little gold medal to the most faithful boy—the one really most conscientiously perfect in his deportment among you. Who shall have it?"

"Little Scotch Granite!" shouted forty boys at once; for the child whose name was so low on the credit list had made truth noble in their eyes.

HARVEY E. POTTER (aged 13).

Both of these stories are very good, and I congratulate the two boys on their choice. The second explains the first. I am sure "Little Scotch Granite" would not have acted as the soldier did. A truly brave man is more anxious to do his duty, simply and honestly, than to seek glory and praise.

Cousin Dorothy.

P. S.—A report has just come in from Captain Bowman. I was glad to hear that the Christmas campaign of Company "A" was a great success.

C. D.

### Things Worth Knowing.

When peeling apples, drop them in cold water as they are done, and they will not turn brown.

A nice way to fry potatoes is to dip them in egg and then bread-crumbs, and fry until brown.

Cleaning windows with borax, instead of ammonia or soap, takes much less time than the ordinary way, and is a success.

Next time you upset grease on your kitchen table, pour some cold water over it at once. This will prevent it from soaking into the wood.

Peas and beans are the most nutritious of vegetables, containing as much carbon as wheat and double the amount of muscle-forming food.

### SEA PIE.

Take two pounds of steak, one large onion, one carrot, four potatoes, one pint of water, salt and pepper, half a pound of suet paste. Cut the meat into pieces about two inches, and fry them in a small quantity of dripping a nice brown. Cut all the vegetables into thin slices, put them on the top of the steak, add seasoning, and a pint of water. Make the suet paste in this way: Take half a pound of flour, a pinch of salt, half a teaspoonful of baking powder, three or four ounces of suet; mix with water. Shred the suet and chop it finely after removing the skin, mix well with the flour, salt and water, to make a light dough. Roll out on floured board, round to fit the inside of the saucepan, put it on the top of the vegetables to simmer gently for three hours. Then lift out the suet paste, place the meat, vegetables, and gravy, on a hot dish, cut the paste into nice pieces, and put them round the edge of the dish.

### Ingle Nook Chats.

MY DEAR GUESTS:—(That's the orthodox mode of address for a "hostess" to use, isn't it.) The hospitality of our Ingle is being accepted by some of our readers, but we have accommodation for many more, so do not fear to inconvenience us by coming in pairs or trios.

Maud Jose, in acknowledging receipt of her prize book, says: "It is very, very pretty, and I am much pleased with it. Thank you, little Maud, for your kind wishes. I hope you have not as much snow as we, or you will not be able to walk so far to school. Come again and bring your big brother."

The following extract is from a letter from Chas. S. Edwards, one of Uncle Tom's old boys:

"I like your suggestion of 'Ingle Nook' for the chats. I agree with you, we do like to see our name in print. Oh, how proud I was to see my name among the solvers when I first sent puzzles to the 'Advocate!' If you could get the 'Ingle Nookers' to discuss a subject or gossip with one another, it would certainly be very interesting. I also like the writing of verses; one can sometimes express one's self much more concisely and artistically in verse than in prose."

I quite understand and sympathize with Charlie's feeling of pride on the memorable occasion of seeing for the first time his name actually gracing the printed page of a magazine. I've been there myself, and I admit that it was one of my red letter days of my childhood—nay, why not say of my life, for the joys and triumphs of youth are just as great as those of later life; greater perhaps, as is then our capacity for their enjoyment. In the very bottom of a little old trunk are the first letters I received from Uncle Tom with prize-money. Often when I am tidying up I think I shall burn them, but somehow they are one of the bonds of happy childhood's days that I am loth to sever, and so I reverently lay them back in the same old corner. I often wonder where Fair Brother, Harry Woodworth and the other old-time puzzlers have gone. How I would enjoy hearing of or from them again!

In a bundle of old manuscript sent me from London recently I found one of my own old letters to U. T. Its merit not being sufficient to warrant my handing it down to posterity, I kindly consigned it to the embrace of the flames, where it shed a transitory glory all about the Ingle.

"Margaret" and "Mai," you two old chums, do you ever deign to glance at our little column now, or are you too busy to drop in for a chat. Kind regards for "Great Scott!"

W. J. G.—Yours duly received. Do you happen to know anyone from your neighborhood who ever used the title "Weary Wiggins?" W. W. was a namesake of yours.

### OUR COMPETITIONS.

As there are now three contests announced, I shall not give any this time, but I expect a large list of contributors to all those now announced. I anticipate a lively time in the conundrum contest announced in last issue. Get your memory to work and send five of the best conundrums you can remember to me. See last issue for particulars.

A pretty valentine to you all. THE HOSTESS.  
Address, "The Hostess," Ingle Nook Chats, Pakénham, Ont.



### "Farmer Joe."

By HERBERT T. COLEMAN, HANLAN, ONT.

Joe is a farmer down our way,  
Plain and hard run some may say,  
Made perhaps of the commonest clay,  
With some sand thrown in, if the reader choose.  
Yet from the crown of his old felt hat,  
Down to the toes of his hobnail shoes,  
He's a nature's nobleman for all that.

He doesn't believe in lengthy creeds,  
That exist in words and not in deeds,  
And blind our eyes to our fellow's needs,  
"There'd be more of pleasure in life," says he,  
"Less that is gloomy and ill,  
If we pesky mortals would only agree  
To let the sun shine when it will."

He's the old ideas of wrong and right,  
And black to him as black as night,  
And self-interest can't make it white.  
He calls those persons arrant fools,  
Whose consciences the occasion bends,  
Who think that using the devil's tools  
Can be for aught but the devil's ends.

The birds that sing from the maple tree,  
A chorus of summer minstrel-y,  
According to his philosophy,  
Teach a grander lesson than schoolmen know,  
That our greatest lack is a sincere love  
For all that's mortal here below,  
And a confidence in God above.

Sunburnt visage and roughened hands,  
Bound for life by duty's bands,  
To the prosy subjects of stock and lands,  
Yet I think when life shall merge in death,  
In the course of time's resistless flow,  
When earth shall fade with the passing breath,  
There'll be room in heaven for Farmer Joe.

### Only a Spray of Blossoms.

It was only a spray of blossoms  
From the farm-home far away,  
But it lightened the toil and the grinding mill  
Of a weary worker's day.

A whiff of the fragrant petals  
In their pink and pearly gleam,  
And the worry and wear, the hurry and care,  
Were hulled in a boyhood dream.

—G. W. Churchard.

The best government is not that which renders men the happiest, but that which renders the greatest number happy.

### A Nourishing Drink.

Beat a fresh egg to a stiff froth, put half a teaspoonful of sugar into it; put it into half a glassful of milk, and stir a little and then drink it. This is pleasant to taste and a very nutritious drink, quite as much so as beef tea.

### Remedy for Insomnia.

M. K.—Insomnia is one of our worst enemies. Give up all idea of sleeping draughts; any drug which induces sleep is bound to lose its effect sooner or later. A warm bath at night is beneficial, or a walk in the open air will often induce sleep. Some people find they can sleep better if they read after going to bed, but that is bad for the sight, and therefore should not be indulged in to any great extent. Have you ever tried that old-fashioned remedy—a supper of boiled onions? If not, the very novelty of the thing may prove successful.

### Would You Comfort an Invalid?

Then forget to say, "Oh, this is a gloomy day." Don't say, "It will be many a day before you will wear these boots again."

Enter the room quickly, but not stealthily—as though you belonged there, never peering slyly through a half-open door.

Let a few cool, fresh blossoms that are not overpoweringly sweet touch the feverish face; they seem to bring rest with them.

Allude not to personal appearance, especially to say, "You look like a ghost," or, "I know by your looks that you are worse."

### Laughable Letters.

A young Irishman in want of a five-pound note, wrote to his uncle as follows:—

"Dear Uncle,—If you could see how I blush for shame while I am writing, you would pity me. Do you know why? Because I have to ask for a few pounds, and do not know how to express myself. It is impossible for me to tell you. I prefer to die."

"I send you this by a messenger, who will wait for an answer. Believe me, my dearest uncle, your obedient and affectionate nephew. P. S. Overcome with shame for what I have written, I have been running after the messenger in order to take the letter from him, but I cannot catch him up. Heaven grant that something may happen to stop him, or that this letter may get lost."

The uncle was naturally touched, but was equal to the emergency. He replied as follows:—

"Dear Jack,—Console yourself and blush no more. Providence has heard your prayers. The messenger lost your letter.—Your affectionate Uncle."

The following letter was sent by a man to his son at college:—

"My dear Son,—I write to send you some new socks which your mother has just knit by cutting down some of mine. Your mother sends you ten pounds, without my knowledge, and for fear you would not spend it wisely, I have kept back half, and only send five. Your mother and I are well except that your sister has got the measles, which we think would spread among the other girls if Tom had not had them before, she is the only one left. I hope you would do honor to my teachings. If you do not you are a donkey, and your mother and myself are your affectionate parents."

Perhaps it was the same parent who sent to a Health Officer this brief note:—

"Dear Sir,—I beg to tell you that my child, aged eight months, is suffering from measles as required by Act of Parliament."

### Humorous.

Meg—"I wonder what it means when the stamp on a letter's upside down? I got ane frae Jock at the New Year, and that's hoo he had it on." Bet—"Weel, I think it wud mean that he mun hae been gey drunk when he put it on."

Overheard in a public-house some time ago.—Soldier (with medal on his breast, to old worthy with black eye) "Hello, old boy! How did you get that nice face?" Old Worthy—"Oh, jist the same way as you got yer medal—it was by fechtin'!"

Once a woman took her boy for a holiday. She went by an excursion train, and when she arrived at her destination the ticket collector said to her—"Is this your boy?" "Yes," said she. "Well, he is too big to travel for half-fare." "He may be that now, but he wasn't when we started," she replied.

A Border worthy, known by the name of "Colter," who was more of a knave than a fool, was taken to Melrose Asylum as a dangerous lunatic. One day while walking in the grounds he observed an inmate planting leeks. Going over to him, and shaking him by the shoulder, he shouted—"Hi! man! Dae 'e want tae loss yer place? Man, that's no' a daft man's trick. Stick them in wi' their tails doon, ma laddie!"

HE WAS NOT GREEDY.

The following was overheard in a chemist's shop:—Small Boy—"Tuppence worth of castor oil an' dinna gie's much. It's me that has to tak' it."



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**Imported Sentinel**—Seal brown, small star, 9 years, 15.3 hands. By Hawkeye (by Uncas, out of Jennie Howlett, dam of Chittabob). Dam Fair Rent, by Wisdom, sire of Sir Hugo, winner of the Derby. A grand young horse of fine quality, plenty of bone, compact, short coupled, lots of substance, beautiful conformation and excellent action. Purchased specially for Canada from Dr. Haslewood, Buxton, England, by

### MAJOR DENT,

of Malton, England, whose judgment is famous at the leading agricultural shows in England, and who was appointed by the War Office to purchase remounts in Canada for the South African war. In purchasing Sentinel for service in Canada, Major Dent says: "I have not endeavored to buy a horse that is only fit for the showing himself, but one whose produce has been winning prizes regularly in the best agricultural districts in England in strong competition. I consider this type of horse the best to breed to, from a commercial standpoint, as his get from the ordinary mares I have seen in Canada will be easily sold for remounts, and, in any case, are the most salable class for riding, driving and general use. Sentinel has proved himself to be a wonderfully successful sire. All his foals are extra large, strong, compact, with the remarkable beauty of their sire in every case. No fault can be found with the conformation or substance of any of the get of this grand young sire, whose three-year-olds have all outgrown him."

**Homecrest, No. 12498**—Chestnut, foaled 1897. American Stud Book, Vol. 7, page 160. 16.1 hands. Bred by Mr. Frank M. Ware, New York.

Consigned by Mr. Frank M. Ware, New York, as a specially desirable sire on account of his size, substance, splendid breeding and graceful action. When put into training he was valued at \$10,000.00, but, on account of growing so fast, it was found he would not develop speed enough to insure profit for this year, and the owner was persuaded to sell him as a sire. He shows any amount of substance, short, strong back, powerful quarters, and bred on the best producing lines in the world. Sired by Chevot, by Traducer, out of Idalia; dam Carmen, by Fiddlesticks, out of Camille. Extended tabulated pedigree will be found in catalogue, which may be had on application. Before being put into training, Homecrest was fired in front as a precaution to save his tendons, but is perfectly sound.

Catalogues of all the above may be had on application.

## 50 HORSES

Of all classes will also be sold on the same day, including first class well-broken drivers, saddle horses, carriage pairs, general purpose horses, etc. And on the following day,

### WEDNESDAY, MARCH 13TH, AT 11 O'CLOCK,

### 100 New and Second-hand Buggies and Carriages

Of every description will positively be sold, regardless of cost, to make room for new consignments.

### WALTER HARLAND SMITH,

AUCTIONEER AND PROPRIETOR.

## THE POST FOUNTAIN PEN.



It is a wonderful tribute

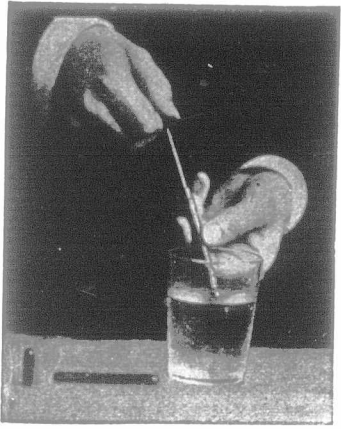
to the greatest invention in fountain-pen construction of the age.

THE PRICE OF THE POST IS **\$3.00**. IT CANNOT BE PURCHASED UNDER THIS PRICE ANYWHERE.

The patentee has a hard-and-fast agreement with the trade and agents that \$3 shall be the lowest retail price. By a special agreement we are in a position to make

### A Great Offer:

We will send one of these pens to anyone who sends us three new subscribers, accompanied by \$3.00 in cash.



General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge sooner. "I have tried every pen of the kind on the market, and not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

Lew Wallace.

TO show our confidence in this pen, we will send you one on trial for a week upon receipt of \$1.00, which, if not entirely satisfactory, you can return to us and we will refund you the \$1.00 paid us. If satisfactory, you must send us the names and addresses of the three new subscribers and \$2.00 additional cash.

ADDRESS— THE WM. WELD CO., LTD., London, Ont.

### GOSSIP.

Mr. S. J. Prouse, Ingersoll, Ont., advertises for sale in this issue two young Clydesdale stallions, bred from imported sires and dams. See the announcement and write him for particulars.

### THE SHIER-GORDON-DAWSON SHORTHORN SALE.

The joint sale by auction on February 14th, at Sunderland, Ont., of the entire Shorthorn herd of Mr. William Shier, and selections from the herds of Messrs. Dawson and Gordon, offers another opportunity to buy at your own price richly-bred cattle, which, we are assured, are mostly good individuals of the approved type, the majority being of excellent Scotch-bred families, and all having the benefit of the blood of first-class lines of the best Scotch-bred bulls, while most of the cattle are of families that are noted for producing a large proportion of heavy-milking cows. Mr. Shier has long been known as a careful breeder, having laid the foundation of his herd mainly in two excellent Scotch families, the Stamfords, descended from imported Stamford 8th, bred by Mr. Marr, of Uppermill, Aberdeenshire, and sired by McCuff, and the Crimsons, from imported Crimson Flower, bred by Mr. Campbell, of Kinellar, which produced many excellent show animals in the hands of Mr. Arthur Johnston and others, and descendants of which are from time to time found among the prizewinners at leading shows in Canada. Crimson Cloud, the first-prize yearling heifer at the Winnipeg Exhibition in 1898, and first-prize 3-year-old at Brandon in 1900, being one of this family, as also Crimson Knight (by Canada), the first-prize bull calf and head of the first-prize young herd at Winnipeg in 1898, the bull being bred by Mr. Shier and shown by Hon. Thomas Greenway.

The character of the bulls that have been used in the Clearwater herd of Mr. Shier has been well calculated to keep up the standard of the cattle. Among the most recent sires in service may be mentioned imported Hopeful, bred at Kinellar, and of the favorite Rosebud family; Scotchman 3rd, from imported sire and dam; Prince Prince, bred by the Russells, sired by Crown Royal, of the Princess Royal tribe, and out of one of their excellent Isabella cows. Many of the younger females are daughters of the richly-bred bull, Canada = 19536 =, bred by the Watts, of Salem, and sired by Clan Stewart = 14311 =, and his dam by the noted champion and sire of champions, Barmpton Hero, Canada having the benefit of two crosses of this imported sire in his pedigree, and showed it in his progeny, his get being uniformly of excellent type and quality, and he was a show bull as well, having won second honors at Toronto Exhibition in high-class company. The present stock bull, Riverside Stamp = 25598 =, is a red 4-year-old bull, bred by Thos. Russell, a second-prize Toronto winner, shown at the head of the Watt herd there in 1898, sired by Sultan, Riverside, of the Kinellar Matilda tribe, and his dam of the Bracelet family, imported from Scotland. He is a typical Scotch bull, low set, thick, smooth and symmetrical, with a good head and high-class breed character. The young things by him, as would be expected, are of very fine type, and will be found very attractive. Among the young bulls in the sale is his son, Guinea Stamp, a capital red 14-months calf, out of Stamford Lucy 3rd, by Canada, which should ensure a good individual, as the Stamford tribe has produced many high-class animals, some of which have brought very high prices. There are six females of this family in Mr. Shier's offering, all nicely bred, and all young or in the prime of life; among them the handsome and queenly Stamford Whitefoot, red with little white, and sired by Canada. She is regarded as one of the plums of the herd, and is as pretty as a picture. There are nine females of the choice Crimson Flower family in the catalogue, only one being over seven years old, and several of them young cows, by Crown Prince and Canada, and in calf to Riverside Stamp. The fine old cow, Crimson Eve 3rd, is the dam of the premium heifer, Crimson Cloud, and is good to produce many more as good. Among the young things of this family are a number of very sweet heifers, among which March Crimson Flower 2nd and Crimson Eve 2nd are charming youngsters, in which are reproduced all the excellent qualities for which the tribe is noted. Mr. Shier is not reserving any of his cattle, as it is his intention to sell his farm after the next crop, so that it is a dispersion of his herd. Messrs. Gordon and Dawson are offering 8 and 7 head, respectively, of the best of their herds, among which are half a dozen useful young bulls and 10 females, principally young cows and heifers, all bred from good milking families and topped by well-bred bulls, sons of such well bred sires as Sussex and Lord Glamis, imported by Hon. John Dryden, the noted champion Moneyfuff Lad, Village Boy 10th, of the Cruickshank Village tribe, and imported Premier Earl, also bred at Sittytton. As intimated in the advertisement in this issue, the sale will be conducted by Capt. T. E. Robson, M. P., and the place is easy of access, being only 50 miles north of Toronto. There should be a good attendance of farmers and breeders present, and we hope to see the cattle widely distributed in the Provinces, where we are sure they are needed and will do good.

### THOROUGHBRED STALLIONS AND MARES.

We direct attention to the advertisement on this page, of horse sales at Grand's Repository, Toronto, and especially to the announcement by Mr. Walter Harland Smith, of the auction sale to take place at the Repository, on March 12th, of Thoroughbred stallions and mares, the property of Messrs. N. Dymont, Barrie, Ont., and Jos. Duggan, Toronto, among which are included imported stallions selected with special reference to their fitness to sire suitable horses for riding and driving, as well as for the army remount service. Good stallions of this class should be in demand at the present time, as there is every encouragement to farmers to breed this class of horses, and there are many mares in this country which, if mated to a strong Thoroughbred horse of the proper type, would be likely to produce what the market calls for—a class which is at present very scarce in Canada, and commanding good paying prices.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

## What Shall We Eat

### To Keep Healthy and Strong?

A healthy appetite and common sense are excellent guides to follow in matters of diet, and a mixed diet of grains, fruits and meats is undoubtedly the best, in spite of the claims made by vegetarians and food cranks generally.

As compared with grains and vegetables, meat furnishes the most nutriment in a highly concentrated form, and is digested and assimilated more quickly than vegetables or grains.

Dr. Julius Remsson on this subject says: Nervous persons, people run down in health and of low vitality, should eat plenty of meat. If the digestion is too feeble at first it may be easily strengthened by the regular use of Stuart's Dyspepsia Tablets after each meal. Two of these excellent tablets taken after dinner will digest several thousand grains of meat, eggs or other animal food in three or four hours, while the malt diastase also contained in Stuart's Tablets cause the perfect digestion of starchy foods, like potatoes, bread, etc., and no matter how weak the stomach may be, no trouble will be experienced if a regular practice is made of using Stuart's Dyspepsia Tablets, because they supply the pepsin and diastase so necessary to perfect digestion, and any form of indigestion and stomach trouble, except cancer of the stomach, will be overcome by their daily use.

That large class of people who come under the head of nervous dyspeptics should eat plenty of meat, and insure its complete digestion by the systematic use of a safe, harmless digestive medicine like Stuart's Dyspepsia Tablets, composed of the natural digestive principles, pepsines and diastase, which actually perform the work of digestion and give the abused stomach a chance to rest and to furnish the body and brain with the necessary nutriment. Cheap cathartic medicines masquerading under the name of dyspepsia cures are useless for relief or cure of indigestion, because they have absolutely no effect upon the actual digestion of food.

Dyspepsia in all its forms is simply a failure of the stomach to digest food, and the sensible way to solve the riddle and cure the indigestion is to make daily use at meal time of a safe preparation which is endorsed by the medical profession and known to contain active digestive principles, and all this can truly be said of Stuart's Dyspepsia Tablets.

All druggists throughout the United States, Canada and Great Britain sell them at the uniform price of fifty cents for full treatment.—Adv. om

## British Columbia.

Anyone thinking of farming in British Columbia should write for descriptive pamphlet of farms for sale in the Lower Fraser Valley—the garden spot of the Province.

We have compiled the largest and most complete list of farms, orchards, cattle grazing and garden lands, and fishermen's allotments, in the Province. It has been very carefully selected, and we have a personal knowledge of every property described. Prices range from \$3.00 per acre to \$250.00 per acre, and in extent from 1 acre to 1,000 acres.

In the Lower Fraser Valley, and on the coast lands around Vancouver, we rarely have more than a month of frost and snow at outside, and the thermometer has only sunk to zero twice in ten years.

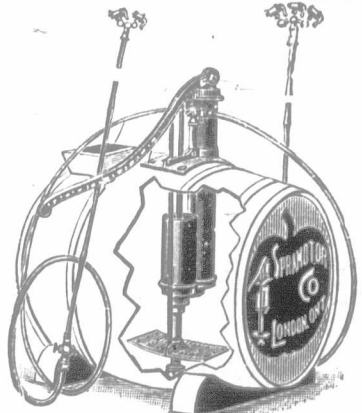
WRITE HOPE, GRAVELEY & CO.,

536 Hastings St. VANCOUVER, B. C.

## 2 Young Clydesdale Stallions FOR SALE.

Rising 2 and 3 years old. Sired by Roslin 9839 (Imp.) and out of Jean of Greenhill 9936 (Imp.) and Harblan's Queen 2551; both bays, with little white. Prices reasonable.

S. J. Prouse. INGERSOLL, ONT.



There was a time, not long ago, when there was a doubt as to the advisability of spraying, and after that the doubt was as to which sprayer to buy. The Government has settled both. The first by demonstrating in 155 places in Canada during the last five years, showing with the

## Spramotor

the proper way to spray, and the results; and the latter, by a contest of sprayers at Grimby, under judges appointed by the Fruit Growers themselves, whereat a newly-invented Canadian machine, THE SPRAMOTOR, was awarded FIRST PLACE.

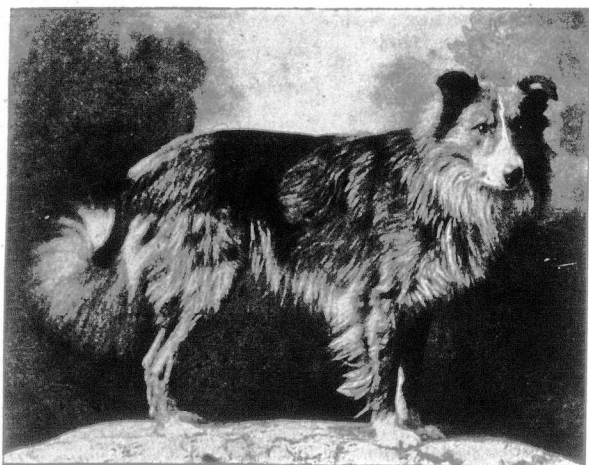
These acts of the Government should save the farmers of Canada millions of dollars annually. That it is saving money for other countries is clear, as thousands of Spramotors are leaving Canada for the United States, Australia, New Zealand, Belgium, and Russia. Do you still doubt? Don't you think the judgment of these judges is worth your consideration. There are hundreds of spray pumps, but only one Spramotor. It will paint your buildings, and kill the wild mustard in your growing grain without injury to the crop. It's every word true.

SPRAMOTOR CO., 68-70 KING ST., LONDON, CAN.

A treatise of 84 pages FREE. Write for it. We pay postage. Address box 9.

## HOW TO GET A FIRST-CLASS COLLIE

Twelve  
New  
Subscribers



Twelve  
New  
Subscribers

TO ANY SUBSCRIBER sending us the names of 12 NEW yearly paid-up Subscribers we offer a young COLLIE, six weeks old or over, eligible for registration, and bred by Mr. R. McEwen, Byron, Ont., whose stock has been so successful in the leading shows in Canada and the United States.

## THE BIG FOUR. GREAT PREMIUM PICTURE OFFER.

For obtaining new subscribers to the "Farmer's Advocate" at \$1.00 per year.

"Canada's Ideal"—Admitted by judges, breeders and artists to be the most magnificent engraving of high-class modern Shorthorns ever issued in any country. 24 x 36 inches. Twelve animals.

"Canada's Pride"—Nine celebrated draft horses.

"Canada's Glory"—Eleven celebrated light horses.

"Canada's Columbian Victors"—13 celebrated Ayrshire cattle.

Your choice of any one of the above for ONE new subscriber, or all four beautiful pictures for only three new subscribers.

### Our Self-Binder, HANDY, DURABLE and ATTRACTIVE.

Made to contain the 24 issues of the year. We will forward this Binder, postpaid, to anyone sending us the names of two NEW subscribers and \$2.00.

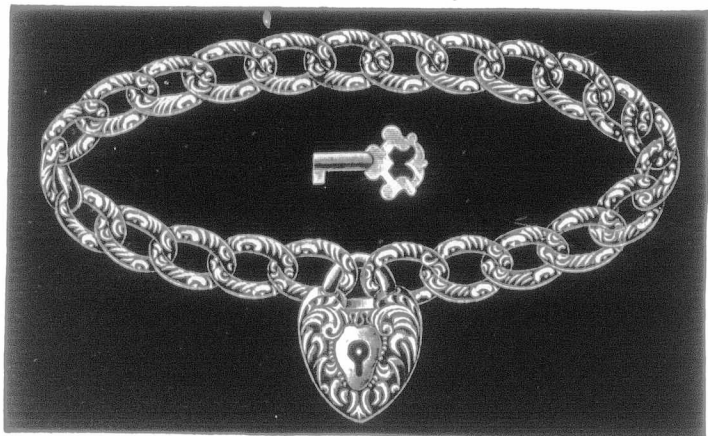
### Bagster's NEW COMPREHENSIVE Teacher's Bible,

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.

#### HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post paid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

### Handsome Curb-link Silver Bracelet with Padlock and Key.



For 2 new subscribers. For each additional new subscriber, two Sterling Silver Friendship Hearts.

Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums right away. In every case cash must accompany the new names.

The Wm. Weld Co., Ltd., London, Ont.

### NOTICES.

**Feed Cookers.**—Attention is directed to the advertisement in another column of the Ripley Hardware Co., Grafton, Illinois, who have recently established a Canadian branch factory at London, Ont., which is in charge of Mr. J. S. Pearce, and are now manufacturing at that point their line of feed cookers which have had such a large sale in the States and Canada. We gladly welcome this addition to our industries, and knowing well the sterling qualities of their manufacture, do not hesitate to recommend them to our readers. The particular pattern of cooker advertised in this issue is one for which they are justly famous. It is built like a steam boiler, and for this reason it is strong and durable and can be used not only to cook feed, but to heat water and buildings at some considerable distance. The modern farmer, who is making the most of his opportunities, requires something of this sort, and we suggest that our readers write the Ripley Hardware Co. for catalogue and prices.

#### A New Garden Spot.

The marvellous development of the mineral, coal, fish and timber wealth of British Columbia in recent years has given a wonderful impetus to that grand Province, and drawn attention to its rich heritage in fertile agricultural lands which are destined in the near future to be of immense value. When to the attractive considerations mentioned is added a salubrious climate, we cannot wonder that the eyes of many are turning in that direction. It will be of special assistance to those in quest of desirable properties for farming, fruit-growing, grazing, etc., in the Pacific Province to consult the advertisement, elsewhere, of Hope, Gravelley & Co., Hastings street, Vancouver, B. C., who will gladly furnish complete information on the subject.

#### GOSSIP.

London, England, Jan. 28.—(Special)—Cattle steady, at from 11s. to 12½c. per lb. (dressed weight); sheep, 12c. to 13c. per lb.; refrigerator beef, 9c. to 9½c. per lb.

We regret to record the death, on January 26th, of Alfred Roshier, well-known to many stock-breeders as late herdsman for Mr. J. C. Snell, at Snelgrove, Ont., with whom he was in continuous service for 14 years. It was he who fitted the Willow Lodge herd of Shorthorns for Mr. Snell, which was dispersed in 1887, and also the herd of Jerseys dispersed in 1897. He was a native of Lincolnshire, England, a skilful and faithful herdsman, a loyal, honest, large-hearted and worthy man, always found on the right side of all moral questions and willing to help a worthy cause.

W. H. Beattie, Wilton Grove, Ont., writes on Jan. 25, 1901: "The year 1900 has been one of the best, I having made more sales of Shropshire sheep than in any one year of my thirty-three years of breeding and dealing. My flock now consists of thirty ewes coming two years old, twenty-five ewe lambs, and forty ram lambs, all of good quality. I have also a fine flock of White Holland and Bronze turkeys. My exhibit at the Ontario Poultry Show won more first prizes than all other exhibitors combined. I have an exhibit at Madison Square Garden, New York, this week, and thought I could sell all my birds without advertising, but found it a mistake. I believe my advertisement in FARMER'S ADVOCATE will sell the rest."

John Racey, Jr., Lennoxville, Que., writes: "Our Shorthorns, Shropshires and Berkshires are doing well. There has been an unusually strong demand for bull calves and young bulls. We could have sold far more than we raised last year. The young calves on hand are by Macbeth—30982—and Strathroy—33035—. Our spring calves will be by Strathroy and Nonpareil Victor—34534—. The latter is a smooth, handsome dark red young bull, purchased last summer. His dam is a deep-milking cow of the Scotch Nonpareil family, and he is closely related to Mr. Arthur Johnston's late stock bull, Indian Chief. The foundation stock of our Shropshires were selected in the Hillhurst flock. They are a thick-set, well-covered lot, and are proving satisfactory breeders."

**INCREASE IN SHORTHORN IMPORTATIONS.**  
To show the readers of the ADVOCATE the very large increase in Shorthorn importations during the past year, it may be interesting to compare it with the figures since 1896. In that year only two imported herds were recorded in the Dominion Shorthorn Herdbook, and no imported bulls. In 1897 there were 12 bulls and 2 cows; in 1898, 33 bulls and 58 cows; in 1899, 46 bulls and 144 cows; and in 1900, 115 bulls and 343 cows. There appeared in print last year figures giving the importations for 1899, but the above are the only correct figures that have yet been published.

### 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. SUPERSIDES 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.

## ONTARIO Provincial Auction Sales

### PURE-BRED CATTLE and SWINE

will be conducted under the auspices of

THE DOMINION CATTLE, SHEEP AND SWINE BREEDERS' ASSOCIATIONS,

Guelph, Ont., Feb. 27th, 1901

Ottawa, Ont., Mar. 6th, 1901.

#### SELECTED STOCK.

Nothing but good representatives of each breed will be allowed to enter and be put up for sale. Orders to buy may be placed with the secretary, and will be honorably discharged.

#### REDUCED PASSENGER RATES. SPECIAL RATES TO BUYERS.

A grand opportunity for anyone wishing to procure registered stock. For copy of rules, catalogue and full particulars, apply to

A. P. WESTERVELT, Sec., Parliament Buildings, TORONTO, ONT.

#### GOSSIP.

Mr. James Smith, manager of Mr. W. D. Platt's Shorthorn herd at Millgrove, near Hamilton, Ont., writes:—"Our last importation is all safe in the stables. I consider them even a better lot than those sold at our Chicago sale last August. Our herd now numbers 86 head, and we expect over 20 calves between now and May. Sales are numerous and enquiry good."

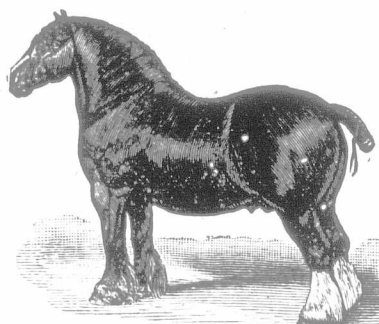
**A SHORTHORN DISPERSION SALE.**  
On account of ill health, Mr. F. Martindale has decided to offer by public auction, on March 1st, 1901, the entire Plaster Hill herd of high-bred Shorthorns, numbering 45 head: 6 bulls, 39 females. Fifteen are descendants of Waterloo Daisy—19853—, winner in the dairy tests at the World's Fair, Chicago; first at the Provincial test, Brantford, 1897. At the Provincial dairy test, London, 1899, two of her granddaughters won first and a second prize. Ten are Scotch-bred, Nonpareil, Fair Queen, and Necklace families. The balance are families descended from Beauty—30—Imp., and Lady Jane—281—Imp. Such bulls as Earl—1417—Rowan Prince—20524—, Souter Johnny—23886—, Kinnellar of York—24504—, Baron Missie—31478—, Duke of Kirklevington—9th—34323—, The Grange Ideal—35614—, have been used in the herd. Mr. Martindale writes: "The herd last fall won all honors given at Cayuga and Caledonia Fairs. Parties wanting show animals will do well to attend this sale. They are all healthy and breeding regularly." Further reference may be looked for in next issue.

## CLYDESDALE STALLIONS FOR SALE.

Fourth consignment will arrive about February 15th, 1901.

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

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



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

## HAWKEYE GRUB AND STUMP MACHINE

Works on either Standing Timber or Stumps. Pulls an Ordinary Grub in 1½ Minutes. Makes a Clean Sweep of Two Acres at a Sitting. A man, boy and a horse can operate it. No heavy chains or rods to handle. You cannot longer afford to pay taxes on unproductive timber land. Illustrated catalogue free, giving prices, terms. MILNE MFG. CO., 886 8th St., Monmouth, Ill. Address Milne Bros. for SHETLAND PONY Catalogue.



GOSSIP.

Messrs. A. F. McLaren, M. P., Stratford, Ont., and G. H. Gooderham, Toronto, have been appointed directors on the Toronto Industrial Fair Board, to fill the vacancies created by the death of Messrs. J. J. Withrow and John I. Hobson.

Mr. Charles Rankin, of Springfield Farm, Wyebriar, Ont., offers for sale nine young Shorthorn bulls from 6 to 14 months old, also some 2-year-old heifers and some yearling heifers. He has now ten imported cattle, nine females and one bull. Eight of these were imported this year.

Fitzgerald Bros., Mount St. Louis, Simcoe Co., Ont., are offering for sale in this issue, at reasonable prices, a grand lot of young bulls, bred from imp. British Statesman (53729). They are like their sire, of good size and grand handlers, and will undoubtedly make useful animals. Our cows mostly descend from the Mara family, and are all of excellent quality.

A well-bred Scotch-topped Shorthorn bull is advertised by Mr. R. Brown, Orono, Ont. He is a son of the imported Collynie-bred Prime Minister, and his dam is sired by that great son of the great Barmpton Hero, Challenge, as a breeder scarcely second to his illustrious sire. On the dam's side, Millbrook Minister comes of a family that has produced many high-class show animals, and he should prove a very useful stock-getter.

The eighteenth annual meeting of the Holstein-Friesian Association of Canada will be held at the Palmer House, Toronto, on Tuesday, February 5th, 1901, at 1 o'clock p. m. The Executive Committee will meet at 10 o'clock. The report of the committee to formulate by-laws for a system of advanced registry will be presented. Mr. George Rice, Currie's, gives notice that he will move "that animals be registered in name of first owner." Everyone interested in Holstein-Friesian cattle is invited to attend. Buy ticket one way and ask for certificate. Members will please note that the annual fee for 1901 is due February 1. G. W. CLEMONS, St. George, Ont., Secretary.

H. Gee & Sons, Fisherville, Ont., write: "We have had a very successful season in disposing of our Pekin ducks, and have been compelled to refuse orders. We shipped stock to various parts of Ontario and also to New Brunswick and Quebec, receiving no complaints, and fine testimonials from some of the parties. We purchased a high-priced pair from A. J. Hallock, Long Island, N. Y., who is recognized as one of the foremost duck-breeders in the United States, invariably winning the lion's share of prizes at the great New York show. Our old customers and a strong local trade have cleaned us out completely in the Barred Rock line. The Berkshire pigs we offer for sale are from a Green boar and sow of Cox Snell breeding, and are lengthy, smooth, and nicely marked. They have not been forced, but kept in nice growing condition, and are in proper shape to go into any farmer's herd and give a good account of themselves."

A. W. Smith, Maple Lodge, Ont., writes:—"Prof. Day, of Ontario Agricultural College, Guelph, recently visited our farm and selected for that institution from our herd two superb young Shorthorn heifers. One 14-months-old roan, got by imported Knuckle Duster (72793), and out of our first-prize cow at the Provincial Dairy Show at London, 1899. She was by Jocelyn = 17438 =, by imp. Vice Consul (60112), and out of imp. Julia, by Golden Prince (38363). The other, a red 10-months-old heifer, is by the successful breeding and show bull, Abbotsford = 19446 = the out of imported Village Blossom, bred by Mr. Cruickshank, and dam of the great champion, Young Abbotsburn. This heifer's dam is one of our best milkers, got by the Cruickshank Clipper bull, Conqueror = 8227 =, so long and successfully used in our herd, and afterwards in that of Hon. John Dryden. We sold last week to Mr. A. Hislop, Brussels, a very promising bull calf by Abbotsford and from one of our best instance cows, a very heavy and persistent milker. Our demand for stock from good milking strain of Shorthorns increases every year."

A FINE STOCK AND GRAIN FARM TO BE SOLD. Mr. John Isaac, Markham, Ont., advertises for sale his stock and grain farm of 225 acres of first-class land, known as "Kinellar Lodge." The farm is conveniently situated only 1 1/2 miles from Markham station, on G. T. R., 2 1/2 miles from Locust Hill, on C. P. R., and 22 miles from Toronto. The buildings are first-class: a good brick house and new stock barn, 95x56, with basement stables full size. The land is in prime condition, stock-feeding having been the principal feature on it for the last 10 or 12 years. A better opportunity seldom offers for securing a desirable homestead.

SOME CLYDESDALE STALLIONS. George Isaac & Brothers, Bomanton, Ont., write:—"Our stallion, *Prince Harpeland 19671*, has done exceedingly well during the winter, and is, as might be expected from his superior breeding, being sired by that renowned horse, Prince Alexander, a model Clydesdale horse in every particular. He is a very heavy horse, of uncommon ambition, and during last season proved to be a sure foal-getter and a great favorite with breeders. *Raphael*, which was imported last August, is a horse of clean bone, excellent style, and a very promising appearance. Sired by Sir Everard and half-brother to Baron's Pride, the best stock horse in Scotland, he cannot fail to produce stock of superior quality. *Gay Gordon* is rising 3 years old, was imported last August, is a beautiful bay with very little white, and promises to make an extra large horse of good quality. He is sired by Prince Robert, and is half-brother to Hiawatha, which is considered to be the best show horse in Scotland at the present time. *Gay Gordon* is a very desirable horse for any locally and any intending purchaser. Anyone desiring to purchase a horse would do well to see him before purchasing elsewhere. *Baron* is a beautiful dark brown, with small star on forehead. He is somewhat smaller than the others, being thick, low-set, and of extra quality. He is rising 3, and was imported when 1 year old. He is sired by Royal Concit 10271, and is a horse of great action and splendid temper. All these horses are in splendid condition and fit for service the coming season. We will give an account of our importation of Shorthorn cattle in another issue."

**Elgin Watches**  
possess accuracy and endurance under all conditions and in all degrees of temperature.  
**Full Ruby Jeweled.**  
Sold by jewelers everywhere.  
An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.  
Send for free booklet.  
ELGIN NATIONAL WATCH CO. ELGIN, ILL.

**Onions**  
and all Garden Truck are vastly benefited and quickly grown by the use of  
**Nitrate of Soda.**  
No scallions; no club root; no pithy centers; only firm, solid vegetables. A lot of information and valuable booklets on these subjects free by asking **John A. Myers, 12-R John St., New York.**  
Nitrate for sale by fertilizer dealers everywhere.  
Write at once for List of Dealers.

**Farm for Sale**  
Known as the "Kinellar Lodge Farm," comprising 225 acres first-class land, bank barn (95 x 56), two-story brick house—all in first-class shape; 1 1/2 miles from Markham Station on the G. T. R. and 2 1/2 miles from Locust Hill on the C. P. R. For particulars apply to  
**JOHN ISAAC, MARKHAM P. O., ONT.**

**Young Man** Must have experience in cattle feeding. Steady and good worker. Small herd Shorthorns kept on ranch. Position by year, and good salary to right man. Apply, stating experience and salary, to *Farmer's Advocate*, Wpg.  
**WANTED ON A Ranch !!!**  
TO THE...  
**Great Southwest!**  
SANTE FE ROUTE  
**EXCURSIONS**

Kansas products this year are valued at \$325,000,000; Oklahoma products, \$75,000,000. Go out and see the country for yourself.  
**VERY LOW RATES**  
Make this a fine opportunity to visit the most prosperous sections of the great Southwest.  
For illustrated descriptive pamphlets call on  
**F. T. Hendry, Pass. Agent,**  
151 Griswold St., Detroit, Mich.  
Or write to  
GENERAL PASSENGER OFFICE,  
**The Atchison, Topeka & Sante Fe Railway,**  
CHICAGO.

**NOTICES.**  
**Money at Five Per Cent.**—Per cent. saved is money made. A high per cent. is not enough on a poor risk, but with good security, money can be borrowed at 5 1/2 Waterloo street, London, at 5 per cent. per annum. See advertisement in this issue.  
**Incubators and Brooders.**—A. J. Morgan, London, Ont., builds a first-rate line of incubators, brooders and fixtures on a large scale, at his London factory, 1000 Wellington street. He makes the Ideal and Morgan machines, the former having 50-egg capacity and the latter from 50 up to 200 eggs. His brooders are built to correspond. His catalogues is instructive.

GOSSIP.

W. G. Pettit & Son, of Freeman, Ont., write us that their herd is now getting in fine shape, and imported bulls have done exceedingly well. "We are having a fine lot of calves from our imported cows. Our herd now numbers 115 head." See change of advertisement in this issue.

N. M. Blain, St. George, Ont., writes:—"The fall trade in Tamworths from my herd was never better. Have disposed of all of my bred sows. Have a number of September and October pigs, bred from the same sires and Dams as the winners. I exhibited twelve pure-bred Tams, at Guelph Fat Stock Show, winning five of the eight red ribbons lung up in the Tamworth class, including sweepstakes for best animal in class and first for pure-bred Tamworth bacon hogs."

Oaklawn Farm, operated by Durham Fletcher & Coleman, Wayne, Illinois, is well prepared for a rushing season's trade in high-class Percherons, French Coachers, and Shire horses. They have on hand over 500 stallions and mares, many of which are world-beaters, all possessing first-rate pedigrees. Their liberally-illustrated catalogue of over 100 pages is a handsome volume, containing a wealth of information on Percheron breeding. It is a notable fact that most of the animals described in the catalogue are black in color. There are also a number of grays in the stud, and several of brown color. See their advertisement in this issue and send for their 1901 catalogue.

PRINCE OF ALBION DEAD.

The Montrave stud of Clydesdale horses has suffered a severe loss by the sudden death of the famous Prince of Albion (6178). He was found on Thursday morning lying dead in the yard adjoining his box. On the previous evening nothing was noticed wrong with him. He cleaned up his supper at 8 p. m., and looked healthy and strong. The veterinary surgeon who was called in ascribes his demise to acute peritonitis. He has been the most healthy of horses, never having had a day's illness. At Montrave his death was looked upon as a truly sad event, he being such a favorite with all, and one of the best tempered animals imaginable. The breed will be the poorer for his loss, and the Athole and Broadbaine Society, to which he had been set for next season, on the very day of his death, will have to go far afield to find as good a one to replace him. He was the highest priced draft horse in the world, his respected and plucky owner, Sir John Gilmour, Bart., having paid Mr. James Kilpatrick, Craigie Mains, Kilmarnock, £3,000 for him when two years old, and he had proved a first-rate investment. He was first four times in succession at the Highland Society's shows, won the Queen's gold medal at the Royal Jubilee Show at Windsor in 1893, and has carried off many other first prizes and champion honors. He was undoubtedly one of the most notable animals the breed has ever known. Amongst his female produce was the 1,000-gs. mare, Queen of the Roses, while he could claim as his sons Rosemount, Prince of Erskine, Prince Murat, Prince Albert of Rosehaugh, and many other well-known prize-winners. He was foaled in 1886, and Mr. Kilpatrick still owns his brother, the equally well-known Prince of Kyles. It is scarcely necessary to mention that his sire was Prince of Wales, and his dam, the noted Darnley mare, Mysie.—*Scottish Farmer.*

**New Thing in Newspaperdom.**—Everybody subscribing for that live newspaper, The Toronto Daily Star, for one year, whether an old or a new subscriber, receives from the Ocean Accident & Guaranty Corporation of London, England, an insurance policy for one year, under which the subscriber is insured for \$1,000 against death by accident while traveling on a steam railway, or \$8.00 a week if disabled from such an accident, and, in addition, the policy gives to the subscriber \$8.00 a week for six weeks if he is sick from any one of a long list of diseases. The wonder of insurance men is how the thing can be done, but the standing of the insurance company and The Toronto Star leaves no doubt that every obligation will be fully and liberally met. You get your life insured and get sick benefits along with your subscription to the newspaper for one year for \$3.00. Address The Toronto Daily Star, Toronto, Ont., for particulars of the plan.

**320-ACRE FARM FOR SALE.**  
South half Sec. 6, Tp. 16, R. 29, W.  
260 acres thoroughly fenced and subdivided with three wires; 150 under cultivation; 56 acres summer-fallowed the past season, and 15 acres of fall plowing, ready for wheat in the spring. The farm has been worked on the 3-year rotation system, summer-fallowing one third every year, and land in first-class state of cultivation, yielding from 40 to 45 bushels wheat per acre. There is quite a large portion in virgin prairie, with bluff of good young poplar on it. Frame house, lathed and plastered twice, making two dead-air spaces, and well-finished in every respect. Main part, 20 x 30 ft., containing dining-room, kitchen, pantry, and hall, downstairs; 4 bedrooms and linen cupboard upstairs; and a lean-to on north side, 10x30 ft. There is a good stone cellar, with brick partition, under house. House cost \$1,200, not counting labor of drawing sand, stone, etc., and finishing. Stable, 26x40 ft., concrete; hayloft above, and frame implement shed, 15x40 ft., on north side. Henhouse, frame; pigpen, frame. Page-fence yard. Granary, 22x31 ft. All shingle-roof buildings: one frame stable, 22x15 ft., with sod roof. There is also a never-failing well. Seed and feed can be bought by purchaser at market prices. Situation: 17 miles from Moosomin; 3 miles from church and school. The N. W. C. R. K., whose present terminus is 25 miles east, is expected, during the coming summer, to run within 3 miles of the farm. This is undoubtedly one of the best opportunities of obtaining a grand homestead at a moderate price. For further particulars apply to  
**C. R. Collyer, or G. P. Collyer,**  
Welwyn, Assa., or LONDON, ONT.  
N.-W.T. om

CHANGE OF CLIMATE

Not Necessary in Order to Cure Catarrh.

The popular idea that the only cure for chronic catarrh is a change of climate is a mistake, because catarrh is found in all climates, in all sections of the country; and even if a change of climate should benefit for a time, the catarrh will certainly return.

Catarrh may be readily cured in any climate, but the only way to do it is to destroy or remove from the system the catarrhal germs which cause all the mischief.

The treatment by inhalers, sprays, powders and washes has been proven almost useless in making a permanent cure, as they do not reach the seat of disease, which is in the blood, and can be reached only by an internal remedy which acts through the stomach upon the blood and system generally.

A new discovery which is meeting with remarkable success in curing catarrh of the head, throat and bronchial tubes, and also catarrh of the stomach, is sold by druggists under name of Stuart's Catarrh Tablets.

These tablets, which are pleasant and harmless to take, owe their efficiency to the active medicinal principles of Blood Root, Red Gum, and a new specific called Guaiacol, which, together with valuable antiseptics, are combined in convenient, palatable tablet form, and as valuable for children as for adults.

Mr. A. R. Fernbank, of Columbus, Ohio, says: "I suffered so many winters from catarrh that I took it as a matter of course, and that nothing would cure it except a change of climate, which my business affairs would not permit me to take."

"My nostrils were almost always clogged up. I had to breathe through the mouth, causing an inflamed, irritated throat. The thought of eating breakfast almost nauseated me, and the catarrh gradually getting into my stomach took away my appetite and digestion."

"My druggist advised me to try a fifty-cent box of Stuart's Catarrh Tablets, because he said he had so many customers who had been cured of catarrh by the use of these tablets, that he felt he could honestly recommend them. I took his advice and used several boxes with results that surprised and delighted me."

"I always keep a box of Stuart's Catarrh Tablets in the house, and the whole family use them freely on the first appearance of a cough or cold in the head."

"With our children we think there is nothing so safe and reliable as Stuart's Catarrh Tablets to ward off croup and colds, and with older people I have known of cases where the hearing had been seriously impaired by chronic catarrh cured entirely by this new remedy."—Adv. om

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

**HOGATE & CO.,**  
OF TORONTO, ONT.,  
IMPORTERS OF  
**Clyde and Shire Stallions.**  
Large importation just arrived. Can show you more Clyde stallions of breeding ages than any firm in Canada. Prices from \$700.00 up. Don't fail to see our horses before you buy. Have had fifteen years' experience, and can save you money. All horses guaranteed to be reasonably sure getters. We are stabling our horses at Woodstock this winter, and can be seen at our barn there.  
FOR FURTHER PARTICULARS WRITE—  
**E. R. HOGATE, WOODSTOCK, ONT.**

**4 Imp. Clydesdale Stallions**  
From such well-known sires as Sir Everard (5353), Prince Roberts 7135, Prince Alexander 8899.  
**2 Imp. Shorthorn Bulls,**  
4 Bulls Imp. in Dams.  
2 Canadian bred Bulls.  
**21 Imp. Cows and Heifers.**  
7 Canadian-bred Cows and Heifers.  
**Geo. ISAAC & Bros., BOMANTON, ONT.**

**THORNCLIFFE**  
**Stock Farm**  
The largest stud of Clydesdales in Canada, headed by the Champion Stallion of all ages,  
"LYON MACGREGOR."

**Stallions and Colts**  
From the best blood in Scotland and Canada. Ayrshire bulls and heifers from imported stock. Jersey heifers and bull calves, sired by the prize-winning bull, Distinction's Golden. Best milking strains, with good teats.  
Terms reasonable.  
A visit to Thorncliffe will well repay you  
**ROBT. DAVIES,**  
Thorncliffe Stock Farm, TORONTO.

# Combination Auction Sale of 35 SHORTHORN CATTLE

On Thursday, Feb. 14th, 1901,

AT MR. WM. SHIER'S CLEAR SPRING FARM  
2 1/2 miles west of Sunderland, a station on the Midland Branch  
of G. T. R., 50 miles north of Toronto.

The sale includes the entire herd of Wm. Shier, Sunderland, and drafts of 8 from the herd of John Gordon, Sunderland, and 7 from the herd of Adam Dawson, Cannington, Ont.

The cattle are all sired by Scotch bred bulls, and most of them bred straight from high-class Scotch families. See notes in Stock Gossip columns. Catalogues, ready Feb. 1st, will be mailed on application to

WILLIAM SHIER, SUNDERLAND, ONT.

Auctioneers: CAPT. T. E. ROBSON, M. L. A., Iderton, Ont.; ROBERT NEILSON, Uxbridge; GEORGE JACKSON, Port Perry.

# Important Dispersion Auction Sale of BATES AND SCOTCH SHORTHORNS

Noted for their prizewinning in both Dairy and Beef competitions.

BEING THE ENTIRE PLASTER HILL HERD, THE PROPERTY OF

MR. F. MARTINDALE

ON

Friday, March 1, 1901.

AT 1 O'CLOCK P. M.

45 head, consisting of 39 females and 6 bulls.

CATALOGUES ON APPLICATION.

TERMS.—8 months' credit on approved notes, or 5 per cent. per annum discount for cash.

THOS. INGRAM,  
AUCTIONEER, GUELPH.

F. MARTINDALE,  
YORK, ONT.

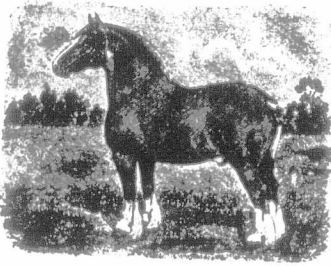
Trains will be met at York station at 9 and 11 o'clock a. m. on day of sale.

# The Horses that made Janesville Famous.

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

CLYDESDALES,

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



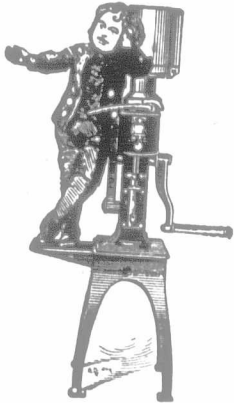
ALEX. GALBRAITH, JANESVILLE, WISCONSIN.

# Creamer Skim Milk

163 LBS. OF IT READY FOR THE PIGS

YIELD  
35 OZS. OF BUTTER

AN EVERYDAY STORY RETOLD.



THE BABY  
RESCUES WHAT  
THERE IS IN IT.

AND IN THIS  
WAY PAYS  
FOR ITSELF.

IF YOU DO NOT  
BELIEVE IT,  
TRY ONE.

PLEASE MENTION THE ADVOCATE.

Gentlemen,—  
On January 1st I allowed your agent at Delta, Wm. Johnson, to place a No. 2 Alpha Cream Separator in my house on trial. He took 163 pounds of skim milk that we had ready for pigs, milk that had been set in creamers for 24 hours and skimmed as close as we could skim it. We did not think the Alpha could get any more cream out of it, but, to our surprise, took out of the 163 pounds enough to make 1 pound 15 ounces of butter, for which we received 40 cents from agent, who wanted it to exhibit.

We also made another test by putting one mess of milk in creamers for 24 hours; from this we got 7 pounds of butter. We then separated same amount with the Alpha and got 9 pounds. Gentlemen, I am fully convinced that the Alpha is a labor saving and money-saving machine, runs easy, and comes up to the recommendation you gave it. I intend using one while I am in the butter business. Wishing your Company and agent success,  
Yours truly,  
JOHN EYRE, Soperton, Ont.

GENERAL AGENTS FOR CANADA:  
CANADIAN DAIRY SUPPLY CO.,  
327 Commissioners St., MONTREAL, QUE.

### GOSSIP.

At the meeting of the Minnesota Live Stock Breeders' Association, held at St. Paul, Jan. 11th, 1901, the following officers were elected for the ensuing year: J. J. Furlong, president; Prof. Thomas Shaw, secretary; J. C. Mills, treasurer. A resolution was passed requesting the Legislature to appropriate \$1,500 for printing 10,000 copies of Prof. Shaw's "Sheep Husbandry" for free distribution throughout the State.

Wm. Howe, North Bruce, Ont., writes:—"My stock of Yorkshire hogs is now in good shape, and sales for 1900 more than doubled those of the previous year, while at the fall exhibitions of Bruce and North Grey my herd maintained its reputation of former years by winning over three-fourths of all the first prizes given. I won 26 first and 12 second prizes in 32 competitions. Among the stock for sale is a bunch of young sows, being bred for spring farrow to Oak Lodge Justice, of Brethour breeding; also a few boars of spring farrow still on hand, and a few boars ready to ship in January. In about another month I will be through with my present stock hog, Oak Lodge Clarence 2nd, and he will then be for sale, as I cannot use him to advantage, and have added to my herd Oak Lodge Justice (4822), of the Oak Lodge Julia family, and sired by Oak Lodge Swell (imp.) 3943, bred by Philo L. Mills, Nottingham, Eng. He has been unbeaten since coming to the North Bruce herd. I am breeding a choice lot of sows, to be retained in my herd, to these two hogs for spring farrow, and prospects are bright for a good spring trade.

Mr. J. A. Caskey, Madoc, Ont., who advertises four young Holstein bulls in this issue, claims for them a stronger combination of the best dairy blood than can be found elsewhere in the Dominion, and sends us a statement of the character and record of some of the cows in his herd, from which these bulls are bred. Pieterje Hartog De Kol as a 2-year-old gave 42 lbs. of milk per day; as a 3-year-old, 55 lbs.; and as a 4-year-old, 63 lbs. Her dam, Netherland Pieterje Hartog, as a 2-year-old, 51 1/2 lbs. per day, 1,416 1/2 lbs. in 30 days, and 8,170 1/2 lbs. in 6 months, and 1,598 1/2 lbs. in one year. The dam of this cow's sire is De Kol 2nd, who as a 4-year-old made 33 1/2 lbs. butter in 7 days, the largest ever made by any heifer of the same age. Her official record at 11 years was 26.57 lbs. of butter in 7 days. Another one is Belle Burke Mechtild, who made 42 lbs. as a 2-year-old, 57 lbs. as a 3-year-old, and 66 lbs. as a 4-year-old. Her dam, Clothilde Artis Bell, as a 2-year-old (official test), made an equivalent record of 19 lbs. 2.79 ozs. in a week, and as a 4-year-old she made an official record of 46 1/2 lbs. of milk in 7 days, and a butter record of 20 lbs. 3.59 ozs. in 7 days. Another one, Inka Darkness 3rd's Jess, as a 2-year-old, gave 40 lbs. per day; as a 3-year-old, 55 lbs., and as a 4-year-old, 65 lbs.; this on ordinary feed. The dam of her sire is Jessie, with a reported record of 81 lbs. per day. Her own dam, Inka Darkness 3rd, has a record of 76 1/2 lbs. of milk per day. Another one is De Dickert's 3rd De Kol, a great show cow, large, and of the typical dairy form. Her granddam, De Dickert, was imported from Holland. Her sire's dam, Netherland De Kol, as a 2-year-old made 20 lbs. 5 ozs. butter in 7 days, and 82 lbs. 7 1/2 ozs. in 30 days, which is the largest 30-day 2-year-old butter record ever made. Others of the herd are Inka Darkness Pet, who this past season produced 74 lbs. milk per day on two milkings a day. She is a cow of immense capacity. Another one is Panasta Pauline, whose sire, Pauline Paul's De Kol, has for a dam Pauline Paul, made 31 lbs. 1 1/2 ozs. butter in 7 days, and 1,153 lbs. 15 1/2 ozs. of butter in one year, which is the largest butter record ever made by any cow of any breed. Manor De Kol's Prince, a son of Manor De Kol, whose dam is Netherland Hengerveld (official butter record of 26 1/2 lbs.), heads the herd, is a low-set, smooth built of strong constitution, and whose breeding is all that could be desired.

### Farm Foreman, Manitoba.

Working foreman, married, able to take charge; 400 acres crop, 30 milk cows, cream shipped. A small Shorthorn herd. House, barns, etc., all modern appliances. Permanent engagement and percentage profits after first year. Wife to board men. Scotchman preferred. Apply giving references and salary.

GEO. H. GREIG, Box 1372, Winnipeg, Man.

### OAKLAWN FARM

AS ALWAYS,  
VASTLY IN THE LEAD.

PERCHERONS,  
FRENCH COACHERS,  
SHIRES.



ON HAND, HOME-BRED AND IMPORTED  
270 STALLIONS, 235 MARES.

The greatest collection of stallions ever brought together. Our two large, recent importations for this year included the Principal Prize Winners at the WORLD'S EXPOSITION, PARIS, and at the Government Shows at Amiens and Mortagne; and the "Tops," first choice, purchased from the leading studs of France and England.

The superiority of the Oaklawn Percherons was also shown at the INTERNATIONAL LIVE-STOCK EXPOSITION at Chicago, December, 1900, pronounced by press and public the greatest live stock exhibition ever seen, where Oaklawn's Exhibit was awarded Three 1st Prizes, three 2d Prizes, three 3d Prizes, two 4th Prizes, and two 5th Prizes in the three stallion classes; Championship, stallion, any age; Championship, mare, any age; 1st and 2d Prizes for collections; \$100 Gold Medal best group, stallions; \$100 Gold Medal, best group, three mares.

Catalogue on application. Prices reasonable.  
DUNHAM, FLETCHER & COLEMAN,  
WAYNE, DU PAGE CO., ILLINOIS.

# BLEEDING PILES

And All Other Forms of this Common  
and Annoying Disease, Cured by  
the Pyramid Pile Cure.

Thousands of men and women suffer from some form of piles without either knowing the exact nature of the trouble, or knowing it, carelessly allow it to run without using the simple means of a radical cure.

The failure of salves and ointments to cure piles has led many sufferers to believe the only permanent cure to be a surgical operation, but surgical operations are dangerous to life, and, moreover, very expensive, and by no means always, or even often, successful.

The safest and surest way to cure any case of piles, whether itching, protruding or bleeding, is to use the Pyramid Pile Cure, composed of healing vegetable oils, and absolutely free from mineral poisons and opiates.

Mr. Wm. Handschu, of Pittsburg, Pa., after suffering severely from bleeding piles, writes as follows: "I take pleasure in writing these few lines to let you know that I did not sleep for three months, except for a short time each night, because of a bad case of bleeding piles. I was down in bed and doctors did me no good."

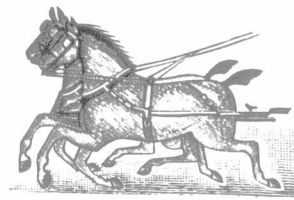
"A good brother told me of the Pyramid Pile Cure, and I bought from my druggist three fifty-cent boxes. They completely cured me, and I will soon be able to go to my work again."

The Pyramid Pile Cure is not only the safest and surest pile remedy, but it is by far the wisest known and most popular, because so many thousands have tried it and found it exactly as represented.

Every physician and druggist in the country knows the Pyramid Pile Cure and what it will do.

Send to Pyramid Drug Co., Marshall, Mich., for little book on Cause and Cure of Piles, mailed free to any address, or, better yet, get a fifty-cent box of the remedy itself at the nearest drug store and try it tonight.—Advt.

### PROMINENT HORSEMEN SWEAR



by our REMEDIES and TESTIFY they are as recommended. You will do likewise after a TRIAL. Our line consists of

Caustic Balsam (the greatest Liniment and Blister known—it has no superior), Colic, Chill and Fever, Tonic Mixtures, Lotion for Wounds, Heave Remedy, Condition Powders, Hoof Ointment, and Gall Cure. Your druggist or storekeeper should have them. If not, send us his name, and we will see that you are supplied. Every remedy guaranteed, or money refunded. Veterinary advice free. EUREKA VETERINARY MEDICINE COMPANY, London, Ont.

### FOR SALE.

CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Sarny, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD,

Richmond P. O., Ont.  
R. R. Station, Stittsville, C.P.R.

### FOR SALE:

Clydesdales and Shorthorns.

Young stallions and fillies bred from imported sires and dams. Also a choice bunch of Shorthorns, of both sexes and all ages, including a few extra choice young red and roan heifers and bulls.

ONTARIO COUNTY, JOHN BRIGHT, Myrtle, Ontario



90 HEAD

High-quality,  
Early-maturing

Herefords

Prizewinners.

Young bulls,  
cows,  
heifers.

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

H. D. SMITH, COMPTON, QUE.

### HEREFORDS FOR SALE.

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

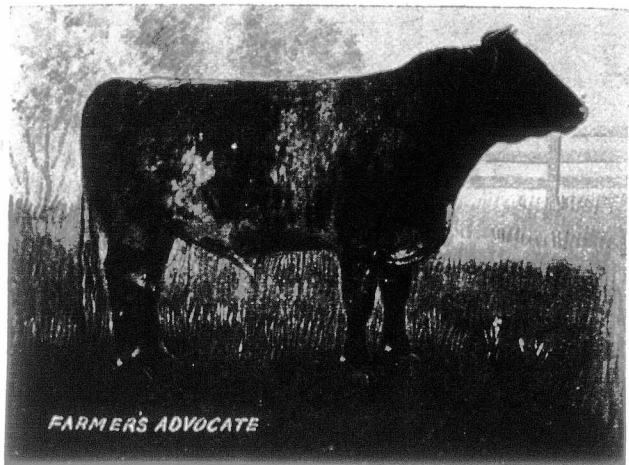
A. S. HUNTER,  
DURHAM, ONT.

### Shorthorn Bulls

TWO excellent young bulls: one 2 yrs. in May, and one 1 yr. in Mar. Bred straight from high-class Scotch-bred bulls and Scotch-topped cows, of good milking families. Write for prices, or come and see for yourself.

GEO. MILLER, Markham, Ont.

IT PAYS TO ADVERTISE IN  
THE FARMER'S ADVOCATE.



IMP. FASHION'S FAVORITE.

FOR SALE Three Beautifully-bred Clydesdale Stallions

Royal Erskine (imp.) [2529] [10431]

Brown; foaled May 3, 1896. Bred by Chas. Smith, Jr., Incheorsie, Huntly, Scotland.

Dam Roseabella (12921) Sire Prince of Erskine (9647) Breeder of Sire, W. S. Park.

2 Rose of Incheorsie (7823) Lord Montrose (7973) J. McGibbon.

3 Susie of Incheorsie (7822) Johnny (414) Wm. Ketter.

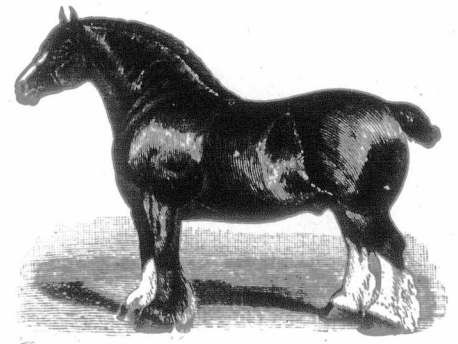
Black Samson (62) A. K. Leitch.

ROYAL ERSKINE is a grand young horse, and won Second at both Toronto and London in 1899 against strong competition, when in very thin condition, being just off the ship.

PRINCE OF ERSKINE (9647), by Prince of Albion; dam Halton Beauty (5687), by the great Darnley (222).

LORD MONTROSE (7973), by Knight Errant (4483); dam Lady Jane (6424), by Model Prince (1225).

JOHNNY (414), alias Nonsuch, alias Young Emperor, alias Rantin Johnny, was a prize-winner at the Highland Society's Show at Glasgow in 1875.



Balmedie Cameron Highlander (imp.) [2562] [Vol. 21, p. 134 S.]

IMPORTED IN 1899 BY H. CARGILL & SON, CARGILL, ONT.

Dark bay, white star on face, hind feet and ankles white, foaled April 7, 1898. Bred by W. H. Lumsden, of Balmedie, Scotland.

Dam Balmedie Doris (13511) Sire Royalist (6242) Breeder of Sire, Jas. Lockhart.

2 Lady Dorothy (8688) Balmedie Prince (7434) J. Cranston.

3 Maggie of Kirrimnoch (5827) Darnley (222) Sir W. Stirling-Maxwell.

4 Jean of Kirrimnoch (5826) Strathclyde (5538) J. McIsaac.

Young Conqueror (957) Jas. Smith.

Cairn Tom (117) Mr. Cochrane.

BALMEDIÉ DORIS won the following prizes: only times shown:—1896, Second Prize as a three-year-old at Royal Northern, Aberdeen, 1897, Second Prize as yearling mare at Royal Northern, Aberdeen, 1898, Second Prize as mare with foal at foot, at Royal Northern, Aberdeen.

LADY DOROTHY won the following prizes, and was one of the best mares left by that famous stallion, Darnley (222):—1891, Glasgow Show, Fourth Prize, Royal Northern, Aberdeen, First and Special for best mare in yard, 1892, Royal Northern, Aberdeen, First with foal at foot, Highland and Agricultural Show at Inverurie, First Prize, 1893, Highland and Agricultural Show at Edinburgh, Silver Medal, 1894, Highland and Agricultural Show at Aberdeen, Third Prize, 1895, Farmington Show, First Prize and Special for best female, Inverurie Show, First Prize and Special for best female.

ROYALIST (6242), sire Darnley (222); dam Princess (6345), by Prince of Wales (673), is one of the Champion Clydesdale Stallions of the day, both in the show-yard and at the stud, his progeny having taken First Prizes at the Highland and Agricultural Society, Royal English, and other leading shows.

ROYALIST, in 1887, as a one-year-old colt, gained Third Prize at Kilmarnock, First Prize and Cup at Royal Northern Summer Show, Aberdeen, and Third Prize at Highland Society's Show at Perth. In 1888, as a two-year-old colt, he gained First and Challenge Cup at Inverurie Show, First Prize and Cup at Royal Northern Summer Show, Aberdeen, and in 1899, as a three-year-old stallion, he gained First Prize and Challenge Cup as champion male at the Jubilee Show of the Royal Northern Society, Aberdeen.

BALMEDIÉ PRINCE (7434), by Prince of Wales (673).

Royal Carruchan (imp.) [2561] (Vol. 21, p. 172, S.)

IMPORTED IN 1899 BY H. CARGILL & SON, CARGILL, ONT.

Bay, stripe on face, off fore and hind feet white; foaled May 4, 1898. Bred by David Walker, Coullie, Udney, Aberdeenshire, Scotland.

Dam Jess of Coullie (13547) Sire Prince of Carruchan (8151) Breeder of Sire, J. McCaig.

2 Balfarg Jess (5295) Mount Royal (8965) D. Mitchell.

3 Dainty of Kingsdale (2648) Corsair (4119) Sir W. Stirling-Maxwell.

4 Jess 2nd (2648) Scotsman (760) J. Melklem.

5 Jess (2648) Stirling Tom (1337) R. Moubray.

6 Mettie (2648) Sir Colin Campbell (778) R. Loran.

Stirlingshire Champion (830) J. Hardie.

PRINCE OF CARRUCHAN, by Prince of Wales, was First at Highland Agricultural Society Show at Dundee, as a two-year-old, First and Champion at the Highland Society, as a three-year-old, at Stirling. First as an aged horse at the Highland Society Show at Edinburgh; also winner of the Cawdor Cup twice at the Glasgow Stallion Show.

MOUNT ROYAL won the following prizes:—1888, First at Perth, 1889, First at Turriff, 1890, First and Champion for best entire, any age, Royal Northern, Aberdeen, First and Clydesdale Society's Medal for best entire, any age, Turriff, First and Challenge Cup for best animal, male or female, Inverurie, First and Lord Aberdeen's Special Prize for best entire colt, Aberdeen, V. H. Commended, Highland Society's Show, Dundee, 1891, First and Champion Cup for best entire, any age, Royal Northern, Aberdeen, First at Royal Northern Summer Show, Aberdeen, Second (to Prince of Carruchan) at Highland Society's Show, Stirling, 1892, First, Royal Northern Summer Show, Aberdeen, Fourth, Highland Society's Show, Inverness, 1893, Second, Glasgow, as sire of five yearlings, Kirriemuir Society's Premium horse, 1894, Kirriemuir Society's Premium horse, 1895, Short list of five for Glasgow Premium, Selkirk and Galashiels Society's Premium horse, 1896, Windygates Society's Premium horse. His stock has gained First Prizes at Huntly, Keith, Banff, Turriff, Incheorsie, Kennedymount, Inverurie, Fyvie, Aberdeen, Glasgow, Edinburgh, Dundee, East Kilbride, Kirriemuir, Kirriemuir, Kirriemuir, Montrose, Forfar, Arbroath, etc. He is sire of Royal Gartly (9844), the Cawdor Cup winner in 1896 and 1896.

FOR SALE: Three imp. Yearling Bulls; Seven imp. in-dam Bull Calves.

Bred by Messrs. Duthie and Marr, from females imported by us, and sired by the best bulls in Scotland. All are excellently bred and first-class individuals.

We also offer any reasonable number of females, either in calf or with calves at foot; all ages.

Herd headed by the imported bulls, Golden Drop Victor and Prince Bosquet.

Also the Standard-bred Trotting Stallion, PAVON (30760) A. T. R.

CATALOGUE FREE.

If interested, come and see us or write:

H. CARGILL & SON, CARGILL, ONT., CAN.

TROUT CREEK HERD OF SHORTHORNS.

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

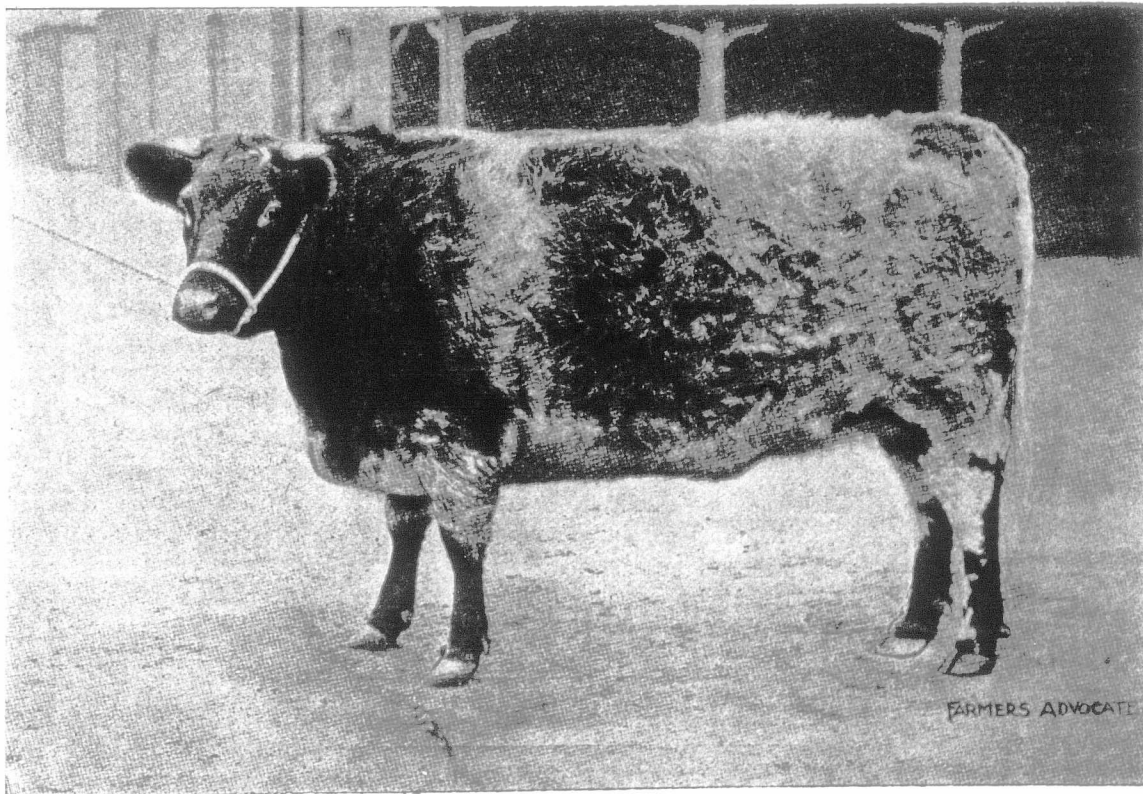
Imp. Lord Banff,

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

Imp. Consul.

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

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



CICELY.

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

Imp. Silver Mist.

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

Imp. Wanderer's Last.

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

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

W. D. FLATT,

378 Hess St. South.

HAMILTON, ONT.

Jas. Smith, Manager.

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We teach by mail, preparing farmers' boys or girls to take positions in town or city where they can earn good salaries. We have prepared farmers' boys for

**WELL-PAID POSITIONS AS**  
**Draftsmen,**  
**Electricians,**  
**Surveyors.**

Farmers' girls have become  
**Stenographers,**  
**Book-keepers,**  
**Designers,**  
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Write, stating subject in which you are interested.  
**The International Correspondence Schools**  
 Box 1517, SCRANTON, PA.

**R. MITCHELL & SON,**  
 Burlington Jct. Station, Nelson, Ontario,  
 Breeders and importers of  
**SCOTCH SHORTHORNS.**  
 Offer for sale:  
 12 Canadian-bred females.  
 11 Imported females.  
 4 Imported bulls.  
 7 Canadian-bred bulls.

**JOHN DRYDEN,**  
 BROOKLIN, ONTARIO,

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

**GOOD QUALITY AND CHOICE BREEDING.**  
**Pure Scotch Shorthorns for Sale.** Two bulls and fifteen months old, and three two-year-old and two one-year-old heifers. All right. Good ones. Meadowvale station, C. P. R. S. J. PEARSON & SON, Meadowvale. -om

**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. -om

**Shorthorns and Leicesters.**  
 Herd Established 1855.  
 A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28859, and Duncan Stanley = 16364 =. Grand milking cows in herd. Also a number of Leicesters of both sexes, from imported foundation.  
**JAMES DOUGLAS,**  
 CALEDONIA, ONT.

**YOUNG SHORTHORNS FOR SALE**  
 Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.  
**A. & D. BROWN,**  
 M. O. RAILWAY, IONA, ONTARIO.

**SPRINGHURST SHORTHORNS.**  
 The herd is largely of Cruickshank and other Scotch sorts, and is headed by the Inverquhomery-bred bull, Knuckle Duster (imported) (72733). Herd has furnished the Fat Stock Show champion three times in the last five years.  
 Choice young stock (both sexes)  
**FOR SALE.**  
**H. SMITH, - HAY, ONT.**  
 Exeter Station on G. T. R., half a mile from farm. -om

**HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.**  
 We are offering 8 young bulls for sale, of first-class quality, and A1 breeding. -om  
**Wm. Grainger & Son, - Londonboro, Ont.**

**FOR SALE:**  
**SHORTHORN BULLS AND HEIFERS**  
 from such sires as Mariner (imp.), Royal Judd 17499, Sultan Selam (imp.), Grenadier 26251, and Roseville Abott 30871, on a Victoria foundation. Also one extra Kinellar Stamp 10-mos. red bull. -om  
 Herd Co. THOS. CUDMORE & SON, Hurondale, Ontario.

IN WRITING  
 PLEASE MENTION FARMER'S ADVOCATE.

**GOSSIP.**

The American Chever White Record Association held their seventeenth annual meeting at Columbus, Ohio, January 16th, and had a larger attendance than ever. Officers elected were: President, I. T. Cummins, Cedarville, Ohio; Vice-President, F. A. Branch, Medina, Ohio; Secretary-Treasurer, Carl Freigan, Dayton, Ohio.

Mr. A. C. Hallman, New Dundee, Ont., who is engaged on the Farmers' Institute staff, writes from Bruce County:—"I am pleased to state that the farmers in Bruce are up to date, and are taking a great interest in advanced methods of agriculture, stock-raising, and the feeding of cattle for export, dairying, and the swine industry. One of the live questions of the day is cheap transportation. I have received a letter from home, stating that my herd of Holsteins and Tamworths are doing well. Since I have added my last herd bull, Judge Akkrum DeKol 3rd, I notice a grand improvement in the young stock. My Tamworths are also of the same high standard. The demand for stock is lively."

F. Bonnycastle & Sons, Campbellford, Ont., write:—"We enclose a list of our sales for the last few months, of Shorthorns, Cotswolds, and Berkshires. We are getting more enquiries than ever for cattle and sheep, and are making a lot of sales at satisfactory prices. To Mr. Geo. Gallagher, Everett, Ont., one bull and one heifer calf; J. H. Mann, Bridgenorth, Ont., one cow; R. S. Mitchell, Warkworth, Ont., one bull calf; C. J. Goodfellow, Codrington, Ont., one bull calf; E. C. McMillan, Erin, Ont., one heifer; John Wilson, Alvin, Ont., one bull calf; James Reid, Big Springs, Ont., one bull calf; North Himsworth Stock Co., Wisawasa, Ont., one bull calf; G. A. Brodie, Bethesda, Ont., ten head, consisting of one 2-year-old heifer, four yearling heifers, four heifer calves, and one bull calf; R. Rowed, Campbellford, Ont., one heifer calf. Sheep.—Elias Ashton, North Seguin, Ont., two yearling rams; James Owens, Meyersburgh, Ont., one yearling ram; T. H. Tumely, Madoc, Ont., two yearling ewes and one yearling ram; J. H. Gilroy, Coe Hill, Ont., two ewe lambs and one ram lamb; A. B. Smith, Moosomin, N.-W.T., ram lamb; J. Taylor, Rockwood, Ont., ram lamb; C. Hendra, ram lamb. Pigs.—W. Jose, Belleville, Ont., sow; J. Blizard, Warkworth, Ont., boar; R. Rowed, two sows; J. Dixon, Trent Bridge, boar."

**Slightly Scorched.**—International Food Co., Minneapolis, Minn.:—"Fire knocked us out Dec. 23rd. We commenced shipping goods Jan. 2nd. Our trade in November showed 66% increase over the largest previous November. Our trade in December shows the immense increase of 122%, and the month ends with the largest sale of any month in the history of our business. We closed the year 1900 with a large increase for every month and a grand total that is extremely gratifying. The year 1901 promises remarkable gains in our business."

**SHORTHORNS FOR SALE,** of the Crimson Flower, Clarissa, and Lustris tribes, with Indian Chief (imp.) and Clan Campbell (imp.) prominent in their pedigrees. Young bulls and heifers for sale. **ARTHUR JOHNSTON,** GREY COUNTY, Vandeleur, Ont.

**FOR SALE:**  
**Shorthorn Bulls, Cows and Heifers,** carrying a combination of Scotch top crosses, and tracing through many popular strains on the dam's side. -om F. A. Gardner, Britannia, Ont.

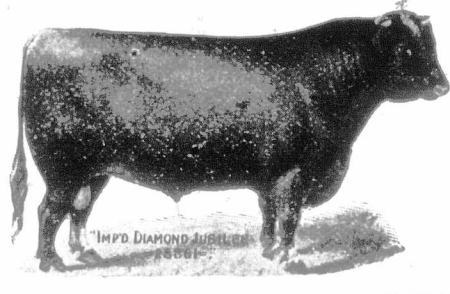
**SHORTHORN CATTLE AND LINCOLN SHEEP.**  
 Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.  
**J. T. GIBSON,**  
 DENFIELD, ONT.

**Standard Sheep Dip**  
 (OIL OF TAR.)  
 Non-poisonous, cheap and effective. Destroys Scab, Lice, Ticks, Foot Rot, etc.  
 Write for Testimonials and Circulars.  
 Manufacturers: **The West Chemical Company,** TORONTO, ONT.  
 For Contagious Abortion use West's Fluid.

**SHORTHORNS FOR SALE**  
 Cows and heifers, also a few young bulls. I have employed sons of Lord Lovel, Royal Member, Perfection, Indian Chief, and Clan Campbell, on Lord Lovel and Abbotsburn females.  
**WM. HAY, TARA, ONT.**

**FOR SALE.**  
**FIFTEEN OR TWENTY** young Scotch Shorthorn cows and heifers. Also 10 bulls, 6 to 24 months; good ones at right prices. -om  
**DAVID MILNE, ETHEL, ONT.**

**9—SHORTHORN BULLS—9**  
 From 7 to 18 months old, Of the Fashion and Lavender tribes; well-developed, healthy, and thick-fleshed; red and roan animals. Golden Robe now heads the herd.  
**WM. G. HOWDEN,**  
 Ontario Co., Columbus, Ont.



**T. DOUGLAS & SONS,**  
 STRATHROY, ONT.  
 BREEDERS OF...  
**Scotch Shorthorns**  
 100 HEAD TO SELECT FROM.  
 Offer for sale 20 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28861 =, at head of herd. Farm one mile north of town, on

**Isaac Usher & Son,** QUEENSTON, ONT.,  
 Manufacturers of QUEENSTON CEMENT. Proprietors of  
**Queenston Heights Stock Farm.**  
**Shorthorn Cattle.**

Herd headed by Lord Gloster (26935), by Abbotsford. Offered for sale seven young bulls, 4 to 20 months; also young cows and heifers. Stock offered for sale sired by or bred to such noted bulls as imp. Guardsman, Royal Standard, Abbotsford, Lord Gloster, Indian Count.

**P. O., TELEGRAPH AND TELEPHONE, QUEENSTON, ONT.**  
 FARM 3 MILES NORTH OF NIAGARA FALLS.

**J. & W. B. Watt,** SALEM, ONT., BREEDERS OF Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.  
 Our SHORTHORN herd was founded over 30 years ago, and contains such tribes as the Village Ruds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as *Barmpton Hero* 324, *Young Abbotsburn* 6236, *Challenge* 2933, *Perfection* 9100, *Lord Lansdowne* (imp.) 2712, *Clan Stuart* 14381, *Canada* 19536, *Sittytone Chief* 17060, *Royal Sailor* (imp.) 18359, *Royal George* 28513, *Clipper King* 16293 and *Judge* 23419, all of which have been first-prize winners wherever shown. *Royal Victor* 34681 and *Royal Wonder* 34682, by *Royal Sailor* (imp.), and out of English Lady and Mildred dams, now head the herd, assisted by *Roan Cloud* 31317, by *Lord Gloster* 26995, and out of *Melody* 21992, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.  
 Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

**SHORTHORNS AND BERKSHIRES.**  
 Young bulls, six to twelve month old; cows and heifers. Berkshires (various ages, either sex), and Embden geese.  
**MAC. CAMPBELL,**  
 Northwood, Ont.

**High-class Shorthorns and Yorkshire Pigs.**  
 One very superior bull, about 17 months old; three bulls about 5 months old, from imp. stock; cows and heifers due to calve this fall. Forty Yorkshire pigs, 2 months old, from imp. stock; imp. boar, 2 years old, and sows due to farrow soon. Write, or come and see us.  
**JAS. McARTHUR, GOBLE'S, ONT.**  
 Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met. -om

**Shorthorns and Tamworths FOR SALE.**  
 Our choice, dark red, 8-mos. bull. Also a few 4-mos. boars of extra quality, with Nimrod blood.  
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**SPRINGBANK FARM.**  
 Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.  
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**Maple Lodge Stock Farm**  
 ESTABLISHED 1854.  
**SHORTHORNS**—An excellent lot of young bulls, and a special value in young cows and heifers in calf to our imported Knuckle Duster.  
**LEICESTERS**—Imported and home bred—the best.  
**ALEX. W. SMITH,**  
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**Shorthorns FOR SALE:**  
 12 young bulls.  
 10 yearling heifers and heifer calves.  
 16 2-year-old heifers and young cows, several well advanced in calf to Precious Stone (imp.). Prices moderate. Write for particulars.  
**G. A. BRODIE,**  
 Stouffville Station, Bethesda, Ont.

**Bonnie Burn Stock Farm**  
 Forty rods north of Stouffville station, Ont., offers 5 Shorthorn bulls and some heifers, 30 Shropshire rams and ewes from Imp. and Canadian bred sires, at reduced prices.  
**D. H. RUSSELL, Stouffville, Ont.**

**Center Wellington Herd Scotch Shorthorns**  
 was founded in 1892 on Marr-bred descendants, to which have been added the Mistletoe and Matchless tribes, with Lord Stanley 4th 22678 at the head. Young cows and heifers for sale. Farm 1 mile from town and 14 miles north of Guelph.  
**Box 66, H. B. WEBSTER, Fergus, Ont.**

**ARTHUR JOHNSTON**  
 Greenwood, Ontario, Canada.  
**HIGH-CLASS SCOTCH SHORTHORNS**  
 (First Importation Made in 1874.)  
 (My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE  
 40 Imported Cows and Heifers,  
 40 Home-bred Cows and Heifers,  
 11 Imported Bulls and Bull Calves,  
 13 Home-bred Bulls and Bull Calves.  
 Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application. -om

**SPRINGFIELD FARM**  
 HERD OF Shorthorns, Oxfords, AND Berkshires.  
 Young bulls and Heifers on hand. Also a few choice Berkshires.  
**CHAS. RANKIN,**  
 Wyebridge, Ont.  
 SIMCOE CO. -o  
 PLEASE MENTION FARMER'S ADVOCATE



**R. & S. NICHOLSON**  
 SYLVAN P. O., PARKHILL STATION,  
 IMPORTERS AND BREEDERS OF  
**SHORTHORN CATTLE,**  
 OFFER FOR SALE  
 7 Imp. cows.  
 3 Imp. heifers.  
 7 Yearling heifers.  
 7 Yearling bulls.  
 9 Cows.

**11 SHORTHORN BULLS 11**  
 5 reds, 3 roans, and 3 whites, for sale, from 3 to 13 months old, sired by imported British Statesman; also some cows and heifers.  
**FITZGERALD BROS.,**  
 Simcoe Co. Mount St. Louis.

**Shorthorns, Cotswolds and Berkshires**  
 FOR SALE.—One yearling bull and six bull calves; also a few cows and heifers. A choice lot of ram lambs, e.e lambs, and ewes in lamb. Young pigs of the long bacon type, from two to three months old. Write for prices.  
**F. BONNYCASTLE & SONS,**  
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**Shorthorn Bull, Scotch Topped.**  
 Millbrook Minister = 23730 =; dark roan; calved Oct., 1896; sired by the imported Dutch-bred bull, Prime Minister; dam by Challenge, best son of Bampton Hero. Sure stock-getter, and perfectly quiet. For sale only because his daughters are coming to breeding age, and I must have a change.  
 Address: **R. BROWN, Orono, Ont.**

**PURE AND SCOTCH-TOPPED SHORTHORNS FOR SALE.**  
 Ten red bulls, from 6 mos. to 2 years. Calves by Imp. Prime Minister, Strathallan, Hawarden. Also females for sale. Parties notifying us will be met at Burlington Station, Appleby P. O.  
**A. D. ALTON & C. N. BLANSHARD CO.**

**Farnham Stock Farm**  
 Shorthorns—A fine lot of young bulls and heifers; sire, 20th Duke of Sylvan.  
 Oxford Down—Both imported and Canadian-bred. A few ewes in lamb to imp. Bryan 125. Prices reasonable.  
**HENRY ARKELL, Arkell, Ont.**

**SHORTHORNS**  
 Cows, heifers and bulls ready for service, by Scottish Chief = 27244 =, by Scottish Pride (imp.). Dam Faneys Gem, by Guardsman (imp.).  
**BERKSHIRES.**  
 Modern type, well-bred boars and sows, all ages.  
**ALEXANDER LOVE,**  
 Eagle, Elgin Co., Ont.

**SHORTHORN BULLS FOR SALE.**  
 We have Cruickshank Lovely, Fashions and Stamford females, and Matchless females bred by J. & W. B. Watt, Salem, Ont., with Lovely Victor 22170 at the head.  
**T. MERCER, MARKDALE, ONT.**

**SPRING GROVE STOCK FARM**  
 Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topsman = 17847 =, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns.  
 Apply  
**T. E. ROBSON, Ilderton, Ont.**

**5 SHORTHORN BULLS 5**  
 My five lusty, well-fleshed, red Shorthorn bulls range in age from 5 to 15 months old. They are all for sale.  
**JAS. BROWN, Thorold, Ont.**

**GUERNSEYS.**  
 This is the dairy breed for ordinary farmers. Large, vigorous, and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.  
 Address—  
**SYDNEY FISHER,**  
 17-y-o ALVA FARM, KNOWLTON, P. Q.

For sale: Yearling A. J. C. C. Bull, sired by a son of Two Hundred Per Cent; dam rich in Stoke Pogis blood. Solid color; good size. For price and particulars address  
**E. B. HINMAN & SONS, Grafton, Ont.**

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

**A QUICK, SHARP CUT**  
 hurts much less than a bruise, crush or tear Done with the **DEHORNING KEYSTONE KNIFE** is the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Look highest award World's Fair. Write for free circulars before buying.  
 Owned and Manufactured by **R. H. McKenna, V.S., Picton, Ont.**  
 THE LATE A. C. BROSIUS' PATENT.

**Maple City Jerseys.**  
 One Jersey bull two years old. Some very choice bull calves from 2 to 5 months old, and a few high-grade heifers and heifer calves. All of the choicest breeding. Write for prices.  
**Box 552. W. W. EVERITT, Chatham, Ont.**

**BARRED ROCKS.**  
 COCKERELS AND PULLETS, large, robust, healthy birds of the "National strain"; bred from a pen of 30 hens, selected for their good color and extra laying qualities, and an AI imported National cock. For prices write  
**W. C. SHEARER,**  
 Bright, Ont.

**Butter Jerseys**  
 FOR SALE:  
 A granddaughter of Louise of H, the great cow whose yield and cost of feed were published in F.A., 8 months old; a son of Bella of H, full sister in blood to Louise, 7 months old; a great-granddaughter of the famous cow, Massena (900 lbs. butter in one year), 19 months old, and in calf.  
**MRS. E. M. JONES,**  
 Box 324. Brockville, Ont.

**FOR SALE.**  
**6 YEARLING JERSEY BULLS,**  
 sired by Brampton's Monarch (imp.), and from tested cows; also registered and high-grade springer.  
**B. H. BULL & SON, BRAMPTON, ONT.**

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

**W. R. Bowman, Mt. Forest, Ont.**  
 We have five choice young bulls of various ages, also a few in-calf heifers and cows from prize-winning stock, which we will dispose of at reasonable prices. We also offer for sale sixty Shropshire and Shropshire and Suffolk Down ewes of excellent breeding and quality, at from \$10.00 to \$15.00 each. All stock registered.  
**H. BOLLETT, CASSEL, ONT.**

**MAPLE GROVE OFFERS** Holsteins of all ages and both sexes, of the most approved type and richest breeding, for sale at right prices. For particulars, address  
**H. BOLLETT, CASSEL, ONT.**

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

**RIGGDALE HOLSTEIN-FRIESIANS**  
 Two young bulls of choice breeding for sale; also some heifers. Prices reasonable. Write for particulars, or come and see them. **R. W. WALKER,**  
 Shipping stations: Utica P. O., Port Perry, G. T. R.; Myrtle, C. P. R.

**BROOKBANK**  
 Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.  
**GEO. RICE,**  
 Oxford Co. Currie's Crossing, Ont.

**HOLSTEINS FOR SALE.**  
 I AM now offering 4 royally-bred Holstein bulls: Regulator DeKol, Pompous DeKol, Jessie 3rd's Inka DeKol, DeDicker's DeKol. All from heavy-milking dams, closely related to DeKol 2nd and Netherland Hengerveld, the greatest of Holstein cows.  
**J. A. CASKEY,**  
 Madoc, Ont.

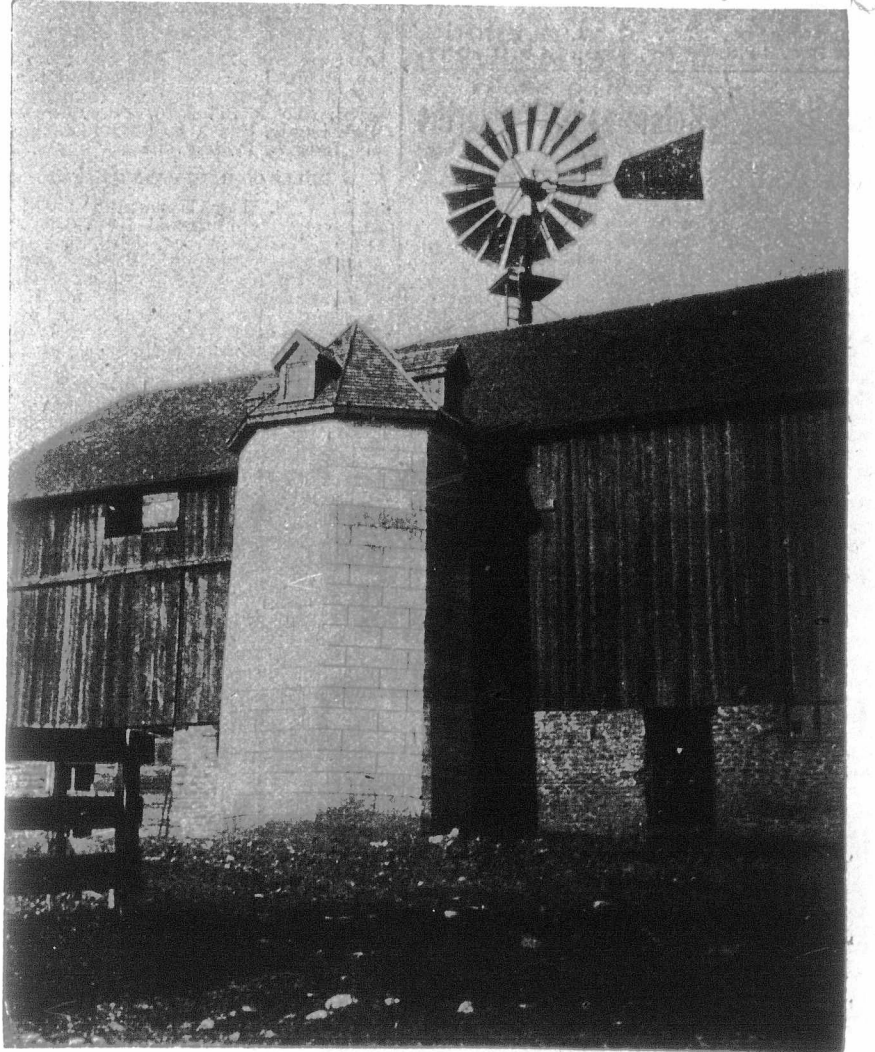
WE WANT TO SELL A FEW **Holstein Heifers, coming 2 years old** or a few young Cows. They are of the richest and largest producing strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale.  
**HENRY STEVENS & SONS,**  
 LACONA, OSWEGO CO., N. Y.

**The Breed THAT FIRST MADE Hillhurst Famous**  
**FIVE GRAND YOUNG SHORTHORN BULLS FOR SALE,** 9 to 12 months old—registered; bred from milking strains; hardy and active, having been reared in a natural manner on pasture. Prices moderate. Special inducements to clubs. A choice lot of **SHROPSHIRE**  
 Ram and Ewe Lambs, by imported rams of Mansell's and Harding's breeding. **HAMPSHIRE, THE GOLDEN-FLESHED,** Ram Lambs all sold. Next crop due January, 1901. Ready for service in August.  
**M. H. COCHRANE,**  
 HILLHURST STATION. COMPTON CO., P. Q.  
 117 miles from Montreal, on Portland Div. Grand Trunk Ry.; 12 miles from Lennoxville, C. P. R.

**W. G. Pettit & Son, FREEMAN, ONT.**  
 IMPORTERS AND BREEDERS OF **Scotch Shorthorns and Shropshire Sheep**  
 OFFER FOR SALE:  
 12 Imported bulls, 12 mos. to 2 yrs. old.  
 5 " " 9 to 12 mos. old.  
 20 " " cows, 3 to 6 yrs. old.  
 15 " " heifers, 2 yrs. old.  
 5 " " 1 yr. old.  
 6 Home-bred bulls, 9 to 18 mos. old.  
 20 " " heifers, 1, 2 and 3 yrs.  
 Our imported bulls are now getting in good shape. All our heifers of suitable age are bred to Pure Gold (Imp.), by Cyprus, and Scotland's Pride (Imp.), a Cruickshank Clipper, by Star of Morning.  
 Catalogues on application. All our imp. cattle were registered in the American Herd Book before the \$100.00 fee for recording was put on.  
 Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.

**Rapids Farm Ayrshires.**  
 REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—  
**Toronto, London, and Ottawa, in 1900.**  
 Come and see or write for prices. Young Bulls and Heifers for Sale, bred from High-class Imported Stock.  
**Robert Hunter, Manager**  
 for W. W. Ogilvie Co., Lachine Rapids, Quebec.

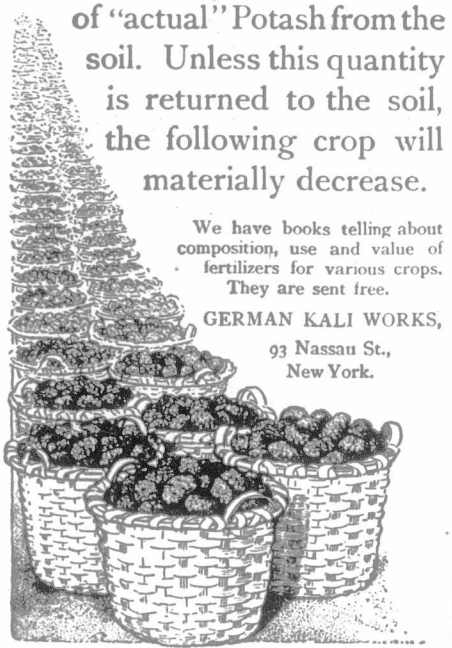
**A MODEL SILO**  
 BUILT WITH 86 BARRELS OF **THOROLD CEMENT.**



Barn of A. C. Pettit. Silo built with Battle's Thorold Cement. Dimensions 30 feet high and 12 feet in diameter. Driving-house floor 26 x 36 feet.

Burlington, Ont., December 12, 1900.  
 ESTATE OF JOHN BATTLE, Manufacturers of Thorold Cement, Thorold, Ont.:  
 GENTLEMEN,—Enclosed you will find a picture of my silo, built by your man, Mr. Ward Hagar. It is one of the most durable and looks the best of any make in our part of the country. I used 86 barrels of your cement to build the silo and lay a driving-house floor 26 x 36 feet, which is as hard as stone. Size of my silo, 30 feet high and 12 feet in diameter. I would advise all parties intending to build silos to get your man, Mr. Hagar, and construct them with your Thorold Cement.  
 Yours truly,  
**A. C. PETTIT,**  
 Importer and breeder of Scotch Shorthorn cattle.  
**Estate of JOHN BATTLE, Thorold, Ont.**

Two hundred bushels of potatoes remove eighty pounds of "actual" Potash from the soil. Unless this quantity is returned to the soil, the following crop will materially decrease.



We have books telling about composition, use and value of fertilizers for various crops. They are sent free.

GERMAN KALI WORKS,  
93 Nassau St.,  
New York.

**Maple Glen Stock Farm.**

The home of officially tested, Advanced Registry, dairy test and showing-winning and out of prizewinning and producing dams. They are show calves, about the best I ever bred. One yearling bull, the first prize calf at Toronto, 1900. Also a nice yearling heifer—a bargain.

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

**Riverside Holsteins.**

6 BULLS, from 2 to 18 months old, sired by our famous stock bull, Victor DeKoi Pietertje. Some are from imported or officially-tested dams. Also a few heifers for sale.

M. RICHARDSON & SON,  
Haldimand Co. om Caledonia, Ont.

**Maple Hill Holstein-Friesians**

SPECIAL OFFERING:  
Four bull calves, born in August and September, sired by the great bulls, Count Mink Mercedes and Daisy Teak's King, and out of prizewinning and producing dams. They are show calves, about the best I ever bred. One yearling bull, the first prize calf at Toronto, 1900. Also a nice yearling heifer—a bargain.

HARRISBURG STN., G.T.R. G. W. CLEMONS,  
GALT STN., C.P.R. ST. GEORGE P.O., ONT.

**SPRING BROOK Holsteins & Tamworths**

Am offering 4 choice-bred cows, bred to my DeKoi bull; also 5 heifers, 10 mos. old, DeKoi breeding, and excellent quality; and 1 bull calf. Write at once for prices. Always a choice lot of Tamworths on hand.

A. C. HALLMAN,  
WATERLOO CO. NEW DUNDEE.

**AYRSHIRE CATTLE AND POULTRY.**

Three prizewinning bull calves, 8 mos. old, from 30 to 35 dollars each. One fine bull calf, 3 mos. old, 25 dollars. All fashionable color and choice breeding, from dams with heavy milk records and fine show qualities, and sired by Royal Star of the Ste. Anne's first-prize bull at Toronto and London. Females all ages. Prices right. Twenty varieties of chickens, Pekin ducks. Also ten pair Toulouse geese, from \$4.00 to \$5.00 per pair. For particulars, write—

WM. THORN,  
Norfolk Co. Trout Run Stock Farm, Lynedoch.

**1 2-year-old Ayrshire bull and 2 yearlings for sale.**

Also a fine lot of calves, sired by Dewey, bred by Wm. Stewart & Son, Menie.

F. W. TAYLOR, Wellman's Corners, Ont.

**For Sale:**

Six Ayrshire bulls, ranging from 5 months to 1 year past. Also a few cows and heifers, thoroughbred fowls, and Scotch collie dogs.

WM. STEWART & SON, MENIE, ONT.

**Maple Cliff Dairy and Stock Farm.**

FOR SALE:  
Ayrshires—6 yearling bulls, females any age. Tamworths—40 boars and sows of different ages. Berkshires—3 boars, a number of sows.

R. REID & CO., Hintonburg.  
Farm 1 mile from Ottawa. Electric cars to farm. om

**FOR SALE:**

THREE BULL CALVES, from 4 to 10 mos. old, from choice Ayrshires of deep-milking strains. Prices reasonable. Come, or write to

Carr's Crossing, G.T.R. W. F. STEPHEN,  
Brook Hill Farm. Trout River, Que.

**DAVID A. McFARLANE,**

Breeder of high-class AYRSHIRES.  
KELSO, P.O.

Young stock for sale from imported and home-bred foundation. Prices reasonable.

PLEASE MENTION FARMER'S ADVOCATE.

**GOSSIP.**

At the joint Shorthorn sale at South Omaha, Nebraska, Dec. 19th, of 66 head of Shorthorns from the herds of C. D. Bellows and W. E. Robinson, an average of \$200 was made on the 42 offered by the former and \$166 on 24 head contributed by the latter, the highest price of the day being \$580 for the 3-year-old bull, Royal Prince 4th, by Victor Mysie 2nd, Mr. E. S. Donahy, Kellogg, Iowa, being the purchaser. On Dec. 18th, F. P. Healey and W. K. Wilson sold 37 head of Shorthorns at Centreville, Iowa, at an average of \$120.54. The highest price was \$200, which was reached by three animals.

Messrs. Alfred Mansell & Co., live-stock exporters, Shrewsbury, recently despatched from Liverpool, consigned to Mr. J. C. Duncan, manager of the Niagara Stock Farm, Buffalo, N. Y., 32 high-class Shropshire sheep, selected from the old-established flock of Mr. T. G. Jukes, of Tern, comprising 20 choice breeding ewes and six ewe lambs sired by Kruger's Hope 10394, bred by Repts. of the late W. Nevett, the balance comprising five well-grown ram lambs.

Mr. W. S. Marr, Uppermill, has sold by private bargain a highly-bred lot of Shorthorns to Mr. C. L. Gerlaugh, Ohio. The draft includes a three-year-old Red Lady, by Sittyton Pride, and from a William of Orange dam; a two-year-old Missie heifer, by Golden Victor; a two-year-old heifer of the Mountain Maid tribe, by Merry Mason, and her bull calf by Bapton Emperor; a yearling Clara heifer, by Captain Ingledwood; a yearling Missie heifer, by Wanderer, this being a full sister of Mr. Flatt's Wanderer's Last; four heifer calves from the Emma Princess Royal and Missie tribes, and got by such sires as Spicy Robin, Silver King and Lovat Champion.

Mr. James A. Cochrane, Hillhurst, Que., writes: "I am pleased to report that the first Hampshire Down lamb, a lusty, vigorous ram, arrived this morning (Jan. 2) on time, and is in all probability the first twentieth century lamb of his breed or of the Down family. Joy of Morning at twenty-four months old tips the beam at 1,850 pounds; he has improved steadily since the shows. Scottish Hero in breeding condition now weighs 2,200 pounds at two years and seven months. Scottish Beau, the first of the Silver Plates imported to America (bred by Mr. Duthie, but calved at Hillhurst) is developing into a worthy assistant to the first-named sires. For evenness of flesh I have never seen his superior of any breed. We have some capital calves by Hillhurst Baronet, and expect some very shortly from Joy of Morning, the first of his get."

Shannon Bros., Cloverdale, B. C., write:—"We have recently sold one Oxford ram to each of the following: Jas. Jenkins, Port Kells, B. C.; S. Smith, Dewdney, B. C.; W. H. Menzies, Pender Island, B. C.; O. H. Culver & Co., Whatcom, Wash., U. S.; Hicks & Everett, Custer, Wash., U. S.; Isaac Sandwith, Doe Bay, Wash., U. S.; J. F. Boothroyd, Surrey Centre, B. C. We purchased from J. H. Juill, Mt. Vernon, Ont., one imp. 2-year-old ram, winner of first in the aged class at New Westminster, B. C., to head our flock. We have made the following sales of Berkshire boars: To A. J. McKinlay, Lac La Hache, B. C.; Capt. Trench, North Saanich; Chas. Coulson, Langley; John Israel, Mt. Lebanon; Wellington Farm, Ladner's; Thos. E. Ladner, Ladner's; H. Ferguson, Port Haney. Sales of sows: To M. T. Johnston, Somenos; Jos. Nightingale, South Salt Spring. Jas. H. Nelson, Langley Prairie, one sow in pig."

**NEW BULLS FOR UPPERMILL AND COLLYNIE.**

Mr. W. S. Marr, Uppermill, Aberdeenshire, has recently purchased from Mr. J. Deane Willis, Bapton Manor, Wiltshire, the grand yearling Shorthorn bull, Bapton Diamond, son of the Royal winning young cow, Bapton Pearl, imported last year by Mr. E. S. Kelly, of Ohio. His sire is Augustin, by Bapton Javelin, out of Augusta Countess, by Count Lavender, and of the Bruce Augusta family. Mr. Marr has thus two Bapton Manor bulls in service, having some time previously secured Bapton Favourite, and he thinks he has two of the best bulls in Britain. Mr. Duthie has also added to the bulls at Collynie at a big price, the bull calf, Bapton Champion, bred by Mr. Willis, sired by Silver Plate, and out of the dam of Bapton Emperor, the Royal champion of 1899.

**CLYDESDALES AND SHORTHORNS AT CARGILL.**

H. Cargill & Son, Cargill, Ont., in their new advertisement in this issue, offer for sale three excellent young imported Clydesdale stallions, 2 to 4 years old, of good size and quality, and bred on best lines, having lots of the blood of Darnley, Prince of Wales, Top Gallant, and other noted sires, and from prizewinning dams in Scotland. Parties looking for Clydesdale stallions will do well to see these, as they are good and can be bought right.

The herd of Shorthorns at Cargill, containing the largest number of imported Scotch-bred cattle on the continent, is in fine form, and increasing rapidly by the birth of calves from the imported cows. A grand lot of young bulls are held for sale at fair prices, and a few young cows and heifers also. If interested, write for catalogue or see the herd.

**Meetings of Horsemen, Toronto.**

Saddle and Carriage Horse Breeders' Association meeting—Wednesday, February 6th, 2 p. m., Albion Hotel, Toronto, Ont.

Canadian Hackney Horse Society meeting—Wednesday, February 6th, 7.30 p. m., Albion Hotel.

Dominion Shire Horse Breeders' Association meeting—Thursday, February 7th, 11 a. m., Albion Hotel.

Dominion Clydesdale Horse Breeders' Association meeting—Thursday, February 7th, 2 p. m., Albion Hotel.

Dinner by the Canadian Horse Breeders' Association—Thursday, February 7th, 7.30 p. m., Canadian Horse Breeders' Association meeting—Friday, February 8th, 2 p. m., Albion Hotel.

Mr. Henry Wade Secretary of the above organizations, advises us that persons coming to the meetings who purchase full fare railway tickets, on starting, can secure return tickets at one-third.

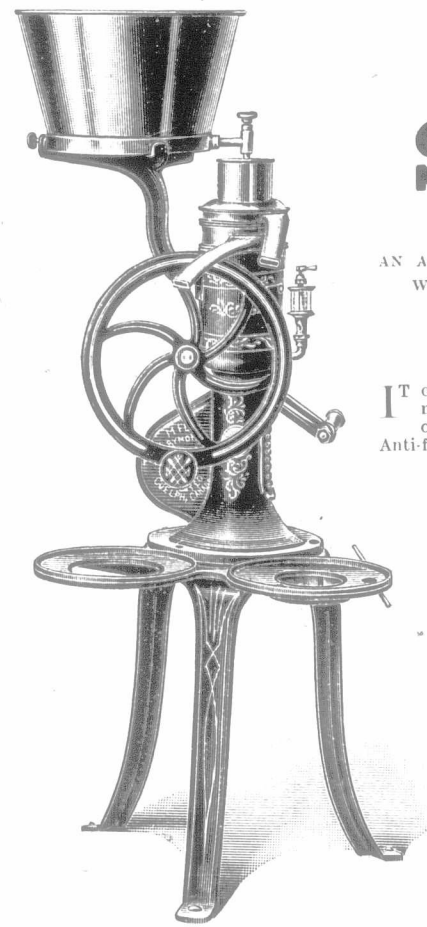
**Easy Harness**

All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of

**Eureka Harness Oil**

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes.  
Made by IMPERIAL OIL CO.

**The National**  
Centrifugal Farm  
**Cream Separator**



AN ACTUAL NECESSITY FOR PROFITABLE DAIRYING WHEN MAKING BUTTER ON THE FARM OR WHEN SENDING CREAM TO THE CREAMERY OR CITY TRADE.

IT combines all important improvements and points of merit that are of real practical service to the every day operator on the farm. Most simple in its construction. Anti-friction ball bearings; convenient and easy to operate by the children. Skim the cleanest; makes the sweetest cream; no numerous parts to give trouble and delay when washing every time it is used; only two pieces inside of the bowl. Strong, durable, made of the finest material, so as to give the most lasting service, and most beautiful in design and finish.

MANUFACTURED BY

THE  
**Raymond**  
Mfg. Co.  
of Guelph,

LIMITED.

GUELPH, ONT.

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

If not introduced in your locality, ask for testimonials, etc., from

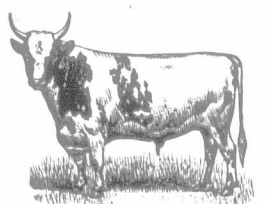
**THE Creamery Supply Co.**

General Agents for Ontario.

GUELPH, ONT.

**Choice Ayrshires, and Barred Rocks.**

A number of cows and heifers in calf to Glenore Sultan. Several choice young bulls.



Plymouth Rocks of both sexes from prizewinning birds.

**JAS. McCORMACK & SONS,**  
-om ROCKTON, ONTARIO.

**Ayrshire Bulls:**

Write to J. YULL & SONS, Carleton Place, for special prices on Ayrshire bulls from 14 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks. -om

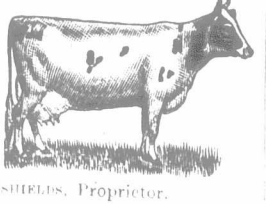
**AYRSHIRES AND LEICESTERS**

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.

**Ayrshires, Guernseys, Shropshires and Yorkshires**

For immediate sale. A few fine Ayrshire bull calves, from 4 to 12 mos.

**Isaleigh Grange Farm,**  
Danville, Que.



J. N. GREENSHIELDS, Proprietor.

**FOR SALE: High-class 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.**

**TREDINNOCK AYRSHIRES**

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

Farm close to St. Anne Station, Quebec. G.T.R. & C.P.R., 20 miles west of Montreal. -om

**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.

**NETHER LEA AYRSHIRES, BERKSHIRES, YORKSHIRES, AND ROUGH-COATED COLLIES.**

YOUNG STOCK FOR SALE.

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

**T. D. McCALLUM, Danville, Que.**

**BROAD LEA OXFORDS.**

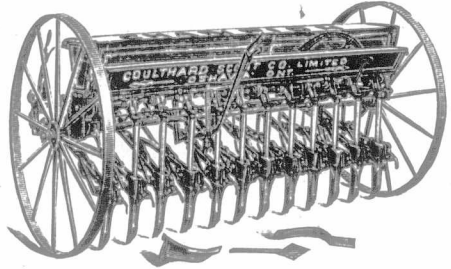
Sheep of both sexes for sale, many of which are bred from the famous imported ram, Royal Warwick 3rd. Correspondence solicited. Visitors welcome. -om

**Henry Arkell & Son,** Teeswater, Ont.

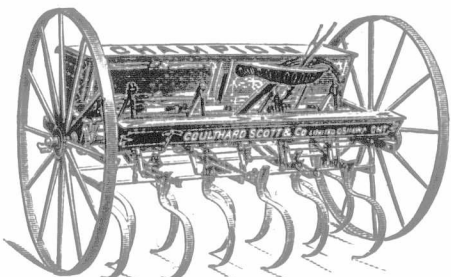


**The Coulthard-Scott Co., Ltd.**  
OSHAWA, ONT.

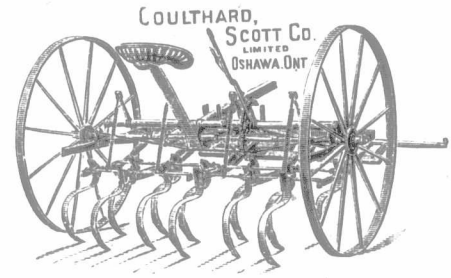
Our line ahead of all others.



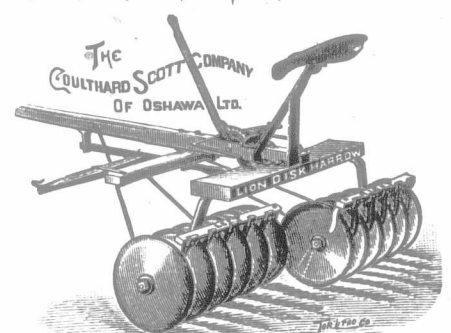
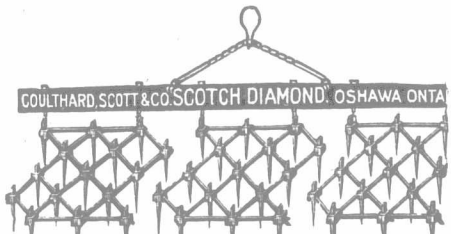
CHAMPION PRESSURE DRILL.



CHAMPION SEEDER.



CHAMPION CULTIVATOR.



Write for catalogue and prices, and call on our nearest agent and examine samples.  
Agents wanted where we have none.

**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.**

The largest flock of imported Lincoln sheep in America, and contains more Royal first-prize winners than any other on this continent. Sheep of this flock won the first prize for the best flock at Toronto, 1900, and all the first prizes for rams at the International Show at Chicago, including the championship and progeny of a sire. Imported and home-bred rams and ewes for sale. Fifty imported ewes in lamb to first-class English rams. Write for prices or come and see.

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

**HUNTLYWOOD FARM**

SOUTHDOWN SHEEP (IMPORTED AND HOME-BRED), ALSO DEXTER-KERRY CATTLE. A USEFUL LOT OF SOUTHDOWN RAMS NOW FOR SALE. APPLY TO—

W. H. GIBSON,

MANAGER.

Hon. G. A. Drummond, Proprietor.

Beaconsfield, G.T.R. & C.P.R. Pointe Claire P. O. P. Q.

PLEASE MENTION FARMER'S ADVOCATE.

EUROPEAN ADVERTISEMENTS.

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 of

JAMES E. RAWLENCE,

SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION,

SALISBURY, ENGLAND.

HENRY DUDDING, RIBY GROVE, STALLINGBOROUGH, LINCOLN, ENGLAND. Breeder of Lincoln Longwool Sheep and Shorthorn cattle. The Riby Flock of upwards of 1,400 Ewes holds an unequalled record for true type, merit, and quality. Its produce and their descendants have won the highest honors at all the principal exhibitions and shows throughout the world; its wool exhibits being unbeaten. Established upwards of 140 years. Its produce leads the way from the fact that satisfaction is given. The Riby Shorthorn Herd of upwards of 300 selected specimens of Booth, Bates, Crickshank, and Scotch strains, is one of the largest Herds in Great Britain. Its principal Stud Bulls are: "Pride of Fortune" 73240, s. "Pride of Morning" 14564, d. "Flora 2nd," by "William of Orange" 50694; "Golden Robin" 68718 (rich roan), s. "Roan Robin" 57992, d. "Golden Sunshine," by "Royal James" 54972; "Prompter" (Vol. XLV.), by "Prefect" 69255, d. "Rislington Lass," by Umpire 13th, 1st and champion at Ombersley, 1898; "Rosario" s. "Wiltshire Count" 69824, out of "Rose Blossom" (G. Harrison). This bull, his sire and dam, won 84 prizes, including first and champions. Telegrams: "Dudding, Keelby." Rail Stations: Stallingborough, 3 miles; Great Grimsby, 7 miles.

J. E. CASSWELL, Laughton, Folkingham, Lincolnshire,

breeder of Lincoln Long-wooled Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 20 rams, at the "Annual Lincoln Ram Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hoggs and shearings for sale, also Shire horses, Shorthorns, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

FAMOUS ALL OVER THE WORLD. ALFRED MANSELL & CO., LIVE STOCK AGENTS AND EXPORTERS, SHREWSBURY.

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

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.

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.

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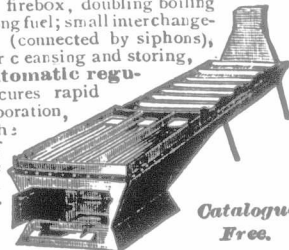
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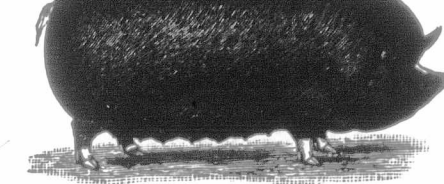
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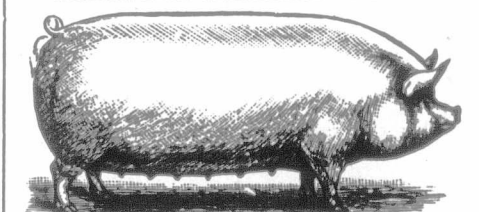
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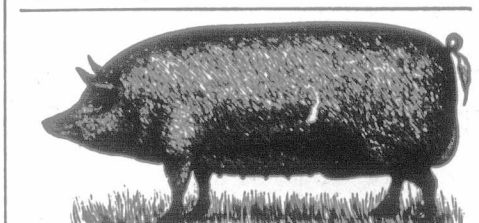
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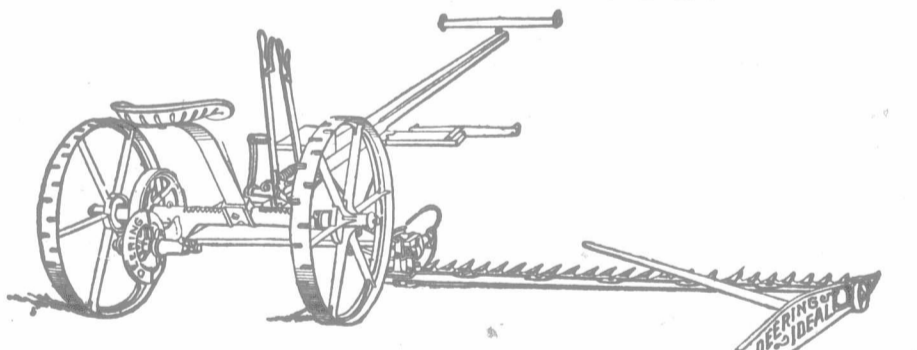
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