

J. H. Grisdale
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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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CONTENTS OF THIS NUMBER.

EDITORIAL.	PAGE.
MR. ALBRIGHT'S LETTER ON THE ONT. AGRICULTURAL COLLEGE.	449
MINNESOTA GRADUATES IN AGRICULTURE.	449
THE NEED OF THE TIMES	449
CULTIVATION OF CORN AND ROOTS.	450
THE O. A. C. COURSE DISCUSSED	450
BIG REWARD FOR LITTLE EFFORT	451
HORSES.	
THE CARE OF HORSES' FEET.	451
WAKEFUL, THE BEST RACE-HORSE IN AUSTRALIA (ILLUSTRATION)	451
BREEDING FROM YOUNG FILLIES	451
CLYDESDALE AND SHIRE STANDARD OF EXCELLENCE.	452
STOCK.	
CAMERA COMPETITION	452
JUDGING AT SHOWS	452
OUR SCOTTISH LETTER	453
THE BATH AND WEST OF ENGLAND SHOW	453
GOODWIN (ILLUSTRATION)	454
ANTISEPTIC ANIMAL SURGERY	454
GIPSY III. OF BURNHOUSES (1878) (ILLUSTRATION)	459
FLYING FOX, P. 2729 H. C. (J. H. B.) (ILLUSTRATION)	459
OXFORD DOWN SHEARLING RAM (ILLUSTRATION)	460
HEREFORD CATTLE AT SILVER HEIGHTS, WINNIPEG. FARM OF LORD STRATHCONA (ILLUSTRATION)	461
GROUP OF SHORTHORNS IN THE HERD OF JAMES THOMPSON, MILDWAY, ONT. (ILLUSTRATION)	455
FARM.	
AN EXPERIMENT IN CLOVER CURING	454
IMMIGRATION AND FARMING IN MANITOBA.	454
BREAKING PRAIRIE LAND	454
PRESERVING FENCE POSTS	454
SPONTANEOUS COMBUSTION	456
FOOD FOR DOGS	455
TERRITORIAL DEVELOPMENT OF AGRICULTURE AND STOCK RAISING	455
PORTRAITS: W. J. BLACK, B. S. A.; L. A. MOORHOUSE, B. S. A.; G. I. CHRISTIE, B. S. A.; J. MURRAY, B. S. A.; W. J. CARSON, B. S. A.; E. C. HALLMAN, B. S. A.; F. S. JACOBS, B. S. A.; B. J. WATERS	456, 457
EXTENSIVE COAL DEPOSITS	456
ONTARIO AGRICULTURAL COLLEGE GRADUATES	456
SEEDS FOR IDENTIFICATION	456
THRESHING SCENE ON ONE OF THE FARMS OF SALKELD BROS., BAYFIELD ROAD, GODERICH, ONT.	462
WHEAT STACKS AND LOAD OF GRAIN (ILLUSTRATION)	463
POULTRY.	
OUR EARLY CHICKS	456
A YOUNG FARMER ON TURKEY RAISING	456
SUITABLE BREEDS AND HOW TO SELECT THEM	457
GARDEN AND ORCHARD.	
SOME INSECT PESTS	457
GREEN CROPS IN ORCHARDS.	457
DAIRY.	
DISINFECTING STABLES	458
JERSEYS AS BUTTER PRODUCERS	458
THE TORONTO INDUSTRIAL DAIRY BUILDING (ILLUSTRATED)	458
PLANS ASKED FOR IN CARE OF FACTORY MILK	463
QUESTIONS AND ANSWERS.	
VETERINARY: SCOURS IN CALVES; MARE SUBJECT TO COLIC; WEAKNESS IN YOUNG PIGS; SPINAL TROUBLE IN COLT; SPAYING BITCHES	458
MISCELLANEOUS: KICKING COW; ALFALFA—STACKING EGGS IN INCUBATOR—SHIPPING GREEN CHEESE; ORANGE RUST ON RASPBERRIES; SILO CAPACITY, ETC.; WHITE SHORTHORNS—LICE ON CATTLE; SOWING RAPE WITH GRAIN CROPS; OLD TIMES—PARIS GREEN AND PLASTER; SALT FOR HOGS; SPRAY PAINTING—SCALES—TREE SEEDS AND PRESSED BLOOD; CALF NOT EATING—COW FAILING TO COME IN HEAT; PERENNIAL SOW THISTLE; KEEPING SHREDDED CORNSTALKS; HOOKS ON CATTLE'S EYES—HERBAGEUM; GREEN MANURE REQUIRED; LIVER DISEASE IN LEGHORN FOWL	458, 459, 460
MARKETS.	
FARM GOSSIP: ONTARIO AGRICULTURAL COLLEGE EXAMINATIONS; NOTES FROM OTTAWA; P. E. ISLAND; WILTON SUGAR BEET FACTORY; PRECAUTIONS AGAINST SPONTANEOUS COMBUSTION; LINCOLN COUNTY, ONT.; PEEL COUNTY, ONT.; KILLING BURDOCKS	461, 462, 463
TORONTO MARKETS	463
BRITISH CATTLE MARKET	463
BUFFALO MARKETS	463
CHICAGO MARKETS	463
CHEESE AND BUTTER	463
DR. JOHN SPENCER'S PROMOTION	463
HOME MAGAZINE.	
THE FAMILY CIRCLE	464
"A VENETIAN FRUIT SELLER" (ILLUSTRATION)	465
THE QUIET HOUR	466
THE CHILDREN'S CORNER	466
GOSSIP	467, 468, 469, 470, 472, 475, 476, 478, 479, 480
NOTICES	467, 468, 469, 472
BOOK REVIEW	469
ADVERTISEMENTS	445 to 448, 467 to 480

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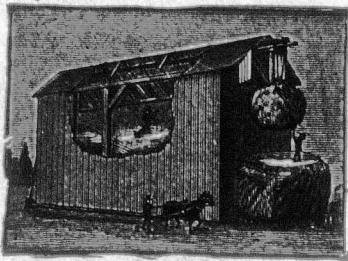
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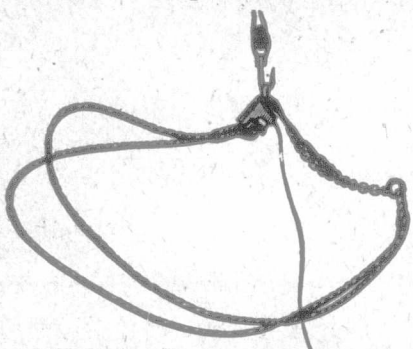
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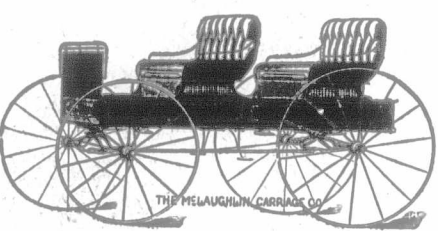
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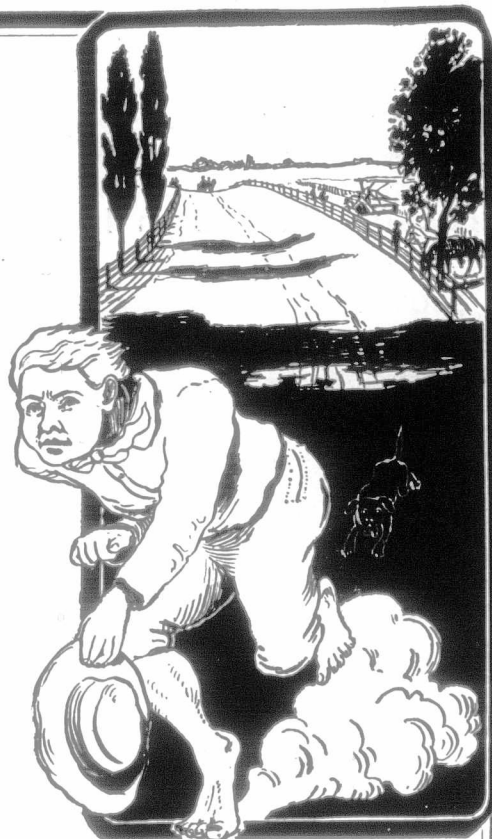
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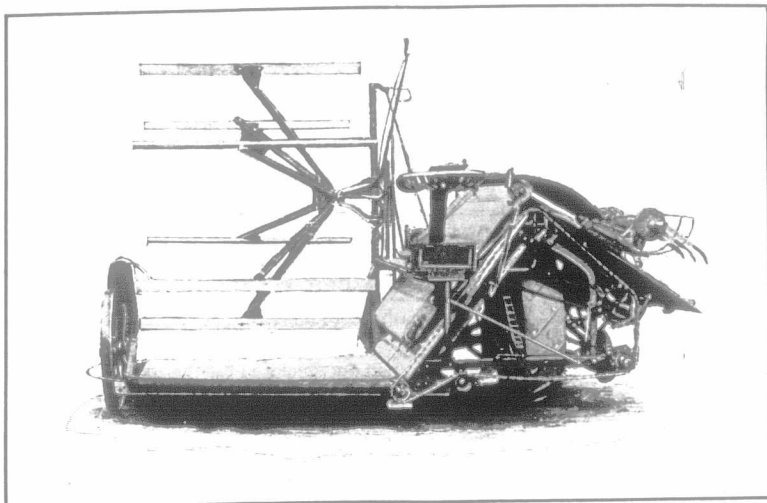
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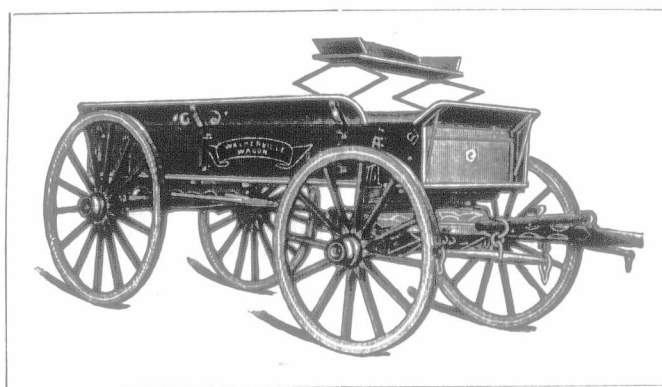
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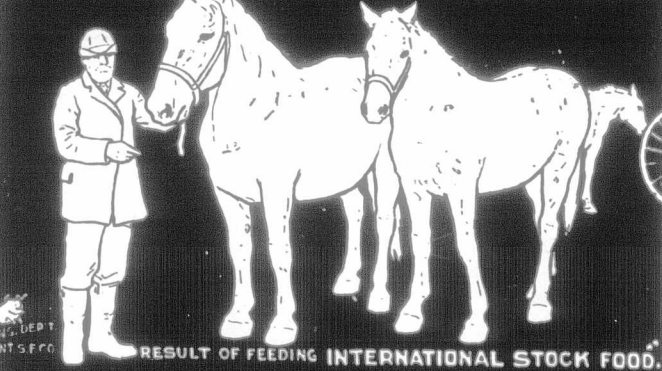
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VOL. XXXVII

LONDON, ONT., AND WINNIPEG, MAN., JUNE 16, 1902

No. 552

EDITORIAL.

Mr. Albright's Letter on the Ontario Agricultural College.

We cannot but commend the refreshing candor and courage with which Mr. Albright, elsewhere in this issue of the "Farmer's Advocate," deals with the course of study and methods of teaching pursued at the Ontario Agricultural College, Guelph. That he is no disappointed sore-head, and that he has been studying at that institution to some purpose, are evident from the honors which he earned in the recent annual examinations, the results of which we publish. Having taken one half of the two-years' course, he states his intention of returning to complete it, so that it is no more than fair to credit him with an honest purpose in pointing out what appear to him weaknesses in the course and plan of teaching, and suggesting remedies.

Now, the Agricultural College belongs to the people of Ontario, and its purpose is to promote the best interests of agriculture—the greatest industry in this Province—primarily by the training of young men for that avocation. How best to further that object is, therefore, a matter of concern to every right-thinking person, who will also be disposed to consider on their merits any suggestions that may be offered in that direction.

The first point of importance in Mr. Albright's letter is that the College has been fitting too large a proportion of our best men to occupy professional positions in the United States. It does seem to us that that is largely a matter of supply and demand. Young Canadians stand well in the esteem of business men and heads of public institutions in the Republic. Agricultural schools and experiment stations have been multiplying across the line, and this, with the general commercial activity there, has naturally drawn away not a few of the best graduates of the O. A. C., and they have done the country and the College honor. Just now Canada is enjoying a period of great industrial and agricultural expansion, population is flowing into the country from the States and elsewhere, and we believe the trouble referred to will to some extent tend to right itself when these graduates begin to realize the excellence of home opportunities. The only other way to stop the exodus of B. S. A.'s would be the narrow policy of shutting up the College or sweeping away the four-years' course that qualifies men for advanced positions. The intelligence of Ontario will hardly tolerate that. The four-years' course must surely be an incentive and an advantage to the whole institution, and with an adequate staff and equipment the two-years' course should not be impaired. Are the two not compatible? By its excellence and practical nature, as Mr. Albright contends, the two-years' course should be made the stronghold of the institution with the rank and file of young farmers. We say, let the Legislature provide the College with ample means for both purposes. Picayune politicians declaim that "the College don't pay." It is not supposed to pay directly, any more than a public or high school, and the College farm, being part of the institution, may not be able to show much of a surplus either.

Reverting, in passing, to the minor suggestion that beekeeping should be made optional, it might be well to do so as an economic study; but as a lesson subject in natural history we doubt if there is any living animal the nature

and habits of which will lend themselves more readily to instruction of interest and value than the bee under the direction of a real educator.

In order to improve the College course and do away with cramming or "plugging," which means systematically memorizing a lot of mere facts in order to pass examinations, Mr. Albright advocates abolishing the lecture system in teaching and adopting the high-school or text-book method. We must confess at once that there is great peril in the lecture system if, as alleged, it degenerates into using the class period for the dictation by a teacher or professor of an array of notes. If the pupil understands that this teacher will set an examination paper at the close of the term, he will, naturally, look for a paper within the limits of the notes and "cram" them accordingly. But we know well, also, that in high and public schools men with the most approved text-books in their hands are the very high-priests of cramming for examinations. Without going further into their respective weaknesses or merits, the "Farmer's Advocate" is satisfied that the roots of this trouble lie deeper than the question of Text-book vs. Lecture. In the last analysis it resolves itself into a question of qualification for the great work of teaching. We are firmly of opinion that the time is at hand when those responsible for the general conduct of such institutions as the Ontario Agricultural College must take more carefully into consideration the pedagogical qualifications of those who are to compose the professorial staff. It is not enough that aspirants to positions as agricultural teachers have been able to pass high examinations in technical knowledge, but are they trained in the all-important work of teaching? Have they grasped the true genius of education, which is not merely the acquisition of facts, but the training of human faculties, the equipment of men and women for successful service in whatever particular avocation in life they may be called upon to play their part?

A word in closing regarding the relatively small attendance in years past of Ontario farmers' sons at the College. Our correspondents have indicated a variety of reasons, but there is another to which we feel in duty bound to refer, viz., the way in which the College has been handled about in party politics. On the one hand it has been portrayed on the hustings as beyond reproach, and resenting the suggestion of any need for improvement; and on the other as a highfalutin and extravagant institution, richly deserving ridicule and censure. Prejudice has doubtless deterred many from attending. We are glad to believe that these extreme attitudes are being gradually modified. A fair and open-minded discussion will not hurt the institution. It will do it good by bringing to the front the needs of the people on one hand and of the institution on the other, and disarm prejudice by showing that those in charge, while having reasons for the faith that is in them, are ready to consider any suggestions calculated to enhance the efficiency and popularity of the College.

Minnesota Graduates in Agriculture.

In the University of Minnesota, this year, there are but two students receiving degrees in agriculture. The Farm Students' Review deplores the fact that so few of the youth of Minnesota take advantage of the opportunities offered in the College of Agriculture to get an education for a profession that is not overcrowded. In Ontario, this season, but eight young men students of the O. A. C. graduate as B. S. A.'s from Toronto University.

The Need of the Times.

The greatest need of the rank and file of farmers in Canada at the present time is a clearer conviction that the hope of this country lies in the bestowal of greater attention on the improvement of the live stock in the hands of the general run of the farmers as well as of the breeders of pure-bred stock. If the impression prevails, as we fear it does to a large extent, that the breeders here are catering mainly to the trade in the neighboring country, which is our principal rival in the British market for live stock and its products, and if most of the best of our stock sold by breeders is going across the line to improve our neighbor's stock and our own is not being improved in the same ratio as theirs, it is clear that our country is thus being heavily handicapped in the race for supremacy in our best market, and that our reputation for the production of high-class commodities must suffer, and we shall be forced to content ourselves with second- or third-class prices.

An observant person travelling through our country even in so favorable a season for growth of crops as the present, cannot but be impressed by the fact that most of our farms are producing crops very far inferior to what they are capable of doing if they were properly managed. The soil is not at fault, for in no country is there better, but the fact is plainly this: that the farmers too generally are yet depending on the raising of grain to sell as such, instead of feeding it to stock and selling it as stock or the products of stock, and meanwhile making more and better manure to keep up the fertility of the farm, so that the crops grown on it may give a fair return for the labor and expense of producing and handling them.

The labor problem in these times is a serious one, and the raising and feeding of live stock is its surest and safest solution. It takes just as much labor to produce a half crop as a whole one, the same implements and the same time in cultivation, the difference in expense being that a full crop requires more handling at harvest, but the satisfaction of seeing and handling it offsets that feature, and there is no question as to the profitableness of the two systems of procedure. That there are more half crops than whole ones produced even in our fair Provinces, of which we are wont to boast, is too patent to need proving, and the question arises, can we afford to farm in this fashion? There can be only one answer, and that is, that the longer this course is continued the worse the situation becomes, the more difficult to restore the land to a paying plane of productiveness, and the ultimate result must of necessity be that the farmer who is depending on his farm for a competency will fall far short, if, indeed, he escape absolute failure.

The only remedy for or relief from this state of things within reach of the average farmer lies in turning his attention to the raising and feeding of more and better stock, with the emphasis on the word "better," for he can just as illy afford to feed inferior stock as to grow inferior crops. It costs as much to raise a scrub as a well-bred animal, and in the market the scrub sells for less than one-half what the superior sort will bring at the same age. For proof of this statement, it is only necessary to go into the stock yards and see, as one may almost any day, one lot of cattle selling at 6 cents per pound and another lot of the same age begging for buyers at 3½ cents, both lots being fat in their way, the

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one lot having their flesh thickly laid upon their backs where the high-priced cuts are, the other storing their fat in their bellies in the form of cheap-selling tallow, the well-bred cattle weighing say 1,300 lbs. at less than three years old and bringing \$78 a head, the others weighing 1,000 lbs. at the same age and selling at \$35 a head, or a difference in the value of two carloads of 20 head of \$860, the cost of production being practically equal. A similar comparison between a herd of deep-milking and high-testing cows and an ordinary set will hold equally good, the latter probably producing less than their feed would bring in the market, the former making a substantial profit over the cost of their keep.

Making due allowance for the fact that the average farmer cannot afford to pay fancy prices for what he regards as fancy stock, there is little excuse for going on in the old rut, making no improvement, for within the reach of nearly all are the services of pure-bred males at a moderate fee, while for a reasonable price a pure-bred sire can be had that is good enough to make a great improvement in the character of the young stock, and if followed by others as good or better, the improvement may be continuous and satisfactory.

Breeders of pure-bred stock are not, as a rule, the selfish, grasping class that the general farmer is apt to consider them, and are not making the fortunes they are supposed to be making, as their investments and expenses are heavy, and they are doing quite as much for the country as for themselves, whether they mean it or not, and they will be found, as a rule, willing to give the struggling farmer and the ambitious beginner as low prices as they can afford and as easy terms as can reasonably be expected. There are hundreds of young bulls, of both the beef and dairy breeds, fit for service now in the hands of Canadian breeders that ought to be secured by the farmers of the country, and which can be bought at prices which they will bring for beef when their term of service in the herd is completed, if they cannot be sold for more as breeding stock. Breeders, in their own interest as well as that of the country, should seek to cultivate this end of

the trade as well as the, for the present, more profitable section of it, for good blood, like leaven, spreads, and shows its influence wherever it goes. Like bread cast upon the waters, it shall be seen after many days, and the people only need to be educated to an appreciation of its value, when the breeders will be recouped by the greater and more general demand, and the whole country will be advantaged and enriched by the higher prices obtained for products of the best quality in the markets of the world.

Cultivation of Corn and Roots.

Now that the growth of corn and root crops has begun, nothing is of greater importance to the production of a successful crop than intertillage. The experience derived during the dry seasons of recent years has taught every thoughtful agriculturist that there are profitable lessons to be learned in the conservation of soil moisture. The advantages to be derived from frequent stirring of the surface-layer between the rows are so great that no farmer can afford to neglect this part of his work. Most soils at seedtime contain an abundance of water. Some well-known authorities state that it is present in sufficient quantity to nourish plants during their entire period of growth. The great problem is how to conserve it.

From the law of capillarity we learn that moisture tends to equalize itself throughout the soil. When land has remained undisturbed for a time, or after a heavy rainfall, small pores are formed by the compacting of the soil particles. As the surface becomes dried through solar radiation and evaporation of winds, the water from below rises through these minute channels, and if no interruption to its progress takes place, the supply soon becomes exhausted. By the use of a mulch or covering that will prevent the soil water from coming in contact with the air, this great essential to plant life may be retained. Since it is impracticable to supply a mulch in the form of farmyard manure or decayed vegetable matter of any kind at this period, the best plan is to loosen the surface by means of a scuffler or cultivator. In doing this, the pores are broken; the water rises until it reaches the point of "break-off," and, as the exhausting influences are beyond its reach, it is held for future use.

To secure the maximum amount of benefit, cultivation should begin as soon as the rows of corn and roots can be distinctly followed. Just as the corn plants are coming through, many give the field a stroke of the harrows and frequently a second one a few days afterwards. Cultivation should be kept up at least once a week and as soon after a heavy rain as the soil can be worked, discontinuing the practice only when the crop has closed the rows or has begun to mature. While the plants are small the weeder may be used by removing, in case of roots, the teeth opposite the line of plants; later, the scuffler will be most effective. In beginning with this implement, the usual, and perhaps best, practice is to cultivate deeply at first, gradually going more shallow as the plants develop root. For corn, four inches will be found about the right depth at which to start on most soils. According as the work continues it should be lessened to the least possible distance at which a complete mulch may be maintained.

While the benefits to be derived from the retention of soil moisture are sufficient in ordinary seasons to more than repay the expense entailed, there are others almost as important that go hand in hand. The destruction of weeds, aeration of the soil and making of plant food available are each advantages secured in some degree through the conditions which conserve moisture. Where weeds are troublesome, the constant tillage necessary to corn and root crops will not only germinate large quantities of seed which may be in the ground, but also destroy any plants aiming to reproduce their species. In most cases, at least once going through the fields with the hoe will be found necessary. In stirring up the soil air is admitted, and the oxygen necessary to the life of beneficial bacteria is supplied. Such eminent authorities in past ages as Jethro Tull have said that tillage is manure. To what extent that is true we cannot at this time discuss, but it is certain, as the result of experiment and the observation by practical men, that proper cultivation of the soil during the growing season liberates and makes available large quantities of food suitable to the sustenance of plants.

The O. A. C. Course Discussed.

To the Editor "Farmer's Advocate":

Sir,—Having noticed lately in the columns of the "Advocate" a couple of letters dealing with the Ontario Agricultural College, and having given considerable thought to this question, I should like to express my views, as a student, through the medium of your excellent paper. At the outset let me explain that this is not intended to be in any sense a personal criticism, for of the personnel of the staff I have a high opinion. It is a criticism of subjects, not of the professors who teach them; of methods, not of the men who adopt or use them.

What is the purpose of the O. A. C.? Is it to train an additional number of our best men for professional positions abroad, or is it to give the rank and file of Ontario farmers such a useful education as will enable them to achieve the maximum results in practical agriculture? The greatest misfortune of Canada has been the pronounced tendency of her educational institutions to educate so many of her best men for the so-called higher professions; these becoming overcrowded, the surplus has been forced to new fields in foreign countries, thus robbing Canada of much of the flower of her population, to contribute to the building up of her Republican rival. What we need in Canada to-day is as large a proportion as possible of our best men upon the farms to demonstrate by actual achievement the advantages and possibilities of our best and greatest industry—agriculture. Professors are all right—and they should not be dullards either—but I contend that we have got to combat the all-too-prevalent idea that any man can be too clever or too able to find ample and remunerative scope for his energies in practical agriculture, and that the best men, therefore, should necessarily go on to fit themselves for professional positions. The tendency of our Agricultural College has been to draw too many of her best students from the farm to fit them for professional positions in American colleges—a good thing, no doubt, for these colleges, but a serious loss to Canada. The O. A. C. boasts that about eighty per cent. of its students return to the farm, and, comparing this with High School statistics, seeks to draw a comparison in its favor. But the fact is that comparatively few of our High School pupils go there with the intention of fitting themselves for agriculture, but the O. A. C. students are drawn almost entirely from the ranks of intending farmers, and the fact that twenty per cent. or more of these promising students should leave the farm is in itself an indication of a weakness somewhere in the course. Why, as "Truthseeker" asks, is there such a relatively small proportion of our farmers' sons attending the College? Now, I do not mean to condemn the whole course, for, despite weakness, it is a very good one, and I accordingly intend to return to complete the two-year course.

The O. A. C. course should be intensely practical. It is not enough that it be more practical than the High School, for the radical defect of this is that it is not practical. It is not enough that our College be more practical and successful than those across the line, for many of these are notoriously neglected and deficient. Besides, as Canada has not as yet the wealth of production of her southern rival, we must make up for this by the greater excellence of our methods and the superiority of our agricultural products. Therefore, we need a better college than any in the States; and, consequently, it behooves us, while recognizing the real merit of the O. A. C.—and it has much—to insist upon its being improved to the utmost limit.

One respect in which the O. A. C. is behind the High School is in the method of teaching. Now, I am well aware that the lecture system is in vogue in colleges and universities, so that the O. A. C. is not behind them in this respect; but it is behind the High School. Having had some personal experience in each, it seems to me that far less relative progress is made in the O. A. C. College than in the High School, and the reason is that in the former the instructor simply talks to his pupils and dictates notes, which must afterwards be "plugged" by the student himself, the consequence being that the information can be fixed in the pupil's mind only at the expense of infinite pains. Too often it is never really learned at all, but is simply "plugged" for the exams., and is then promptly forgotten. Academic resolutions against "plugging" are then passed and various preventive expedients resorted to, but the fact is that the system places a premium upon cramming. How, then, can the practice be stopped and the students made to learn instead of cram? By abandoning the lecture system for the High School system, by adopting suitable text-books and then following these systematically, assigning each day a lesson to be prepared, and then making this prepared lesson the basis

for questioning the class, encouraging discussion and clearing up any difficult or misunderstood parts. True, this is not the orthodox college method, but it is the only method which will ever be found to prevent "plugging," and get the student to master his subject so that he can retain it. Let us by all means adopt this method, even though it may mean a further division of classes and the employment of a few more assistant professors. Unfortunately, the idea seems to prevail that if the student only gets the information down in good form in his notes, that is the main point—as if he will think in after years of referring to a lot of blurred and musty old manuscript! Were the information in good, readable, printed text-books, these might be of some value for reference; but, except in a few cases, the text-books prescribed are not used at all, the lecture period being devoted to dictating notes. In nine cases out of ten, what the pupil does not assimilate will be of little use to him afterwards.

Again, I contend that too much attention is given to unimportant details and not nearly enough to general principles. A certain amount of detail is unavoidable, but the proportion should be as small as possible, for much of this detail is inevitably forgotten, and then of what use is it? Now, true education consists in drawing out or developing the pupil's faculties, and mere memory is not the most important of these. The student should be trained to read, study and think, not merely to commit to memory a lot of bald facts. Yet, under the present system, this is exactly the result, so that instead of utilizing the extensive library, we are forced to "plug" a great many details, which in less than a year will be mostly forgotten.

Finally, I wish to take exception to some of the subjects in the curriculum, and of these, apiculture first. Now, there can be no objection to teaching this subject to those who care for it, but probably eighty per cent. of us care no more for the keeping of bees than we do for the raising of cotton, yet we are forced to prepare and write upon it for the sake of the remaining twenty! Teach it to these, but by all means make it optional.

Another subject which deserves special mention is veterinary science. The text-books used are crammed full of technical detail and the lectures reproduce that information. We are taught much of the detailed anatomy of the horse and are forced to memorize the actions, uses and doses of a hundred or so drugs, many of which are rarely used, while some are used for hypodermic injection only. Taught from a suitable illustrated elementary text-book, like that used in half the agricultural colleges of America, there is no reason why this subject should be more difficult than physiology as taught in the public schools, but at present it is the cause of more discouragement than probably any four other subjects in the first year. Taught as suggested, we would have more time for the study of other subjects, and for general reading.

As for biology, this has frequently been defended by defending systematic botany and entomology. So far so good, but what about the large proportion of time devoted to structural botany, and what about zoology? Excepting a lecture or two on birds, our whole study was with the comparative anatomy and physiology of minute forms of animal life, mostly marine—animals which are for the most part entirely foreign to our thoughts and associations. The consequence is that, although taught by one of the clearest and best lecturers on the staff, the subject has to be plugged for the exams., and gladly forgotten. Then we got agriculture only three times a week during the winter term, yet we are told that the course is practical! What I would suggest is say a half-dozen general lectures on zoology, with no examination. We are told that the aim of the course is to teach us those sciences and principles underlying agriculture; and this is right, but what connection has zoology with agriculture? Let us have agriculture and live stock at least one hour each day; let us have more chemistry and soil physics, and, to provide the necessary time, lop off zoology and perhaps some geology and structural botany. Make apiculture optional; teach veterinary science in a more non-technical manner. Give us more drill in the facts and principles brought out in the magnificently-conducted experimental department. Pay less attention to poetic interpretation, more to grammar and rhetoric, abolish French and German in the upper forms and substitute a small amount of elementary Latin. Attach greater importance to the two-year course and make it more practical throughout. Then will the O. A. C. have advanced a long step toward becoming what it should be: an institution which no intending farmer can afford not to attend.

Lincoln, Co., Ont.

W. D. ALBRIGHT.

Big Reward for Little Effort.

I received the Bible as a premium all right, and I am very much pleased with it and obliged for your promptness. The Bible is better than I expected. It is a big prize for so little work. Thanks.

M. McPHEE, Jr.

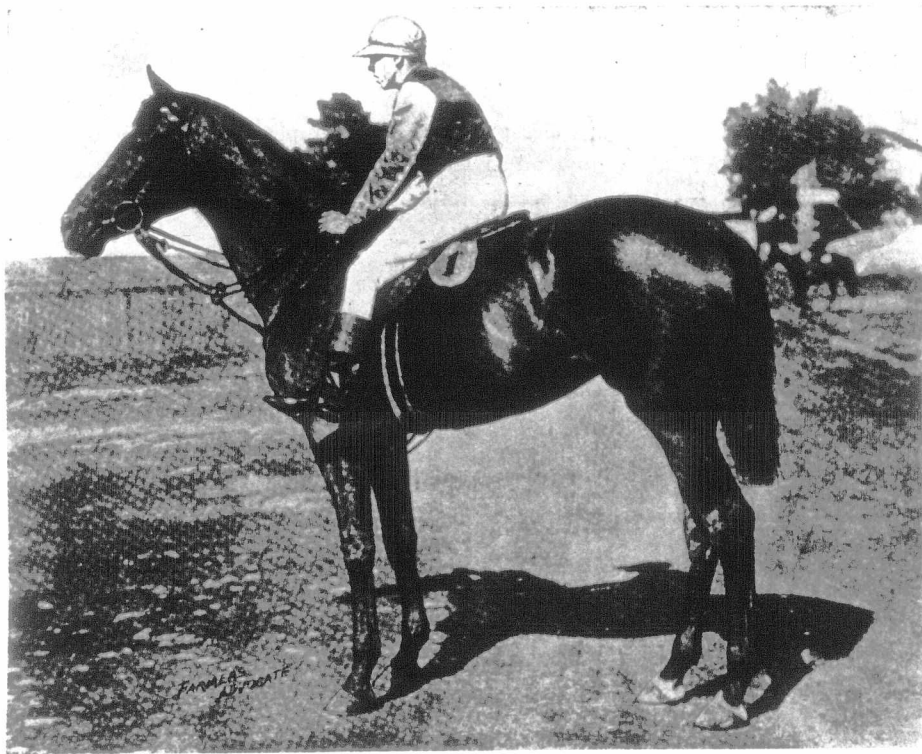
HORSES

The Care of Horses' Feet.

We all recognize the importance of good feet in a horse. There is a great deal of truth in the old adage, "No feet, no horse." While some horses have congenitally weak feet and require very careful usage to prevent disease, many go wrong in their feet from careless or ignorant treatment. The foot of the horse is a complex organ and subject to many diseases, the causes and symptoms of which we will not discuss in this article, but rather discuss the means of preventing disease. The main point to be observed is to keep the feet in as natural a shape and condition as possible. There is, under normal conditions, a constant growth of all the horny or insensitive parts of the foot, and we can readily understand that if there be not an equally constant waste, the organ will assume abnormal size, and, as a consequence, become ill-shaped. Of course, during youth, while the animal is growing, the growth of the feet, like that of other organs, exceeds the waste, hence they increase in size. In the state of nature, the natural wear and tear on the unshod foot equals the ordinary growth and keeps it in proper shape, but owing to the artificial manner in which horses are of necessity reared in cold climates, their feet require more attention than they frequently receive. Interference is seldom necessary until the first winter, as during the

often there is a foul-smelling discharge from its cleft. This is due to neglect of regular attention, and, as the frog should be large and strong and so deep that it presses on the ground when the foot is planted, in order to sustain its proper share of the animal's weight and tend to prevent contraction of the heels, it can readily be seen that anything that tends to a decrease in size or prevention of development of this important part of the foot is a serious matter. Regular attention should be paid to the feet until the time arrives when shoes are required, after which the shoeing smith will cut and rasp away at each shoeing a sufficient amount of horn to keep the foot in proper shape. The intelligent horseshoer will be careful to not cut the bars down nor pare any off the frog or sole except what becomes partially detached. Horse owners should see that there is not too much cutting and rasping done in the shoeing forge. Horses should have their shoes removed every month or at the most every five weeks. During cold or damp weather no particular attention is required other than having the shoes removed regularly and cleaning the feet out daily; but in dry, hot weather, horses that are kept in the stable should have artificial moisture supplied to their feet. During this season the roads and fields are hot and dry and the stable floors in a like condition, and unless some means be taken to supply moisture, the feet also become hot, dry and hard, which condition predisposes to disease. Moisture can be supplied by the soaking tub or soaking boots, or by standing in wet clay. Thick felt swabs, to fit around the wall and buckled around the pastern, are very convenient and satisfactory. These, allowed to remain in a tub of water until they become saturated and then buckled on, will keep the feet moist for hours. There are a great many "hoof ointments" advertised and highly recommended, and while some of them may be of some value (at least for improving the appearance of the feet), there is nothing quite as valuable as water for supplying the necessary moisture. Horses at pasture do not require the same attention, as the dew and rain on the grass will have the same action. If more attention were paid to some of these matters we would see fewer lame and groggy horses on the streets and roads.

"WHIP."



WAKEFUL, THE BEST RACE-HORSE IN AUSTRALIA.

summer months, when the colts are at large, the natural wear will suffice, but when the weather becomes cold and they are kept in the stable the greater part of the time, often in stalls that are not regularly cleaned (which state favors the growth of horn), the wear will be infinitesimal, and unless attention be given, the feet will become abnormally large, deep in the heels, long in the toes, and abnormal in shape to such an extent as to render it impossible for the animal to stand and move naturally. This condition abnormally increases the tension on some of the tendons and ligaments and correspondingly decreases that of others. If this be allowed to continue, the future usefulness of the animal will be affected. In order to prevent this, the feet should be paired or rasped down to the natural shape every few weeks during the season of stabling. The heels should be kept well pared down, the wall rasped off on the bearing surface all the way around and the toes not allowed to become too long. It is not often necessary to pare either the frog or the bars. In order to prevent thrush or other disease of the frog from an accumulation of filth, it is wise to clean out the sole every day with a foot hook. In the spring we often notice colts with long toes, deep heels, and with the lower margin of the wall turning inwards. In such cases the owner probably thinks it wise to have the feet trimmed before turning them out to grass. When a foot is lifted and the sole cleaned out preparatory to trimming, it will be noticed that the frog is very narrow and shallow, and

Breeding from Young Fillies.

The question whether it is wise to breed fillies at two years old has been more than once asked by correspondents in the last few months, and, in replying, caution has been advised in resorting to this unless in cases where the filly is vigorous and well developed. We notice that the same question is being discussed in Britain, and from the Farmer's Gazette of recent date we quote: "With reference to the advisability or otherwise of breeding from young fillies, a well-known breeder of heavy horses writes to inform us that he himself has, for years, bred very successfully from animals of this age, and has never known any injurious results to have followed from the practice. Much depends, in cases of this kind, upon the filly herself. If the animal belongs to a vigorous family of horses, possesses a good constitution, and has been well 'done' in her first and second seasons, no great harm may be caused by putting her to the stallion at the age mentioned, but in the generality of cases we find that not only is the foal produced less robust and less vigorous in its constitution than the produce of a fully-matured mare, but that the development of the filly herself is so much arrested that she very seldom grows into as fine a mare as another of the same age, and kept under the same conditions, but not bred from until her third or fourth year. If indulged in at all, our experience is that breeding from two-year-old fillies should only be attempted where the animals are, as above indicated, of sound, vigorous constitution, and where they have been kept in the best condition right through from the time of foaling. Much may also be done to counteract the injurious effects of early breeding if precautions are taken to work the animals lightly and feed them liberally during the time they are carrying their first foals."

Clydesdale and Shire Standard of Excellence.

In "Farmer's Advocate" of Feb. 1st appears an article by "Whip" under the above heading. The points of excellence as there described are good, and a horse possessing them all would be a very desirable animal; but I think the writer is a little out on the relative values of the different points. For example, he places more value on neck than on head. A head of his own description not only indicates an excellent temperament, but also strong character and constitutional vigor, very important qualities in a sire. Then, again, he places 62 points on limbs and feet, while on withers and back, and chest, two headings under which, according to his description, comes the whole seat of life, or the organs of respiration and digestion, he places only 16 points. This difference is, I think, very wide of the mark.

It is frequently said, "No foot, no horse," and I quite agree with this saying, but my limited experience and observation lead me to believe that a sound, healthy foot cannot be produced and retained without a good vigorous constitution; thus the body, or seat of life, should score at least as many points as the entire score of legs and feet.

Below is given revised valuation of points, with some reasons for changes. [Note.—First column contains values taken from "Whip's" article, while in second column are my revised figures.]

	4	4	α Nelson
HEAD			
Have added 4 points to head, as it is one of the most important parts of horse, as a good head indicates a good temper. It is very important that a horse have a good temper; a bad-tempered horse should be shunned as much as a bad-footed horse.			
NECK	5	5	
WITHERS AND BACK	8	25	
My change on this point may seem a very wide one, but I believe that I am not over-valuing this point, as it might well be subdivided: Withers, Back, and Loins; and placing on each division a value equal to value placed on other points of similar importance would quite make up the 25 points.			
CROUP	4	4	
CHEST	8	30	
Have placed much more value on this point, or combination of points: Breast; Floor of Chest; Side of Chest; and Abdomen; placing values as follows:			
Breast.....	6		
Floor of Chest.....	4		
Side of Chest.....	10		
Abdomen.....	10		
	—30		
SHOULDER	5	8	
A good, well-shaped, well-muscled shoulder, one of the most important points of a draft horse, and should score equal to most points.			
ELBOW	2	2	
FOREARM	4	4	
KNEE	5	4	
Equal to forearm.			
KNEE TO FOOT	10	5	
FOOT	10	8	
HAUNCH	4	4	
STIFLE	2	4	
Have added two points; stifle is more liable to injury than many other points, therefore very necessary that it should be strong and well-muscled.			
GASKIN	4	4	
HOCK	5	5	
HOCK TO FOOT	10	5	
FOOT	10	8	
COLOR	3	2	
SKIN	4	4	
TEMPERAMENT	4	4	
STYLE AND ACTION	10	10	
WEIGHT	6	6	
Weight should not be less than 1,900 pounds in a matured stallion, and that at a good serviceable condition.			
HEIGHT	6	6	
Should be 16 hands and upwards, in proportion to weight and thickness generally.			
SYMMETRY	10	10	
	143	175	

I submit this criticism in hope of drawing out more on this subject, as it is an important one at present.

NELSON,

Halton Co., Ont.

STOCK.

Camera Competition.

Last year the "Farmer's Advocate" conducted a camera competition, which proved decidedly popular. The large number of amateur photographers who sent in samples of their work and the artistic excellence of the photographs indicated in a surprising degree the progress that has been made in that direction. Many of the photos were quite equal in artistic excellence and execution to the work of professionals, the subjects selected showing great variety and interest. So encouraging were the results, that we have decided to announce another competition open to amateurs, and to offer much larger prizes than we did in the competition of 1901. We now offer eight prizes, as follows: 1st, \$10; 2nd, \$7; 3rd, \$5; 4th, \$3; 5th, \$2; 6th, \$1; 7th, \$1; and 8th, \$1; for the best photographs of country homes, individual animals or groups, gardens, field scenes, orchards or fruit trees, bits of scenery or anything of that nature, subject to the subjoined rules:

All photographs must be not less than 4 x 5 inches in size, mounted, and be the work of amateurs.

All photographs must be clear and distinct in detail and well finished.

They must reach the "Farmer's Advocate" office, London, Ont., not later than October 1st, 1902.

The name of the competing photographer and post-office address, and the name and location of the scene, must be marked on the back of each photo.

Any person competing is at liberty to send more than one photograph if desired, but only one prize will be awarded to the same individual.

All the prizewinning photographs will become the property of the "Farmer's Advocate" for the purpose of illustration. We reserve the right to purchase, at 25 cents or 35 cents each, according to size, any photographs that do not win a prize.

No photograph is eligible to competition from which an engraving has previously been made, and photographs must be the work of competitors.

Judging at Shows.

A Wigtownshire correspondent of the Scottish Farmer writes a vigorous letter on the vagaries of judging at shows in that country, and amongst other things complains of the appointment of the same men year after year at the same show or at a number of shows in the same season at which the same exhibitors desire to exhibit, and says: "What is the result? The ruling can hardly be expected to have changed with the locality, and, be the judgment as glaringly in error as possible, the decision follows the ruling precedent, and the animals follow the previous order. An outsider might naturally infer that the capability of judging was a monopoly in the hands of a select few. But there can be no scarcity of unprejudiced and competent men capable of judging the merits of the stock before them. This being so, how is it that the names at so many shows bear such a striking similarity? The same men ought not to be allowed to judge at more than one show in each season. Mistakes do occur, and many attenders at shows have had reason to deride the judgment given; therefore, to all desirous of seeing the best animal of its kind or class come out at the top at the end of the season, it must appear most desirable to have the most varied expert opinion. A cure, to a great extent, for the existing state of matters would be found in a healthy and vigorous criticism by the press when required; but many reporters seem afraid of the judge's shadow, and, after the tickets are distributed, ingeniously fits the animal's condition to the place assigned, regardless of the actual merits of the case, and without a single observation on the justice or injustice of the award. One would imagine, almost, that they got the reports sometimes dictated by the judges. This is not as matters should be, and until the members of the press fasten upon and show up any unfair awards in the show-yards, matters will, I suppose, remain as they are."

Our Scottish Letter.

The month of May is closing, and not often has it so clearly upheld its reputation for climatic treachery as in 1902. Everything is at least "three weeks late," as farmers express it. In other words, so far as vegetable growth is concerned, May has been a blank. Cold, biting north-east winds have generally prevailed; not infrequently there have been sleet showers; grass is not further forward than it is in ordinary seasons in the beginning of May, and many who have large herds of stock to carry find themselves hard pressed to carry the cattle through. On the other hand, there has been quite a revival in the price of fat stock, and beef and mutton have been making prices to which farmers in recent years have been little accustomed. Speculation is rife as to the cause of this, but it must be due to scarcity, although that may be intensified by the operations of the so-called Beef Trust. Sometimes it is said that this combine can do little; beef, being a perishable article, cannot be "held up" as other articles are until it please commercial magnates to part. On your side this will be better understood than with us, and it is useless to speculate.

More interesting is the new policy of our Government in respect to tariffs. It has been decided to impose duties on wheat and flour, and the attitude of the public generally to this proposal is surprising. For a country generally supposed to be thirled to free trade as the first article of its creed, there is something sublime in the equanimity with which the new departure has been received. I should say that this state of matters is largely due to a sentiment of resignation on account of the war. We have had that costly enterprise on hand. The bills are now coming in, and the question is, How are they to be paid? They must be paid, and the Chancellor says he can only get revenue by taxing things the people must use. They must eat bread, and, therefore, he can see revenue by levying rates on wheat and flour. The Chancellor is a sensible man. The agricultural community is not unduly elated by what he has done. The country is not now corn-growing to the extent in which it was so in 1850-60, and quite as many farmers now want cheap grain for feeding purposes as want dear grain for cropping purposes. Sir Michael Hicks-Beach understands this as well as most men and he was no doubt thinking about it when he put a tax on flour as well as registration duty on wheat. Not many farmers of any class would object to a heavy tax on flour. Some who have been life-long Free Traders have boldly advocated the levying of such as desirable alike for revenue purposes and in order to bring our American friends to their senses. Nothing would do more to prevent further depopulation of the rural districts than the re-starting of the silent mills. No more pathetic sight meets the gaze of the passer-by than the silent houses in which was wont to be heard the music of the grinding-stones. For myself, I believe the best policy for the world is Free Trade, but in order to be free it must be universal. Great Britain can never be a protectionist country—she can never levy a prohibitive tariff on foodstuffs—but she cannot indefinitely give away everything and get nothing in return, and now that her supremacy in the mercantile marine is threatened, men are being compelled to take a different standpoint from of old and are endeavoring to find out the weak points in our commercial armory, as South Africa has taught us the weak points in our army.

A very large trade has been done this spring in Aberdeen-Angus cattle for the United States, and equally extensive purchases of Ayrshires have been made for Sweden and other Continental countries. Colonel Judy has been buying up Ericas wherever they could be found, and is loud in his praises of the "doddies." He has been saying that no one who begins with them ever gives them up, and this witness is certainly true in the home trade. Whatever other breeds may be displaced or supplanted, the black cattle hold on their way. They are making conquests in Ireland, and a fine show of them was seen at the Royal Dublin Society's spring meeting. Our observation is that the "doddie" flourishes best in a dry climate and that not much can be expected of them in a wet climate. For countries with a heavy rainfall, amongst beef breeds the Galloway and the Highlander are easily first, and the history of Aberdeen-Angus cattle in the West of Scotland, while not disappointing, has not been very brilliant. For grazing purposes the pure-bred will not be as useful as the cross-bred, but the latter, inheriting the best properties of the black sire or dam, is a very valuable animal indeed. The high prices got for black polled calves is one of the phenomena of agriculture on this side, and there is a small ransom in such to the man who can rear them successfully.

Horse-breeding is exciting considerable interest meantime. The South African war has had the curious effect of leading men to think more highly of the smaller-sized horse than was their wont. The extraordinary revelations regarding the purchase of horses for the army in Hungary has also had a good effect. Of course, the man who persisted in shaking up officialdom has not received

many thanks, but all the same he has opened the eyes of the country, and it perhaps counts for something that he is understood to be a persona grata at Court, and, indeed, an intimate of the King. Sir Blundell Maple is one of the commercial kings of London, who combines his labors in that sphere with the pursuits of a country gentleman. He is a breeder of Shire and Thoroughbred horses, and generally has an eye to the main chance. As member of Parliament he has done good service, and the unearthing of the Remount scandal is due to his zeal and pertinacity. Pony-breeding has received a much-needed fillip here, and there is every prospect of greater attention being paid to it in future than ever in the past. The Polo Pony Society has been reconstituted, and is doing splendid work in registration of all recognized pony breeds in one studbook, but each in its own section and as a distinct breed. It takes cognizance chiefly of riding ponies, and does not meddle with those of Hackney or driving type and breeding.

The Bath and West of England Show.

This, the first of the three large English summer shows, held its meeting at Plymouth on May 27th to 31st last, when in all the departments there was a display of good average merit. The aggregate number of entries this year was 1,934, as against 2,096 at the corresponding show last year and 1,041 at the last show held by this Society in Plymouth in 1873.

The horse section accounted for 276 of the entries, which were divided into the usual sub-sections. Following the order of catalogue, we refer first to the agricultural horses, whose number was fifty-three, of which forty were Shire horses. The principal studs represented in the winners were: For stallions, Lord Rothschild's and Lord Llangatock's, whose specimens were of good merit; and for mares, Mr. R. W. Hudson secured the pride of place, the Shire Horse Society's gold medal being won by his noble three-year-old mare, Wern Blossom, and another from the same stud, Nateby Aurea, won in the broodmare class; Lord Llangatock winning in the two-year-old class, and Mr. H. Oakly in that for yearling fillies. The five classes for Hackneys secured an entry of twenty-three, a typical lot, but nothing exceptional, Mrs. Oppenheimer taking the Hackney Society's gold medal with Knowle Belinda, a two-year-old filly by that grand mover, His Majesty, whose fine quality and action was well represented by his successful progeny.

The cattle section was one of quality and good character, the aggregate total of entries being 515, as against 633 last year. The pride of place in the schedule is given to the "Rubies of the West," the Devon cattle, whose Society, we may mention, are now inserting in our columns an advertisement of their breed, which are, in fact, the Southdowns of the cattle breeds: small in size, but having little waste offal, with the finest of flesh. In their classes we found an entry of twenty-three head, Mr. J. C. Williams being the owner of the winning bulls in each class, and he also secured the champion honor and its reserve, their respective names being Woodman 4518, Musa and Woodbine, a noble and typical trio. The Hon. E. W. B. Portman was leading winner in the female classes, with neat and symmetrical animals. The South-Devons numbered fifty-two. These are very much of the character of the Devon, but have more size and bone and lack the high quality of the former. Unquestionably this section was a very strong one all through, and the honors were pretty evenly distributed amongst several of the leading exhibitors.

The entry of Shorthorns was eminently a satisfactory one in all respects, the number of entries being forty-nine. The great success achieved by Mr. J. Deane Willis demonstrates the high quality and value of his widely-known Scotch-bred herd, for he, with three bulls—C. I. V., Granite Chip and Bapton Florist—secured all three firsts and the champion honors also, the first-named bull securing the champion prize, beating, both in the contest for this and also in his class, Mr. G. F. King's Lord Bruce, who was champion at the great Dublin show last month. Mr. Willis also won with White Heather in the cow class, beating Warrior Queen, formerly Capt. Duncombe's and now owned by Lord Calthorpe. He also won in the heifer-calf class. Lord Rothschild, Messrs. R. Stratton, J. Colman and A. Henderson, M. P., were also leading winners.

Forty-one entries made up the Hereford class, which were of high merit and quality. The Earl of Coventry, Messrs. W. F. Barneby, A. E. Hughes, J. Tudge and G. D. Faber, M. P., were the principal winners.

Sussex cattle had present a small but exceedingly creditable entry of sixteen, the Earl of Derby, Mr. P. F. B. Lailard, Mrs. Montefiore and the Earl of Winterton being the principal winners.

The Red Polled cattle, with a notable entry

of twenty-three, certainly did their breed considerable credit. Lord Amberst, Sir W. D. Corbet, Hon. A. E. Fellowes, M. P., and Messrs. R. P. Cooper and J. Hammond were the leading winners.

The Aberdeen-Angus away from north of the Tweed were not a numerically strong class, but had fine merit, fifteen entries being present, the leading honors going to Messrs. J. J. Cridean, R. P. Hudson (whose herd is of high merit), and J. H. Bridges.

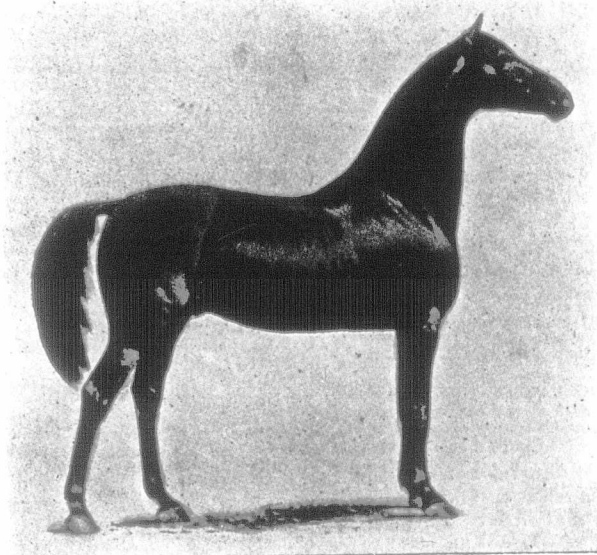
One hundred and fifteen Jerseys were entered for competition. These large classes were, we may say, of typical and creditable merit, a fact clearly demonstrated by the large number of awards given, namely, seventy-five. Lord Rothschild, Admiral Howe, T. S. Brand, Mrs. C. McIntosh, Col. McCalmont, M. P., and Mr. A. Miller-Hallett were the more important winners.

The Guernseys came out in strong force, namely, sixty-seven entries. The Lady Titchbourne and Mr. W. A. Glynn, both of whom are owners of noted herds, were the leading winners in these well-filled and good classes.

The sheep section of the Show was one in which opportunity was afforded to see and inspect varieties seldom seen out of their district. The entries in the several classes for the six breeds numbered 170, as against 188 at the same show last year.

The Cotswolds were but few in number—only seven, but Mr. W. Houlton, who was first in yearling rams and ewes, was owner of some grand sheep, Mr. R. Swanwick winning with lambs and second for shearing ram.

The Devon Longwools, a south country sheep of the Lincoln type, were well to the fore, with an entry of eighteen. These are excellent mutton sheep, with a good class of long wool, hardly so dense or broad in the staple as the Lincoln, the honors being pretty evenly divided between the two leading flocks of Messrs. F. White and H. E. Thorne.



GOODWIN.

Prizewinning American saddle stallion, in his 2-year-old form. Typical of the American gaited saddle.

The Southdowns were in good force, with high quality. Mr. C. Adeane's yearling rams led the way, winning also champion honors. A pair of real typical rams they were, with grand flesh, fleeces and skins, and we are fully in accord with the award. They won first and second in their class. Third honors went to a fresh exhibitor, Col. A. F. Walter, whose flock, under the charge of Sir James Blyth's late shepherd, is making rapid headway, and the ram here noticed is one of high merit and fine flesh, Mr. E. Ellis' noted old stock being r. n. with a ram full of quality. In ram lambs, that great flock owned by Col. McCalmont [see his adv.] won first with a notable pen got by last year's champion ram lamb, a pen of great merit, whilst his second pen came in for third honors, a success that demonstrates the high merit of this well-managed and carefully-bred flock. Mr. C. Adeane's pair of deep and wide lambs, with typical fleeces, were a good second, and Col. A. F. Walter's well-matched pair r. n. Col. McCalmont's trio of wide, deep-fleshed ewes took precedence in their class and champion honors also, a pen of valuable ewes and wonderfully well brought out. Mr. J. Colman's nice-wooled pen, with typical heads, were second, Col. A. F. Walter's inspiring pen, one of which was a grand ewe, third.

The entry in the Hampshire Down classes was one of merit and quality, though its number was not large, namely, sixteen. Mr. Carey Coles won in the yearling rams after a severe fight with two notably deep-fleshed and fine-quality rams from Mr. J. Flower's flock, which were second and third. The winning ram had rare type, being a fine, masculine, lengthy sheep. Lord Rothschild and Mr. J. Joyce were also in the award list, with typical rams. In the ram-lamb class, however, the result was different. Here Mr. J.

Flower asserted the well-known pre-eminence of his grand flock and went first and third with four lambs of notable quality and merit, Mr. Coles being a good second with a well-grown, masculine-headed pen. Lord Rothschild's flock had to be content with barren honors for two pens of high merit and good flesh. Hard luck, but all cannot be at the top. In the yearling ewes, Mr. Flower had again a couple of pens of ewes practically unmatchable in respect to type, character and merit. They were first and second.

The Shropshire entry, twenty-two, was a large one and good all through. Mr. R. P. Cooper's leading ram thoroughly deserved the premier award, being typical, with grand flesh and fleece. We also very much liked Mr. W. F. Inge's second winner, a ram of the right sort and one which has every appearance of making an excellent sire. Third honors went to a second ram of Mr. Cooper's. This ought to have gone to the r. n. from Mr. E. Nock's flock, which was fully deserving of this place. Again in the ram lambs Mr. Cooper led the way. He was fortunate here mainly on account of the unevenness in the size of Mr. Nock's second winners, for had they matched they must have won, their flesh being deeper and they were wider and more firm. Mr. W. F. Inge's ewes repeated their Oxford success, a pen of well-matched, evenly-fleshed ewes, Mr. R. P. Cooper coming in for second honors with a pen of substance, width and character, whilst two pens which we liked very much, from Mr. T. Fenn's and Mr. E. Nock's, were respectively third and r. n.

An entry of twenty-one made up a better lot of Oxford Downs than we have seen for several years at this show. Mr. J. T. Hobbs, with his Oxford champion ram, again led the way in the yearling class. Another first-class ram from the same flock came in for r. n. Mr. R. W. Hobbs, whose flock is fast taking a leading place, was second, with a grand ram of high merit, and Mr. A. Brassey third. This breeder was first in the classes for ram lambs and yearling ewes. The former pen are a bit narrow and too high, but the latter pen are as good as can be. Mr. J. T. Hobbs was second in these classes, and we were much struck with the undoubted merit of the ram lambs, which may yet take precedence over the Brassey pen. They are wider, deeper and more compact. Mr. R. W. Hobbs secured third honors in these classes with entries full of grand type, good flesh and high merit, a flock from whence selections can be made with all confidence.

The picturesque Exmoors were represented by an entry of a dozen pens, Mr. C. N. Skinner taking the lead all through. The Dartmoors, another purely local breed, with grand fleeces of long staple, made a notable display, and one could not but be struck with their wealth of flesh and typical uniformity of markings.

The Dorset Horns, with an entry of thirteen, were well represented, and the well-known flock of Mr. W. R. Flower has seldom, if ever before, sent out a better or more typical collection, whose uniform success was thoroughly deserved. They secured premier honors in all the classes they competed in. Mr. F. J. Merson led in the yearling-ram class with a grand ram, and was second for yearling ewes, a well-matched, even, typical pen. We were pleased to see the well-known name of Culverwell once again in the award list, being second for rams and commended.

In swine, the Berkshires, with an entry of twenty-two in four classes, well represented their breed. The Hon. Claud Portman, who won the championship with his notable, deep-fleshed and good-backed sow, Ethel, certainly exhibited one of the best specimens of her breed we have seen for many a day. Two hundred and fifty dollars was offered and refused for her at home. Messrs. R. W. Hudson, J. A. Nicker and J. Lawrence were amongst the other leading winners.

We claim, with every confidence, that included amongst those who from England advertise their herds and flocks in the "Farmer's Advocate" are included those who can supply the best and, as another example of the fact, we quote the pronounced success of the herd of Yorkshire swine of Sir Gilbert Greenall, Bart. At this show it won championship for boars, first and r. n. for Large White old boars (\$500 being offered for the champion), second for pairs of young boars, first for old sows, and first for pairs of sows. In Middle Whites, first and second for old boars, and third and r. n. for old sows; whilst in Small Whites it was first pen for old boars and second for old sows, a record that needs neither critical detail nor description to disclose the fact of the undoubted merit of the herd.

The Tamworth entry was a small one of high merit, Mr. D. W. Phillip's herd being far away ahead of all. A sow of his breeding won for Mr. H. C. Stephens the championship of the sow classes in competition with the White breeds, and he also took precedence in young sow classes as well as several minor honors. Mr. H. C. Stephens led in the classes for young boars, and Mr. E. de Hamel in that for old boars.

The produce classes and the dairy section were very good. This last-named section, a main feature at these annual gatherings, was well supported and attracted considerable interest.

Antiseptic Animal Surgery.

On all live-stock farms well-being and profit call for minor surgical operations. The knife is the chief tool used. Until a comparatively recent period no attention was paid to the aseptic condition of the knife. It might have last been used to open a malignant tumor and simply wiped, leaving numbers of disease germs on the blade, and in this condition the next operation was on the healthy tissue of another animal. The germs on the knife would enter the healthy tissue of the freshly-incised wound, causing it to swell and gather pus, causing the animal much needless pain and perhaps endangering its life. All who practice animal surgery now know the value of sterilizing their instruments. This is usually done by the use of a solution of corrosive sublimate. This is not convenient on the farm, so a knife may be sterilized by washing in boiling water, then hold the blade for an instant in the flame of a gasoline stove, finishing by wetting with alcohol. Parts of an animal to be operated on should previous to the operation be washed with strong soapuds. After the operation the animal should have clean quarters to lie down. If these precautions are observed, very little trouble will be found. A light diet of bran with oats or slop, according to the nature of the animal, should be given.—Twentieth Century Farmer.

FARM

An Experiment in Clover Curing.

To the Editor "Farmer's Advocate":

In reply to the enquiry re curing clover hay in the green state, I will give you the plan that we followed last season, by which we saved from 75 to 80 tons of hay. I prefer to cut clover when it is in full bloom; at that time it contains the greatest amount of digestible nutrients, and especially the honey, which adds so much to the palatability of the hay. If any person wants evidence of this fact, I would ask them to chew a head of clover in the winter season that has been cut at the proper time. Stock relish sweets as well as mankind. But, as we cannot cut all of our clover at the proper time when there is a large acreage, I prefer to start early, say before the blossoms are all fully out, so that all may be cut before the blossoms start to turn brown and the stalks woody. In matters of this kind we have to deal with averages. Cut in the morning, after the dew has dried off the grass. That which was cut in the forenoon may be raked up and put into cocks after dinner. Do not run the mower later than four o'clock in the afternoon. All that is cut must be put into cocks before the dew falls. This should be hauled to the barns the next day and tramped into the mows tight, without using any preservative such as salt or lime. This plan may be continued from day to day until all is saved in the barns.

Three things should be borne in mind in curing hay by this method.

First—Do not cut the grass until dry in the morning.

Second—Do not allow fresh cut hay to lie on the ground over night, exposed to the dew or rain.

Third—If any hay should get wet with rain, let it stand in the cocks until thoroughly dry before taking to the barn.

By this plan all of the leaves and blossoms, which are the most valuable portion of the plant, will be saved, and the hay will come out of the mow as green as the day it was put in the barn and almost as palatable to the stock as the day it was cut.

There was no evidence of spontaneous combustion, as the blossoms on the alsike clover were all pink and the red-clover blossoms were from purple to a light amber color. I did not detect any heat in the mows. If there had been much heat I am of the opinion that the blossoms would have been of a dark-brown color. There was no mould and the hay was the freest from dust we ever had.

A great advantage is gained owing to the short time required between cutting and storing in the barn. If there is an appearance of rain, do not cut that day. It gives the farmer a great chance to get his hay saved between showers.

I have not put any hay in stacks or overhead lofts with open floors. The mows were large, with double-inch boards for floors in two cases. In another mow the bottom went to the ground. There were cracks in the siding of the barns, between the boards, averaging about $\frac{3}{4}$ of an inch each. The hay was open in all of the mows on the driving-floor side, and it came out from all parts of the mows alike, which was pronounced by all who saw it the best they ever saw.

HY. GLENDINNING.

Ontario Co., Ont.

[Note.—We would like to hear briefly as to the results of any other trials in storing green clover, and also exactly what were the conditions under which it was done. Farmers will deem it prudent to have full information before generally adopting the plan.—Editor.]

Immigration and Farming in Manitoba.

During the past twelve years I have been giving information to parties who thought of coming to settle in Manitoba. Ninety per cent. of such information was given to farmers or farmers' sons. The great field offered for investment was in our broad acres, ready for the plow, with rich soil that gave a bountiful crop to the husbandman. I was always well aware that if the land were occupied and tilled by farmers, there would follow the necessary number of mechanics and business men of all kinds. To-day I can only repeat what I have so often said before—perhaps a little more emphatically, for 22 years' residence in Manitoba has confirmed my views regarding the possibilities of our Province. When I came to Manitoba, in 1880, there was so much land offered for homesteading at \$10 for 160 acres and an additional 160 acres to pre-empt at \$1 per acre, that it was somewhat difficult to make a selection: so many wanted to be near timber, to have a living stream of water; at the same time, that every foot of the homestead could be plowed, and also wanted a hay meadow on the pre-emption, and, if possible, stones on the banks of the creek for building purposes. Oh, no, we were not greedy! These things were scattered all over the prairies, and many of the early settlers secured more than two of them. To-day, after twenty years' residence in the Province, there are hundreds—yes, thousands—of farmers who are so satisfied with their farms that they consider them equal to if not better than any other in the Province.

On the advent of a railway (the C. P. R.), we considered that our lands had increased very materially in value, for we were then in communication with the outside world and could dispose of our products. As settlement increased, branch railways were built; then came a competing line of railway, and now we have a network of railways in all parts of the Province, and the end is not yet, for many branch lines are to be extended and new ones constructed the present year.

Speaking generally, our \$1-an-acre land was worth \$5 an acre on the advent of the C. P. R., and \$10 an acre when a second railway corporation was introduced. To-day, with all our branch railways and reduced freight rates, our lands adjacent to railways are valued at from \$15 to \$20 per acre. With increased settlement and more general cultivation, within ten years these prices will be doubled. Put this statement in tabulated form and we can better judge of what benefit our railways have been:

25,000,000 acres of tillable land in 1880, at \$1 per acre, value	\$ 25,000,000
25,000,000 acres on advent of C. P. R., at \$5 per acre, value	125,000,000
25,000,000 acres on advent of competing line of railway, at \$10 per acre, value	250,000,000
25,000,000 acres to-day, with all our branch railways, at \$15 per acre, value	375,000,000

I admit that the land in itself is of no value unless cultivated or used for grazing—that we must have settlers to cultivate it, and that it has been the settlers who actually developed the "gold mines," as it were, of Manitoba—but so intimately associated with the farmers' work is the railway work, that it is impossible in such a Province as Manitoba to separate the one from the other, or to reckon the success of the one without considering the success of the other. There are some men, even editors of newspapers, so illogical in their deductions, so barren of ability to grasp figures, conditions and events, so permeated with the leaven of fault-finding and jealousy, and with that most detestable attribute of seeking popularity by associating the success of individuals and corporations with the implied degradation and servitude of the farmers, that they at all times endeavor to lead farmers to believe that they are still where they were 20 years ago. It is not true. Manitoba farmers have made wonderful progress in the last twenty years. The progress and success of all our railway corporations and business concerns come only from the heart-beats of the great farming community, and to-day the farming pulse is so strong that the wheels of commerce are paralyzed in attempting to carry out our products and at the same time adequately supply the farmers with their wants.

To-day the farmer in Manitoba who has 320 acres of land, and uses a fair amount of diligence and attention in cultivating the same and raising stock, has a safer investment than \$6,000 in the bank, for he has a sure reward for his toil, ample to supply the wants of himself and family in comfort—yes, in luxury—and he has the pleasing satisfaction of knowing that his investment is increasing in value from year to year.

An extensive, prosperous farming community is to-day the safest place in the world for investment and business. Manitoba and the N.-W. Territories present such a place. Our great crop in 1901, which blocked our elevator and railway systems, has awakened new interest in the Northwest. Men are now coming in thousands, ready to work and with capital to invest. I predict that in 1905 the Northwest Territories will have more wheat to export than Manitoba had last year.

HUGH McKELLAR.

Breaking Prairie Land.

After years of practical experience extending over a period of nearly a quarter of a century, during nearly all of the time with exceptional facilities for studying the requirements and conditions of the Province, Mr. S. A. Bedford, Superintendent of the Brandon Experimental Farm, contributes his views on the breaking-up of new land. As he deals with the question in considerable detail, the article will be of special interest to many thousands of new settlers who will read this edition.

Mr. Bedford writes: Northwestern Canada is particularly fortunate in having such a large area of rich virgin soil in the very best possible condition for the new beginner. Nature has apparently done her utmost to prepare the way for the millions of pioneers soon to take possession of its immense areas of prairie and park lands.

Although nature has done much to prepare the soil of a prairie farm, there is still considerable work necessary before the land is ready for the seed, and the yield of future crops depends largely on how this preliminary work is done.

SHALLOW BREAKING.

For the best success the prairie sod must be so thoroughly rotted and broken up that there is abundance of soil to form a seed-bed for the grain. This can best be accomplished by plowing the land when the plants are full of sap. This is usually from May 1st to June 15th, but in a very early season work can be commenced two weeks earlier than this date. The breaking should be done quite shallow, just deep enough to turn all the sod. This will generally be from 2½ to 3 inches deep, depending on the smoothness of the land. This shallow plowing will sever the roots of the natural grass plants, leaving portions of them in the ground and turning the balance up to the sun to wither. The furrow should be sufficiently wide to allow the complete inversion of the sod. The fancy plowing of the old countries, with the furrow set on edge, showing a handsome "comb," is not desirable here. The flatter the furrow the better will the sod rot. It is desirable that the furrows be straight, so that none of the land be missed by the plow. Straight breaking also lessens the work of backsetting. All surface boulders and small clumps of scrub should be removed before the breaking is commenced. This will not only give an air of neatness to the farm, but also permits of labor-saving machinery being used to the best advantage. If the breaking is at once well packed with a land roller, running the opposite direction from which the land was plowed, it will smooth out the wrinkles in the furrows, compact the land, and greatly hasten the rotting of the sod.

BACKSETTING.

As soon as the sod of the breaking is thoroughly rotted, the second plowing, or "backsetting," as it is commonly called, should be commenced. This is usually done in the same direction as the breaking, but a little deeper, so as to bring up some additional soil to furnish a good seed-bed. All backsetting should be finished before harvest. This prevents the weeds from going to seed. The land should be well disked in the autumn, and all that is necessary to make a perfect seed-bed for the grain in the spring is a slight harrowing either before or after sowing.

DEEP BREAKING.

Many farmers on light soil are giving up backsetting. They break deeply, and simply use a disk harrow to work up the rotted breaking. This plan has been tried on the Experimental Farm, but the deep breaking is much heavier on the horses, and the sod does not rot nearly so well. On land cleared from timber and scrub, which is usually quite free from sod, very satisfactory results are obtained from breaking deeply, followed by surface cultivation with disk and iron harrows. Where the scrub is composed exclusively of willows and rosebushes, the work can often be done with very little chopping. A strong brush plow furnished with an upright coulter fastened into the point of the share will root up and turn over quite large willows. These can be raked out later with the harrows and burned.

Cleared scrub land is the only kind on which it is advisable to raise a crop the first year, and even then it seldom pays to grow anything besides field roots and vegetables.

Preserving Fence Posts.

As a result of a series of experiments conducted by the Department of Agriculture, Germany, in the preservation of fence posts, we have the following report: Posts used in vineyards were dipped in different solutions to preserve them against rot. The period of the experiment covered twenty-four years. The best results were secured with tar. Only nine per cent. of fir posts impregnated with tar had rotted at the end of twenty-four years. At the end of twenty years, thirty-three per cent. of those impregnated with copper sulphate (bluestone) had rotted; nevertheless, the ease and cheapness with which posts, particularly green posts, can be saturated with copper sulphate solutions seems to make its use more desirable than that of tar.

Spontaneous Combustion.

Since the burning of S. A. Freeman's barn in Dereham Township, Ontario, considerable discussion has arisen regarding the danger of shredded corn and other similarly stored crops from spontaneous combustion. In the "Farmer's Advocate" of May 1st, letters from officers of Iowa, Illinois and Michigan Experimental Stations were published, showing the care necessary and the precautions to be exercised in the storing of shredded fodder corn, a good deal of which is handled that way in the Western States. This month we are in receipt of Bulletin No. 109, Kansas Agricultural College, dealing with spontaneous combustion of alfalfa or lucerne clover. The author, H. M. Cottrell, M. S., who is in charge of the farm at that institution, states that during the summer of 1901 there were many instances of alfalfa hay becoming so hot that it took fire by spontaneous combustion and was destroyed. Six examples are given, showing the conditions under which the loss took place.

O. L. Hull, Manhattan, Kan., began cutting a heavy crop of alfalfa when the first bloom appeared. It was left three days in the swath and then placed in windrows, where it remained three days longer before being stacked. This entire first cutting of 150 tons was placed in one stack in apparently good condition. The stack settled considerably and became very warm, but no danger was anticipated. About forty days afterwards, a small fire, resembling a locomotive headlight, was noticed by a neighbor, and before help could arrive the total crop was consumed.

Emmet McDonald, Manhattan, Kansas, also made his first cutting when the early blooms appeared, the last week in May. The hay was left in the swath for about a day, when it was placed in windrows by a side-delivery rake, where it remained for three days and was finally loaded with a hay-loader and placed in stacks of about twenty tons each. On the morning of July 25th, one stack was so hot that it was thought unwise to leave it any longer, as others stood near by. After a few feet was taken from the top, it was found to be too hot to handle, and it was well wetted and left to see what would follow. In three hours a blaze broke out about four feet from the ground and the stack was consumed.

Similar reports come from J. L. McCormick, Zeandale; George Washington, Manhattan; W. D. Poole, Briggs, and T. W. Andrews, Rossville, Kansas. In each case the hay was not stacked until it was considered sufficiently dry, and in every instance fire broke out in from forty days to two months from date of stacking.

In summing up these results, Mr. Cottrell states that in every case spontaneous combustion occurred with the first cutting, the growth of which was rank and the time for curing damp and unsatisfactory. With later cuttings the growth is not so rank and succulent, the weather is drier, and there is more wind, which makes curing easy. At the Kansas Station farm they have not had alfalfa heat sufficiently to take fire, but the first cuttings have often become very hot. During the last four years it has been stacked outside to ensure safety to buildings, while later crops have been stored in the barn without fear of loss.

The lesson to be drawn from these results are worthy the consideration of Canadian farmers in clover harvesting. Alfalfa is a comparatively new crop in this country, but its many excellent qualities have so commended it to stockmen in certain districts that a large acreage is sure to be grown. The practice of shredding corn, also, has lately been introduced, and if its popularity amongst American farmers is any guarantee of its suitability to conditions in this country, we may look for its more general trial. Heretofore, very little corroborative testimony has been forthcoming to show the possibility of loss in stored vegetable matter from spontaneous combustion. Further investigation is needed. In the meantime, it will be well for all concerned to take warning by the experience of Mr. Freeman and the farmers of Kansas State whose losses have been stated.

Food for Dogs.

W. T. Buchanan has the following to say re feeding dogs, in the Live Stock Report, which experienced dogmen will bear out as correct: "As a rule, dogs of all kinds are ruined or their lives shortened by being gorged with meat, and, worst of all, fats. The best food for young dogs—or, in fact, any age—is well-boiled oatmeal and milk. The meal should be steeped in water for five to eight hours. When this is done, stirring it properly to mix it, five or ten minutes is quite sufficient for boiling to finish. It is the raw uncooked stuff, unfit for use of man or beast, that gives what Burns calls 'healsome parritch, chief o' Scotia's food,' a bad name. Whole-wheat meal, or good corn meal, would answer very well, properly prepared. No food is better for the 'second wind,' as anyone can prove. For old or young dogs, bones with a little flesh on them are invaluable. They serve to sharpen the teeth."

Territorial Development of Agriculture and Stock Raising.

To the Editor "Farmer's Advocate":

In order to convey a fair idea of the development which has taken place in the agricultural and pastoral industries of the Territories during the past decade, it would be necessary to present a statement of production covering each year, but, as you are probably aware, the Territorial Department of Agriculture was only organized in 1898, and prior to that time no statistical records of any sort had been compiled, I shall, therefore, have to do the best I can with the material available, and will deal more particularly with the period lying between 1898 and the present time.

AGRICULTURE.

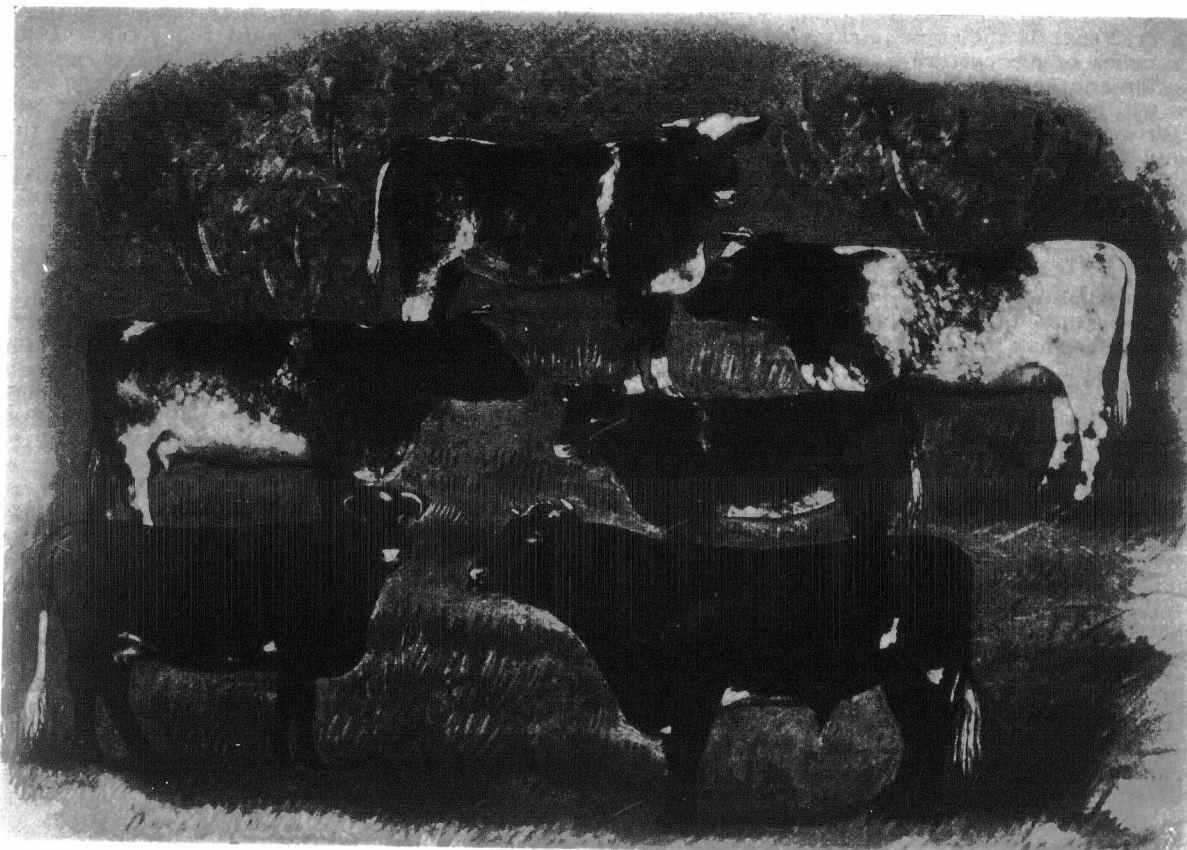
One of the most important economic crises which this country has ever seen took place during the present year, when the transportation company found itself unable to move the huge crop harvested last season within the usual period. The high yield in all classes of grain throughout the Territories was chiefly responsible for this state of affairs, but an examination of the crop-area statistics reveals the fact that the rate of production has increased during the past four years to a very considerable extent, and that with an average crop two years hence, the pro-

duction will exceed that of the past year. The area under wheat in the Territories in 1898 was 307,500 acres; in 1899, 363,500; in 1900, 413,000; and in 1901, 508,500. It will thus be seen that if the average rate of increase takes place during the present year, we may look for an area in wheat at least twice as great as that of 1898. The increase in the area under oats has been even more marvellous. The oat area in 1898 covered 105,000 acres; in 1899, 135,000; in 1900, 175,000; and 1901, 229,500. The acreage for the present year promises to be three times as great as that of 1898. Barley is not very extensively grown in the Territories as yet, although in the westerly portion of the country, where a standard price of 40c. to 45c. per bushel is paid for malting barley, it is one of our best-paying crops. One of the peculiarities of the colonization of the Canadian West is the steady advancement westward of the zone within which wheat can be successfully grown. I do not claim to be an old-timer in this country, but I can distinctly remember when the idea of growing wheat west of Moosomin was regarded with ridicule. During the year just past about 13,000,000 bushels were raised west of that point, with an average yield of 25.44 bushels per acre.

LIVE STOCK.

There are some 195,000,000 of acres, over 300,000 square miles, of land available for free grazing in the Northwest Territories; an area six times as great as the estimated combined grazing area of all the Eastern United States. On this enormous extent of country about 200,000 head of sheep, 600,000 head of cattle, and 175,000 horses are at present pastured. Almost every acre of this land will sustain live stock, winter and summer, and the great bulk of it belongs to the most fertile virgin prairie in the world. No higher tribute could be paid to the Canadian Northwest as a grazing country than the statement that all cattle and sheep exported are consigned direct to their final destination without any grain-finishing process, a procedure which would be absolutely impossible in any State of the Union. The total export shipment of finished cattle from the Territories in 1899 amounted to 41,500 head, and, at the most conservative estimate, there should be at least 70,000 head available for export during the present year.

The total area of the Colony of New South



Duchess 6th. Countess 8th. Queen. Duchess 7th.
Cinderella. Diamond King.

GROUP OF SHORTHORNS IN THE HERD OF JAMES THOMPSON, MILDMAY, ONT.
(See Gossip, page 467.)

Wales is about equal to that of the Northwest Territories. We have 200,000 head of sheep, and up to a few years ago, New South Wales boasted of sixty million head, in addition to an enormous number of cattle and horses. This conveys a faint idea of the expansion which this industry is capable of in the Canadian Northwest. It is significant that, when the Territorial Government came to dispose of their range-sheep exhibit at the Pan-American Exhibition at Buffalo, it was found profitable to send these animals all the way back to Winnipeg to be sold. Winnipeg is at the present time the best market for mutton in Canada. In spite of its unlimited possibilities in the direction of sheep-raising, the Territories do not as yet supply even the British Columbia market. Over 20,000 carcasses of frozen New South Wales mutton were imported to Vancouver during the present year, in addition to a large quantity from the United States.

It is scarcely necessary to devote any extended remarks to the future of horse-raising in the Territories. With the enormous immigration now pouring into the country, which, for the present year, is estimated at some 50,000 souls, it is evident that the demand for farming horses of all classes will be quite beyond the abilities of the country to supply. Train-loads of farm horses are now being brought up at large transportation expense from the costly lands of Ontario. These animals can be raised at half the cost on our extensive prairie ranges. The day of depression in the horse business has passed, and the Western demand, at remunerative prices, is bound to keep well ahead of the supply for many years to come.

The burning question in the West at the present time is that of the transportation of our ever-expanding grain crop. A glance at the map will show that Moose Jaw is about the same distance from Vancouver, with an ocean port open all the year 'round, as it is from Lake Superior, ice-locked half of the year. The construction of a line of railway to the Pacific Ocean,

POULTRY.

Our Early Chicks.

The mother-hen says, "Don't you cry,
You lovely fluffy things;
If you are cold, then come and lie
Beneath my sheltering wings."

We had very good success in the chicken-hatching line this spring. Our hens commenced to lay about the 1st of January. About the 20th of March some of them announced their intention to raise babies. This was just what we wanted them to do. We had a nice warm house all ready for them, where they would not be disturbed. Instead of giving the would-be sitters a cold bath, or placing them in close confinement, we made them inexpressibly happy by giving them a nestful of eggs. The first one was set on March 26th, and up to this date (May 10th) we have set every hen that clucked. We have 61 chickens hatched and six hens sitting now. All the hens we set have good families with the exception of two. They were both set on Buff Cochins. One of them turned out to be an egg-eater. After she had been sitting about two weeks she went to work and ate five or six of the eggs, chicks and all. But she will never eat any more, for she is in the fattening coop now. Somebody will eat her soon. One solitary chick was all she had. The other hen was set on twelve eggs. The eggs were not as fresh as they should have been. She only had two chicks. Some of the eggs contained dead chicks and some were unfertile. As the Buff Cochins are slow, lazy hens, perhaps the chicks were too lazy to chip the shell. I have learned one lesson, however: I shall set no more Buff Cochins eggs. We intend to set some more hens yet. We want to raise 100 chicks at least. This will mean plenty of work, but what of that, as long as there is money in the business! Our chicks are all smart, and growing nicely. But they have been well looked after ever since they were born. We have them in an ideal coop, where the sun shines in all day long. It is divided into compartments, which are occupied by four large families. It is amusing to watch the pretty little youngsters looking out at the windows. The first week we fed them every two hours and gave them water three times a day. Now we feed them four times a day and water twice. We never give them any sloppy food. Hard-boiled eggs, bread crumbs, and oatmeal constitute their bill of fare the first week. We dust the mothers with sulphur when they come off with their broods, and spread road dust in the coops so that the chicks can obtain plenty of grit. We keep them shut up until they are six weeks old at least; after that we let them out on fine afternoons for a run. But they must be watched, or something will happen them: Hawks, rats or cats may take a fancy to the little chirpers. One of our neighbors had eight early chickens. She let them out one day and forgot to shut them in at night. In the morning she found the disconsolate mother alone, bemoaning the loss of her beloved children. The rats had taken every one of them. So we chicken-raisers must be on the lookout and try to keep our coops rat-proof.

Well, farmer women, isn't poultry-raising pleasant, interesting work? I quite enjoy it. We have only kept about 50 hens since we commenced to farm, but we intend to increase the number this summer. We are going to kill every old hen this spring. Fowl sells readily for 10 cents per pound.

We have learned some valuable lessons from experience and also by reading the excellent practical articles published in the "Advocate." We know that the fresher the eggs are when set, the better chance of success we have. If possible, set them before they grow cold. The best place to make a nest for a hen to sit in is on the floor, in a quiet, secluded place, where the other hens won't bother her. I put a sod or road dust in the bottom and then a little fine hay on top. Quiet, good-tempered hens are the best to set, those that will let one do anything with them. We never like to let them sit on the nest they have been laying in, but sometimes we find it hard to make them stay on the new nest, for biddy is a pretty determined lady and always wants to choose her own nest. After dark is the best time to move a sitter, for after the first night she may forget all about her old nest.

P. E. I. MRS. A. RODD.

Seeds for Identification.

I enclose several seeds which I found this year in rape seed. Can you tell me what they are? They somewhat resemble the description of bladder campion. F. W. WRENSHALL.
Grey Co., Ont.

Ans.—The seeds received were subjected to careful microscopical and botanical examination by an expert, and are certainly pronounced not campion. They appear to be from a plant cut before it was ripe and are very probably one of the common goosefoot family.



W. J. BLACK, B. S. A.

Who joins the "Farmer's Advocate" editorial staff.

Columns might be written on the irrigation development of the Territories, the recent introduction of the beet-sugar industry on an extensive scale, erection of woolen mills and other kindred industries throughout the country, but, peradventure, that if the present rate of progress in all branches of agriculture and stock-raising continues for another ten years, the Northwest Territories will be a factor to be reckoned with in the race for superiority and supremacy in the world's markets for agricultural products.

C. W. PETERSON,

Deputy-Commissioner of Agriculture.

Regina.

Extensive Coal Deposits.

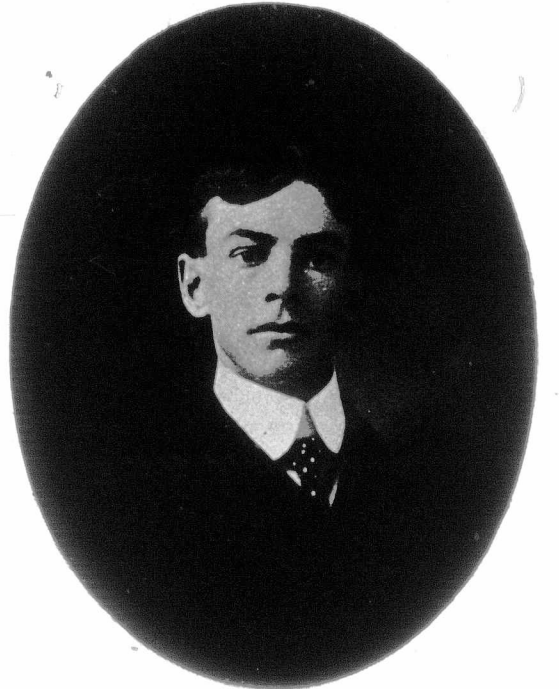
It is estimated that the workable coal under each square mile in the vicinity of Medicine Hat is 5,000,000 tons; of Blackfoot Crossing, 9,000,000 tons, and of Lethbridge, 5,500,000 tons. The coal of British Columbia is of good quality and abundant. Anthracite is being found in one area. It is estimated that the Elk River field contains at least 23,595,200,000 tons of coal. The question of "great scarcity of fuel" that haunts the mind of the intending settler should be banished forever when he reads the foregoing figures. The reader has no doubt heard that joke (long stale), "There'll be fuel, Biddy, when ye'r dead." And so there will in the Great Northwest for many generations to come. The fact that the price of coal often reaches \$10 per ton here is not an evidence of scarcity, but simply the result of not having keen railroad competition. It is the transportation that raises the price of any localized article. When we get a few more thousand miles of rails laid by opposition companies, it will surprise the natives what a great difference it will make in the price of fuel.

Ontario Agricultural College Graduates.

We take pleasure in portraying in this issue the 1902 graduates of the Ontario Agricultural College at Guelph, and the "Farmer's Advocate" bespeaks for them one and all careers of honored usefulness in whatever avocations they may embark. Judging by personal appearances and the thoroughness with which we believe they have taken their extended course, they will do credit to their alma mater. The degrees of B. S. A. were conferred at the University of Toronto on Friday last.



L. A. MOORHOUSE, B. S. A.



G. I. CHRISTIE, B. S. A.

A Young Farmer on Turkey Raising.

To the Editor "Farmer's Advocate":

I see, in your last issue, an invitation is given farmers to write to the "Advocate," and as I am a young farmer I would like to say something about the raising of turkeys. Here in Lanark County the land is principally high and suitable for turkeys, as there are lots of grasshoppers for them as soon as they are able to go after them. In Lanark Township there are hundreds of turkeys raised with little or no other feed during the summer months, and they serve a good purpose in transforming into a marketable product the grasshoppers which otherwise in many places would spoil the grain crops extensively. The fox is the turkey's worst enemy. Last year in Lanark Township foxes destroyed hundreds of dollars' worth of turkeys. Some farmers lost all they had. I think every farmer who considers there is money in turkeys should try to get rid of the fox, and I believe foxhounds would be the best means of frightening them away, as I know some farmers who keep foxhounds and foxes are a thing of the past around their farms. There are a great many foxes poisoned in winter, but there are always some left, and when their young are about two months old is the time they start to look for food for them. I have seen an old fox come into a flock of turkeys when a very short distance from the farm buildings and take them at all times of the day. They are very hard to shoot unless a person stays with the turkeys all the time, and then, if the wind is blowing the right way, they will get on the scent and are never seen. I tried this last summer. When I was not there, the fox would come and kill the turkeys, till at last the flock was all gone, which is very discouraging when the turkeys are three or four months old. I think the county should raise the fox bounty to \$5, and then people would take an interest in getting them, dead or alive. When the fall comes on, turkeys can be fed very cheaply on boiled grain, sugar beets, pumpkins, turnips, etc. They are especially fond of sugar beets and potatoes boiled, and with the addition of some corn on the cob in the evenings, they will get fat in a few weeks. We have tried this way of feeding for several years and I have never seen better fattened turkeys on the market. Some farmers say they eat too much to make it pay, but if they boil all the feed I think they will change their minds. Half a dozen hogs would, I believe, eat more than 150 turkeys, as



J. MURRAY, B. S. A.



W. J. CARSON, B. S. A.

I have fed both long enough to know, as in this country we only need to feed turkeys heavily about two months, and unless hogs are fed grain or shorts, even on good pasture, they will not grow much during the summer. J. E. M. Lanark Co., Ont.

Suitable Breeds and How to Select Them.

BY J. W. CLARK, BRANT CO., ONT.

Since there is a constant and increasing demand for table poultry in the English market, and the raising of poultry for export in Canada has developed into a prominent industry, and one which has—the most of us think—come to stay, it will be well for us to watch closely and see that the exacting tastes of the picky chicken-consumers in England are not hampered with too many vexatious variations.

They want birds that come up to their standard of perfection—something that suits their eye—a heavy, compact body, with white flesh and white legs and skin. It is to our advantage to raise poultry that possess certain good qualities. It is to our advantage to get a breed that will stand forcing, and one that will thrive well under even unfavorable climatic conditions, such as we frequently get. We want a chicken that will make a rapid growth on comparatively inexpensive food, and reach an early maturity.

Egg-laying machines, such as we have in the Leghorns, Andalusians, and Minorcas, will not suit this purpose. Those breeds may be all right in their place, but their place is not in a feeding crate. I have fed some of that type and believe that I have pumped into them many dollars' worth of feed from which I got no profit.

We hear a great deal about the Buff Orpington breed now. I have only a few of them yet, but I am very much pleased with those which I have, and have ordered a number from England. We cannot speak too highly of the Barred Rock. They are a breed with which all are acquainted, a breed that excels in the production of winter eggs. If we take a flock of one hundred well-bred Barred Rocks we are fairly certain of getting eighty or ninety good birds for feeding. Perhaps the one objection to that breed is their tendency towards yellow legs and skin. But this can be overcome to a certain extent by systematically weeding out our breeding stock which show this tendency—breeding only from white-skinned and white-legged birds—and also by feeding a ration that will make white flesh.

The Wyandottes are also a very good breed. I have no doubt that the fanciers of this particular breed could tell you of many points where they excel the Barred Rocks. From the experience that



E. C. HALLMAN, B. S. A.

I have had with them I am not prepared to say that they fit my needs quite as well. Nevertheless, they are a very excellent fowl, and for crossing with an Indian Game cock are perhaps as good as the best.

The same principles that should be observed in selecting breeding cattle of the beef breeds should be observed in selecting a cockerel and hens to raise table fowls. It is a block of meat of the best quality that is wanted. It will be found quite as difficult to make a good carcass of chicken out of an egg-laying machine (or special egg-laying breed) as to make an ideal carcass of beef with a Jersey steer.

I believe it is wise and essential to the highest degree of success to raise your chicks from hens that are pure-bred, or nearly so, and from a pure-bred cock. If your breeding hens have a strain of Leghorn in them your chickens will not likely be so uniform. There is more apt to be a larger percentage of culls. There will be some that show the back breeding. But I believe that we get stronger chicks by crossing a pure-bred male of one breed with hens of another breed.

An ideal bird for the export trade might be described as having a short neck, with a wide head, bright eyes, and a short, heavy bill. The legs should be short, squarely set, and well apart. The back should be wide and strong. The breast should only be of moderate depth—having plenty of room for a large quantity of meat. The skin, flesh and legs should have a healthy, white appearance.

GARDEN AND ORCHARD.

Some Insect Pests.

The day has come when it is necessary for every horticulturist to know something of entomology if he would successfully combat the various insect pests that prey upon orchard and garden crops. Among biting insects none have probably been more destructive to orchards throughout this country in recent years than the codling moth, bud-moth, plum curculio and American tent caterpillar. By this time the latter will have done its work and entered the pupa state in some secluded spot, from whence it may be expected to emerge a full-fledged imago during the first two weeks in July.

The eggs of the codling moth hatch in about a week after being deposited on the calyx end of the blossom, and the tiny worm at once begins to burrow through the apple to the core. In three or four weeks from hatching the larvæ attain full growth, let themselves down to the trunk of the tree by a thread, and immediately begin to spin their cocoon. The insect remains in this condition about two weeks, when the moth escapes. Considering the time of blossoming, it is readily seen that at present the moth is in the larval state in the young fruit. During the last of July it will be full-fledged and on the wing ready to produce eggs for a second brood. Hence the need of continual spraying with arsenical poisoning.

Although the bud-moth is not so well known throughout the fruit sections as the insect just described, it is, nevertheless, responsible for considerable damage. And there is little doubt but that it is increasing very rapidly, especially in certain northern districts of Ontario. The adult moth is an ashy gray color, about three-quarters of an inch across the wings. In Canada there is but a single brood in a season. The eggs are laid in June and July. According to Slingerland, these hatch in from seven to ten days. The larvæ feed upon the foliage for about six weeks, when they become about half-grown. They then form a small silken case, well concealed in the crevices of the twigs, where they remain until the following spring. As the buds are swelling, and even after they have burst, the larvæ, which are about one-quarter inch in length and dark in color, again appear. They feed upon the young buds and even the foliage, incurring widespread destruction. The young growing leaves are drawn together by silken threads, and within this retreat the larva pupates, emerging as a mature moth about seven or eight weeks from its first appearance in the spring. To kill this insect spraying should, of course, be done when the buds are opening. One or two applications before the blossoms appear are usually effective.

To the plum-grower there is no greater enemy than the plum curculio. It is a small grayish or black beetle about one-fifth of an inch long. About the time the trees are in blossom the insects begin to move. The female lays her eggs on the young plum shortly after it is formed. A small crescent-shaped slit in the fruit will reveal the presence of the egg at this time of year. Within this mark the tiny morsel is placed. In warm weather it hatches in about four days, and the young larvæ immediately begin to feed on the green flesh of the fruit. At the same time it bores its way to the center, where in from three to five weeks it becomes a yellowish-white grub about two-fifths of an inch long. Infected fruit usually falls to the ground, and in it the larva



F. S. JACOBS, B. S. A.

remains until full-grown. It then passes into the ground, changes to a pupa, and in about six weeks comes out as a mature beetle. There is only one brood in a season. A very effectual method of dealing with this pest is to jar the trees and collect the beetles in a blanket, which should be spread underneath. This work should begin when the trees are in blossom and continue morning and evening for three or four weeks if the insects be numerous. All fallen fruit should be collected and destroyed. Two or three sprayings of Paris green, one teaspoonful with two gallons of water, will destroy most of the beetles and incur much less work than the former method.

Green Crops in Orchards.

Investigation conducted at Cornell University Experiment Station show the need of some system of fertilizing the orchard lands to make the trees produce large, handsome commercial fruits. Some growers have reached the conclusion that green manure is more economical and as satisfactory as expensive fertilizers and barnyard manures, but we apprehend that is a point not easily settled. The different clover and grass crops raised in an orchard should be for the double purpose of protecting the tree roots in winter and for fertilizing the soil by turning under early in spring. In the experiments made at the above station it was found that of the various crops sown in mid-summer, after the sod of the winter crop had been plowed under and allowed to decompose, the alfalfa gave to the soil by the following spring 136 pounds of nitrogen to the acre, mammoth red clover 130 pounds, crimson clover 104 pounds, and common red clover 87 pounds. Similarly the hairy vetch and soy bean were planted, and on one acre the former from the heaviest yield produced 256 pounds of nitrogen, and the cow pea 52 pounds, both within three months after planting. According to these returns it was estimated that the hairy vetch added to the orchard soil in the form of nitrogen, phosphoric acid and potash about \$58 worth of material to each acre. Added to this fertilizing value of the green crops there is the advantage obtained of protecting the trees in winter. Another point is the good obtained in the use of these plants by preserving the moisture in the soil in hot weather, and in inducing the roots of the trees to penetrate far down into the subsoil. Deep-rooted trees are the sturdiest and best producers.



H. J. WATERS.

To receive B. S. A. degree on passing supplemental examination in bacteriology.

DAIRY.

Disinfecting Stables.

Of special interest to dairy and stock men generally is the following reminder, recently issued by Dr. A. W. Bitting, Veterinarian of Indiana Agricultural Experiment Station:

The disinfection of stables after a period of constant use should be a part of routine practice. Dairy stables in particular should be disinfected twice a year, and oftener if the conditions demand it. It is not possible to give many stables that thorough disinfection that is possible in houses, because their construction will not admit of it, but it is possible to do very much and at little expense. The ideal method of disinfection is by means of a gas, as that would have the power to penetrate everywhere. The effectiveness of this method depends upon securing a large volume of gas and maintaining it for some time. Unless the stable can be made tight, a gas will be of little use. For all practical purposes the gas produced by burning sulphur over a pot of coals is the best if used in connection with steam. The dry sulphur fumes have little germ-killing power, but when combined with the steam in the air it forms a compound that is deadly. The boiling of water and burning of sulphur should go together. Formaldehyde gas is not so efficient for stable disinfection as many would have us believe. A very practical means of disinfection that may be used under almost every stable condition is by whitewashing. This is not expensive for material and is very easily applied by means of an inexpensive fruit spray pump. The lime should be thoroughly slacked and strained through cloth and made just thin enough to work well through the nozzle. One man can apply two coats of whitewash with the pump and reach all parts of side and ceiling of a room in about one-fourth the time required with the brush. Whitewash will kill or hold the germs with which it comes in contact. It has the effect, too, of making the barn lighter and cleaner. After the first spraying, one application will usually be sufficient if given regularly. As the business of supplying milk to cities and creameries is of large proportions and depends upon cleanliness, this precaution of disinfection should be regularly followed.

Jerseys as Butter Producers.

The exceptional richness of the milk of Jersey cows has earned for that breed a world-wide celebrity. In some of the milking contests which are held in connection with several of the leading cross-channel shows, animals of this breed have for years been figuring to great advantage. Their excellence as butter-producing cattle was again well exemplified at the great annual show of the Royal Jersey Agricultural Society this year, where a special butter test was brought off, and where no fewer than 46 animals competed for the several prizes offered. The milk of ordinary cows that produces 1 pound of butter to every 2½ gallons of milk is considered very fair quality; by way of contrast with this it is interesting to know that several of the cows competing at this butter test produced milk of such extraordinary richness that it only took about half the quantity of ordinary milk to produce 1 pound of butter.

The cow which carried off the gold medal and £10 prize was four years old, and calved on the 1st March. She was thus 67 days in milk, and on the day of the test she produced within a small fraction of 4 gallons of milk. On being churned, this milk gave 3 lbs. ¾ oz. of butter or at the rate of 1 lb. of butter to every 13 lbs. of milk. Even better in this respect were the performances of some of the other competing cows. One of these, which had been 147 days gone in milk, gave 2½ gallons of milk on the date of the trial, and this milk produced 1 lb. 15 ozs. of butter, or at the rate of 1 lb. of butter to every 12.83 lbs. of milk. As a gallon of milk may be roughly regarded as weighing 10 lbs., it will be seen that this cow gave at the rate of 1 lb. of butter to a little over 1¼ gallons of milk. Quite a number of the cows in this competition gave milk which yielded at the rate of 1 lb. of butter to every 1½ gallons of milk, performances which show what wonderful butter-producers these Jerseys are.—Farmer's Gazette.

After the calves have been turned out, do not be so hard-hearted as to give them no place of escape from the sun and flies. A shed or little house of some kind will afford them shelter and give them a chance to grow. Growth is what we are after.

There will be one hundred new creameries established in the State of Minnesota this season.

The Toronto Industrial Dairy Building.

We publish herewith an engraving of the splendid new dairy building which is being erected for the approaching Toronto Industrial Exhibition. The dimensions are 189 feet long by 83 feet wide. It is constructed of dark gray cement blocks, which give it a very fine appearance, and the blocks being hollow will aid greatly in keeping the building cool. The floor is also constructed of cement concrete with proper slope for flushing. The walls are 17 feet high, and the roof, which has heavy, overhanging eaves, is covered with galvanized-iron shingles. To the right and left of the south entrance there is ample space for exhibits of dairy apparatus, and to the rear space for the exhibits of cheese, with ample accommodation and refrigeration for the displays of butter. The right wing will be fitted up especially for the popular buttermaking competitions and demonstrations which constitute such an instructive and interesting feature of the exhibition. We expect that the dairy department of the Toronto show this year will eclipse anything heretofore witnessed.

QUESTIONS AND ANSWERS.

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

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

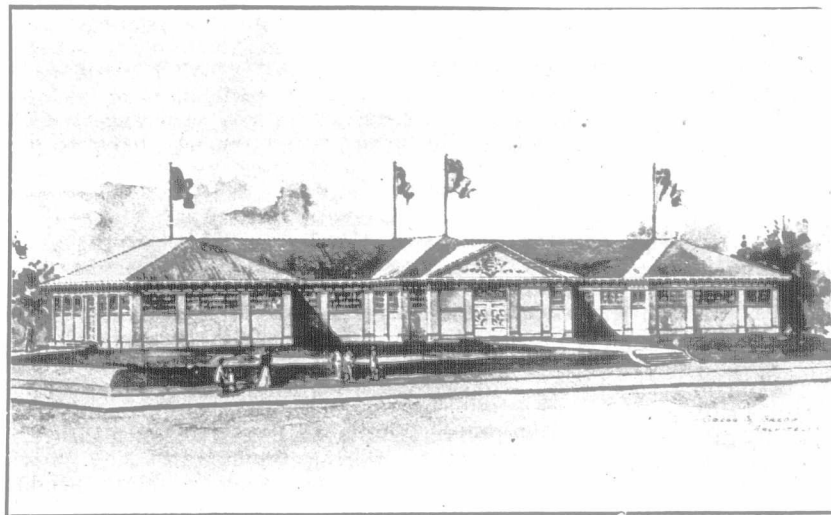
3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.

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

Veterinary.

SCOURS IN CALVES.

What is the cause of scours in calves, and what is the proper treatment? A. B. N.-W. T.



NEW DAIRY BUILDING, TORONTO INDUSTRIAL EXHIBITION.

Ans.—Diarrhea in calves is produced by various causes, the principal of which are: Feeding unwholesome milk; eating coarse food, upon which the digestive organs are not prepared to act; irregular feeding; allowing too long time to elapse between meals and then permitting the calf to engorge itself; breathing obnoxious gases, especially carbon dioxide and sulphurated hydrogen in badly-ventilated and filthy stables. These debilitate the general health, and, as a result, digestion is impaired, which leads to an accumulation of undigested materials in the stomach and bowels, and the consequence is fermentation, irritation and diarrhea. The formation of hair balls in the first, third, and sometimes in the fourth, stomach is also, occasionally, a cause of diarrhea in calves. In the treatment of this disease, the removal, if possible, of the causes mentioned or any other known cause, is of the greatest importance. Affected calves should be removed from those not affected, and cleanliness and good ventilation should be strictly observed in relation to both the diseased and healthy animals. The medical treatment has to be regulated by the stage of the disease. If in the first stage, a laxative should be administered for the purpose of expediting the removal of the cause of irritation, and for this I would recommend from one to three ounces of castor oil and an equal quantity of lime water, well shaken together. When the offending agents are supposed to have been expelled, give three times daily, until the stools become normal, one tablespoonful of this mixture: Tincture of catechu, tincture of rhubarb, tincture of camphor, tincture of opium, of each four ounces; dose to be given in two ounces of lime water.

In the second, or "white scours," stage, which is always more or less contagious, the precautionary measures in regard to isolation is still more imperative. In this stage the castor oil and lime water dose should still be administered. Give four times daily two tablespoonfuls of the following: Chalk mixture, 4 ounces; creosote, ½ an ounce;

wine ipecacuanha, 2 ounces; tincture of opium, 1½ ounces. Put into a full-quart bottle and fill up with good port wine. The milk which the calf is fed should be boiled. If the abdomen is tender, rub with the following liniment twice daily: Soap liniment, 4 ounces; tincture of cantharides, 2 ounces; liquor ammonia, 1 ounce; tincture of opium, 2 ounces. Mix.

MARE SUBJECT TO COLIC.

1. I have a brood mare that takes colic if allowed to eat grass. She was the same last year. She is all right if fed on dry food.

2. For some years my cows have been unthrifty. They do not shed their hair properly. For weeks at a time they will chew boards, rails, etc. All my cattle, both young and old, do this both summer and winter. They are well fed. Huron Co., Ont. T. J.

Ans.—1. Try the following with your mare. Take powdered ginger, bicarbonate of soda and slacked lime, of each 6 ounces; gentian, 3 ounces. Mix and make into 21 powders. Give one three times daily in wet bran. If she will not eat them, mix with ½ pint cold water, and drench.

2. There is a lack of phosphates in the food your cattle get. Give 2-dram doses phosphate of lime twice daily to each cow.

J. H. REED, V. S.

WEAKNESS IN YOUNG PIGS.

What is the cause of my two-weeks-old pigs knocking down suddenly behind the shoulders as though their spines had given way? They are healthy and active. Both the pigs and sow have plenty of exercise. The sow has been fed on mangels and oat chop and housed in a fairly dry stable. Grey Co., Ont. T. W. W.

Ans.—Your pigs are either suffering from rheumatism, caused by sleeping in rather damp and cold quarters, or are affected with rickets, due to the food of the sow. Give them warm, comfortable quarters, plenty of exercise and grass. Feed some bran and a little pea meal to the sow and mix a little lime water (a cupful) in her food each meal.

J. H. REED, V. S.

SPINAL TROUBLE IN COLT.

I have a yearling colt that seems to have lost control of its limbs. It was all right when I turned it out to pasture with a two-year-old two weeks ago. It did well until a few days ago, when I noticed it wobble around as though weak in the muscles of the back.

Norfolk Co., Ont. J. K. R.

Ans.—Your colt evidently is suffering from disease of the spinal cord, sometimes called in veterinary practice, "locomotor ataxia," although it is not of the same nature as that disease in the human being. Place it in a box stall and give a purgative of about 3 drams Barbadoes aloes and 1 dram ginger. After purgation ceases, give 1-dram doses nux vomica three times daily in damp food. If you notice a twitching of the muscles, decrease the dose to ½ dram. It is probable the colt will recover, but it is liable to be tedious, probably some months.

J. H. REED, V. S.

SPAYING BITCHES.

At what age should a bitch be spayed? How is the operation performed, and what is the size and general appearance of the ovaries?

A. B. V.

Ans.—From three to six months of age is the best time. It requires an expert to operate. The most approved method is to chloroform the animal, place her on a table, cut into the median abdominal line just anterior to the pelvic bones. The horns of the uterus will be exposed, follow each upwards towards the kidney; the ovary is attached by a tube; it will vary in size from a small bean to that of a marble, according to the age and size of the animal. It resembles a testicle in general appearance. It is well to remove the uterine horns as well. The wound should be thoroughly cleansed, dressed with an antiseptic, as iodoform, and then stitched with carbolyzed catgut sutures.

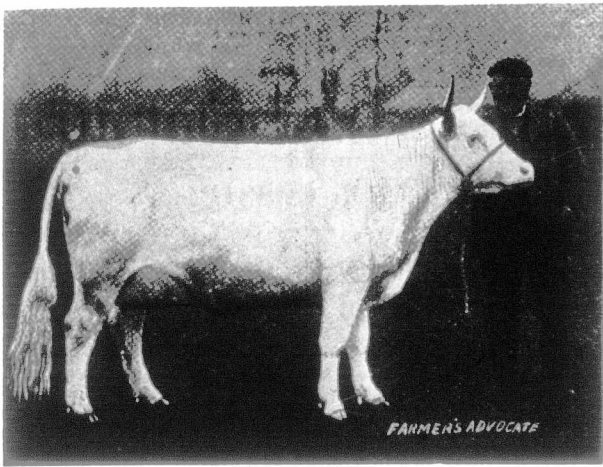
J. H. REED, V. S.

Miscellaneous.

KICKING COW.

I have a young Jersey cow, which we are milking this spring for the first time. The cow, when young, was petted considerably, and now, when we come to milk her, we find her to be quite a kicker. She kicks so badly that it is almost impossible to milk her. There seems to be no cause to the matter, as her teats and bag are not the least bit sore. It is apparently a habit. Will you kindly suggest a remedy, and oblige—Huron Co., Ont. J. P.

Ans.—The petting should have ensured a quiet



GIPSY III OF BURNHOUSES (13878).
Ayrshire cow, four years old. Winner of first prize and female championship at Kilmarnock Show, 1902.
BRED BY AND PROPERTY OF MR. WM. HOWIE, GALSTON, SCOTLAND.

cow if her udder had been handled when she was younger. We know of no better remedy than a rope tied or a strap buckled tightly around the body just in front of the udder—that is, around the flanks and loin. Tie her in a stall for milking and give her something good to eat while being milked. She will soon improve so that the rope thrown loosely on her back will be sufficient, and ere long it may be dispensed with if kindness accompany the treatment.

ALFALFA — STACKING EGGS IN INCUBATOR — SHIPPING GREEN CHEESE.

My neighbor's alfalfa and common red clover, though pastured off short last fall, looks full as well as mine, which was kept as if sacred. 1. In general, does alfalfa yield for seed equal to the red clover? Will it injure the next year's crop to take seed off it this year? Would you advise siloing alfalfa to hold it for feeding in July and August?

2. Do you advise stacking eggs in the incubator say two deep, or putting in enough extra ones so when we test out the tray will just be even full?

3. Could nothing be done to influence the Dominion Government to take action to prevent the exporting of our green cheese?

Prince Edward Co., Ont. **FARMER.**

Ans.—1. Alfalfa is considered a heavier yielder than red clover. From five to seven bushels per acre is considered an average yield in many of the States, and I know of no reason why it should not yield that amount in Prince Edward County. We do not grow it here for seed, nor has it ever been grown on this farm for that purpose, to my knowledge. Three to four bushels of red clover is considered a good yield per acre. It is generally conceded that when alfalfa is grown for seed the following crop will not be quite as vigorous, but the difference is very slight. I think that siloing is the very best method that can be practiced in using alfalfa for July and August feeding. We do not practice siloing any of the clovers here. Most farmers who have tried clover in the silo do not report in very favorable terms. It is not a safe practice to pasture either alfalfa or red clover very close in the fall. With a favorable winter and spring, all may be well, but should the winter prove severe, a considerable portion is likely to be killed. We had a small patch of alfalfa in connection with a field of rape last fall, and, of course, it was pastured exceedingly bare, yet it is doing well this spring. I believe that the favorable conditions of the winter and spring are altogether responsible for the vigorous growth of the closely-cropped pasture field.
M. D. GEDDES.
Ontario Agricultural College.

2. It is not a good practice to stack eggs in an incubator. If your correspondent desires to put in an extra number of eggs into the machine, I would consider it a much better practice to take some pains in putting the eggs on end and to take the extra trouble in turning them rather than to place eggs two deep. Where you place the eggs one row upon the other, you must certainly overheat the upper one or underheat the lower. If your correspondent will be good enough to put two thermometers in his incubator, and place the bulb of one thermometer on a level with the top of the eggs and the other on a level with the bottom of the eggs, he will find that in the majority of instances there is a difference of two degrees. If he placed two rows of eggs in the machine, he will find that there will be a slightly greater difference. The only way to put in the extra number of eggs and have the heat evenly distributed is as I have mentioned before. The only difficulty in this method is in the turning.
Poultry Dept., O. A. C. **W. R. GRAHAM.**

3. The brisk demand of the present season for cheese has had the natural effect of taking it from the curing-rooms when very immature, but this trouble is likely to correct itself. Prof. Jas. W. Robertson, Agricultural Commissioner, and Mr. J. A. Ruddick, Chief of the Dairy Division, doubtless have this matter under advisement.

ORANGE RUST ON RASPBERRIES.

Find enclosed a few leaves of a black-raspberry bush affected by some disease, insect or blight. We have lost nearly all our bushes through this trouble, although we have always destroyed the affected ones. Will you kindly tell me what is the trouble, and remedy, or what we can do to prevent it? and greatly oblige,
A FARMER LASSIE.

Northumberland Co.

Ans.—The trouble appears to be orange rust or red rust (*Cæoma luminatum*, Link.). Prof. Lode-man gives the following description: "This fungus is found upon blackberries and raspberries. It possesses a perennial mycelium, so that when a plant is once infested it cannot be cured. The fungus has two forms, which were formerly supposed to be distinct plants. One form is known as *Puccinia peckiana*; it attacks the foliage and produces spores, which germinate in the fall or spring. The mycelium enters the canes of the host-plant, probably by means of the underground parts, and from there it spreads to the various branches. The copious production of orange-colored spores on the under side of the foliage of diseased plants is the result of such infection. This condition is preceded by an appearance which is easily recognized: the leaves are smaller, and they have a pale green color which distinguishes them from the healthy tissues. The only practical remedy yet known is to dig out and destroy affected plants as soon as they are discovered. Spraying the foliage with a fungicide, to prevent the entrance of the fungus into the leaves, might be followed by good results."

SILo CAPACITY, ETC.

1. Would a square silo 12 ft. inside and 25 ft. high be large enough for say 20 head of cattle?
2. Could a well be cemented over successfully to form a bottom of a silo, and still have the use of the well?
3. Will silage cure properly in the bottom of the silo, the bottom being in the cellar and cemented?
M. M.

Grenville Co., Ont.

Ans.—1. According to the best authority we have, a square silo of the dimensions named would hold about 55 tons or about five acres of good corn, which would give about 30 pounds of ensilage a day to each of 20 animals for six months, a fair average amount for a mixed herd of different ages, old and young, together with other feed. Forty pounds per day and upwards is fed by many dairymen to large cows.

2. If the foundation were made perfectly solid, iron girders placed across the well, strong planks over these, the ground made level with this and a cement concrete floor over all and plastered with cement plaster, the well could be used by drawing the water through a pipe running under the silo. It would be well to have a pipe from the bottom of silo leading to a drain to carry off any water accumulating from the pressure of the silage.

3. Yes, if the sides are smooth so that the silage settles evenly.

WHITE SHORTHORNS—LICE ON CATTLE.

1. Is white considered an objectionable quality in a registered Shorthorn? If so, why? 2. Are white cattle more subject to lice than any other color, and, if so, why? 3. What is the best method to rid cattle of lice?
J. E. J.

Cardwell Co., Ont.

Ans.—1. White is a strictly orthodox color for a Shorthorn. They may be red, white, red and white, or a mixture of these termed roan. The record of the shows reveal that in proportion to the number of whites shown, more prizes are won by white ones than by those of any other color. In the fat-stock shows in Canada, in recent years, the champion steer has generally been a white one.

2. We are not sure that white cattle are more subject to lice than others, and know no reason why they should be. Lice show more plainly on a white than on a darker-colored animal. They may be on the latter, but you don't notice them so quickly.

3. Any of the sheep dips advertised will destroy lice. Insect powder (pyrethrum) will

banish them, as also will mercurial ointment and kerosene emulsion.

SOWING RAPE WITH GRAIN CROPS.

I would like to learn if any of your readers have ever tried sowing rape seed in crop of spring grain, say oats or barley, about 15th or 20th of June, and about 4 or 5 pounds to the acre, sown broadcast with hand seeder? If so, I would be pleased to have them contribute an article in your valuable paper, stating time of seeding, amount of seed to acre, and success with same for fall pasture.
M. H. O'NEIL.

Middlesex Co., Ont.

Ans.—Much depends on the soil and the season. On clay land we have sown rape with oats at same date of sowing as the latter. In low, damp places, in a wet season, the rape grew too strong and proved troublesome in harvesting the oats, the butts of the sheaves being full of green rape and delaying the drying process. On higher and drier ground, very few plants were visible at any time either before or after harvest. It might fare better on lighter soil, but it is too late to sow rape in grain at this date, as it would require to be harrowed to cover the seed, which would at the present stage of growth of the grain damage it. Barley ground after harvest may be prepared by plowing and harrowing or by disking well without plowing, and sown to rape at the rate of 4 or 5 pounds of seed per acre broadcast or 2 pounds per acre with the grain drill, using grass-seeder attachment and stopping all but two or three tubes, sowing in rows 20 to 24 inches apart and cultivating with horse hoe, with a fair prospect of a good crop of fall pasture if weather conditions prove favorable.

OLD TIMES — PARIS GREEN AND PLASTER.

The "Farmer's Advocate" comes quite regularly and it seems to draw us so near home. The letter in your last issue about plowmen and plowing and plows "broke me up quite." I was born and raised in Scarborough, within one mile of the Hoods, Rennies, Clarks, Gibsons, Morgans, and spent many a happy day with those boys, and was at Brooklin when Simpson Rennie took the \$100 cash prize for the best plowing in Whitby Township. I have a warm spot in my heart for all of them. I would like you to tell me about how much Paris green to mix with say 100 lbs. of land plaster to make it strong enough to kill potato bugs, and oblige,
J. LINTON.
Penn.

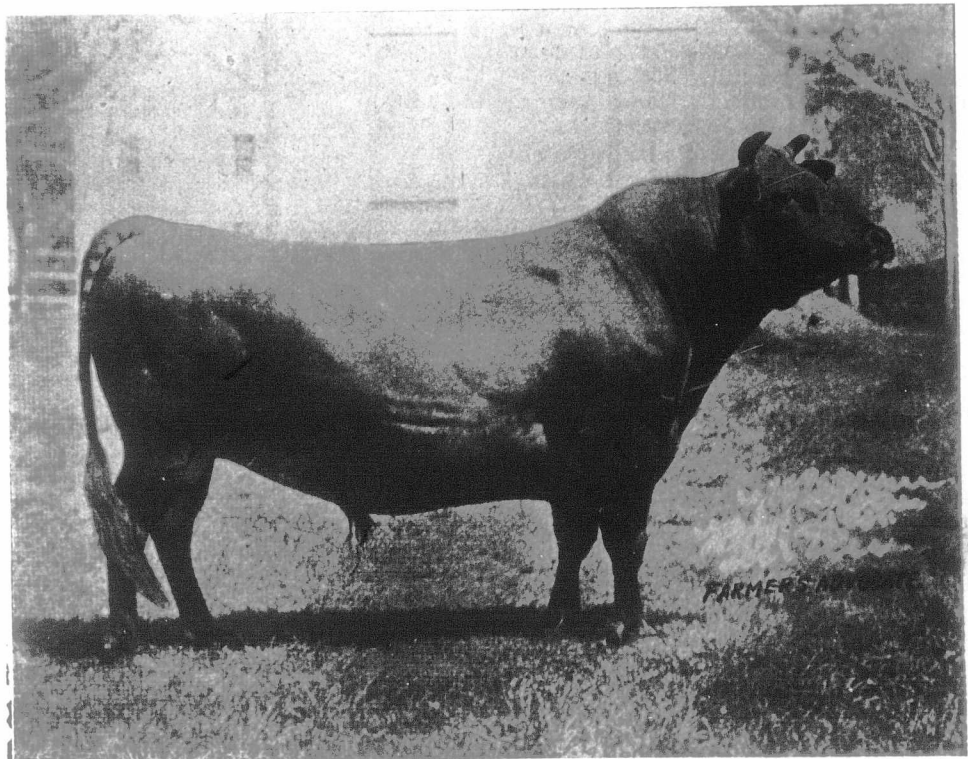
Ans.—One pound of Paris green is sufficient for one hundred pounds of land plaster when mixed for the destruction of potato beetles.

SALT FOR HOGS.

Please state what you think of giving hogs a quantity of salt sometimes. I don't see why a hog should not have some salt as well as any other beast.
B. D.

Grey Co., Ont.

Ans.—Where hogs are confined to a pen they should be given the freedom of a box containing salt. Many successful feeders keep their pens constantly supplied with a mixture of charcoal and salt; about three parts by bulk of the former to one of the latter. Others recommend the addition of small quantities of sulphur and sulphate of iron (copperas). Hogs which are allowed the freedom of a pasture lot have not the same need of a condiment as those kept inside. But even with access to clay they will partake of a considerable amount of salt, and it therefore should be supplied. Pigs that receive kitchen swill probably get all the salt they require in that way.



FLYING FOX, P. 2729 H. C. (J. H. B.).
Imported Jersey bull, four years old. Sold, May 30th, for \$7,500 at the annual sale from the Linden Grove herd of T. S. Cooper, Coopersburg, Pa.

SPRAY PAINTING—SCALES—TREE SEEDS AND PRESSED BLOOD.

1. Please tell us how to prepare paint for applying to outbuildings with a Spramotor? Red is the color we will likely use. 2. Where can scales such as are used in dairy stables be got and the probable cost? 3. Is it worth while spraying fruit trees now that have not been sprayed earlier in the season? 4. Where can the seeds of our ordinary forest trees, such as elm, basswood, ash, etc., be bought? 5. Can you give the composition of pressed boiled blood such as is sold by the Canadian Packing Co., of London, Ont.?

Middlesex Co., Ont. WEEKES BROS.
 Ans.—1. If you are using an ordinary oil paint, thin with benzine before applying. The Spramotor water paints are mixed in the proportion of five lbs. of the powder to one gallon of water. 2. George Fox, York St., London, Ont. Double beam standard 800-lb. scales, \$20; single beam 800-lb., \$17. 3. Yes. See spraying calendar, "Farmer's Advocate" for March 15th, page 216. 4. J. M. Thorburn & Co., of New York City, make a specialty of supplying tree seeds. The duty on them is ten per cent. On a small scale they might be collected as soon as ripe. The nuts and seeds of broad-leaf trees, we understand, require to be packed in moist earth until sown. They will not stand drying like other seeds. The elm is propagated by seeds, usually ripening in May or June and sown at once. Most of them will germinate in a few days, but some of them remain dormant till the next spring. Basswood seeds ripen about August. Ash seeds are gathered in the fall and sown immediately or are stratified till spring. Maple seeds are also sown in autumn or stratified and sown in spring. 5. Blood consists of 90 per cent. water, nearly 8 per cent. albumen, 1 per cent. fibrin, and the balance of fats, extractives and salts, each in small proportion. As prepared and sold, however, the bulk of the water is removed.

CALF NOT EATING—COW FAILING TO COME IN HEAT.

I have a pure-bred calf seven weeks old that has not made an effort to eat yet. I let it suck the cow three times a day. Do you think it gets too much milk and that that accounts for it not eating—the calf is doing well. When it starts to eat, what should I feed it to the most advantage? The mother has not come in heat since this calf was born. Do you not think it is time she had? Is there anything that could be done to bring her in season, as I am anxious to have her bred again? Do you think the calf sucking her too much has anything to do with it? G. M. Ontario Co., Ont.

Ans.—New milk from the cow is so complete a food that the calf does not yet feel the need of any other feed. A little fresh, sweet hay or grass should be placed within its reach. A good plan is to suspend a small bundle of good hay by a rope from the joists of the pen, overhead, so that the calf may play with it and it will soon learn to nibble some of the hay. Whole oats and bran makes as good feed as any for a young calf. Put some oats or some of the mixture in its mouth after it is done sucking at each meal and it will chew them and soon learn to eat. Later on a mixture of ground oats and peas or corn and bran or oats and bran and a little coarse ground oil cake will fill the bill. Good sweet hay, clover preferred, if you have it, should be kept constantly before it, but what is not eaten should be removed and fresh put in the rack or manger every day.

Cows suckling their calves do not, as a rule, come in heat as soon as those milked by hand. It is not unusual for them to go eight to ten weeks before coming in season, and some go three or four months. Feeding the cow a light ration of meal when she comes to the stable to let the calf suck would probably bring her in sooner. The drain on her system by the suckling of the calf no doubt causes the delay.

PERENNIAL SOW THISTLE.

The inclosed weed is one of which I found three small patches last summer. I dug it up carefully and burned it, but this year it has come up thickly, both from the seed and from small pieces of root left in the ground. The roots are like the common thistle and the plant is about the same size, but it has a yellow flower. About every four inches a new plant comes up from the root. If it is a dangerous weed, how can it be killed? Could it be killed by piling straw upon it? EDGERTON C. WANNAMAKER. Prince Edward County, Ont.

Ans.—The weed is perennial sow thistle, and hence lives over from year to year and reproduces from root as well as from seed. It should not be any more difficult to eradicate than common thistle. Cut off with hoe or cultivator any plants that appear above ground. In doing so the plant is deprived of its respiratory organs—the leaves, and very soon the roots become exhausted and die. Make sure that none are allowed to seed. If you should desire to produce a crop while clearing the land of this pest, a heavy crop of rape will be found most useful and effective. If the patch is small it might be smothered out by a deep covering of straw, but such a course hardly seems necessary.

KEEPING SHREDDED CORNSTALKS.

A subscriber living in a Western Ontario district, where corn is somewhat extensively grown and ripened, and where the husking and shredding machine is used to some extent, is desirous of learning the experience of farmers in storing shredded cornstalks in barn mows, as to whether they have had any trouble from it overheating, and, if so, how this can be prevented? This is a subject of special interest to many of our readers, and we invite brief letters for publication from those having had experience in this line, to come under the head of the best mode of taking care of shredded corn. Write while the question is fresh in your memory.

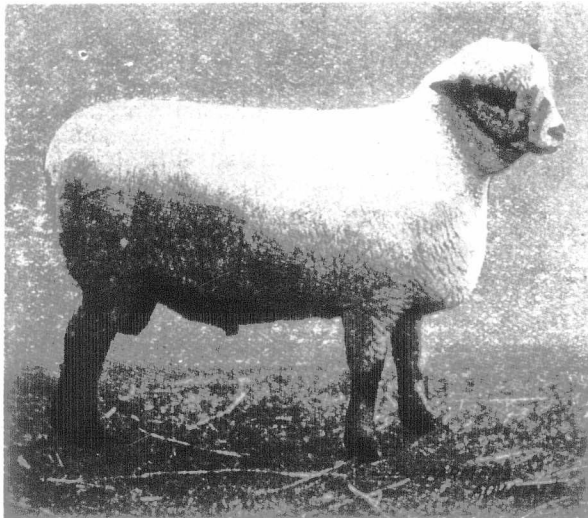
HOOKS ON CATTLE'S EYES—HERBAGEUM.

1. Is there any such thing as hooks on cattle's eyes, and what of cutting them off? 2. What do you think of Herbageum as a condition powder? Antigonishe Co., N. S. WM. McI.

Ans.—1. We have never heard of a trouble such as you mention. Perhaps some reader can give the information? 2. So far as we have noticed, no tests have been officially conducted showing the value of Herbageum as a stock food or condiment, but we know it is very largely used by dairymen and other stock-raisers. One of our contributors advises us that he thinks highly of its aromatic or condimental qualities. He used it especially in feeding calves and young pigs. In an Ontario town, the other day, one of our staff noticed a well-known sheep-breeder, who had had satisfactory experience with it, taking out a large number of sacks of Herbageum to feed his show sheep and lambs.

GREEN MANURE REQUIRED.

I have a field of eight acres which has had two crops of oats in succession the two last years. I would like to put wheat in next fall, but it will not raise wheat without some kind of manure or fertilizer. Is there not some kind of



OXFORD DOWN SHEARLING RAM.

Winner of first and special prize at Oxford County Show, 1902. BRED AND EXHIBITED BY MR. JAMES T. HOBBS, FAIRFORD, GLOUCESTERSHIRE.

crop that I could sow on it now, such as buckwheat, and then plow it under just before wheat-sowing? How would Hungarian grass do? Would it be any benefit to the land, and would this be sufficient? My land is gravelly-clay ground. S. B. SHAFER. Welland Co., Ont.

Ans.—To plow down before sowing fall wheat, you should have some plant, such as clover, peas or vetches, that would supply nitrogen to the soil. Since clover is out of the question in your case and it is now rather late for the two latter, we would recommend that you at once sow buckwheat, at the rate of about five pecks per acre. Buckwheat has the ability to make use of and change into a form suitable to other plants certain constituents contained in the soil. It is, however, not to be compared to plants of the clover family in preparing land for wheat. The crop should be well turned under when in bloom, before it has any chance to go to seed. Hungarian grass would not be suitable in your case.

LIVER DISEASE IN LEGHORN FOWLS.

I have a flock of White Leghorn fowls which are dying of a disease. They get very thin, their heads white, and their combs seem to wither away. They live for about two or three weeks after they start to fail. On opening, I find their liver enlarged and covered with hard white spots about the size of small peas. I would like to know what is the disease, what is the cause, and what is the cure? ALBERT E. SHIER. Huron Co.

Ans.—The disease which Mr. Shier has in his flock is undoubtedly liver disease, brought on by indigestion, which is caused by lack of exercise, too much stimulating food, not enough green food, and lack of grit. I would advise putting in all the mash which is fed a little powdered charcoal, say a cup of powdered charcoal to a pail of food. W. R. GRAHAM. Poultry Dept., O. A. C.

MARKETS.

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

FARM GOSSIP.

Ontario Agricultural College Examinations.

We give below the results of the annual examinations of the students of the Ontario Agricultural College, Guelph. The work of the fourth-year students writing for the B. S. A. degree was finally passed upon by the Senate of Toronto University, where the degrees were conferred on June 13th.

BACHELORS OF SCIENTIFIC AGRICULTURE.
 W. J. Black, Mansfield, Ont.; W. J. Carson, Vernon, Ont.; G. I. Christie, Winchester, Ont.; E. C. Hallman, Washington, Ont.; F. S. Jacobs, Minesing, Ont.; L. A. Moorhouse, Cairo, Ont., and J. Murray, Avening, Ont., completed the final examination in agriculture, becoming eligible for admission to the degree of B. S. A. B. J. Waters, Ivan, Ont., will be admitted to the degree on passing a supplemental examination in bacteriology.

SCHOLARSHIPS.

First Year.—1. English (English, mathematics, bookkeeping, and drawing)—S. M. Pearce, Iona, Elgin, Ont.
 2. Physical science (mechanics, carpentering, inorganic chemistry, and geology)—F. H. Reed, Georgetown, Halton, Ont.
 3. Biological science (botany, zoology, and horticulture)—W. C. McKillican, Vankleek Hill, Glengarry, Ont.
 4. Agriculture (agriculture, dairying, poultry, apiculture, and veterinary science)—W. D. Albright, Beamsville, Lincoln, Ont.

MEDAL.

Second Year.—Governor-General's silver medal—First in general proficiency, 1901-1902—H. W. Houser, Campden, Lincoln, Ont.

PRIZES.

Second Year.—Essay: "Addison, Macaulay, and Carlyle as Writers of English Prose"—H. W. Houser, Campden, Lincoln, Ont.

First in general proficiency, first and second year, theory and practice—H. W. Houser, Campden, Lincoln, Ont.

FIRST, SECOND AND THIRD YEAR STUDENTS.

Passed in all subjects, and arranged in the order of general proficiency:

First Year.—1. Albright, W. D., Beamsville, Lincoln, Ont.; 2. Reed, F. H., Georgetown, Halton, Ont.; 3. McKilligan, W. C., Vankleek Hill, Glengarry, Ont.; 4. Pearce, S. M., Iona, Elgin, Ont.; 5. Esmond, C. W., Blessington, Hastings, Ont.; 6. McDonald, D. J., Crawford, Grey, Ont.; 7. Deachman, R. J., Gorrie, Huron, Ont.; 8. Eddy, E., Scotland, Brant, Ont.; 9. Groh, H., Preston, Waterloo, Ont.; 10. Mayberry, H., Ingersoll, Oxford, Ont.; 11. Howitt, J. E., Guelph, Wellington, Ont.; 12. Scott, P., Waubesa, Lambton, Ont.; 13. Westover, C. A., Freilighsburg, Que.; 14. Evans, J., Randolph, Simcoe, Ont.; 15. Cameron, R. R., Ailsa Craig, Middlesex, Ont.; 16. Nicholson, C., Teviotdale, Wellington, Ont.; 17. Cohoe, W. J., New Durham, Oxford, Ont.; 18. Murray, R. S., Toronto, Ont.; 19. McDiarmid, H. S., Fingal, Elgin, Ont.; 20. Mortimer, R. E., Honeywood, Dufferin, Ont.; 21. Mason, W. E., Tyrrell, Norfolk, Ont.; 22. McAulay, J. W., Winnipegosis, Man.; 23. Peterson, G., Hawkesville, Waterloo, Ont.; 24. McCrady, A. A., Lvn, Leeds, Ont.; 25. Harcourt, W. V., St. Ann's, Lincoln, Ont.; 26. Hankinson, L. D., Grovesend, Elgin, Ont.; 27. McIntyre, J. E., Renfrew, Renfrew, Ont.; 28. Leitch, W., Cornwall, Stormont, Ont.; 29. Barber, E. R., Devil's Lake, Assa.; 30. Linklater, J. R., Stratford, Perth, Ont.; 31. Brerton, F. E., Bethany, Durham, Ont.; 32. Muir, L., Port Elgin, Ont.; 33. Breckon, W. H., Watford, Wentworth, Ont.; 34. Thompson, H., Hathercote, Grey, Ont.; 35. Davison, J. B., Hamilton, Wentworth, Ont.; 37. Whyte, G. G., Paris, Brant, Ont.; 38. Chisholm, J., Briley Brook, N. S.; 39. Orvis, W. G., Dryden, Rainy River, Ont.; 40. Taylor, F., Cumberland Mills, Beauce, Que.; 41. McAulay, A. T., Heathcote, Grey, Ont.; 42. Barberre, G. L., Corwin, Wellington, Ont.; 43. Procinier, G. A., Bayham, Elgin, Ont.; 44. Rankin, R. D., Toronto, Ont.; 45. Young, A., Glanville, Wentworth, Ont.; 46. Stewart, D. F., Hampstead, Perth, Ont.

The following wrote on final examinations only, and passed in all subjects:

1. Bower, J. E., Harriston, Wellington, Ont.; 2. Winter, M. H., Wicklow, Northumberland, Ont.; 3. Logan, F. M., Amherst, N. S.; 4. McFayden, H., Caledon, Peel, Ont.; 5. Murphy, J. P., Sussex, N. B.
 Second Year.—1. Houser, H. W., Campden, Lincoln, Ont.; 2. McCallum, J. M., Shakespear, Perth, Ont.; 3. Fulmer, H. L., Ruthven, Essex, Ont.; 4. Laird, J. O., Blenheim, Kent, Ont.; 5. Readey, J. C., Rosetta, Lanark, Ont.; 6. Barton, H., Vankleek Hill, Prescott, Ont.; 7. Dewar, W. R., Fruitland, Wentworth, Ont.; 8. Thom, C. C., Elma, Dundas, Ont.; 9. Paul, R. H., Bath, Lennox, Ont.; 10. Johnson, J., Fingal, Elgin, Ont.; 11. Rothwell, G. B., Ottawa, Carleton, Ont.; 12. Strachan, C. L., McKenzie, Man.; 13. McNaughton, F. B., Balderson, Lanark, Ont.; 14. Cogle, M. F., Bath, Lennox, Ont.; 15. Dysart, A. A., Cocagne, N. B.; 16. Henderson, T. B., Rockton, Wentworth, Ont.; 17. Bauber, T. C., Devil's Lake, Assa.; 18. Shearer, F. J., Vittoria, Norfolk, Ont.; 19. Hamilton, W., Ravenshoe, York, Ont.; 20. Gunn, R. E., Toronto, Ont.; 21. Irvine, A., Habermehl, Grey, Ont.; 22. MacRae, C. M., Cumberland, Russell, Ont.; 23. Colter, G. L., Mouth of Keswick, N. B.; 24. Bray, C. L., Kleinburg, York, Ont.; 25. Downing, R. J., Fenaghvale, Prescott, Ont.; 26. Zavitz, C. J., Fork's Road, Welland, Ont.; 27. Elliott, G. W., Cathart, Brant, Ont.; 28. Stauffer, G. A., Ringwood, York, Ont.; 29. Reynolds, R. H., Scarboro Junction, York, Ont.; 30. Duff, W. E., Sturton, Wellington, Ont.; 31. Morton, W., Bethany, Durham, Ont.; 32. Baker, R. G., Gwarthmore, Penn., U. S. A.; 33. Smith, R. S., Toronto, Ont.; 34. Metcalfe, I. M., Burford, Brant, Ont.; 35. Clarkson, F. L., Swaburg, Oxford, Ont.; 36. Buchanan, D., Florence, Lambton, Ont.; 37. Rivett, T. B., Spanishtown, Jamaica.
 Third Year.—1. Ketchen, A. P., Brucefield, Huron,

Ont.; 2, Rive, H., Guelph, Wellington, Ont.; 3, De Corioli, Forest-Tide, Mauritius; 4, McDonald, W. T., Teeswater, Lanark, Ont.; 5, Sharp, T. H., Spanish-Town, Jamaica; 6, Newman, L. H., Andrews-ville, Lanark, Ont.; 7, Klinck, L. S., Victoria Square, York, Ont.; 8, Elderkin, T. D., Amherst, N. S.; 9, Galbraith, D. H., Ellesmere, York, Ont.; 10, Peart, H. S., Nelson, Halton, Ont.; 11, Silcox, P. H., Iona, Elgin, Ont.; 12, Atkinson, A., Seaforth, Huron, Ont.; 13, Rivara, J. B., Buenos Ayres, Argentine Republic; 14, Gunn, W. H., Ailsa Craig, Middlesex, Ont.; 15, Cutting, A. B., Turro, N. S.

To take supplemental examinations, arranged in order of general proficiency.

First Year.—1, Gunn, J. F., Toronto, materia medica; 2, Bell, G. R., Glanford Station, Wentworth, Ont.; apiculture; 3, McDonald, T. D., Olinda, Essex, Ont.; materia medica; 4, Fawcett, C. F., Upper Sackville, N. B., euclid; 5, Robinson, G. H., Walkerton, Bruce, Ont.; inorganic chemistry and materia medica; 6, Crane, R. H., Montreal, Que.; materia medica; 7, Groves, J. J., Antrim, Carleton, Ont.; arithmetic and euclid; 8, Lennox, W. J., Newton Robinson, Simcoe, Ont.; materia medica; 9, Prittie, F. H., Toronto, Ont.; English and arithmetic; 10, Cayford, W. B., Montreal, Que.; bookkeeping, euclid, and materia medica; 11, Hall, J. S., Weisenburg, Wellington, Ont.; materia medica; 12, Prittie, R. D., Toronto, Ont.; arithmetic and drawing; 13, Ferguson, A. S., Kenlis, Assa., arithmetic and mechanics; 14, Bingham, G. T., Bloomingdale, Waterloo, Ont.; arithmetic, euclid, and materia medica; 15, Clark, E. E., Meaford, Grey, Ont.; arithmetic and materia medica; 16, MacKray, A. N., Surrey, England, arithmetic; 17, Bartman, R. W., Hamilton, Wentworth, Ont.; chemistry, agriculture, and materia medica; 18, Yeo, W. J., Ryckman's Corners, Wentworth, Ont.; geology, apiculture, and materia medica; 19, Watson, J. A., Seagrave, Ontario, Ont.; English and materia medica; 20, Warner, G., Coulson, Simcoe, Ont.; mechanics and materia medica; 21, Kennedy, J. A., Nassagaweya, Halton, Ont.; apiculture; 22, Stanton, K. S., Chicago, Ill.; arithmetic, euclid, and materia medica; 23, Flack, A. R., Banda, Simcoe, Ont.; apiculture and materia medica; 24, Ross, H. E., Strange, York, Ont.; materia medica; 25, Moss, D. E., Lyons, Elgin, Ont.; chemistry and materia medica; 26, Hinman, W. P., Grafton, Northumberland, Ont.; mechanics; 27, Phillips, A. E., Rossmore, Prince Edward, Ont.; zoology.

Second Year.—1, Carpenter, C. H., Fruitland, Wentworth, Ont.; dairying; 2, Fansher, D. W., Florence, Lambton, Ont.; dairying; 3, Nancekivell, G. M., Ingersoll, Oxford, Ont.; economics and animal chemistry; 4, Williams, M. G., Corbetton, Dufferin, Ont.; organic chemistry and animal chemistry.

Third Year.—1, Broderick, F. W., St. Catharines, Lincoln, Ont.; mathematics; 2, Cleal, J. P., Dayton, Ohio, U. S. A.; organic chemistry and mathematics.

HONOR LIST—FIRST YEAR.

Agriculture and Field Experiments.—Class I.—1, Albright; 2, Deachman; 3, Eddy and Pearce; 5, McDonald, D. J.; Class II.—1, McKillican, Nicholson and Reed; 4, Groh, Mayberry and Peterson; 7, Esmond; 8, Scott; Winter: 10, Hankinson and Breckon and McAuslan; 13, Bower; 14, Evans; 15, Howitt; 12, McAuslan; 17, Crane; 18, Barber and Cohoe; 20, Leitch and McAulay; 22, Robinson.

Dairying.—Class I.—1, McKillican; 2, Logan; 3, Westover; 4, Albright; 5, Esmond; 6, Howitt; 7, Scott, 8, Reed. Class II.—1, Groh; 2, Mayberry; 3, McDonald, D. J.; 4, McCrady; 5, Cohoe and Eddy; 7, Brerton and Evans; 9, Bell, Hinman and McDiarmid; 12, F. H. Prittie and Winter; 14, Deachman and

Mortimer; 16, McIntyre and Nicholson; 18, Breckon, Chisholm, Harcourt, Orvis and Teeple; 23, Bingham, Cameron, and Pearce; 26, Barberree, Davison, Leitch, Murray and McAuslan.

Poultry and Agriculture.—Class I.—1, Howitt; 2, Reed. Class II.—1, Mayberry; 2, Albright and Cameron; 4, Peterson; 5, Groh, McKillican and Nicholson; 8, Stanton and Winter; 10, Evans and Leitch; 12, Crane; 13, Bowman; 14, Cohoe; 15, Scott; 16, Clark.

Veterinary Anatomy and Materia Medica.—Class I.—1, Reed; 2, Esmond. Class II.—1, Albright; 2, Howitt; 3, Brerton; 4, Nicholson; 5, Deachman; 6, Albright; 7, Reed; 8, Groh and Nicholson; 6, Howitt; 7, Deachman. Class II.—1, Mayberry and Scott; 3, Esmond; 4, Pearce; 5, McDonald, D. J.; 6, Eddy; 7, Gunn and Muir; 9, Harcourt and Whyte; 11, Hoodless and Peterson; 13, Barber; 14, McIntyre; 15, Murray; 16, Evans; 17, Davison and Mason.

Horticulture.—Class I.—1, McKillican; 2, Reed; 3, Pearce; 4, Albright and Howitt; 6, Barber, Esmond, Evans and Gunn; 10, Deachman, Groh, Leitch, McIntyre and Westover; 15, Robinson; 16, Scott. Class II.—1, Mayberry; 2, Hankinson and Winter; 4, Breckon, Eddy, Logan and Peterson; 8, Cohoe and Crane; 10, Cameron, Groves, and McDonald D. J.; 13, McAulay, McDiarmid, Nicholson and Warner; 17, Bower, Chisholm, Fawcett, Mason and McCrady; 22, Lennox and Rankin; 24, Davison, Ferguson, Teeple, and Whyte; 28, Bell, Murray and Procuier; 31, Brerton; 32, Hoodless, McDonald, T. D., and Taylor; 35, Kennedy.

Inorganic Chemistry.—Class I.—1, Reed; 2, Albright; 3, Esmond; 4, McKillican; 5, Pearce; 6, Westover; 7, Evans and Groh; 9, Bower; 10, Eddy; 11, McDiarmid; 12, Howitt; 13, McDonald, D. J.; Class II.—1, McCrady and Murray; 3, McIntyre; 4, Mason; 5, Brerton; 6, Linklater; 7, Deachman and Nicholson; 9, Winter; 10, Cameron and McCayden; 12, Hankinson; 13, F. H. Prittie and Scott.

Geology.—Class I.—1, Albright, McKillican and Pearce; 4, Reed and Groh; 6, Bower. Class II.—1, Scott; 2, Esmond and Nicholson; 4, Mayberry; 5, Howitt and McDiarmid; 7, Deachman, Eddy and Stanton; 10, Breckon and Hankinson; 12, Brerton, McAulay, McDonald, D. J., and Peterson.

Mechanics and Carpentry.—Class I.—1, McKillican. Class II.—1, Reed; 2, Murray; 3, Cohoe; 4, Eddy and Mayberry; 5, Teeple; 6, Pearce; 7, Cameron; 8, Albright and Evans; 10, Gunn and Westover; 11, Logan, McDiarmid, McDonald, D. J., and Scott. Class I.—1, Pearce; 2, Esmond; 3, Albright; 4, Bower and McDonald, D. J.; 6, McKillican; 7, Reed. Class II.—1, Scott; 2, Eddy; 3, Robinson; 4, Cameron; 5, McDiarmid; 6, Deachman and Groh; 8, Peterson; 9, Leitch and Orvis; 11, Nicholson; 12, Howitt; 13, Hankinson and Westover; 15, Groves; 16, Mayberry; 17, Teeple; 18, Murray; 19, Procuier; 20, Breckon; 21, Arithmetic and Euclid.—Class I.—1, Pearce; 2, McDonald, D. J.; 3, Albright; 4, Bower and Esmond; 6, McKillican; 7, Cameron; 8, Deachman; 9, Cohoe; 10, McCrady and Eddy; 12, McDiarmid; 13, McDonald. Class II.—1, Reed; 2, Mayberry and McAulay; 4, Taylor; 5, Mason, 6, Teeple; 7, Winter; 8, Thompson; 9, Mortimer; 10, Howitt; 11, Muir; 12, Nicholson; 13, Barberree; 14, Groh and Murray; 16, Westover; 17, Bell; 18, McIntyre and Peterson.

Bookkeeping and Drawing.—Class I.—1, Reed; 2, Albright; 3, Murray, Pearce and Westover; 6, Cohoe. Class II.—1, McDonald, D. J., and Stewart; 3, Teeple; 4, Cameron; 5, Esmond and Evans; 7, Brerton; 8, Deachman and McKillican; 10, Barberree and Muir.

HONOR LIST—SECOND YEAR.

Live Stock, including Judging.—Class I.—1, McCallum; 2, Houser; 3, Barton, Laird and Readey. Class II.—1, McNaughton, 2, Rothwell; 3, Fulmer and MacRae; 5, Thom; 6, Carpenter; 7, Paul; 8, Shearer; 9, Bray and Cogion; 11, Dewar; 12, Fansher; 13, Strachan; 14, Johnston; 15, Stauffer; 16, Irvine; 17, Baker and Downing; 19, Zavitz.

Dairying.—Class I.—1, Houser; 2, Paul; 3, Rothwell; 4, McCallum; 5, Readey; 6, Irvine; 7, Gunn; 8, Dewar; 9, Cogion; 10, Thom; 11, Dysart; 12, Fulmer; 13, Elliott and Hamilton.

Poultry.—Class I.—1, McCallum; 2, Thom; 3, Laird and Rothwell; 5, Dysart and Houser. Class II.—1, Paul; 2, Readey and Stauffer; 4, MacRae; 5, Baker, Irvine and Reynolds; 8, Johnston; 9, Hamilton; 10, Morton; 11, Shearer and Zavitz; 13, Henderson; 14, Gunn; 15, Strachan; 16, McNaughton.

Veterinary Science and Practical Horse.—Class I.—1, Readey; 2, Barton; 3, McCallum. Class II.—1, Houser; 2, Fulmer and Laird; 4, Cogion; 5, Gunn; 6, Fansher and Johnston; 8, Carpenter, Downing and Thom; 11, Strachan; 12, Dewar, Rothwell and Zavitz; 15, Colter; 16, Stauffer and Williams; 18, Barber and Dysart; 20, Elliott; 21, Duff, Hamilton and Henderson; 24, Irvine.

Agricultural and Organic Chemistry.—Class I.—1, Fulmer; 2, Houser; 3, McCallum. Class II.—1, Dewar and Readey; 3, Laird; 4, Barton; 5, Paul and Thom; 7, Barber; 8, McNaughton.

Botany.—Class I.—1, McCallum; 2, Houser; 3, Barton and Fulmer; 5, Dewar; 6, Laird; 7, Thom; 8, Johnston; 9, Readey. Class II.—1, Cogion; 2, Carpenter; 3, Downing; 4, Paul; 5, Henderson; 6, Strachan; 7, Bray and Dysart; 9, Irvine and MacRae; 11, Stauffer and Zavitz; 13, Colter, Rothwell and Shearer; 16, Barber and Gunn; 18, Fansher; 19, Nancekivell; 20, McNaughton; 21, Hamilton; 22, Reynolds and Smith; 24, Duff.

Entomology.—Class I.—1, Fulmer, 2, Barton; 3, Houser; 4, McCallum; 5, Rothwell; 6, Downing and Laird; 8, Dewar; 9, Henderson; 10, Cogion, McNaughton and Readey. Class II.—1, Baker, Carpenter and Gunn; 4, Paul; 5, Elliott; 6, Rivett; 7, Barber and Williams; 9, Thom; 10, Colter and Shearer; 12, Strachan; 13, Johnston and Nancekivell; 15, Dysart, Hamilton and Morton; 18, Zavitz; 19, Smith.

Bacteriology.—Class I.—1, Fulmer. Class II.—1, Houser; 2, Thom; 3, Strachan; 4, McCallum; 5, Readey; 6, Cogion, Laird and Rothwell; 9, Barton; 10, Barber and Stauffer.

Horticulture.—Class I.—1, Houser; 2, McCallum; 3, Barton and Readey; 5, Dewar; 6, Laird; 7, Fulmer and McNaughton; 9, Thom; 10, Johnston; 11, Paul; 12, Downing; 13, Fansher, Irvine and Stauffer; 16, Barber; 17, Carpenter, Duff, Metcalf and Strachan; 21, Hamilton; 22, Dysart and Shearer; 24, Baker, Elliott and Gunn; 27, Rothwell. Class II.—1, Cogion and Henderson; 3, Bray, Colter and MacRae; 6, Reynolds; 7, Zavitz; 8, Smith and Morton; 10, Buchanan; 11, Clarkson; 12, Nancekivell; 13, Rivett.

Physics.—Class I.—1, Fulmer; 2, Dewar; 3, Johnston; 4, Barton and Gunn; 10, MacRae and Rothwell; 12, Barber and Laird; 14, Houser and Thom; 16, Henderson. Class II.—1, McNaughton and Strachan; 3, Colter and Dysart; 5, Paul; 6, Zavitz; 7, Carpenter and Downing; 8, Cogion; 9, Irvine; 10, Duff; 11, Elliott, Reynolds, Shearer and Stauffer.

English, Thesis, and Economics.—Class I.—1, Houser; 2, Readey; 3, Dewar; 4, Laird; 5, McCallum. Class II.—1, Barton; 2, Fulmer; 3, MacRae and Paul;



HEREFORD CATTLE AT SILVER HEIGHTS, WINNIPEG, FARM OF LORD STRATHCONA.

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Prescott,

a, Ont.;

R. H.,

Elgin,

Ont.;

ughton,

M. F.,

gne, N.

h, Ont.;

Shearer,

on, W.

Toronto,

t.; 22,

Colter,

C. I.,

Fenagh-

s Road,

Brant,

nt.; 29,

nt.; 30,

Morton,

Gwarth-

oronto,

nt.; 35,

nt.; 36,

Rivett,

Huron,

5, Bray and Johnston; 7, Gunn; 8, Shearer; 9, McNaughton; 10, Thom; 11, Colter; 12, Rothwell; 13, Barber; 14, Henderson; 15, Strachan; 16, Fansher; 17, Carpenter.

HONOR LIST—THIRD YEAR.

Inorganic and Organic Chemistry.—Class II.—1, Ketchen; 2, Rive; 3, DeCoriolis; 4, Sharp; 5, Broderick; 6, McDonald.

Geology.—Class I.—1, Newman; 2, Ketchen. Class II.—1, McDonald; 2, Klinck; 3, Broderick and Rive; 5, Gunn; 6, Silcox; 7, Galbraith; 8, Atkinson and Cutting; 10, Elderkin and Sharp.

Botany.—Class I.—1, Newman. Class II.—1, McDonald; 2, Atkinson; 3, Ketchen; 4, Klinck; 5, Broderick, Cutting, and Galbraith; 8, Cleal; 9, Silcox; 10, Rive; 11, DeCoriolis; 12, Rivara; 13, Elderkin; 14, Sharp; 15, Peart; 16, Gunn.

Fungi and Entomology.—Class I.—1, Newman. Class II.—1, Klinck; 2, McDonald; 3, Cutting; 4, Silcox; 5, DeCoriolis; 6, Galbraith and Sharp; 8, Ketchen; 9, Elderkin; 10, Broderick; 11, Rive; 12, Atkinson; 13, Peart.

Physics.—Class I.—1, Atkinson; 2, Elderkin; 3, Klinck; 4, Ketchen. Class II.—1, DeCoriolis; 2, Rive; 3, Sharp; 4, Gunn; 5, Silcox and McDonald.

English.—Class I.—1, Ketchen; 2, Rive; 3, Klinck; 4, Atkinson; 5, McDonald. Class II.—1, Elderkin; 2, Cleal; 3, Galbraith; 4, Broderick; 5, Sharp; 6, Rivara; 7, DeCoriolis.

Mathematics.—Class I.—1, Peart. Class II.—1, DeCoriolis; 2, Ketchen; 3, Sharp; 4, Elderkin and McDonald; 6, Newman; 7, Galbraith; 8, Atkinson.

French and German.—Class I.—1, Rive; 2, Sharp; 3, DeCoriolis; 4, Ketchen. Class II.—1, Newman; 2, McDonald; 3, Elderkin and Rivara; 5, Cleal; 6, Peart.

Notes from Ottawa.

(Special.)

A visit to the Central Experimental Farm at this season of the year affords a very pleasant outing. The trees are clothed with their green leaves, the grain sowed about two weeks ago has sprouted and is making good headway, while on the far-off fields the cattle can be seen feeding on the green herbage. The men are busy at the planting, and the work is being hustled in all the departments.

EXPERIMENTAL FARM LIVE STOCK.

The three imported aged Ayrshire cows, Jessie A., Norah's Last, and Maggie, are giving an average flow of milk of forty-five pounds per day. After being milked three months since they calved, their milk is testing very evenly at 3.9 per cent. butter-fat. These cows are in fine condition, and much admired by the dairymen who visit the farm.

The three three-year-old Ayrshire heifers bred by Mr. Wallace, of Scotland—Daisy, Flecky, and Bloomer—which have now been milking two months, are giving over thirty-five pounds of milk each daily, testing 4.0 per cent. of butter-fat. These three are very promising young cows.

Of the four imported Guernseys, Clatford's Spot and Itchen Lady were imported from England, while Honoria and Deanie were imported direct from the Island of Guernsey. The latter two are a very pretty pair of cows and are of the model dairy type. Their superiors have probably not yet been seen in Canada. These two cows have given a very reasonable amount of milk and of a high percentage of butter-fat. They have not had a chance to show what they can do, as neither of them has had a calf since they landed in Canada, but since their voyage over last summer they have given enough milk to prove themselves good milkers. The other two, imported from England, are of a much larger and stronger type, and have proven themselves to be splendid milkers and good breeders. They have been milking almost three months and are giving over thirty-five pounds each per day, testing 4.6 per cent. butter-fat.

The imported dairy Shorthorns are Lunsdale Marchioness, Illuminatta, and Darlington Lass. These three cows are of three various types, one showing very strongly the dairy type, while the other two show much stronger the beef type. Mr. Brettell, the herdsman, says that they have given a very satisfactory amount of milk. One has given 45 pounds of milk, testing 3.8 per cent. butter-fat, and another one has given almost as much. The third one has given an average daily amount of milk, for three months, of forty-five pounds, testing 4.0 per cent. of butter-fat, and dropped a magnificent heifer calf; while the other two dropped bulls. There are also two year-and-a-half-old heifers (Shorthorns) that are superior in quality and promise well.

These dairy cows were fed a daily ration of fifty pounds of ensilage and roots, four pounds of hay and seven pounds of meal. The seven pounds of meal was taken from a mixture made up of 300 pounds of gluten meal, 200 pounds of bran and 100 pounds of barley. Cows giving a certain number of pounds of milk received the full ration, while those only giving a limited number of pounds were fed according to the amount of milk given. Had the officials given the cows giving the limited number of pounds the same quantity of feed as the cows giving a much larger amount, the former would have put the extra amount of feed on in flesh instead of yielding a profit.

Lord Dunsdale, the Shorthorn bull, is still coming to the front, and has every appearance of being a prizewinner. Jessie Elmhurst, the nine-months-old heifer, is developing wonderfully.

There are fifty-three head of steers being fed, which are by far the best group which have been fed at the farm for a number of years. The last fortnight they have made an average gain of 2½ pounds daily. The fifty-three head average per steer 1,450 pounds. In the group are some two, three and four year olds. They have been fed a ration consisting of four pounds of hay, fifty pounds of ensilage and roots daily. Their meal ration commenced January 1st, 1902, on one-half pound of gluten meal, and has been gradually increased to six pounds daily, which is their present feed. These steers were secured by Mr. Alex. McIntosh, of Montreal, at a very fair figure, for shipping to England.

The same experiment with calves is being carried on, "Full Fattening vs. Limited Growing Ration." These calves are just now a year old. The fattening group are decidedly the best animals, and are of much better quality. They are ready for the block any time, while the other group look as though a twelve-months' feeding would be greatly to their advantage, although they are a very growthy lot. There are five fed in each group. The full-fattening group are being fed indoors, 25 pounds of ensilage, 3 pounds of hay and 3 pounds of meal daily. Their meal ration is chiefly gluten meal. The ones on the "limited ration" are being fed what ensilage they will eat on pasture. The "full fattening ration" five steers averaged when 12 months old 820 pounds per steer. The "limited growing ration" five steers averaged at 12 months old 600 pounds. A larger difference is expected in the next twelve months.

A BIG CREAMERY ENTERPRISE.

In the near future the County of Pontiac can boast of having one of the finest creameries in Canada, located in the village of Quyon, Que. It will

have a capacity of 10,000 pounds of butter a day, and it will be under the management of Mr. J. D. McCann, of Perth, Ontario, formerly inspector of creameries and cheese factories for the Ontario Government. Mr. McCann states that his company will be ready to open about the first of June, as the building is about completed. The creamery will be known as the Quyon Creamery Co., Ltd.

A MILKING TRIAL.

At the Carleton Co. annual fair, next fall, a new feature will be a one day's milking test, which will be conducted as follows: Conditions—Rations fed to the competing cows will not be considered. Cows will stand in open stalls, in full view of the public. Competition open to all dairy cows. Competing cows to be milked clean at 6 o'clock on the day prior to the test. All milking to take place at the hours of 6 a.m. and 6 p.m., and the cows to be under the direction of the officer in charge. In connection with the poultry department, Mr. P. C. Hare, superintendent of the Dominion Poultry Fattening Stations, will have charge of the judging.

TREATING THE PEA BUG.

During the past month a number of applications have been received at the Entomological Department of the Central Experimental Farm regarding the pea weevil, that consumes the interior of the pea. It is about one-fifth of an inch long, of a brown-grayish color, and it comes from an egg laid on the outside of the young pod. The Ottawa Valley and District is not subject to attacks, but Eastern Ontario suffers greatly. The remedy recommended is to place the quantity of peas to be treated in a barrel. One ounce of carbon bisulphide to every hundred pounds of grain will kill the weevil, the treatment lasting 48 hours. The chemical should be poured on the peas in the barrel and the barrel covered immediately with a thick damp cloth. The late sowing of peas is an assistance to preventing attacks of the pest. The following is a simple method also, recommended by the Department. One gallon of coal oil poured over twenty bushels of peas and the grain turned with a shovel till all the peas have a coating of coal oil.

PROF. ROBERTSON'S VISIT TO ENGLAND.

Prof. Robertson, Commissioner of Agriculture, who returned from England last Saturday, states that Canada, Canadian affairs and Canadian products are occupying a larger attention in England than ever before. He had several interviews at the departments of the Imperial Government regarding future shipments of Canadian supplies to South Africa, and found the

ended has been an important one for sending out samples of seed grain. Nearly 36,000 samples were sent out to farmers all over the Dominion. This is the largest number of applications on record. In 1900, 28,000 were sent out, and in 1901, 25,279. The figures show that more applications come from the Province of Quebec than from any other Province in the Dominion.

MR. CARSON'S APPOINTMENT.

At the regular meeting of the Cornwall Cheese Board, held last Saturday, Mr. W. J. Carson, of Vernon, who recently graduated from the Ontario Agricultural College, was appointed as the Eastern Ontario Dairymen's Association instructor for that district. Mr. Carson was strongly recommended, and produced a number of letters from the officials at the College testifying to his ability. He entered on his duties the first of the week, and intends to pay a flying visit to all the factories on the Board which have entered the syndicate, so that he may gain a good idea of their location and requirements, after which he will set to work in earnest.

CHEESE CURING.

Mr. J. A. Ruddick, Chief of the Dairy Division, states that the work on the four consolidated curing rooms being established by the Department is being rushed as rapidly as possible. The buildings at Woodstock and Brockville will be ready for use about June 23rd, and those at Cowansville and St. Hyacinthe by the 1st of July. Mr. Ruddick further states that the Department has had no trouble in inducing a sufficient number of factories in each section to agree to send their cheese to the curing rooms. Twelve factories at each point have been interested in the matter and have accepted the terms of the Department.

BUTTER ANALYSIS.

Mr. J. A. Ruddick states that the Department of Agriculture is arranging to have samples of butter from different sections analyzed by Mr. Frank T. Shutt, Chemist at the Central Experimental Farm, the object being to ascertain the amount of moisture they contain. This step is being taken as a result of the recent enactment put in force in the British markets, requiring that all butter shall not contain more than a certain percentage of moisture. Circulars giving all particulars about this matter will be issued shortly.

P. E. Island.

May was dry and cool up to nearly the last, but

during the last week we had copious rains, which continued at short intervals up till now. The seeding season was very favorable, and the crop was all sown in good time—about two weeks earlier than usual. Grain has come up well, and clover is making a good catch in the fields seeded down. All that remains of the planting is a small part of the turnip crop. The hay fields are beginning to look up, but the hay crop will be light, as there is no clover at all. Pastures are getting good, but the weather lately has been too cold for much growth. Most of the dairy stations began the manufacture of cheese on the first of June, with a very small supply of milk. The Thoroughbred horse imported by the Government was sold to our veteran horseman, T. Robbins, of Bedouque, for \$900. He is highly spoken of by good judges of horse-flesh, and will leave a good impression on our equine stock. There is also a high-class Hackney (Kilwick Fireaway) doing service here this year. Very many good horses are going the rounds, and the high price for both drivers and cart horses that now obtains is giving a great impetus to breeding. A great deal has been done through the Farmers' Institutes towards getting good sires for both the dairy and beef.

The poultry business is booming. A strong company, called "The Westwood Poultry Association," has been organized near Charlottetown. It has an American gentleman at the head of it, and proposes to raise chickens on a large scale and fatten them for the English market. They have also intimated to the public that they will be prepared to buy almost any number of live chickens from the farmers in the fall at about 7c per pound, live weight. Such establishments operated last year paid well, and we predict a great expansion of our poultry business in the immediate future. The Maritime Stock-breeders' Association has been incorporated by the Dominion Parliament.

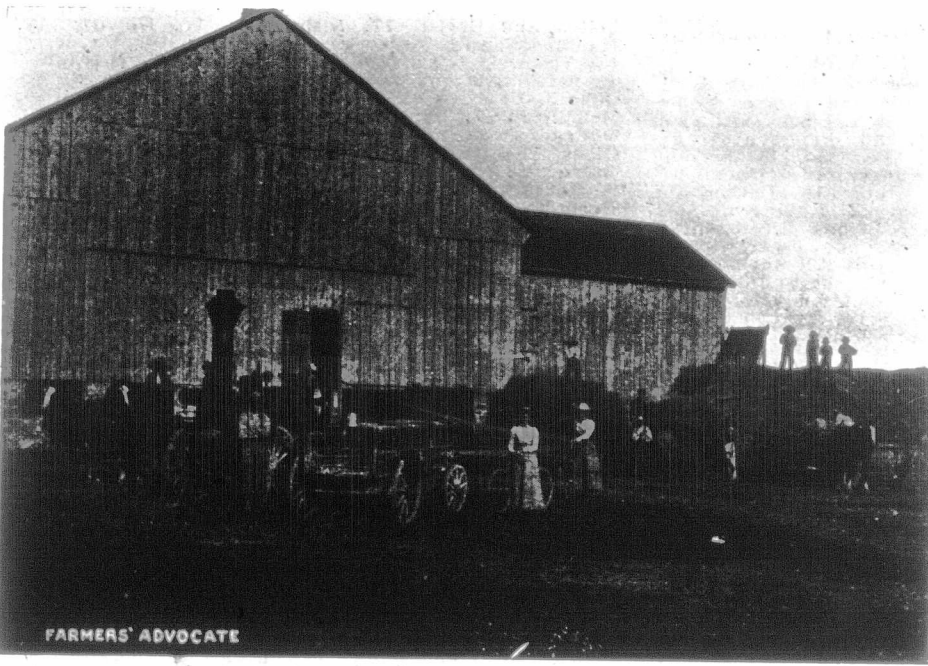
The announcement has been made that only those provinces that give a grant to the Fat Stock Show at Amherst will be allowed to compete for prizes there. This will shut out P. E. Island, as our government refused a grant to it. As we write, the trees are loaded with bloom. The weather is favorable and everything points to the biggest crop of apples ever raised here. Plums are also making an excellent showing. The illustrations in spraying are to be again taken up by Mr. Vroom and associates as soon as the blossom falls. W. S. June 6th.

Wierton Sugar Beet Factory.

On June 5th the corner-stone of the big beet-sugar factory to be erected at Wierton, Ont., was laid by President Jas. Mills, of the Agricultural College. Addresses were also delivered by J. C. Siemon, President of the Company; Mr. Hy. Cargill, M. P.; Dr. Horsey, M. P.; G. M. Boyd, A. G. McKay, O. R. Baldwin, D. W. Simons (Detroit), and others. The building is to be ready to handle 6,000 acres of beets this fall.

Precautions Against Spontaneous Combustion.

Owing to wet weather, Kansas farmers are taking precautions to prevent spontaneous combustion in alfalfa hay.



THRESHING SCENE ON ONE OF THE FARMS OF SALKELD BROS., BAYFIELD ROAD, GODERICH, ONT.

authorities most favorably disposed to Canadian products. The hay and flour shipped to Africa has given entire satisfaction. He found, however, that even one inferior bale of hay in a shipment had a tendency to seriously injure the reputation of shippers. While in England he went before the Committee on Remounts to give evidence regarding the supply of horses from Canada. He pointed out to them that Canada could supply from ten to thirty thousand horses per year suitable for artillery, cavalry and mounted infantry. All that was required was a steady market which would encourage farmers to keep up the standard of breeding. A notable increase has taken place in the quantities of cheese, butter and bacon exported. The value of these exported from Canada has increased from \$19,455,544 in 1896 to \$35,822,434 in 1902, and all occupy a relatively better position on the market of the United Kingdom.

CANADIAN OATS ORDERED.

The Department of Agriculture has been advised that the Imperial War Office has placed an order for 4,000 tons of oats with the Brackmen & Kerr Milling Co., of Victoria, B. C. These oats will be supplied from points along the Edmonton and Calgary Railway. The oats have to weigh 39 pounds to the Imperial bushel, and must be inspected by the Dominion Department of Agriculture.

NEW COLD-STORAGE SYSTEM.

The Dominion Government has just closed arrangements with the five large Canadian lines—Allan, Elder-Dempster, Thompson, Donaldson, and Manchester—for the installation of an entirely new system of cold storage on their steamers. A new service is being opened up between Prince Edward Island and Manchester direct, and from this connection great results are anticipated. At all the principal ports in the Old Country, the Canadian Government now has an officer to watch how all Canadian products are handled on their discharge from the ship, and the condition in which they are landed.

POULTRY EXPERIMENTS.

Mr. N. G. Gilbert expects to begin the poultry-feeding experiments in the course of a few weeks at the Experimental Farm. Before the hatching season is over, fully 300 chickens will be brought out. As has been the case for a long time, the incubator has given equal results to the hen-setting method of hatching eggs.

GRAIN SAMPLES.

A perusal of the records show that the season just

Lincoln Co., Ont.

The winter of 1902 was a grand one for the farmers of the Niagara Peninsula. Snow came at Christmas time and remained until March, being an excellent blanket for the wheat and meadows. The land died very quickly and quite an amount of seeding was done in March, although some of the grain sown then looks very badly now. The sugar-making season was a very short one, but the quality of syrup made was exceedingly good. The first of April was very wet and seeding was delayed for quite a while. There has been a large acreage put into spring crop this year, as very little wheat was sown last fall, and farmers will have to make up in spring crop. The principal varieties of oats sown here this spring are the Sensation, Twentieth Century, the Australian, and some American Banner oats. The latter seem to have had their day in these parts. The Sensation and Twentieth Century, both new varieties, are doing very well. One fourteen-acre field of Twentieth Century oats in this neighborhood turned seven hundred bushels, which is good for this part of the country.

Very little barley is sown, as it does not do well in this section. A few years ago the beardless variety was introduced, which proved a failure altogether, being a very small yielder and very light in weight.

In peas we grow the grass pea altogether, as the common round pea is so subject to being destroyed by bugs, while the grass pea is never harmed by these, and, besides, it is a splendid yielder, and does well on hard land; in fact, it does not do so well on rich soil, as it runs too much to vine.

Quite an amount of corn has been put in this spring, but on account of the recent dry weather has not made much of a start. Roots are not doing well. Only those that were sown early are looking well. Turnips are being superseded by mangels and sugar beets of late years. Until a week ago wheat and meadows looked exceptionally fine, but the dry weather that has prevailed for the past few days has been a serious drawback to the grass.

A few frosts have occurred of late, somewhat damaging a few of the tender crops, such as beans; but the fruit has escaped without serious injury, although it was thought for a while that the peach trees had been damaged. It was a grand sight to see the peach trees in bloom this spring. Never was the prospect better for this favorite fruit. The immense orchards along Lake Ontario, between Hamilton and Niagara town, were the sight of the season, and the H. G. & B. electric railway ran excursions for the city people to "have a look" at the orchards when in full bloom.

There has been a great demand for bacon hogs this winter and spring. Good prices have been realized and farmers are raising more hogs than formerly, although they are going into the business somewhat cautiously. Cattle have been a good price, also. Milch cows have ranged from \$25 to \$52, and of not extra quality at that. Cattle seem to have come to be in rather a bad state lately. Farmers have not seen the benefit of raising well-bred animals, and, as they still persist in using scrub males, it is not likely to become much better very soon. There have been a few registered bulls brought into the vicinity of late years, but farmers will not patronize them if there are scrubs at half the price that they can use.

In horses there is some more attention paid. Heavy horses are not raised very extensively, as they do not seem to stand the roads. The Coach horse has become quite popular and no doubt will do very well for some time. In road horses, the Wilkes family take the lead and as many of them get to be good-sized crossed with our mares, they make a good, useful horse, as they can stand any amount of roading, and are large enough to do a good amount of farm work as well.

A few years ago silos were not used at all, but now one can see dozens of them in driving through the country.

The Farmers' Institute seems to have done a great deal for the farmers, as the suggestions that have been thrown out by the different Institute speakers have been put in practice and are making themselves prominent, and the farms begin to show that a better system of farming is being introduced.

It is just as essential for the farmer to be educated in his line of business as it is for representatives of other lines, and we are glad to know that there were more farmers elected to the Legislative Assembly on May 29th than any other one class, and we think electors of the rural districts should keep this fact in mind, that they as farmers should have representing them in the Legislature a gentleman that is in close touch with their wants and views—viz., a farmer.

There have been quite a number of public libraries started and are being well patronized, and we believe them to be a splendid thing, especially in country places. Farmers' sons and daughters are doing more reading. One of the great drawbacks to the young farmers is that they do not read enough of the right kind of literature—not enough agricultural papers taken. We hope the time will soon come when the young farmers of Ontario will take to studying agricultural topics more and thus fit themselves for their calling.

June 7th.

Peel Co., Ont.

Perhaps at no time in the past decade has the wheat and clover crop in this district looked better than they do at present. The wheat that was sowed late has made rapid progress. The cattle soon appease their hunger in the luxuriant pastures. When one watches the dairy cow coming home at night, with her udder filled to its greatest capacity, anxious to be relieved of her burden by the milker's hand, and the bee returning laden with the sweets of the apple and clover blossoms, it reminds one of a land flowing with milk and honey. The prospect for the apple crop so far is excellent. Some of the older trees that have seen better days seemed to revive this spring and were covered with bloom. The tent caterpillar was not as troublesome as in former years. People are beginning to realize the importance of a cover crop for the orchard. Many in this part are sowing rape for this purpose. The corn is coming through nicely. The crows seem to be their worst enemy. We sowed two fields. On one the corn was soaked in coal oil previous to sowing, as was advised in the May issue of your valuable paper, and, although it is surrounded by bush on two sides, yet the crows pass over this to the one where the corn crop was not oil-soaked. The old family shotgun, a relic of the past century, is entrusted in the hands of the writer to put them off this one, but the black marauders are beginning to think now, judging from past experiences, that the safest place to be is where he is aiming. Ensilage is growing in favor every year. Many silos were erected last year. The round stave silo seems to be the most popular in this part.

June 7.

Killing Burdocks.

To the Editor "Farmer's Advocate":

Sir,—As it is not generally known how to kill burdocks, and as they are a great pest when they get very thick, I send you a sure way to kill the burdock. When the moon is full in June, July and August, take a round-pointed shovel and place it about four inches from the plant and with the foot press down so as to cut the root about three or four inches below the crown, then draw out the shovel without disturbing the ground, and with the hand pull out the piece you have cut off. The root is then hollow, and the water settles down in the hole you have made by pulling out the root, and enters the hollow in the piece left in the ground and kills it. This is the most effectual way I have ever discovered to get rid of burdock.

JOHN B. STONE.
Northumberland Co.

Toronto Markets.

Trade was generally good at the Western Cattle Market. A few grass cattle are now coming forward. Prices are firm, with prospects good for slight advance in the next two weeks. Export cattle sold readily.

Export Cattle.—The advance in the British market and the appearance of two buyers from Chicago made business good in export cattle. Loads of choice export cattle in a few cases reached \$6.62½.

Butchers' Cattle.—Picked loads of butchers' cattle, equal in quality to best export, weighing from 1,100 lbs. to 1,150 lbs. each, sold at \$5.75 to \$6. Best butchers' steers, weighing 900 to 1,025 lbs., \$5.35 to \$5.60. Good butchers' cattle—heifers, fat cows—\$5.25 to \$5.40.

Bulls.—Choice heavy export bulls sold at \$5 to \$5.50; light bulls, \$4.25 to \$4.75.

Feeders.—Choice, well-bred feeders, weighing from 900 lbs. to 1,000 lbs. each, sold at from \$4.25 to \$5. There is a good demand from farmers for feeders to place on grass, although the fields are reported as very backward for spring grass.

Stockers.—Well-bred young steers, weighing 800 lbs., are worth \$4.75; medium weights, from 400 to 800 lbs. average, \$3.50 to \$3.90; poor to medium, mixed colors, are worth from \$3 to \$3.50.

Calves.—Not many on offer of choice quality, and sold at from \$2 to \$10 per head, or from \$4.50 to \$5.50 per cwt.

Sheep.—Prices were steady and ruled from \$4 to

These horses pass through in bond, and many comments were made on their condition, size, etc. They were collected at Kansas City, and are under the charge of Capt. Grey, who happens to be an Australian volunteer from the Sydney Yeomanry. He expressed himself as being struck with the average quality of Canadian cattle, but we were also able to afford him the opportunity of inspecting one or two choice herds near Toronto. Many of his observations were novel and interesting, but his delight was with the horses. Capt. Grey will be in Toronto for the next few months, and hopes to see some of our best horse-breeding establishments.

Grand's Repository.—Trading in horses at Grand's Repository has been steady. Prices have a wide range: Carriage teams from \$150 to \$250; drivers from \$60 to \$150; draft horses from \$70 to \$120; general purpose (second-hand) from \$50 to \$80; ponies and scrubs from \$25 to \$50. The usual sale days are Tuesday and Friday, and on June 20th Mr. W. H. Smith will hold a special auction sale of over 100 head, comprising two carloads of heavy-draft horses.

Cheese and Butter.

Ontario Cheese Market for the week ending June 14th, closed at from 9½c. to 9 9-16c.; creamery butter selling at from 20½c. to 20¾c.

British Cattle Markets.

London, June 14.—Live cattle, firm at 14½c., dressed weight; sheep, dressed weight, 14½c. to 15½c.; refrigerator beef, 12c. to 12½c. per lb.

Buffalo Markets.

East Buffalo, June 14.—Cattle—Dull and unchanged. Veals steady, very tops, \$7.25 to \$7.50; fair to good, \$6.50 to \$7; culs to common, \$5 to \$6. Hogs—Medium heavy, \$7.50 to \$7.60; Yorkers, \$7.35 to \$7.50; light, do., \$7.25 to \$7.35. Sheep and Lambs—Top winter lambs, \$5.75 to \$6; fair to good, \$4.50 to \$5; culs to common, \$2.50 to \$4; yearlings, \$5 to \$5.35; sheep, top, mixed, \$4.50 to \$4.75; fair to good, \$4 to \$4.25; culs to common, \$1.75 to \$3.75.



WHEAT STACKS AND LOAD OF GRAIN.
A Canadian Northwest scene.

\$4.25 for ewes, and from \$3.25 to \$3.75 for bucks.

Lambs.—Yearling lambs sold at \$4.50 to \$5 per cwt. Spring lambs are worth from \$2.50 to \$5 per head.

Milk Cows.—Not many cows on offer; springers and dairy cows sold at from \$30 to \$50 per head.

Hogs.—Hogs are rushed on this market in too great numbers to ease the decline, and a slump occurs. Over 2,000 per day arrived two weeks ago. This caused the price to fall to \$6.87½ for best select baconers, with prospects for lower prices next week, \$6.50 per cwt.; light and thick fat, \$6.62½. Sows are still coming forward, at from \$5 to \$5.50; stags at \$3.

Wheat.—Was steady; 200 bushels of white sold at 53c. to 54c. per bushel.

Oats.—Were steady; 600 bushels sold at 50c. to 52c. per bushel.

Hay.—Choice loads were firm, at from \$11 to \$13 per ton. Farmers are clearing out their barns, and inferior clover hay sells down to \$7 per ton; for choice loads, \$9 was paid.

Straw.—Clean straw in bundles sells at \$9 per ton.

	Extreme comparative prices to-day, June 14th.	Two weeks ago.	Same date last year.
Export cattle	\$ 6.62½	\$ 6.15	\$ 5.40
Butchers' cattle	6.00	5.65	5.00
Export bulls	5.50	5.15	4.25
Feeders	5.00	5.00	4.25
Stockers	3.50	3.75	3.75
Sheep (per cwt.)	4.25	4.50	4.00
Lambs (per cwt.)	5.00	5.50	5.00
Hogs	6.50	7.00	7.00
Milch cows	50.00	55.00	50.00

Dressed Beef.—This trade in Toronto is assuming larger proportions. Two wholesale butchers are reported to have made arrangements to supply by contract two large institutions out of town who have hitherto dressed their own cattle.

HORSE MARKETS.

The British Government is shipping through Canada about 12,000 horses. They are arriving in Toronto at the rate of 1,000 per week, and unloaded, fed, and then reshipped to Halifax, from there to South Africa. One thousand horses were unloaded at the Cattle Market, fed and rested. The new pens lately erected were made use of for this purpose.

Chicago Markets.

Chicago, June 14.—Cattle—Good to prime steers, \$7.30 to \$7.80; poor to medium, \$5 to \$7.25; stockers and feeders, \$2.50 to \$5.25; bulls, \$2.75 to \$5.60; calves, \$2.50 to \$6.50; Texas-fed steers, \$5 to \$6.70. Hogs—Mixed and butchers', \$7.10 to \$7.55; good to choice heavy, \$7.50 to \$7.65; rough heavy, \$7.25 to \$7.45; light, \$7 to \$7.30; bulk of sales at \$7.20 to \$7.45. Sheep—Good to choice wethers, \$5 to \$5.50; western sheep (clipped), \$4.75 to \$5.50; native lambs (clipped), \$5.50 to \$6.90; western lambs, \$5.50 to \$6.90.

Dr. John Spencer's Promotion.

We are glad to notice that Dr. John Spencer, V. S., formerly of the "Farmer's Advocate" staff, latterly Assistant Veterinarian at the Virginia Experiment Station, has recently been promoted to the head of that important department. The State is to be congratulated on thus securing the services of so energetic and well-qualified an officer.

Plans Asked For in Care of Factory Milk.

A reader who has begun sending milk from a herd of twenty cows to a factory that makes all the milk into cheese, except Saturday night's (which is made into butter), desires some of our older dairymen to describe briefly in the "Farmer's Advocate" what they have found the best plan for keeping Sunday morning's milk till Monday morning, and the night's milk till morning throughout the week in good sweet condition. A good many different plans are in use, and we trust readers will describe in a few words what they have proved useful.



I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home, in his nest at even.
He sings the song, but it cheers not now,
For I did not bring home the river and sky;
He sang to my ear—they sang to my eye.
—Emerson.

Ingle Nook Chats.

My dear Guests,—

Our nineteenth contest, an original poem on "A Day in June," has come to a close, and I append the result. While the number of contributors was not large, the work was all fairly good, several papers showing evidences of real talent. Many poems containing beautiful ideas were spoiled by defective metre; others by carelessness in repeating a word too often, an unpardonable fault in either prose or poetry. Some of the contributors digressed from the original subject (that is what happened yours, "Marie," but I must say the result was amusing and the composition very good; your rythm reminds me of that of "The Khan"), and thus debarred themselves from the contest.

I have awarded the prizes as follows:—Class I., to Miss A. L. McDiarmid, Ormond, Ont., also special prize to Mrs. J. H. Taylor (address mislaid; kindly forward to "Advocate" office, London); Class II., to Miss Jennie Crosby, Brazil Lake, Yarmouth, N. S.; Class III., to Miss Cornelia Freeborn, Denfield, Ont.

Those deserving special mention are: Alice McDavitt, Mrs. F. Hunter, N. A. McEachern, "Nancie," "Marie," "Mountain Daisy," Verne Rowell (where have you been so long, lazy boy?), and Charlotte Hunter. Other contributors were Maie V. McKenzie, Alex. McColl, Isabella McKenzie, Ernest C. Sutherland, Percy McDavitt, Anna Arthur, Bella Snow, and M. Ethyl Nixon.

Cecilia Cromar, Lillian Carswell and Teresa McCrea, winners in the drawing contest, have acknowledged receipt of prizes therefor and expressed their appreciation of the same.

I am glad you tried "to please father," otherwise I should have missed a pleasure, while you have the double reward of pleasing him and winning a prize. I trust you will find some of our other contests sufficiently interesting to tempt you to the Nook again.

"Annie Laurie," a young girl, living on a farm in a rather isolated district, would like to correspond with some of the young folks of the Nook. I shall be happy to forward her the address of any one desirous of entering a correspondence with her. I know from personal experience that friendships both pleasant and lasting have begun in this way.

"Naughty Baby," you precocious infant, to suppose I should laugh at your "June-bug," although I have often, as you say, "laughed till I ached," literally, not figuratively. I thank fortune for giving me a vein of humor; I can see the ludicrous side pretty clearly—the great trouble is it sometimes upsets my gravity just when I should be looking prim. I hope to receive some very interesting papers on "The Wild Flowers of Our Province"—each Province for itself. Which will win?

THE HOSTESS.

Ingle Nook Chats, Parkenham, Ont.

PRIZE POEM—CLASS I.

By Miss A. L. McDiarmid, Ormond, Ont.

A Day in June.

Flutter of leaves at the window,
Stirred by a passing breeze;
Murmuring voices of children,
And drowsy hum of bees.
Bobolinks trilling and calling,
Through the long sunlit hours;
Honey-bees humming and hovering
Over a sea of flowers.
Meadows adrift with daisies,
Butterflies all aglow,
Magical play of light and shade,
And balmy winds that blow,
While fair as a sweet young maiden,
Fresh as this first June day,
A white rose sways upon its stalk
Adown the garden way.

PRIZE POEM—CLASS II.

By Mrs. J. H. Taylor.

A Day in June.

DAWN.

O'erhead the pale blue sky shades into pink;
The east is fair with crimson barred with gold,
A faint breeze fans and stirs the rustling leaves,
And perfume wafts from flowers as they unfold.

A myriad dewdrops gem the verdant fields;
The earth is starred with flowers; and rippling rills
Are mingling fairy music with the birds
Which greet the sunbeams as they tip the hills.

NOON.

White clouds float slowly o'er the deep blue sky,
A drowsy hum of insects fills the air,
The birds have ceased their music for awhile,
So busy are they with their children's care.

SUNSET.

Again the sky in crimson glory glows,
As if the gates of heaven were held ajar;
In her full splendor now the moon appears,
And waits the coming of the evening star.

Again the robin's throat pours forth its song,
The oriole's liquid note, the snipe's shrill call,
Now each in its own perfect way proclaims
The praise of Him who ruleth over all.

A star or two appears, and Nature's voice
Seems louder as the busy world grows still,
And from the deepening shadows of the grove
Day's knell is sounded by the whip-poor-will.

PRIZE POEM—CLASS III.

By Miss Jennie Crosby, Brazil Lake, N. S.

A Day in June.

A day in June—what happy scenes
Those four short words suggest;
Would that the poet's pen were mine,
That they might be expressed.

A clear, blue sky, where fleecy clouds
Glide slowly here and there;
The murmuring of busy bees
Floats on the balmy air.

A whispering foliage of leaves,
A choir of sweet-voiced birds;
Still waters by the pastures green,
With peaceful flocks and herds.

Sweet month of roses! peerless queen
Of all the summer hours;
Dance Nature's favorite art thou,
With thy rich wealth of flowers.

Fain would we keep thee ever here,
And stern old Time defy;
But even as we speak the wish,
The night is drawing nigh.

The bright warm sun, with golden rays,
Is sinking in the west;
It seems to smile a last good-night
Upon the earth, at rest.

Ere long the twinkling stars enhance
The radiance of the moon,
And then reluctantly we say—
One less fair day in June.

PRIZE POEM—CLASS III.

By Miss Cornelia Freeborn (aged 14), Denfield, Ont.

A Day in June.

O June! delicious month of June!
When winds and birds all sing in tune;
When in the meadows swarm the bees,
And hum their drowsy melodies,
While visiting the buttercup,
To take the golden honey up.

O June! the month of bluest skies,
Dear to the wandering butterflies,
Who seem gay-colored leaves astray,
Blown down the tides of summer day.

O June! the month of merry song,
Of shadow brief, of sunshine long;
All things on earth love you the best;
The small bird singing near his nest;
The wind that comes and, passing, blows
The sweetest perfume of the rose;
The bee, that sounds his muffled horn
To celebrate the dewy morn.

O June! such music haunts your name;
With you the summer's chorus came.

From Some Old-time Records of the Northwest of Long Ago.

ACROSS THE PRAIRIES IN 1856.

[Continued.]

"Our progress was constantly impeded by logs, swamps and innumerable creeks, but our average rate of travelling was about thirty or thirty-four miles a day. The heat of the sun was almost insupportable, and the flies, consisting of mosquitoes, sand flies, and the large bulldog fly which particularly attacked the animals, tormented us dreadfully. We would always start before sunrise, remaining for two hours twice a day to take our breakfast and dinner, to give the poor horses 'a spell,' which, poor things, they sadly needed, and we then camped before sunset for the night. Our brigade had three tents when alone, but when we caught up to other parties which had started long before us, as we frequently did, our camping ground was a picture to remember. Several tents would be pitched here and there, each with its camp fire blazing brightly upwards, and of the carts there would be sometimes two or three hundred together at one time. The horses ("hobbled" by their owners or drivers), poor weary beasts, would wander a little way off, gladly cropping the rich pasture of the swampy soil, neighing confidences or remonstrances to one another until, their hunger satisfied, they, too, sought forgetfulness in sleep. We were so fortunate as often to have moonlight nights, which enabled us to see all around us—sometimes one vast expanse of plain as far as the eye could reach. Sometimes we could hear, near by, the gurgling waters of a river, with its small rapids, or behind us would be a magnificent American forest, rearing its stupendous branches above us, making us gaze around with delight and almost awe, until weariness closed our eyes, and Ameri-

can forests, gurgling rivers, expansive lake and camp fires would gradually fade away, and we ourselves be far lost in the land of dreams! Yes, it was sleepy, hungry work, too, this primitive travelling, both for man and beast. No wonder the large flocks of little pigeons would take flight when they heard the distant creaking of our cart wheels. Connecting them with hungry people, instinct taught them that their best safety was to retreat, for pop, pop, would go the guns, and the stragglers amongst the poor wee things were sure to be sacrificed to the voracious appetites of the travellers. The Red Lake River was the largest and broadest of any we had to cross. Finding it impossible to ford it, our guides gladly availed themselves of the aid of some Indians, who, expecting the inland carts to pass about that time, were awaiting their arrival with large canoes. In these all baggage was carried across, as well as the ladies and children of the party. The carts were tied together, three at a time, and pulled over, whilst the horses, with a large number of oxen, as well as a cow and a little calf belonging to the party we had overtaken, bound for a new settlement on the Otter Tail Lake, were expected to breast the current and swim peaceably to the other side. But to this little arrangement they made decided objection. Influenced by the bad example of a sturdy-looking and very determined ox, and by the writer's own especial steed—one which should have known better, and which had for the whole trip scornfully refused to associate with the wild prairie horses which were being driven over in our company, and occasionally ridden by us in turn—none of the creatures would take to the water at all. The scene was ludicrous. The shouting and yelling of the men, their frantic dodging amongst their rebellious cattle, and the fruitlessness of their efforts, might have been fun for us, but it certainly was exasperatingly serious for those whom it more immediately concerned. Finally persevering effort, aided by stratagem, met with its reward, for at last, two or three being forced into the stream, the rest followed, and the whole band swam nobly over, the little calf by the side of its mother being as rapid in its movements as the rest. Nearly at the end of our journey we met one English officer and two American gentlemen who were bending their steps towards Red River, hoping to be in time to join the buffalo hunt. They were encamped close by a large swampy bog which they had just passed, and which we had to get through also. Their difficulties had been such as to cause them much alarm; so much so, that they showed decided symptoms of giving up the trip altogether. Their little camp looked very pretty on the outskirts of a large wood. They tried to tempt us to pitch our tents with them, but our guides were anxious to get through the mire before nightfall, which we did, our new acquaintances looking on meanwhile, after which we encamped for the night on the banks of the Crow Wing River. Whilst we supped two handsome-looking Indians came up to us, offering to sell our guides some fish, which were gladly bought. They remained near our fire the whole night, and we parted from them in the morning. Shortly afterwards we met an old Indian who was in pursuit of these two men, as they had just murdered three of his sons! Perhaps we should hardly have felt quite so secure the night before had we been aware of the doubtful company we had been keeping, although, their quarrel not being with us, we had no cause for fear.

"When the announcement was made that we had passed the last swamp, we were indeed rejoiced, and the first house we saw was greeted with rapture. The roads then became much better, the cultivated ground, and the neat though humble houses of the settlers showing us that we were getting nearer to the civilized world. We were delighted with the American garrison, Fort Ripley, though we only saw it across the river. The soldiers made our surroundings novel and cheerful; the laborers going about their work reminded us strongly, though still in a foreign land, of old times. We did not leave our carts until we arrived at Saw Rapids, where we had to encamp for two or three days, waiting for the steamer, 'Governor Ramsey,' which was to take us down to St. Anthony's Falls. The steamboat accommodation certainly was miserable, but the scenery of the Mississippi, the knowledge that each stroke of the wheel was taking us nearer home, and the amusement we could not help feeling at the evident contempt our shabby travelling habiliments and sunburnt faces excited among the gaily-dressed American ladies (for to our unaccustomed eyes they appeared as if attired in gorgeous array), helped to make us forget past disasters and to awaken the keenest interest in all that awaited us, before we planted our feet once more upon the shores of dear old England. We had experienced great kindness from many strangers, and mingled in scenes which make a retrospect very pleasant, whilst pleasurable recollections will always be connected in our minds with Canada and the United States; and Red River itself will have many a kindly thought and many a hearty wish when, in imagination, we again take a trip across the prairies of Northwestern America."

H. A. B.

"A Venetian Fruit Seller."

A Venetian picture by a well-known artist. In many pictures there is an equal mixture of poetry and prose. In this, prose prevails, and the group of women around the boatman are evidently in dead earnest in their determination to have good value for their money. The canal roadway, the peculiar shape of the so-called fruit, the lady with her mantilla and fan, and even the lazy attitude of the lad in the bow of the boat, tell us, without any signature or title, that the scene is in Venice, but, judging from the attitude and dress of the buyers, they might have been drawn from nature almost anywhere.

H. A. B.

Travelling Notes.

Grasse, France.—My whole visit to Grasse has been like a delightful dream, nearly every moment of the time devoted to "taking in," leaving none for "giving out"; consequently, my notes have suffered, and have been but meagre reflections of all I have seen and thought during my sojourn in this land of flowers and magic. When first I came here the dear young people had so much to show

Monte Carlo without, thank God, having even the slightest inclination to revisit it. It will always be a wonderful, though a somewhat sad, memory to me. But I must tell you something about the place. It, with Monaco, forms a principality of its own (the smallest in all Europe), governed by the Prince of Monaco. It is the richest place, for its size, in the world, most beautifully situated, with the grandest gardens and most excellent sanitary arrangements; indeed, the surroundings everywhere are perfect. The bank pays the Prince, the salaries, and every other outlay, so it plainly shows how much more money is taken in than is paid out. The residents are not allowed to play in the Casino; neither have they any taxes to pay. All is managed in the most orderly manner, and a drunken man is seldom seen. Everything portrays wealth, luxury and magnificence. The Casino, exquisite in design and architecture, gorgeous in its fittings, replete with all that wealth can furnish or the most artistic soul desire, is usually filled from 11 a. m. to 11 p. m. with a crowd of wealthy, clever, aristocratic, and, though it may sound somewhat incongruous to say so, intellectual people, men and women alike, from all parts of the known world. Princes, dukes and duchesses, earls and countesses, mixing with "nonveaux riches" or the more desperate "nonveaux poor," as if hardly aware who were elbowing them in the same wild race for gain.

there. Nor were all eager gamblers. There were some who threw their gold pieces down upon the table as we would play with beans. Again I questioned: What is it all for? Can it be really for mere amusement? Can it be altogether for love of money? Some of these very people are most generous. They are open-handed in their liberality for philanthropic purposes. They are generous in their support of the dear little English and American churches at Monte Carlo and Nice, some twenty miles away. Is it not all an enigma? One set playing with an indifference which cannot be all put on. Another set, amongst them aged men and withered old women, with an indescribable eagerness, their veins swelling and their hands trembling with nervous excitement until, the game "made" or "unmade," they can hardly totter from the tables to their carriages, which have been waiting for them for hours at the door of the Casino. Truly, I say, it is an enigma, and who can be found to solve it? But enough of Monte Carlo. In two days my sister and I leave Grasse, a friend from England joining us. We expect to spend a couple of weeks more on the Riviera, viz., at Cannes, Mentone, Bordighera (Italy), seeing the lovely suburbs of each place, such as Cimiez, Beau Jean, Antibes, La Bocca, etc. Then we go on to Switzerland, remaining a day or two en route at Marseilles, Avignon, Dijon and Lyons. We take Geneva first.



ASSIRI, VENEZIA 1876

"A VENETIAN FRUIT SELLER."

(L. Passini)

me, were so persistent in making me see and admire what they had seen and admired before, that I positively could not get a quiet time for scribbling to my friends in Canada. Then, my brother and sister desired to show me Cannes, Nice, Mentone and Monaco, all places of intense interest, and, of course, I went also to Monte Carlo, because everybody said I must. I had read of Monte Carlo and its wonderful fascinations; I had also read of the Stock Exchange and of its iron grip upon the soul of the natural-born gambler, but somehow I felt that there was no internal germ, no waiting microbe within me on which the infected atmosphere could lay hold, and so I too might venture to visit Monte Carlo without personal injury, though I could not expect to do so without a mixed feeling of wonder and sorrow. All sense of proportion seems lost to the frequenter of that veritable den of iniquity. "Won't you come into my parlor?" said the spider to the fly? and the fly, seeing the silver strands of the pretty web, walks in, and before it has been there a minute it is as much the spider's prisoner as if those strands were made of iron. Perhaps it was because I kept warily to the outer edge of the gilded web, perhaps because I did not even try my fate by the smallest coin of the realm, I did see something of

Others have described these scenes so much better than I dare attempt to do, that I will not try to bring before you the living picture as I saw it that day, when even I, who had no stake in it, held my breath as that iniquitous little ball ran its course. Would it stop, I asked myself, at this color or at that? Would it be odd or even? And, when it stops, what kind of a look will come upon the face of that handsomely-attired, aristocratic-looking woman whose gaze is held to it with a fascination she makes no attempt to hide? She has laid on the table and seen the croupier rake in a handful of gold, which may, as it loses or wins, make or mar her fate. Hers was not the only face which told unwittingly its tale of suspense, for there were hardly any there who looked with real indifference upon that ball when it was sent by them upon its errand of evil. Nevertheless, it amazed me to see, in spite of the turmoil which must in so many cases have surged within, in how quiet and orderly a manner everything was conducted. None of the tragedies of which one has read occurred during our visit, when the quietude of the place is momentarily broken by the quickly-hushed cry of the despairing gambler, who has staked his last coin and has thus lost his all. It was simply an everyday at Monte Carlo which we saw when we were

Fellow travellers have recommended us "pensions," and my sister has the tour arranged, clearly, systematically, and, above all, economically, after which will come the coronation. The next time you will hear of us will be from Geneva.

MOLLIE.

Salt and Lime.

Gardeners use both salt and lime with considerable success on soils of a certain character. Sometimes both of these are used to excess, and if they do not actually injure the soil, they do no good and cost considerable. But where the soil is sour, heavy and difficult to work, an application of either salt or lime proves beneficial.

Toads in the Garden.

Toads are valuable friends to gardeners. In Europe they are advertised for sale and gardeners buy them in large numbers. Boys capture them in nets, which is easily done in evening twilight. When placed in a garden they seldom leave, but soon find a burrow under a board or stone, or at the root of a tree or shrub, and make themselves at home. Their value is in the fact that they destroy many damaging insects.

THE CHILDREN'S CORNER.

House Building.

Haven't you all heard the birds chattering a great deal lately? Perhaps you didn't know exactly what they were saying, but it is easy to guess that they were talking about their house building and furnishing.

"I was sitting alone by the maple tree—
I wasn't asleep—you needn't tell me.
Two voices I heard right over my head,
And this is precisely, just what they said:

"Oh, Robin! Oh, Robin! I'm all out of breath;
Oh, Robin! Oh, Robin! I'm tired to death.
With, 'Come, look at this tree, and now, look at
that'!"
I'll look at no more. Oh, Robin, that's flat!"

"Why, Robina, Robina, Robina, dear,
You must be both tired and nervous, I fear.
And, what do you think?—I'm quite sure of this—
I plainly heard Robin then give her a kiss.

"Oh, see, love, the fountain, there by the path,
What a beautiful place for a nice morning bath;
And dewy and fresh, at the breaking of dawn,
Fat worms will be plenty, right here on the lawn.

"With slugs from the garden, and all of the best,
Oh, Robina, here is the place for our nest.
Then gaily they flew to the top of the tree,
And that's where they'll build, as sure as can be."

That couple did not forget to put in the teaspoonful of love when they were preparing their home, did they? Somebody once said that he would rather have a teaspoonful of love in a house than all the grand furniture in the world. If you ever tried to live in a very grand house where everybody was disagreeable and cross, I think you would agree with him and be very glad to get home again, even if the carpets are rather shabby and the tables do look a little old and scratched. You have a great deal more than a teaspoonful of love in your home, I am sure. A few weeks ago a robin was determined to build his nest inside the house where I live. He tapped at the windows and flung himself against them, from early morning until evening, for nearly a week. Then he gave up the hopeless struggle, and, as he couldn't get in, built his nest in a tree just outside our dining-room window. I don't know whether he intended us to help him in feeding his family, but it certainly was a handy spot for crumbs.

The birds have plenty to do when their babies are young, for they seem to be hungry all the time, and make a great fuss if they are not fed in a hurry. I read of a bird-lover who rescued four little robins that had fallen out of their nest, and undertook to feed them. The cries for help began every morning about four o'clock, and every hour through the day those hungry babies had to be fed. A small boy was engaged to dig worms for them, but he got tired after one day's work, for sixty worms were not enough to satisfy their appetites. Just fancy how hard it must be for the old robins to dig worms or catch insects all day long, to cram into the mouths which seem to be always wide open. Do they ever get time to eat a nice juicy worm themselves, I wonder. However, like other unselfish people, they manage to be contented and even jolly most of the time. Would you like to learn their secret?

"If you'd learn to be happy
Just study the robin;
He never looks cross
With his tail hanging down.
If it rains, he says 'Thank you,
That's just what I wanted,
'The dust is so dreadful
In this blessed town.'
He's a poor, homeless fellow,
Without place of shelter,
Excepting the sky
Or a bare, leafless tree.
But he puts on his best looks,
Seeks after a wife,
And then on house-building
They both will agree.
And then if he's hungry,
He first asks a blessing—
Or rather gives thanks
For the good things in life.
Then he breakfasts on fish-worms,
Which he thinks a great dainty,
And seems to enjoy
Without plate, spoon or knife.
But as springtime advances
His family grows larger,
And robin is working
From morning till night,
Yet he still looks so happy,
So bright and so jolly.
One would think that his days
Were one constant delight.
Now that business is over
He takes things more easy,
Leaves housekeeping cares
To his young pretty wife;
But he often sits by her,
And sings her a solo,
Which means (in bird language)
'You're the joy of my life.'
And so, my dear children,
What if you are busy,
Or have to 'mind baby,'
The whole living day,
Don't say, 'Oh, what a bother,'
And look cross and snappish,
But be like the robin,
Light-hearted and gay."

Some birds are very particular about the materials they use for their nests, and it is wonderful to see how cleverly they build them, when

they have no hands or tools to work with. I have a humming-bird's nest which is such a dainty, round home, almost as pretty as the bird that built it. You have all seen nests made of horse-hair, and I heard of one person who encouraged the birds to build in her garden by tying bits of wool and string to her clothes-line, which they very gladly made use of. I heard of another kind of nest made entirely of hairpins, but that was built by a city bird. It wouldn't make a very comfortable bed for the poor featherless bird-babies, would it?

Most birds are splendid insect-destroyers, and it is quite worth your while to help them in their house-building, and so encourage them to live on your farm. Charles Aldrich says that every spring he gets thirty or forty cigar-boxes and fastens them in the trees for the birds to live in. If the boxes are long, he puts a partition across the middle. This partition has a hole cut through it, so the box is turned into a two-roomed bird cottage. In one of his boxes eighteen wrens were reared in one season. A pair of wrens have been known to carry to their young about a thousand insects in a single day, so it is worth while encouraging them. Will you remember this next spring, and help the little builders to make their nests in your orchards?

Cousin Dorothy.

Old Timers.

There are no days like the good old days—

The days when we were youthful!
When human kind were pure of mind
And speech and deeds were truthful;
Before a love for sordid gold
Became man's ruling passion,
And before each dame and maid became
Slaves to the tyrant fashion.

There are no girls like the good old girls—

Against the world I'd stake 'em!
As buxom and smart and clean at heart
As the Lord knew how to make 'em!
They were rich in spirit and common sense,
A piety all-supportin';
They could bake and brew, and had taught school, too,
And they made the likeliest courtin'!

There are no boys like the good old boys—

When we were boys together!
When the grass was sweet to the brown bare feet
That dimpled the laughing heather;
When the pewee sung to the summer dawn
Or the bee in the willow clover,
Or down by the mill the whip-poor-will
Echoed his night song over.

There is no love like the good old love—

The love that mother gave us!
We are old, old men, yet we pine again
For the precious grace God gave us!
So we dream and dream of the good old times,
And our hearts grow tenderer, fonder,
As those dear old beams bring soothing gleams
Of heaven away off yonder.

—Eugene Field.

Little Essays of the Commonplace.

It is all very well to say "don't worry," but oftentimes it seems impossible not to. One great aid for the "Don't Worry" is to rest more. Whenever possible, slip into loose clothes and rest in a darkened room. Another good idea is to divert the mind by change. Read children's books, do anything to avoid settling into a rut. It is fatal to do always the same things at the same time. Learn to "swing off." Suggest and do unexpected things. To be attractive, the clever woman must be variable. She must not look to-day as she will to-morrow; her moods must be many, each more fascinating than the other. The woman who "worries" never pleases. "Care killed a cat" seems inconsequential and meaningless, but think about the cat. Poor kitty!

In my grandmother's days, for a woman to be considered "fore-handed" was a great deal of a compliment. A glance backward often serves us in getting forward. Women of this generation would help themselves and others many times by planning ahead, not only as to food and food supplies, but in the little personal matters. To have always a half dozen pairs of stockings, a half dozen handkerchiefs laid away, with some specially nice underclothing, ought to be a rule with every woman. If to these be added a dainty wrapper, dressing sack and bedroom slippers, she will have the comfortable feeling that she is prepared for any emergency. Sudden illnesses come to all, and careless dress is most depressing in times of sickness. Does one have to make an unexpected journey, if there is nothing to do but pack bag or trunk the pleasure of the change is doubled. Close friendship with a woman who always did everything at the last available moment long ago convinced me that this plan of looking "forward" should be a rule. A member of this woman's family wittily says, "Things are always done here at the last minute and 'put on wet.'"—The Lady's World.

THE QUIET HOUR.

The Lord is at Hand.

"Loose not Thy hold, O Hand of God!
Or utterly we faint and fall;
The way is rough, the way is blind,
And buffeted with stormy wind;
Thick darkness veils above, below,
From whence we come, to what we go;
Feebly we grope o'er rock and sand,
But still go on, confiding all,
Lord, to Thy Hand!"

"In that strong hold salvation is;
Its touch is comfort in distress,
Cure for all sickness, balm for ill,
And energy for heart and will.
Securely held, unflinching,
The soul can walk at ease, and sing,
And fearless tread each unknown strand,
Leaving each large thing, and each less,
Lord, in Thy Hand!"

There are always two sides to everything. A little while ago we considered the possibility of looking at things invisible—that was our point of view. Now let us look at the other side and consider that, whether we remember Him or not, God never forgets us. Life would not be the discouraging thing it often is if we realized the wonderful promise: "I the Lord thy God will hold thy right hand, saying unto thee, Fear not; I will help thee."

Do you remember the object lesson our Lord once gave to His disciples? He sent them away, depriving them of the visible presence which might be a hindrance to faith. They thought themselves alone on the stormy sea, in the darkest hour of the night. But Christ's disciples are never alone. He saw them toiling in rowing, and, when things seemed at their worst, He came to them, walking upon the sea. Even then they did not know their Master, and cried out for fear. How often must they have thought of that night afterwards, when fighting far greater difficulties than contrary winds. It must have been a great help to know that the Lord was watching them, though Himself unseen, and would come to their assistance when most needed.

When we think we are having rather a hard time of it, it is often a help to get away from ourselves altogether and study our case from an outside point of view—seeing our lives as God sees them. The Bible tells us over and over again that our Father is carefully training his children. Tenderly and patiently He steadies each faltering step, like a mother teaching a little child to walk alone, as He has said: "I taught Ephraim also to go, taking them by their arms; but they knew not that I healed them. I drew them with cords of a man, with bands of love." How beautifully His watchful care is shown by the image of a mother eagle forcing the young birds to leave the comfortable, enervating security of the nest. She deliberately puts them in a dangerous position, that they may become strong and hardy, but she is always near to help if needed. "As an eagle stirreth up her nest, fluttereth over her young, spreadeth abroad her wings, taketh them, beareth them on her wings; so the Lord alone did lead them." The young eagles were perfectly safe, and so are we, for the eternal God is our refuge, "and underneath are the everlasting arms."

Even the wind and the rain do not come by chance; everything is governed by what we call physical laws. People are beginning to accept as sober fact, instead of poetical imagery, the words of Job about the winds having weight, the rain obeying laws, and even the swift lightning being chained to a track. God made all things, and still keeps even the mightiest powers in check: "He looketh to the ends of the earth, and seeth under the whole heaven; to make the weight for the winds; and He weigheth the waters by measure. When He made a decree for the rain, and a way for the lightning of the thunder; then did He see it, and declare it, He prepared it, yea, and searched it out." Let us try to remember that God "weigheth by measure" all the sorrows and joys of our lives. Nothing is too trifling for His patient consideration, nothing comes by chance. Even when our troubles are of our own making, He permits them, and overrules them for our good.

"Child of my love, lean hard!
And let me feel the pressure of thy care.
I know thy burden, for I fashioned it,
Poised it in my own hand and made its weight
Precisely that which I saw best for thee;
And when I placed it on thy shrinking form,
I said: 'I shall be near, and, while thou leanest
On me, this burden shall be mine, not thine.'

"So shall I keep within my circling arms
The child of my own love; here lay it down,
Nor fear to weary Him who made, upholds,
And guides the universe. Yet closer come;
Thou art not near enough. Thy care, thy self,
Lay both on me, that I may feel my child
Reposing on my heart. Thou lovest me?
I doubt it not; then, loving me, lean hard."

In some kinds of modern religious teaching there is a great deal of introspection. People are encouraged to study their own feelings, instead of looking up to God. If this is carried to an extreme it leads to a morbid, narrow-minded, spiritual selfishness. There is a story told of a certain university professor who had been suspected of skeptical tendencies. He was asked on one occa-

sion what he thought of God, and his answer was very much to the point: "Madam, it matters very little what I think of God, the important question is what God thinks of me."

That is the important question for all of us. Let us try to look at ourselves through God's eyes; not with a short-sighted wish to have everything made easy and pleasant to-day, but gladly accepting the training which He sees to be best for us for time and for eternity.

HOPE.

What Your Striving Does for Others.

If all the end of this continuous striving
Were simply to attain,
How poor would seem the planning and contriving,
The endless urging and the hurried driving
Of body, heart, and brain!

But ever in the wake of true achieving
There shines this glowing trail:
Some other soul will be spurred on, conceiving
New strength and hope, in his own power believing,
Because thou didst not fail.

Not thine alone the glory—nor the sorrow,
If thou dost miss the goal;
Undreamed-of lives, in many a far to-morrow,
From thee their weakness or their force shall borrow;
On, on, ambitious soul!

—Ella Wheeler Wilcox.

He Carried the Basket.

Men who have been married ten or a dozen years are too seldom famous for extreme courtesy to their better halves; but sometimes they are, nevertheless, very "thoughtful."

That was the case with Silas Perkins, who took his wife with him to the Pike County Fair. Mrs. Perkins had on her arm a basket containing the dinner and supper for the pair.

The crowd grew dense and Mr. and Mrs. Perkins began to be jostled about a great deal.

"Here, give me that basket, Sairey," said Mr. Perkins.

"That's real kind of you, Silas," said Mrs. Perkins, giving up the basket.

"Kind of me!" exclaimed Mr. Perkins, resenting the insinuation. "Gosh! I was afraid you'd get lost!"—[Youth's Companion.

Ages of Animals and Birds.

- A sheep lives ten years.
- A cat lives fifteen years.
- A lion lives twenty years.
- A camel lives forty years.
- A bear lives twenty years.
- A dog lives fourteen years.
- A squirrel lives eight years.
- A canary will live six years.
- A crow will live fifteen years.
- An ox lives twenty-five years.
- A guinea-pig lives seven years.
- A horse lives twenty-five years.
- A swan will live twenty-five years.
- A whale lives three hundred years.
- A tortoise lives one hundred years.
- An elephant lives four hundred years.
- A parrot lives one hundred and twenty-five years.

WANTED: A young man to manage a farm, close to Montreal, of 300 acres, which may be extended. A knowledge of high-class cattle and dairy work required. Salary not limited. Apply, stating experience and when at liberty, to Drawer No. 2326, P. O., Montreal.

For several years the advertisements of the Mead Cycle Company have appeared in the columns of the "Farmer's Advocate." Every year the business of this company has grown until now it is claimed to exceed 50,000 bicycles sold through mail orders all over the world each year. The company keeps its factories running all winter storing up wheels of the finest quality, and is always ready in the spring and summer to fill orders promptly at prices which they claim are lower than manufacturers selling on the old plan, through local dealers, can deliver a wheel of even inferior quality. The Mead Cycle Company can ship any wheel at any price the same day the order is received. When writing for catalogues and prices mention the "Farmer's Advocate," and address Mead Cycle Company, Dept. R 142, Chicago.

GOSSIP.

The American Hereford Association has removed its offices for the registration of cattle and publication of the Herdbook from Kansas City to Chicago, and its headquarters for the present will be opened in a temporary building on Exchange Ave., at the main entrance of the Union Stock Yards, pending completion of a capacious three-story structure adjoining the Live Stock World building, at a cost of \$100,000, to be called the Pure-bred Live Stock Record building.

ADVERTISE IN
THE FARMER'S ADVOCATE,

Right Way to Drink Water.

Professor Silkham says there are few people who realize the value of water as a beverage, or know how to get the best good from it. Sipping water is a powerful stimulant to the circulation, which ordinary drinking is not. During the action of sipping fluid there is also a favorable effect upon the liver. Sipping cold water will often allay the craving for alcohol, probably due to the stimulant action of the sipping. For a glass of cold water slowly sipped will act as a stimulant or tonic, and produce a greater acceleration of the pulse for a time than will a glass of wine taken at a draught.—[S. F. Chronicle.

Simple Remedies.

- For liver disorders, use tomatoes, onions, lemons, salt.
- For erysipelas, use cranberries externally and internally.
- For cancer, use figs in the same way.
- For indigestion, use garlic and tomatoes.
- For dropsy, use elderberries.
- For gravel, use spinach and onions.
- For asthma, use carrots.
- For scurvy, use turnips, onions and salt.
- For corpulent diabetes, use peanuts, avoid all sugar and starch.
- For nervous disorders, use onions, turnips and celery. Onions are the best of nervines, toning up the system and relieving nervous prostration.
- For the blood and to tone up the system, use all the fresh, ripe fruits.
- For a tonic, use blackberries and raspberries.
- For summer complaints, use the same, also the banana.
- For insomnia, use either lettuce or onions.—[Table Talk.

A Lady Born.

True politeness does not consist of the artificial airs of the drawing-room, in what is sometimes called "company manners," that continue so long as there are persons present to look on whose good opinion is desired, and relapse into barbarism as soon as the company has gone. It is the inborn impulse of a higher and nobler nature. Here is an apt illustration:

An aged truckman bent under the weight of a big roll of carpet. His bale hook fell from his hand and bounded into the gutter, out of reach. Twenty idle clerks and salesmen saw the old man's predicament and smiled at his look of bewilderment. No one ventured to help him. A fashionably-dressed young woman came along, took in the situation at a glance, and, without looking to the right or left, stepped into the gutter, picked up the hook in her dainty gloved fingers, and handed it to the man, with a smile. The idlers looked at each other and at the fair young woman.

The old truckman, in a violent effort to express his thanks politely, lost his hat. It rolled into the gutter where the hook had been. This was almost too much for any woman, young or past young; but this New York girl was equal to the occasion. Into the gutter she tripped again and got the soiled hat. When she handed it to the truckman a happy smile was seen to play about her lips.

GOSSIP.

Mr. William Linton, Aurora, Ont., sailed for England last week, and expects to attend the Royal and other leading shows, and to import some more Shorthorns.

The group of Shorthorns shown in the engraving on another page of this issue are members of the herd of Mr. James Thompson, Midway, Ont., who is making certain changes in his business operations and desires to sell these cattle, with 8 or 10 head more of similar breeding, by private treaty. The quality of the cattle, as may be judged from the photo., which does them less than justice, is of no ordinary character. The bull, Diamond King 34032, now two years old, was bred by H. Cargill & Son, sired by Imp. Diamond Jubilee and out of Imp. Diamond 18th 18363, and is straight Scotch-bred from first-class blood. Cinderella and Countess 8th are descended straight from Imp. Countess 5th 5101, bred by Mr. Duthie, Collynie, and contain the blood of many of the best bulls used in his herd and that of Mr. Marr, of Uppermill, including the noted Heir of Englishman. The Duchesses trace to Imp. Duchess 460, a first-prize winner at provincial fairs, and the top crosses are by richly-bred Scotch bulls, such as Prince Albert by Bampton Hero, whose dam was by the great Champion of England; Canada's Chief, by Imp. Indian Chief; and Royal Ury, by Imp. Royal Member. There are six heifers sired by Royal Ury in the herd that are hard to beat in any company, the three roans in the picture being among them. Two heifers from this herd were sold at an Iowa sale last year for \$435 and \$675. We are assured these cattle will bear inspection, and are worth looking after.

One mile north of Iona station on the M. C. R. and L. E. & D. R. R., in the County of Elgin, lies Prospect Hill Stock Farm, the property of Messrs. J. R. McCallum & Son, breeders of Shorthorn cattle and Yorkshire hogs. The herd of Shorthorns now numbers 35 head, and on the dam's side was founded on the cow, Adeline 3rd 11116, sired by Duncan 1732, a Cruickshank Nonpareil by Golden Crown (imp.); dam Adeline 2301, tracing to Imp. Lilly 302; the animals in the herd being sired by the following well-known Scotch bulls: Lavender Victor 12229, Elgin Chief 3rd 20372 (whose dam, Fashion's Fame, was by Imp. Indian Chief), Darlington 15910, Starlight 17441, Advocate 24558 (this latter being the sire of the heifers in the herd from one to three years old), and Imp. Warfare 6452. The present stock bull is Royal Duke 34678, bred by the Messrs. Watt, sired by Imp. Royal Sailor 18959, dam Mildred 5th. He is a solid red, with a square, deep, lengthy, fleshy body, on the shortest kind of legs, and is proving a sire of worth. There are some rare nice heifers in the herd, also four young bulls, from seven to nine months old, that are the kind that people are looking for. They are all sired by the present stock bull. These heifers will be sold, also, a few young bulls are for sale; also, a few heifers are all for living prices. The Yorkshires are all of Oak Lodge breeding, of which a description is superfluous. Suffice it to say that the young ones on hand are as good as the best, and are of both sexes and all ages. Mr. McCallum reports sales, especially in Shorthorns, as the best he ever experienced, which we do not wonder at, as his stock is all right.

The catalogue has been received of the 50 head of Shorthorn cattle to be sold, July 9th, from the noted herd of Lord Polwarth, St. Boswells, Berwickshire. The sale will be held at Carlisle, within a mile of the gates of the Royal Agricultural Society's Show there at that date. This herd has a fine reputation and a splendid record of prizewinning at the Royal and other leading British shows. Catalogues may be had on application as per the advertisement in this issue. Mr. John Garner's old-established herd in Gloucestershire will be sold on July 9, and on July 18 a sale of Jerseys from the herd of Mr. Phipps, at Kettering, will be conducted by John Thornton & Co., all of which are announced in the same advertisement in this issue.

PRACTICAL PHILANTHROPY.—So proof-positive is Dr. Slocum of their power as a remedy for all throat, lung, chest and other wasting diseases, that, to increase their usefulness and make known their great merits, four large samples of the Dr. Slocum Remedies will be sent to every reader of this paper who is afflicted with the terrible disease—consumption. All you have to do is to send your name, post-office and express-office address to the T. A. Slocum Chemical Co., 179 King St. West, Toronto, when the four samples of the Slocum Remedies will be sent immediately.

CALF FEEDING.—One of the necessities on nearly every farm, especially where dairyming is carried on, is the rearing of calves by artificial feeding instead of allowing them to suck the dams. Scores of calves are ruined or stunted for life in the first six months. Mr. E. Hamilton, of Hamilton, Ont., advertises in this issue what is called "The Common-Sense Calf Feeder," designed to overcome the troubles of calf-rearing by hand and give much better results from the same quantity of separator or skim milk. Write for a pamphlet.

"God bless ye, miss," the old man said, as the fair maiden turned her back on the crowd of idlers and went her way. What an example of true politeness!

Married People Would be Happier:

If they tried to be as agreeable as in courtship days.

If they kissed and made up at once after every quarrel.

If each would try and be a real comfort and support to the other.

If household expenses were always proportioned to receipts.

If women were as kind to their husbands as they were to them as lovers.

If each remembered the other was practically a human being, not an angel.

If both remembered that they were married for worse as well as better.

If there were fewer silk and velvet street costumes, and more plain, tidy house dresses, and street ones, too, for that matter.

If there were fewer "please darlings" in public and more polite manners in private.

If wives and husbands would take their pleasure as they go along, and not degenerate into mere toiling machines. Recreation is necessary to keep the heart in its place, and to try and get along without it is a big mistake.

The Cake He Wanted.

"I'm going to get married," he said, as he placed a hand as large as a Dutch cheese upon the counter, "and I want a wedding cake."

"It is customary nowadays," said the pretty confectioner's assistant, "to have the materials of the cake harmonize with the calling of the bridegroom. For a musician now we have an oat cake; for a man who has no calling and lives upon his friends, the sponge cake; for a newspaper paragrapher, spice cake; and so on. What is your calling, please?"

"I'm a pugilist!"

"Then you'll want a pound cake."

A good story is told of a general and his wife, resident in Ireland, who were constantly pestered by a beggar woman to whom they had been very generous. One morning, at the accustomed hour, when the lady was getting into her carriage, the old woman began: "Agh! my lady, success to yer ladyship, and success to yer honor's honor, this morning, of all the days in the year, for sure didn't I drame last night that her ladyship gave me a pound of tay, and yer honor gave me a pound of tobacco!"

"But, my good woman," said the general, "do you not know that dreams always go by the rule of contrary?"

"Do they so, plase yer honor?" rejoined the old woman, "Then, it must be yer honor that will give me the tay, and her ladyship that will give me the tobacco."

Mrs. Neighbors—"I advertised for a plain cook last week, but I didn't receive a single reply."

Mrs. Nextdoor—"Take my advice and advertise for a good-looking kitchen lady, and you'll be overrun with applications."

Choice Farm for Sale.

That splendid farm known as Spruce Park, the estate of the late James Deans, containing 200 acres, more or less, and composed of part of lots 37 and 38, concession 1, Township of South Dumfries, County of Brant. This is one of the best farms in the county, and is well adapted for all kinds of mixed farming, dairying or stock-raising; has first-class stone house, and large bank barn; 400 choice fruit trees in full bearing, and 500 spruce, protecting orchard and buildings; abundance of fine spring water. Situated close to school. Two miles from town of Paris, and eight from City of Brantford. Price very reasonable, as the estate must be wound up. For particulars apply to

WM. DEANS, Box 157, GALT, ONT.

BINDER TWINE

SEA-ON 1902.

"Farmers' Special" binder twine supplied to FARMERS ONLY at 11c. per lb., baled in cotton grain bags, bound with rope halters, and weighing 60 lbs. to the bag; length over 500 ft. per lb.; quality and length guaranteed. Cash with order; purchaser pays freight. Address orders, J. T. Gilmour, Warden, Central Prison, Toronto. Further particulars, address James Noxon, Inspector, Parliament Buildings, Toronto.

J. R. STRATTON,
Toronto, June 10, 1902. *Prop. Secretary.*

Important Sales of Pure-bred Live Stock in England.

John Thornton & Co. will sell by auction the following first-class herds:

WEDNESDAY, July 2.—

Mr. John Garne's old-established herd of Shorthorns at Filkins, Lechlode, Gloucestershire.

WEDNESDAY, July 9.—

Sixty head of Shorthorns from Lord Polwarth's famous herd (removed from Merthoun), near the R. A. S. E. show ground, at Carlisle, comprising about 30 young cows and heifers and 20 bulls.

FRIDAY, July 18.—

Mr. Pickering Phipps' Jerseys, at Rushton Hall, Kettering.

Catalogues may be had of

JOHN THORNTON & CO.,

7 Princes Street, Hanover Square, London, W., who will execute commissions and attend to shipment and insurance.

\$25.00 Round Trip to Denver,

Via Chicago & North-western R'y, from Chicago, June 22 to 25 and July 1 to 13. Return limit Oct. 31. Correspondingly low rates from all points east. Favorable stop-over arrangements. Two trains a day to Denver. The Colorado Special (only one night en route) leaves Chicago 6.30 p. m., daily. The best of everything. Write for booklet, "Colorado Illustrated." For rates and reservations, apply to your nearest ticket agent, or address, B. H. Bennett, 2 East King St., Toronto, Ont.—Adv't.

FARM FOR SALE IN PILKINGTON

THREE hundred acres in the Township of Pilkington, Lots 3, 4 and 5, Concession 3. This is one of the best farms either for stock or grain in Ontario. There are two sets of buildings, and it is suitable to be farmed as one, two or three farms. For particulars apply to the undersigned on the premises, or by letter to

JAMES HUNTER, ALMA P. O., ONT.

Westfield Correspondence Institute

OR ELECTIVE HOME SCHOOL,
FOR PRIVATE TEACHING BY MAIL,
WESTFIELD, MASS.

F. H. Dewey, Prin.

High Park Stock Farm Galloway Cattle, A few choice young heifers and bulls for sale. Inspection invited.

SHAW & MARSTON (Late A. M. & R. Shaw)
P. O. Box 294, BRANTFORD, ONT.

Shires, Shorthorns, and Leicesters.

Young stock of both sexes for sale. Imported Prince Louis—32082—heads the herd. Write for prices or come and see them.

John Gardhouse, Highfield P. O.,
Weston, G. T. R. and C. P. R.

GOSSIP.

Mr. John Campbell, Fairview Farm, Woodville, Ont., takes pride in the fact that two Strathallan cows, bred and sold by him last winter, were re-sold at public auction on May 14th, at Indianapolis, Ind., one making \$600 and the other \$925, the latter figure being considerably higher than prices obtained by same seller for several imported females; and was the second highest in his list of sales. The fact of both cows having been bought by Messrs. Robbins, of Indiana, leading breeders of the U. S., makes the case more satisfactory to the breeder, who has quite a number of the same line of breeding still in his herd. Fairview Shropshires and Shorthorns make good impressions abroad, judging from such reports as the above.

GOSSIP.

Arran Lake Stock Farm is situated in the County of Bruce, about eight miles from Port Elgin station, and is the property of Mr. Wm. Mackintosh, Burgoyne P. O., Ont., breeder of Shorthorn cattle, Leicester sheep, and Clydesdale horses. The Shorthorns are principally of the Lady Fanny and Queen Esther families, and are descendants of Lady Fanny 8th, out of Lady Fanny (imp.) and Queen Esther, bred by the Watts, of Salem. The herd is headed by Golden Count, sired by Imp. Golden Crown, dam Imp. Roan Betty. This bull is one of the kind that is eagerly looked for, but seldom found, being an exceptionally big, deep, broad, meaty fellow down to the ground, and built as even as possible. The younger animals in the herd, including a half dozen heifers, sired by him stamp him at once as a sire of more than ordinary worth, for they are a good lot sure. He is now for sale, as are also others of both sexes and different ages. The Leicesters number about sixty head, and are bred directly from imported stock, and are a big, well-developed lot. This season's crop of lambs are sired by a ram bred by Whitlaw Bros., by one of their imported rams, and are already showing fine form. In Clydesdales, Mr. Mackintosh is justly proud of a yearling filly out of his imported mare and sired by Crystal City (imp.). She is a beauty, with abundance of size and quality. In all these lines of stock Mr. Mackintosh has constantly on hand, for sale, animals of both sexes and all ages.

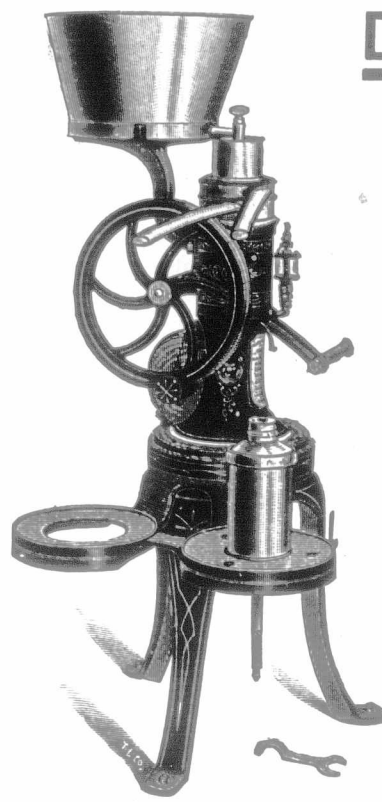
Coldspring Stock Farm is situated in the County of Brant, about three miles west of St. George, which is the owner's post office and shipping station on the G. T. R., and is the property of Mr. N. M. Blain, the well-known breeder of Tamworth hogs. Mr. Blain still retains and uses to a certain extent that grand old stock hog, Advance 610, sired by Birmingham Duke (imp.) 113, dam Amber Duchess 110, by Ingersoll Duke (imp.) 12. This old hog has done Mr. Blain golden service, having sired prize-winners galore. Among them is the sow, Jessie K., sweepstakes and silver medal winner at Toronto last fall. This splendid sow is now breeding, and there are at present for sale, out of her, five March pigs, sired by Flasher, winner of second prize for boar under a year at Toronto last fall. He is by Rob Roy, dam Thrifty Maid, who won first at Toronto and sweepstakes at Guelph in 1900, also first as a yearling at Toronto to last fall. This sow is also one of Mr. Blain's brood sows. From her there are also on hand for sale several young sows about ready to breed and a litter seven weeks old. Another of the breeding dams is a full sister of the first-mentioned sow, Jessie K. She is Lovelass, and is every whit as good as Jessie K. Out of her are two boar pigs six months old, splendid types of the Tamworth. They are also sired by Flasher. Mr. Blain has lately purchased as chief stock hog an animal that, if Royal Leeding and perfect form count for anything, should sire him many ring winners, for he is a cracker sure. He is Royal Bob, by Imp. British King, dam Royal Lady, by Imp. Royal First. The many sows are now being bred to this hog, so look out for Blain at the fall shows next year. This herd won last fall at Toronto, second on aged boar, first on yearling boar, second on boar under a year, first on boar under six months, first on aged sow, first on yearling sow, third on sow under a year, first on sow under six months. Silver Medal on best sow any age, and herd prize. The most of these animals have been sold, and as Mr. Blain is selling as fast as he can produce, it is only likely he will be an exhibitor this coming fall. Some time ago Mr. Blain, for a good long price, purchased a Cheshire sow in pig. This breed of hogs originated in Cheshire, England. They resemble to a more or less extent, Yorkshires, but are perhaps a little finer. They are a purely bacon hog, white, very smooth and even, and the meat is said to be very fine in the grain, and juicy. Of this breed there are for sale three boars and one sow, four months old.

NOTICES.

SPECULATOR GOES TO THE STATES.

The Pan-American champion Shorthorn bull, Speculator, imported by Mr. W. D. Platt, Hamilton, Ont., and shown at the head of his first-prize herd at Buffalo last year, has recently been sold to head the show herd of Mr. E. W. Bowen, Delphi, Ind. Speculator is a very smooth, level, thick-fleshed bull, with great heart-girth, smooth shoulders, long, level quarters, good thighs, and excellent handling quality, and has greatly improved during the past six months, growing deeper, nearer the ground, and massive in appearance. He will be a hard one to down in any showing this year, and we anticipate a continued successful career for him.

WIDE TIRES AND LOW WHEELS on farm wagons are bound to come more and more into use as farmers learn to realize that the draft is easier with such and that the roads may be kept in much better condition with wide tires. Low wheels possess many advantages on a farm wagon, saving much high lifting and pitching. Wrought-iron wheels with broad tires require no tire-springs and are always reliable. No need of repairs. The Dominion Wrought Iron Wheel Co. of Toronto, advertises this kind of wagon in this paper. See their advertisement and write them for circulars and prices.



DON'T

BUY A SEPARATOR UNTIL YOU HAVE SEEN THE

National.

EXAMINE

The simplicity of the design.

All wheels and bearings protected, being perfectly safe in the hands of a child.

It has anti-friction ball bearings.

Few parts to wash—only two pieces inside the bowl.

The National is made by The Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship.

In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years.

The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day.

The National will well repay investigation by intending purchasers.

National No. 1, capacity 330 to 350 lbs. per hour.

National No. 1 A, capacity 450 to 500 lbs. per hour.

AGENTS WANTED IN UNREPRESENTED DISTRICTS.

The Raymond Mfg. Co. of Guelph,

LIMITED.

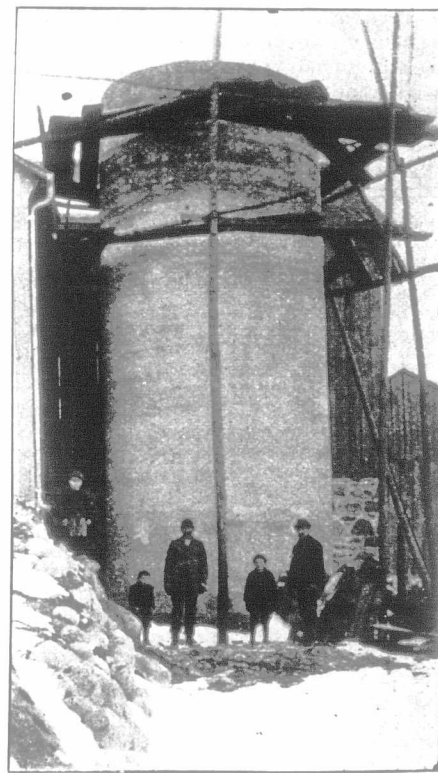
GUELPH, ONT.

WE ALSO MAKE GOOD SEWING MACHINES.

"A SPLENDID SILO"

BUILT FOR ADOLPHUS HOOPER,
AT EXETER, HURON COUNTY, WITH

Beaver Portland Cement



THE RATHBUN COMPANY, 310-312 Front St. W., Toronto, Ont.,
Sales Agents for THE CANADIAN PORTLAND CEMENT COMPANY, Limited:

EXETER, HURON COUNTY, Nov. 27, 1901.
DEAR SIRS.—I am pleased to let you know that the cement-concrete silo built for me last fall by Mr. A. E. Hodgert has proved all that he promised. It is eleven feet in diameter and thirty feet high. It cost me one hundred dollars (\$100.00), with a little time on our part thrown in. It was built with your BEAVER BRAND PORTLAND CEMENT, of which I cannot speak too highly. My opinion is that the round concrete silo, built with a high-grade PORTLAND CEMENT, is the only satisfactory one to build. Yours truly,

ADOLPHUS HOOPER.

Jersey breeders are reminded of the Club, to be held at their home, two invitation of Messrs. R. H. Bull & Son, milks from the town, on June 20th, to Brampton, Ont. published on page 434, inspect their noted herd with its recent in our June 2nd issue, to attend the semi-annual meeting of the Jersey Cattle Island, and to a social time together.

GOSSIP.

A STOCK SALE CENTER.

The Hamilton Stock Yards, of which Mr. W. D. Flatt, Mr. W. G. Pettit and other leading Ontario breeders of pure-bred stock are prominent shareholders, recognizing the need of facilities at a convenient center for the holding of public sales of pure-bred stock, under capable and reliable management, where buyers and sellers may meet for mutual benefit, have recently erected, and nearly completed, at the stock yards in the City of Hamilton, extensive and comfortable stabling for about 125 head of cattle, as a nucleus of what is expected to expand largely, and a sale pavilion, or amphitheatre, with seating capacity for 800 people. And they make the announcement that on the 13th of August an initial sale will be held, under the management of Mr. W. D. Flatt, of about 75 head of selected Shorthorns from the high-class herds of the following well-known breeders: H. Cargill & Son, Cargill; W. G. Pettit & Son, and A. C. Pettit, Freeman; Capt. T. E. Robson, Ilderton; H. Smith, Hay; Robt. Miller, Stouffville; W. D. Flatt, Hamilton; J. M. Gardhouse, Highfield; James Douglas, Caledonia; Geo. Amos, Moffat; and possibly others. The reputation and character of these breeders and their herds will be a sufficient guarantee of the quality and breeding of the stock that will be offered and of the business methods under which the sale will be conducted.

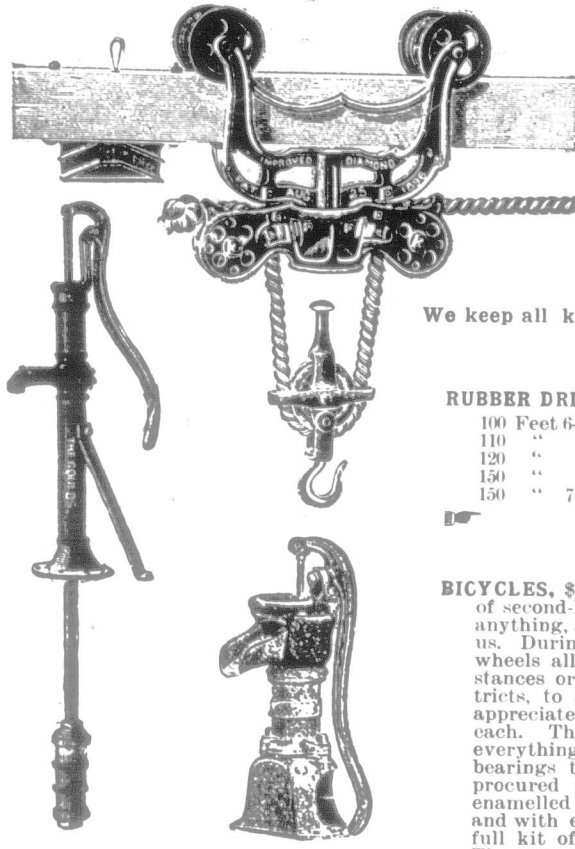
Hamilton, the Ambitious City, is an ideal location for such an enterprise, being only forty miles from the United States border at Niagara Falls, and having shipping facilities on three leading railways, the G. T. R., C. P. R., and M. C. R., besides steamship transport for passengers in the summer months. As an evidence of its importance as an exceptionally favorable point in this regard, it may be stated that the Deering Harvester Company, one of the greatest manufacturing concerns of the kind in the United States, after looking over all Canadian cities, have selected Hamilton as the point at which to locate the Canadian branch of their factories, while one of the largest of the American pork-packing and dressed-beef companies has established a plant at the Hamilton Stock Yards and honey-combed the city with high-class meat and provision stores, which will probably ere long be extended to neighboring towns. One of the principal breakfast-food companies on the other side of the line has also selected this city as the center for its Canadian branch factory.

Recognizing the urgent need of a more general distribution of pure-bred stock in all sections of our country, in order that the general farmer may have the facilities for securing the advantage of good blood in grading up his stock and thus improving the character and quality of our beef cattle and other meat-producing animals, the promoters of this enterprise, having faith in the future of our country, if wisely guided and managed, to hold its own with any other in the production of the best quality in all lines of live stock, have risked their money and their reputation in the inauguration of a scheme which, after careful consideration, they are confident will prove beneficial and helpful not only to the large breeders, but also to the general farmer and to the country as a whole, for these selling facilities are not to be limited to any privileged class, but will be open and available, for a moderate fee, to any breeder or any number of breeders who choose to combine to hold a sale of pure-bred stock at any time, and the management will cheerfully render all the assistance in their power to make such sales successful and satisfactory to all concerned, and will assist in shipping, take charge of consignments and feeding of stock, and in any reasonable way in their power facilitate business and encourage the farmers to make Canada what it is well designed to be: the breeding ground for many more millions than it now has of high-class cattle, horses, sheep, and hogs, and to capture and hold the best markets for all these. The hope for the future of this country depends upon the character of its live stock more than on any other branch of its enterprises, and the sooner the farmers realize this fact and act upon it, the better it will be for them and for all. Further particulars of this sale will be given in the next issue of the "Advocate," and in due time a catalogue of the offering will be published, which, when ready, will be mailed on application to Mr. W. D. Flatt, Hamilton, Ont.

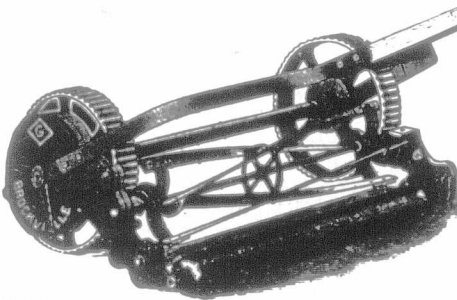
Vol. 13 of the Hampshire Down Flock-book, issued by the Hampshire Down Sheep Breeders' Association of Great Britain, is received at this office through the courtesy of the secretary, Mr. J. E. Rawlence, The Canal, Salisbury, England. The book is well printed, substantially bound, and contains the pedigrees of 459 rams, a long list of members of the Association and record of flocks, showing a lively interest in this useful breed.

We would remind our readers of the dispersion sale, on June 25th, of the entire Shorthorn herd of Mr. Geo. Dickie, Hyde Park, Ont., on G. T. R., 5 miles from London, as advertised. This sale occurs on the day following that of Mr. Richard Gibson, of Delaware, 12 miles from London, and affords the opportunity to attend the two sales on one trip. Catalogues will be sent on application to the owners.

SEND FOR ILLUSTRATED PRICE LIST



DEEP-WELL PUMPS, only \$6.50 each.
CISTERN PUMPS, \$1.75, \$2.25, and \$2.50 each.



LAWN MOWERS, high wheel,
12-inch, \$3.50; 14-inch, \$3.75;
16-inch, \$4.00; 18-inch, \$4.25,
each.

Wilkins & Co.,
166-168 KING ST. E.,
TORONTO, - ONT.

HAY CARRIERS and HAY-FORK OUTFITS at less than wholesale prices. We give you an example of our No. 3 outfit which we sell for \$17.64; it is composed as follows:-

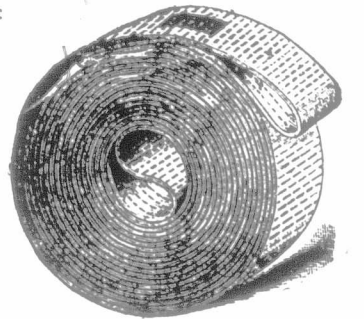
1 Improved car stopblock and pulley,	\$4.00
1 Best harpoon hay fork,	2.75
12 Rafter brackets,	.80
12 Track bolts, jointed,	1.41
3 Best malleable knot-passing pulleys,	1.50
4 Wrought-iron pulley screw hooks,	.35
1 Doz. 4 1/2-inch bolts for track,	.25
1 Snatch-block pulley,	.90
1 Rope hitch,	.25
60 Feet best trip rope,	.60
120 Feet horse-power rope, 1 inch,	4.80
	\$17.64

We keep all kinds of haying implements and outfits for both wood rail and cable track carriers. Will send all particulars on application.

RUBBER DRIVE BELTS, 4-ply, extra Star, fully guaranteed:

100 Feet 6-inch, 4-ply, extra Star belt (endless),	\$26.00
110 " " " " " " " " " " " "	28.50
120 " " " " " " " " " " " "	31.00
150 " " " " " " " " " " " "	40.00
150 " 7-inch, " " " " " " " " " "	47.00

Beltting of all kinds in stock.

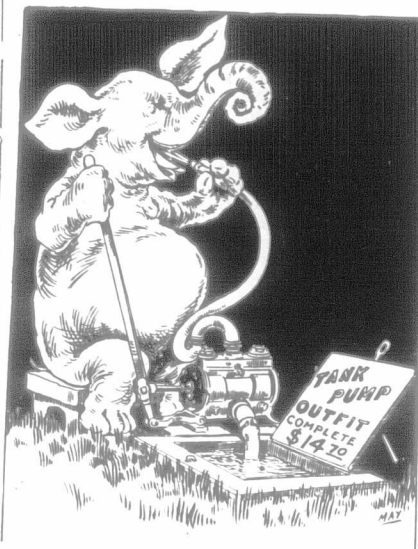


BICYCLES, \$10.00. We have made another large purchase of second-hand wheels. We may say these wheels, if anything, are better than the previous lot purchased by us. During the last ten months we have sold hundreds of wheels all over the Dominion, and in a great many instances orders were repeated, and from the same districts, to show you how our bargains in wheels were appreciated. These bicycles are actually worth \$20.00 of interest to all farmers. Our prices are away below those of any other firm in Canada. For instance: we sell a complete tank pump outfit, containing a Standard tank pump, 20 feet best 2-inch wire-lined suction hose, 10 feet of 1-inch discharge hose, hose bands, hose clamp and nozzle, all for only \$14.70. We sell a complete set of rasps for Monitor Jr. clover huller for only \$15; a steel wagon tank, \$14; thresher teeth, 5c. each, all machines; a 3-inch 4-tone chime whistle, \$8; etc. Our prices on drive belts, handy wagons, wrought-iron wheels, feed rakes, injectors, lubricators, sewing machines, watches, rubber goods, mackintoshes, books, etc., are correspondingly low. Send for our catalogue and judge for yourself. We will also thank you to tell your thresher about us, or send him his name, and we will send you and him a catalogue apiece.



Messrs. D. Milne & Son, Ethel, Ont., whose advertisement of Scotch Shorthorns runs in our columns, write: We could spare a carload or two of the following fashionably-bred Scotch families, viz., Matchless, Golden Drops, Rosebuds, Crimson Flowers, Claras, Clarets, Vain Duchesses, Mayflowers, Marr Beautys, and others, aged one, two and three years and upwards, several show animals amongst them. Our imp. bull, Red Duke = 36084 = (77585), is doing good service in the herd, calves coming good and strong and excellent colors.

Among fanciers of Oxford Down sheep on the continent of America, there are few indeed who have not heard of the Linden Farm Oxfords. Mr. R. J. Hine, the owner of the Linden Flock of Oxford Down sheep, is well known to breeders of this favorite breed of sheep in Canada and the United States, not only on account of the many Royal and other leading show winners he has imported, but to all who have had the pleasure of an acquaintance with him he is held in pleasant remembrance on account of his open, frank and genial disposition. Mr. Hine's farm is situated in the County of Elgin, about six miles north of Dutton station on the M. C. & L. E. & D. R. Railroads. His flock of Oxfords now numbers over 100 head, and are all either imported or bred directly from imported animals. Among the breeding ewes are no less than three years' first prize pens of lambs at the Royal Show. What more need be said of the quality of the breeding ewes of this flock? This flock, it is claimed, produced the sheep that literally swept the boards last fall at the leading shows in Ohio and Michigan, including both state fairs. Among this year's lambs are a number that weigh from 100 to 125 lbs., that have made the phenomenal gain of a trifle over a pound a day. Part of this year's lambs are sired by Linden's Champion 3rd, a big, massive, perfectly-moulded ram, of Mr. Hine's own breeding, a ram that has proven so successful a sire that Mr. Hine is loath to part with him, although he has refused many tempting offers. The other part of this year's crop are sired by Imp. Addebury Warrior. Mr. Hine also owns the grand old stock ram, Imp. Reading's 10th, winner of first prize at the Royal in 1899; also winner of first at Toronto and London the same year. Mr. Hine imported this ram, and after using him one season, sold him to go to the United States. His lambs turned out such a grand lot that Mr. Hine endeavored to get him back, and only late succeeded. He will use him this year. At present a number of both sexes are being fitted for a tour of the fall shows. These, together with Mr. Hine's new importation which he expects to land shortly, will make a formidable lot to run up against next fall.



Our 100-Page Catalogue Free.

Our new 1902 catalogue, containing 100 pages, will be sent to any address on application. It is of particular interest to threshers, as it gives net prices on all kinds of thresher and engineers' supplies, but it also shows a lot of articles of interest to all farmers. Our prices are away below those of any other firm in Canada. For instance: we sell a complete tank pump outfit, containing a Standard tank pump, 20 feet best 2-inch wire-lined suction hose, 10 feet of 1-inch discharge hose, hose bands, hose clamp and nozzle, all for only \$14.70. We sell a complete set of rasps for Monitor Jr. clover huller for only \$15; a steel wagon tank, \$14; thresher teeth, 5c. each, all machines; a 3-inch 4-tone chime whistle, \$8; etc. Our prices on drive belts, handy wagons, wrought-iron wheels, feed rakes, injectors, lubricators, sewing machines, watches, rubber goods, mackintoshes, books, etc., are correspondingly low. Send for our catalogue and judge for yourself. We will also thank you to tell your thresher about us, or send him his name, and we will send you and him a catalogue apiece.

WINDSOR SUPPLY CO.,
160 Ouellette Ave., Windsor, Ont.

Scotch Shorthorns:

Of both sexes, of the following noted families: Golden Drops, Rosebuds, Claras, Matchless, Strathallans, Vain Duchesses, Marr Beautys, Mayflowers, Crimson Flowers, and others; 56 head to select from. Herd headed by the imported Bracelet bull, Red Duke = 36084 = (77585).

DAVID MILNE & SON, ETHEL P. O.,
Huron Co., Ont., Ethel Station, G.T.R., half mile from farm.

Bug Death

Kills potato, squash and cucumber bugs; currant, gooseberry and tomato worms, and all bugs and worms that eat the leaves of plants.

BUG DEATH is not poisonous.

It prevents the blight, it FEEDS the plant. The increased yield of crop more than pays for the Bug Death used.

SEND FOR OUR BOOKLET: WE SEND IT FREE.

BUG DEATH CHEMICAL CO., Limited,

ST. STEPHEN, N. B.

VALUABLE PREMIUMS.

EXACT SIZE OF KNIFE.



An Al Farmer's Knife

DIRECT FROM SHEFFIELD, ENGLAND.

FINEST HAND-FORGED STEEL BLADES. STRONG AND DURABLE.
BEAUTIFUL NICKEL HANDLE.

Specially selected and ordered by the Manager of the
ADVOCATE when in England last summer.

Cannot be Duplicated.

Every farmer and farmer's son should
have one of these knives.

START
OUT
FOR
THE
NAMES
TO-DAY.

How to Secure It.

SEND

New
Subscribers

2

New
Subscribers

TO THE

FARMER'S ADVOCATE

And we will send you the knife, postpaid.

Another large consignment now on the way from England.

Made by one of the longest-established manufacturers of cutlery in Sheffield, England.

THE BIG FOUR

THE GREAT PREMIUM PICTURE
OFFER, FOR OBTAINING NEW
SUBSCRIBERS TO THE "FARMER'S
ADVOCATE" AT \$1 A 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.

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

"CANADA'S GLORY" Eleven celebrated
light horses.

"CANADA'S COLUMBIAN VICTORS"
Thirteen celebrated Ayrshire cattle.

BEGIN TO CANVASS AT ONCE

FOR NEW SUBSCRIBERS. The Christmas number for
1901 will be sent FREE to all who now subscribe for 1902.
Subscription Price, \$1.00 per Annum.

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 pre-
paid) this Bible to anyone sending us the names of TWO NEW SUB-
SCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

Handsome
Curb-link
Bracelet:
Silver
Filled



For 2 new subscri-
bers. Sterling silver
for 3 new subscri-
bers. For each ad-
ditional new sub-
scriber, two Sterl-
ing Silver Friend-
ship Hearts.

Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums.
Cash must accompany new names.

THE WM. WELD COMPANY, LTD., LONDON, ONTARIO.

CLYDESDALE AND HACKNEY STALLIONS AND MARES

FOR SALE: THE CLYDESDALE STALLION **CHARMING LAD 2923** Rising 3; large size and very smooth; has won 6 prizes and a gold medal at Ottawa Exhibition. **LORD STANLEY 2537**, rising 2, also a prizewinner. **CLOTH OF GOLD 2959**, 5 years old; first-prize winner at Toronto and first and sweepstakes at London. Also brood mares and a number of very fine foals of both sexes. **TWO HACKNEY STALLIONS**; also two mares rising 4 and 5 years old; large, handsome, high-steppers, well broken to drive. Size, action and quality combined in all. Inspection invited. -om
O. SORBY, GUELPH, ONTARIO.

SPECIAL OFFER IN BARCLAY'S PATENT ATTACHMENT FOR THE CONTROL AND CURE OF BALKING AND KICKING HORSES.

We will send our Attachment, charges paid one way, to any part of Canada, C.O.D., and subject to examination and approval of method. When satisfied it will do all we claim for it, pay the express agent our price, \$5.00. If not, the return freight will cost only a few cents. Our article will control any vice known to a horse, and is giving splendid satisfaction wherever used. Full illustrations and directions are enclosed. A boy can adjust it, and it can be used with any harness, vehicle or implement. If you have a troublesome horse, or a colt you wish to break in, write at once to
The Barclay Mfg. Co., Brougham, Ontario.

WM. SMITH, COLUMBUS, ONT.,
IMPORTER AND BREEDER OF
Clydesdale Horses & Shorthorn Cattle

4 Imp. Clydesdale Stallions 4

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

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

IMP. CLYDESDALES AND AYRSHIRES

The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentin, Ayrshires all ages; and poultry, utility breeds. Eggs for sale. -om
ROBT. NESS & SONS, Howick, Que., P.O. & Sta.

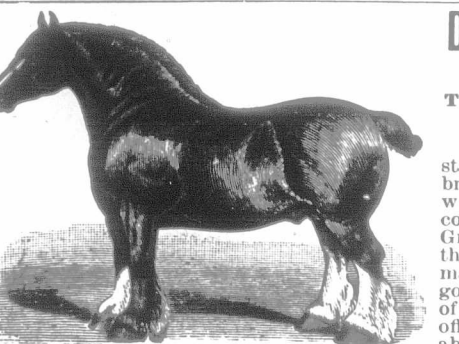
DR. PAGE'S ENGLISH SPAVIN CURE

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

Spring Brook Holsteins and Tamworths.

A few choice 2-year-old heifers, 1 yearling and 2 calves, all sired by my imp. prizewinning bull, Judge Akkrum De Kol 3rd, and out of rich-bred cows. Stock strictly choice. A few Tamworths to offer. -om
A. C. HALLMAN, Breslau, Box 26, Waterloo Co., Ont. (Formerly New Dundee)

PLEASE MENTION FARMER'S ADVOCATE



Old Country all the time, in the heart of the Clydesdale home. Intending purchasers desiring to place their orders with us for either stallions or mares, please write or call upon
JAMES DALGETY, LONDON, ONTARIO.

GOSSIP.

Three miles from the village of Thornhill, Ont., which can be reached by electric railway every hour from Toronto, is the farm of Mr. Wm. Teasdale, of Doilar P. O., breeder of high-class Yorkshire hogs. Just now the herd contains a number of very select youngsters from two to eight weeks old, sired by the old stock boar, O. L. Prince 5071, sired by O. L. Conqueror 2475, dam O. L. Royal Queen (imp.) 3058. Without doubt this is one of the best types of bacon Yorkshires alive to-day, enormous length and depth, a perfect back, with scarcely a variation in width from end to end, and he possesses very heavy, clean bone. Were it not for a crooping of one ear, due to an accident, he could scarcely be beaten in any showing. The several breeding sows, Dollar Fubero 7248, by O. L. Blucher 3961, dam O. L. Tubero 1950, by Hollywell Emigrant (imp.) 173, with some full sisters of hers, and other Brethour-bred sows, were all selected as breeding dams on account of their superiority of type, and are a grand lot. As before intimated, the young ones for sale out of these sows and sired by the stock boar, are all that could be desired, and Mr. Teasdale is not one of the fancy-priced men either. See his advertisement and write for prices.

FLEMING'S FISTULA AND POLL EVIL CURE.

A remedy that has never failed is indeed a marvel, but such is the strong claim made by Fleming Bros., eminent chemists, 36 Front St., West, Toronto, Ont., for their Fistula and Poll Evil Cure. This scientific cure, that anyone can apply with safety and success, is free if it fails, as its makers plainly state in their advertisement elsewhere in this issue. Have also Spavin Cure and cure for Lump Jaw. Full particulars and book of testimonials from many users will be sent free to all who write Fleming Bros. and mention Catalogue M.

NOTICES.

NOVA SCOTIA FRUIT GROWERS.—Secretary S. C. Parker, of the Nova Scotia Fruit Growers' Association, Berwick, has issued, in attractive pamphlet form, the 38th annual report of the organization, made up mainly of a stenographic report of the proceedings of the annual convention held last winter at Wolfville, an account of which was published in the "Farmer's Advocate" at the time. The papers, addresses and discussions were of a very practical nature, and Mr. Parker is to be congratulated on issuing them in this permanent form for the benefit of our Maritime fruit growers.

THE SOVEREIGN BANK OF CANADA.—The above institution, whose card appears on the cover of this issue, is the first chartered bank established in Canada for over twenty years. It opened its doors in Toronto on the 1st of May, with a capital of \$1,000,000, which was subscribed for at a 25% premium, or \$125 for every \$100 share. The premium was used to create a reserve fund, and the "Sovereign" is the first bank that ever started business in Canada with a reserve fund. The directors are as follows: President, H. S. Holt, Esq., President Montreal Light, Heat and Power Co., Montreal. Vice-presidents: Randolph Macdonald, Esq., Messrs. Manning & Macdonald, contractors, Toronto; James Carruthers, Esq., Messrs. Jas. Carruthers & Co., grain exporters, Toronto. Directors: A. A. Allan, Esq., Messrs. A. A. Allan & Co., Toronto; Arch. Campbell, Esq., M. L., Toronto; Hon. Peter McLaree, Perth; Hon. Donald McMillan, Alexandria; Jno. Pugsley, Esq., Messrs. Pugsley, Dingman & Co., Toronto; Henry K. Wilson, Esq., President Lincoln Trust Co., New York. These gentlemen are well known throughout the Dominion, and form a strong business board. The bank has also a young, active and experienced General Manager and a staff of trained experts from the older banks. The strong financial position of the bank, as well as its directorate and management, have enabled it to gain confidence from the outset. This was well evidenced by the splendid reception it has met with at Montreal, Toronto and other points where branches have been opened to date. The Sovereign Bank receives deposits and allows interest, and has agencies and correspondents all over the world, it being represented in New York and London by J. Pierpont Morgan's firm. The Bank Act under which the Sovereign Bank was established goes further to protect the public than any previous Bank Act passed by the Dominion Parliament, and this is the first bank established thereunder.

Dalgety Bros., London, Ont., and DUNDIE, SCOTLAND,

The Largest Importers and Exporters of Horses in Canada.

Having sold out our last consignment of stallions, we are again making preparations to bring out a large consignment in September, which will include many valuable horses, combining size, quality, breeding and action. Great care will be taken in the selection of this consignment. We have imported a great many winners at the principal shows, which goes to prove that we bring out the right kind of horses. We are in an excellent position to offer buyers the best quality at most reasonable prices, having our representative in the

I PURPOSE SELLING BY AUCTION

35 HEAD OF SHORTHORNS

TUESDAY, JUNE 24, AT DELAWARE.

THE OFFERING WILL CONSIST OF

Straight Scotch, Scotch Topped, Bates and Booth.

All are by Scotch-bred bulls, and all old enough are in calf to bulls of similar breeding. The cattle are worthy the attention of intending purchasers, being well bred and in good condition. Several are prizewinners, and are worthy of strong competitors. Without doubt great material will be offered upon which to continue the use of Scotch blood. A number of very superior Yorkshire swine will be sold. The Shropshire flock may be inspected, and purchases made by private treaty. Catalogues in due time, for which apply to

Richard Gibson, Delaware, Ont.

R. R. station Komoka, G. T. R. and C. P. R., three miles from farm, twelve miles from London.

IMPORTANT AUCTION SALE

OF FIRST-CLASS 200-ACRE FARM,

27 Registered Shorthorn and 10 High-grade Cattle,

ROAD AND DRAFT HORSES,

Wednesday, June 25th, 1902.

THIS herd is largely of Scotch breeding, and combine quality and substance in very even proportions, being sired by such noted bulls as Scottish Victor (imp.) (50422), Warrior (imp.) (55173), Clinton Victor = 21123 = (whose dam was first-prize cow at London), and Rugby = 2337 =. Females not having calved are safe in calf to Wood Home Lad, by Royal Standard. The farm is one of the finest stock farms in Canada, situated five miles west from the City of London. Visitors will be taken to and from the sale, meeting all trains at Hyde Park station up to 2 p.m. Lunch at 12 noon. Sale commences at 2 p.m. Send for catalogue. For information and terms of farm apply to

JOHN GILLSON, Auctioneer. **GEORGE DICKIE, Proprietor, Hyde Park.**
Mr. Richard Gibson, Delaware, Ont., 12 miles from London, will hold a sale of Shorthorns and Yorkshires on June 24th.

First-Class Farm for Sale

MAGNIFICENT farm for sale, in the highest state of cultivation, containing 150 acres, being lot 21, concession 2, West Oxford, Oxford County, Province of Ontario, one-half mile from town of Ingersoll, on G.T.R. and C.P.R. Modern buildings, two-story brick house (54 x 28 feet) with slate roof, and heated with hot-air furnace. Basement barn, 76 x 42; and stable, 52 x 35 feet, with 20-foot posts. Brick piggery, 100 x 30 feet, two stories. Splendid water supply; two orchards; soil rich clay loam, all underdrained, well fenced; 18 acres hard maple bush. No waste land. Within two miles of successful pork-packing house, three cheese factories, and the largest milk-condensing factory in Canada. For full particulars come and see, or write to the proprietor on the premises.

GEORGE SEBBEN,
INGERSOLL, ONTARIO.

THE SHEEP OF THE CENTURY.

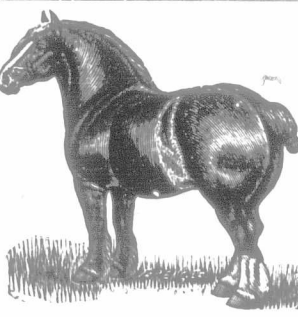
PRINCIPAL AWARDS GAINED BY SUFFOLKS AND SUFFOLK CROSSES IN OPEN COMPETITION AGAINST ALL BREEDS, 1898 TO 1901.

SCOTTISH NATIONAL FAT STOCK SHOW—			
Championship of the yard	1898	1899	1901
Reserve number for ditto	.....	.....	.....
SMITHFIELD CLUB SHOW—			
Championship of the yard	1898	1899	1900
Reserve number for ditto	.....	.....	.....
Breed cup—cross-bred section	.....	.....	.....
SMITHFIELD CLUB SHOW (Carcase Competitions)—			
Centenary gold medal (best carcase in the yard)	1898	.....	.....
Reserve number for ditto	1898	.....	.....
First prize—Short-wool lambs	1898	1900	1901
Second prize— " " "	1898	1899	1901
Third prize— " " "	.....	1899	.....
Fourth prize— " " "	.....	.....	1901
First prize—Short-wool wethers	.....	.....	1901
Second prize— " " "	.....	.....	1901
Third prize— " " "	.....	.....	1901
First prize—Long-wool wethers	1898	.....	.....
Second prize— " " "	.....	.....	1900
Third prize— " " "	.....	.....	1901

AN UNEQUALLED RECORD.

Pamphlet, with full description of the breed, show-yard honors, live and dead weights of rams, ewes and lambs, can be obtained on application to

ERNEST PRENTICE, Secretary Suffolk Sheep Society, IPSWICH, ENGLAND.



Clydesdales and Shorthorns

FOR SALE: Seven choice young stallions, and several young mares and fillies. Five young bulls and bull calves, and thirty-five excellent young cows and heifers. Mostly registered in the American Herdbook. -om

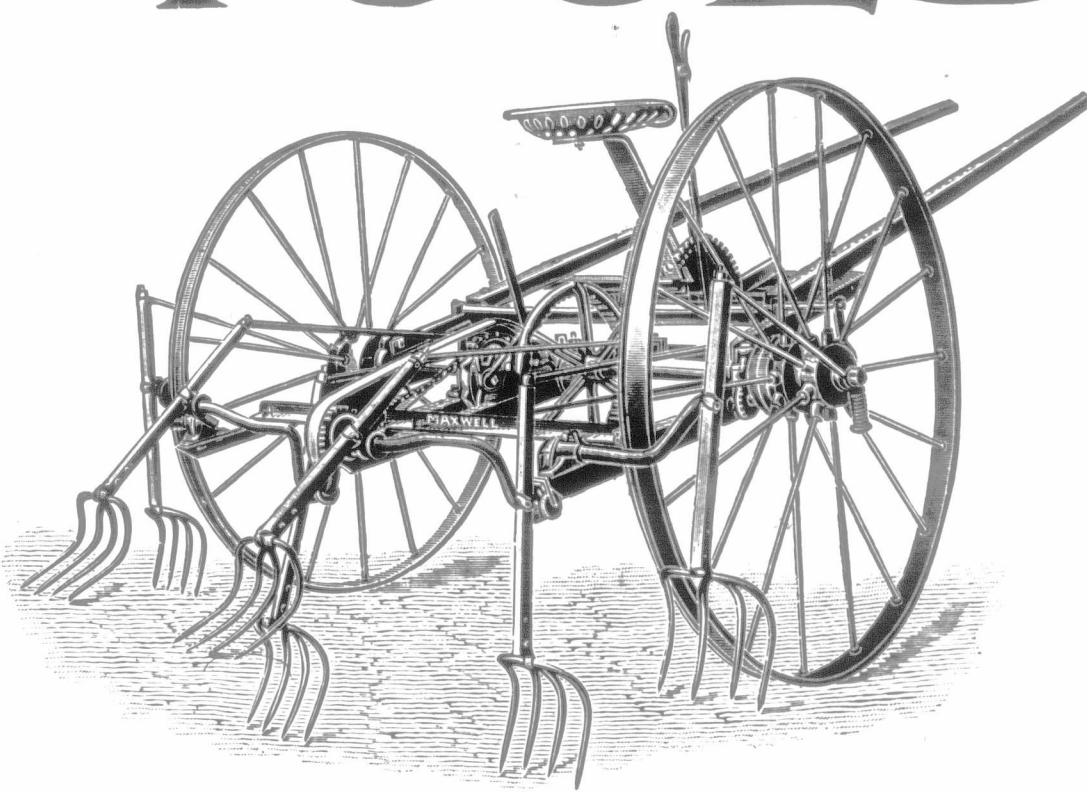
JOHN BRIGHT, MYRTLE, ONTARIO.

HAY TOOLS

The Maxwell Hay Tedder

(ALL STEEL).

The growing demand for a reliable, well-made Hay Tedder, which can be sold at reasonable figures, led to the developing and perfecting of this machine.



Improved
"SIDE DELIVERY"
Hay Rake

SPECIALLY ADAPTED
FOR HAY LOADERS.

NOTHING LIKE IT FOR
GOOD WORK.

MOST COMPLETE OUTFIT
OFFERED THE TRADE.

Maxwell Hay Loader

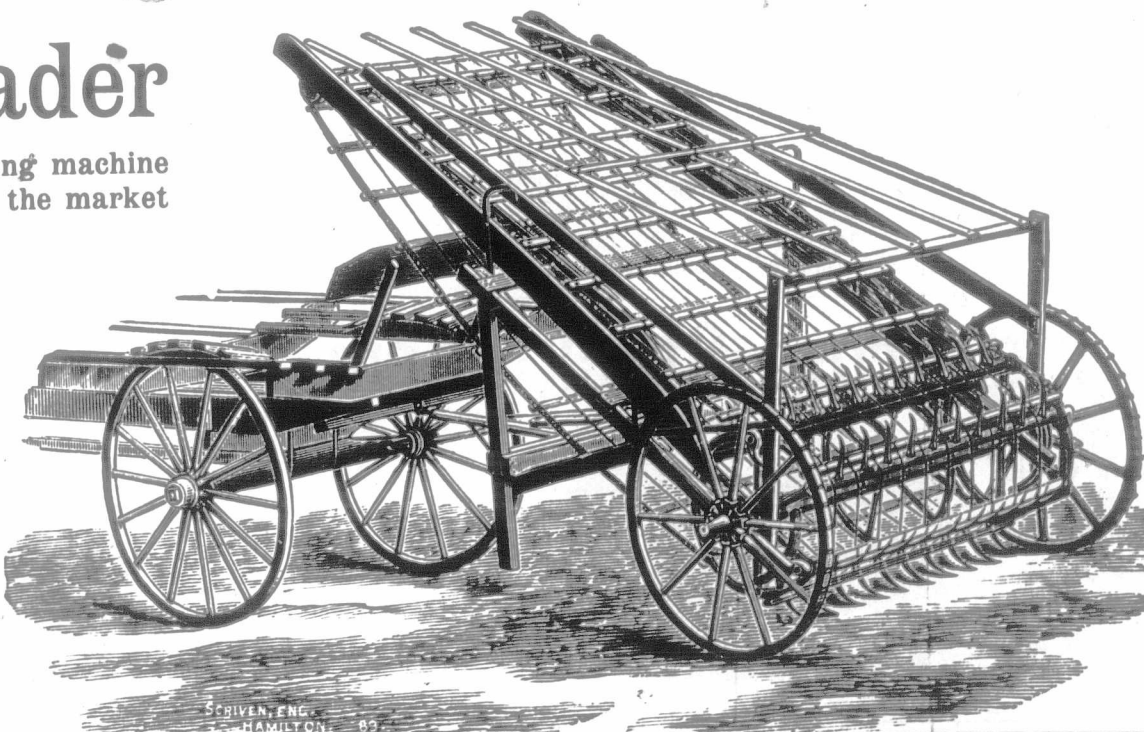
It is no experiment, but is the leading machine of its class in Canada; has been on the market for years, and is fully guaranteed.

DO YOU WANT THE BEST?
THEN ASK US FOR PARTICULARS.

David Maxwell

& SONS,

ST. MARY'S, ONT.

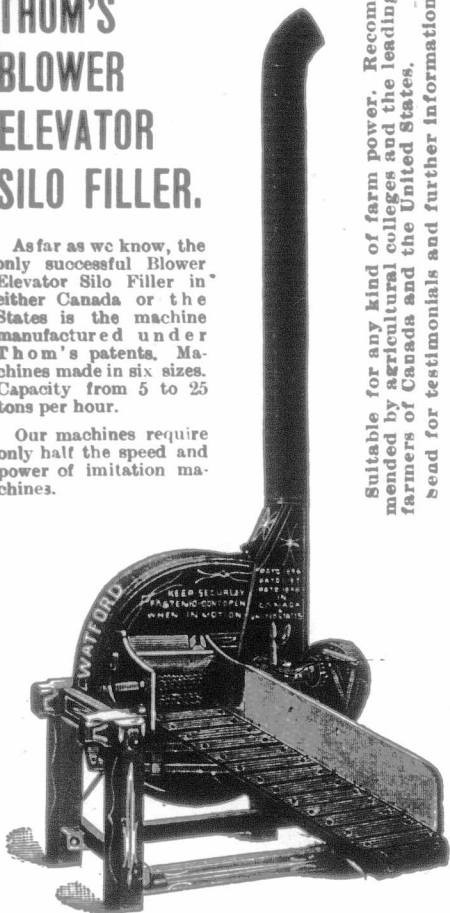


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**The Originator and the Original
THOM'S
BLOWER
ELEVATOR
SILO FILLER.**

As far as we know, the only successful Blower Elevator Silo Filler in either Canada or the States is the machine manufactured under Thom's patents. Machines made in six sizes. Capacity from 5 to 25 tons per hour.

Our machines require only half the speed and power of imitation machines.



THOM'S IMPLEMENT WORKS,
WATFORD, ONT.
D. THOM, PATENTER.

Suitable for any kind of farm power. Recommended by the leading farmers of Canada and the United States. Send for testimonials and further information.

**Wide-Tire Metal Wheels
FOR WAGONS.**



Made to fit any axle, any sized wheel, any width tire. Every farmer should have a set. They are low and handy. They save labor, and the wide tires avoid cutting the farms into ruts. Write for prices.

Dominion Wrought Iron Wheel Co., Ltd.,
9 AND 11 BROCK AVE.,
TORONTO, ONT.

Bicycles Below Cost

5000 Bicycles, overstock. For 30 days only we will sacrifice at less than actual cost. **New 1902 Models.**
"Bellie," complete \$8.75
"Cossack," Guaranteed High Grade \$9.75
"Siberian," a Beauty \$10.75
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no finer bicycle at any price.
Choice of M. & W. or Record tires and best equipment on all our bicycles. Strongest guarantee.
We SHIP ON APPROVAL C.O.D. to anyone without a cent deposit & allow 10 DAYS FREE TRIAL before purchase is binding.
500 good 2nd-hand wheels \$3 to \$8.
Do not buy a bicycle until you have written for our free catalogues with large photographic engravings and full descriptions.
MEAD CYCLE CO., Dept. 360 R Chicago.

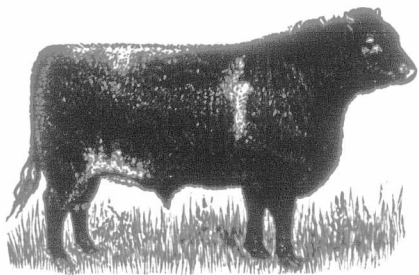
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FOR FARMERS.**

We are after more mail-order business. Send us your address, and we will mail you our latest WHOLESALE price list.
25 cent teas at 17 cents.
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Etc., etc., etc.
You pay the same prices as the storekeepers, and get better goods. Terms, cash on delivery.
Crighton & Co., 102 Church St., Toronto.

Spring Grove Stock Farm.

Shorthorn Cattle
AND
Lincoln Sheep.

HERD prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the



get of the great sire, Wanderer, of the Cruickshank Brawith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply

T. E. Robson,
ILDERTON, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

British Columbia Farms.

If you are thinking of going to the Pacific Coast, try British Columbia. No extremes of temperature. No cyclones. No dust storms. No cloudbursts. No droughts. No blizzards. Fertile land, and the heaviest crops per acre in Canada; we make this statement without fear of contradiction. The land is cheap, and the markets and prices for farm produce the best on the Pacific Coast. Write for farm pamphlet to THE SETTLERS' ASSOCIATION OF B.C. BOX 540, VANCOUVER, B. C.

High-class Herefords

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

A. S. HUNTER, DURHAM, ONT.

The Sunny Side Herefords.

Imp. Sunny Slope Tom 1st at head. Lord Wilton, Garfield, Grove 3rd, Diplomat and Anxiety blood represented. For sale: 5 bulls from 9 to 30 mos., and 20 choice young cows and heifers. Inspection and correspondence solicited. on O'NEIL ST., Sault Ste. Marie, Ont. Local station, G. T. R. Ilderton station, L. H. & B.

INGLESIDE HEREFORDS.

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

Shropshire Sheep and Tamworth Swine.
H. D. SMITH,
Compton, Quebec, Ont.

**High-Class Shorthorns
and YORKSHIRE PIGS.**

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

JAS. McARTHUR, Goble's, Ontario.

Shorthorns for Sale.

6 heifers (all in calf), from Imp. British Statesman; also two young bulls, 18 months old. Write for prices. LOUIS ELLARD, Loretto P.O., Beeton Stn.

**JOHN DRYDEN,
BROOKLIN, ONTARIO.**

BREEDER OF
CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.
Choice Young Bulls and Ram Lambs for sale. Write for prices.

"ORCHARD HILL" SHORTHORNS.

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

JAMES A. CRERAR, Shakespeare, Ont.
BREEDER AND IMPORTER OF

HIGH-BRED SCOTCH SHORTHORNS

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

ROSEVALE SHORTHORNS

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



Horn Fly Oil

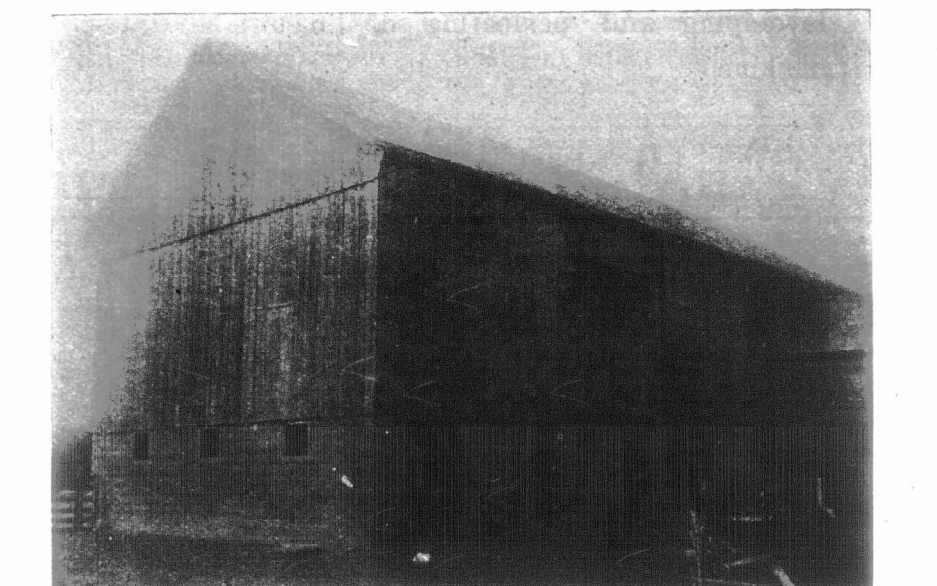
Keeps flies off animals,
Kills vermin,
A splendid disinfectant.

Sold in Cans (with directions)—
QUART, each, 25c.; doz., \$2.70. GALLON, each, 60c.; ½ doz., \$3.50
BY EXPRESS OR FREIGHT AT PURCHASERS' EXPENSE.
Ask your dealer, WM. RENNIE, ADELAIDE and TORONTO.
or send direct to

"IT IS WITH PLEASURE THAT I TESTIFY TO THE GOOD QUALITIES OF YOUR

Thorold Cement

FOR BUILDING PURPOSES."
A WELL-TO-DO FARMER NEAR ALVINSTON THIS TIME.



BASEMENT BARN OF JOHN BLACK, NEAR ALVINSTON, ONT.
Walls 36 x 60 feet, 8 feet high.
Mr. Black used Thorold Cement in both basement walls of barn and floors of stables.

ALVINSTON, ONT., Oct. 22, 1900.
ESTATE OF JOHN BATTLE, Thorold, Ont.:
DEAR SIRS.—It is with pleasure that I testify to the good qualities of your Thorold Cement for building purposes. I have just completed an eight-foot wall under my barn, 36 x 60 feet. I have also floored all my stables with it, using in all 150 barrels of cement. The work was done under the supervision of William Hand, a man who I am pleased to recommend to any of my fellow farmers contemplating erecting concrete walls or floors.
I remain,
Yours truly,
JOHN BLACK.

ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.
MANUFACTURERS OF THOROLD CEMENT.
"We do not place our cement to be sold on commission."

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.
Imp. Golden Drop Victor our present stock bull. Eleven young bulls and some young cows for sale at reasonable prices.

H. CARGILL & SON,
Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.

ARTHUR JOHNSTON
BREEDER AND IMPORTER OF
SHORTHORNS ONLY.

FOR SALE: Imported bulls and bull calves. Home-bred bulls and bull calves, from imported cows and by imported bulls. Home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.
GREENWOOD, ONT., P. O. AND TELEGRAPH OFFICE.
RAILWAY STATIONS: PICKERING, G. T. R., 22 MILES EAST OF TORONTO.
CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

SHORTHORNS, SHROPSHIRE, COTSWOLDS
We are now offering a number of heifers and heifer calves; a few bull calves; a number of cows; all bred in the purple and as good as the best. Also Shropshire and Cotswold sheep. om
JOSEPH BELL ESTATE, Bradford P. O. & Sta.

SHORTHORNS.

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

LAKE VIEW STOCK FARM.

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

SHORTHORNS FOR SALE.

Two good young bulls fit for service. Also females all ages. Herd headed by (imp.) Spicy Marquis. om
JAMES GIBE, Brookdale, Ont.

Shorthorns and Leicesters.

Herd Established 1855.
A number of young bulls, cows and heifers for sale. Imported Christopher = 28859 = heads the herd of large cows of grand milking qualities. Also a number of Leicesters of both sexes, from imported foundation. om
JAMES DOUGLAS, CALEDONIA, ONT.

Maple Lodge Stock Farm.

ESTABLISHED 1854.
SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale. LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams, now for sale. om
A. W. SMITH, Ailsa Craig Station, Maple Lodge P. O., G. T. R., 3 1/2 miles. ONT.

SHORTHORNS (IMP.)

Cows and heifers, imp. and home-bred. Bulls, imp. and home-bred—all ages. Representing the fashionable blood of Scotland. om
EDWARD ROBINSON, MARKHAM P. O. & STN.

SHORTHORNS:

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

FOR SALE:

5 Scotch Shorthorn Durhams (bulls), 5 to 16 months; 5 young cows and heifers. Berkshire pigs, both sexes. Prices reasonable. "Camden View Farm," om
A. J. C. SHAW & SON, Thamesville P. O.

Shorthorns and Berkshires

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin. om
MAC CAMPBELL, NORTHWOOD, ONT.

Shorthorns and Clydesdales

100 SHORTHORNS TO SELECT FROM.
Herd bulls (imp.) Diamond Jubilee = 28861 = and Double Gold = 37852 =. May offering: Six grand young bulls, and cows and heifers of all ages. Clydesdales: One 3-year-old stallion, and one 4-year-old mare (in foal). Farm one mile north of town. om
T. DOUGLAS & SONS, STRATHROY, ONT., BREEDERS OF

SHORTHORN BULLS FOR SALE:

A choice lot of Shorthorn bulls from 10 to 16 months old, sired by Imp. British Statesman (63729) = 20833 =; and cows of the Mara family. They must be sold at once. Prices away down to suit customers. om
FITZGERALD BROS., Elmvalle Station, G. T. R. Mount St. Louis P. O.

J. & W. B. WATT,

SALEM, ONTARIO
(POST AND TELEGRAPH OFFICE),
BREEDERS OF—
Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

Our herd contains such families as Matchlesses, English Ladies, Mildreds, Village Buds, Missies, Stamford, Mysies, Vanillas, Clarets, and Marthas. The imported bulls, Scottish Peer and Coming Star (a prizewinner at Chicago in 1901), now head the herd.

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

Shorthorns, Berkshires, Leicesters

An offering at present the grand stock boar, Crown Prince; also some young ones. om
ISRAEL GROFF, ALMA, ONTARIO.

GOSSIP.

Joseph Lawrence, of Clearwater, Man., sold by auction six head of yearling bulls, at Calgary, just before the Territorial stock sale there, at an average of \$106.00 per head.

The Conrad-Price Cattle Co. recently brought about 2,000 head of Mexican cattle from the south, which they are placing on their range at the Saskatchewan river near Medicine Hat.

L. H. Praitt, a Texas rancher, is moving 6,000 head of Texas cattle into Assiniboia, south of Medicine Hat. The shipment will require 200 cars, or ten train-loads, and the freight is said to be about \$10 per head.

At the dispersion sale, last month, of the Shorthorn herd at Rettie, Banffshire, Scotland, the property of Mr. Geo. Longmore, the outgoing tenant, the highest price for cows was 32 guineas and for heifers 62 guineas, given by Mr. G. Campbell, Harthill. The average for 28 head was 23 guineas.

One of the largest and most valuable consignments of Aberdeen-Angus cattle that has ever left Great Britain was shipped on May 23rd from Liverpool to America by Col. Judy and Messrs. Cantine and Williams, of Iowa. In all these gentlemen are taking out over one hundred head, purchased from many of the leading breeders in Scotland, including H. M. the King, the Earl of Rosebery, Sir George Macpherson Grant, Bart., Col. Smith Grant, Auchorachan; Mr. Skinner, Drumlin; Mr. Shaw Adanson, of Careston Castle; Mr. Patrick Chalmers, of Aldbar; Mr. Macpherson, Mulben, and others. Col. Judy's purchases number no fewer than fifty-one head. Amongst the bulls in the group is Lord Fretful of Ballindalloch, bred by and purchased from Sir Geo. Macpherson Grant.

CLYDESDALE FILLIES FOR CANADA.

Mr. James Carruth, Portage la Prairie, Manitoba, shipped from Glasgow, on May 17th, three splendidly-bred two-year-old Clydesdale fillies. The best of these, Lady Pandora, is from her breeder, Mr. Samuel Hutchinson, Blairlusk, Alexandria. She was well forward at Glasgow last year, as well as second at Dumbarton, and first at some of the local shows. Her sire was the celebrated Mains of Airds, and she is out of the fine breeding old mare, Tibbie, by Glencoe, gr-dam by Garibaldi (315). It will be noticed that this filly is strongly inbred to Prince of Wales (673), both Mains of Airds and Glencoe being got by him. She has splendid feet and legs, and should make an excellent brood mare. The other two fillies, Chantress and Bell, are also of nice quality, and full of good blood. The former was bred by Lords A. and L. Cecil, Orchardmains, Kent, and is got by the Royal winner, Palmerston, out of Caress, by Prince Eddy, a son of the £3,000 Prince of Albion, gr-dam of the noted prizewinning Claymore mare, Cynthia, winner of first at the Royal and other English shows. Her neighbor, Bell, was bred by Mr. A. Carruth, the shipper's brother, at Crossflatt, Kilbarchan, and was got by the Glasgow premium horse, Clan Chaltan, out of Nannie, by the noted Gallant Prince, sire of the champions Holyrood and Knight of Cowal.

**Mark Your Stock
Dip Your Stock
Cure Your Stock
Shear Your Stock**

We make a specialty of Ear Labels and Buttons, Tattoo Markers, Milk Oil Sheep Dip, Cooper Sheep Dip (English), Worm Powders, Insect Powder, Rice's Lice Paint, Shears, Shearing Machines, Toxaline French Worm Cure, Crooks, Bells, Poultry Tonic, Poultry Bands, Shepherds' Cordial.

All Best and Cheapest.
Write for Illustrated Catalogue.
F. S. BURCH & CO.,
178 Michigan St., Chicago.
Mention this paper

SHORTHORNS.

THORNHILL HERD, ESTABLISHED 27 YEARS.

Imp. Royal Member and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls. om

REDMOND BROS., Millbrook Sta. and P. O.

HIGH-CLASS SCOTCH SHORTHORNS

of the following families, for sale at moderate prices: Village Girls, Broadhooks, Beaufort Roses, Missies, Clarets, Marr Floras, Nonpareils, Minns and other choice families. Write for catalogue. Shropshire rams and ewes for sale as usual. om

ROBERT MILLER, Stouffville, Ont.

Shorthorn Bulls.

Good ones. Choicely bred. Moderate prices. Send for bull catalogue. Also Scotch-bred cows and heifers.

H. SMITH, HAY, ONTARIO.

Exeter station on London and Wingham branch of the G. T. R. adjoins the farm. om

Hillhurst Shorthorns

AND HAMPSHIRE DOWN SHEEP.

THERE are few herds on the continent that can boast of three as good stud bulls as Joy of Morning 15303, Scottish Hero 14553, and Scottish Beau 14552. These are all imported bulls, of the richest breeding, and right well do they reflect the possibilities of the future character of the Shorthorns being bred at Hillhurst. The breeding cows at Hillhurst are of Scotch and English breeding, and are especially noticeable for their size.—*Live Stock Indicator*, May 15, 1902.

M. H. COCHRANE, COMPTON CO., P. Q., G. T. R., 117 MILES EAST OF MONTREAL. om HILLHURST STATION.

TROUT CREEK HERD OF Shorthorns

Won first prize for herd and the championship for best bull and best female, any age, at Toronto Industrial and Pan-American Exhibitions, 1901. We keep constantly in our herd a choice lot of imported and Canadian-bred cattle of both sexes. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains if notice is given. Visitors always welcome. Address:

JAMES SMITH, W. D. FLATT,
Manager, 378 HESS ST., SOUTH,
MILLGROVE, ONT. Hamilton, Ontario.

Queenston Cement.

No better cement for durability and economy in building concrete houses, barn foundations and floors, silos, cisterns, etc. Estimates and all other information cheerfully given. Low prices. Write to this office, or see my agents before giving your order.

Isaac Usher, QUEENSTON, ONT.

Rapids Farm Ayrshires.

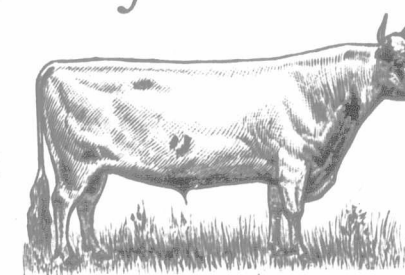
REINFORCED BY RECENT IMPORTATIONS of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows last year. Imported Douglasdale of Dam of Aber, champion at the Pan-American, heads the herd. Representatives of this herd won the first herd prize at the exhibitions at— om

Toronto, London and Ottawa in 1900, and at the Pan-American in 1901.

Come and see or write for prices.

Robert Hunter, Manager
for W. Watson Ogilvie, Lachine Rapids, Quebec.

PLEASE MENTION THE FARMER'S ADVOCATE.



Mercer's Shorthorns

Are represented by Missies, Stamfords, Floras, Claret Princesses, Red Roses, Fashions, Crimson Flowers, and Matchless families. Headed by Village Squire 24963, a son of Abbottsford. Stock of both sexes and all ages for sale.

T. MERCER, MARKDALE P. O. & STN.

W. G. PETTIT & SONS

FREEMAN P. O., ONT.,

IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

Make a Special Offering for May and June:

One of our imp. stock bulls, 3 years old, red; one imp. bull, 2 years, roan; two bulls imp. in dam, 15 months; four bull calves from imp. cows, 12 and 14 months; four home-bred bulls by imp. bulls, 15 to 18 months; seventy-five imp. and home-bred cows and heifers, all ages. Catalogues on application.

Burlington Jct., G. T. R. Stn., Tele. & 'Phone.

HAWTHORN HERD

of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from A1 dairy cows. WM. GRAINGER & SON, Londesboro, Ont.

SHORTHORNS FOR SALE

6 yearling bulls, cows and heifers, all ages. Cows and heifers in calf to Sir James, deep milkers.

H. E. HIND, Hagersville P. O. and Station, G. T. R. and, M. O. R.

GEO. ISAAC, BOMANTON, ONT.,

BREEDER AND IMPORTER OF

Scotch Shorthorn & Clydesdale CATTLE HORSES.

Forty-one head of Shorthorns arrived from quarantine 20th March. One Clydesdale stallion for sale.

COBOURG STATION, G. T. R.

SHORTHORNS FOR SALE

Sired by Scottish Chief and Abbottsford, and from prizewinning dams. Also cows, heifers, and Berkshire pigs.

ALEX. LOVE, EAGLE P. O., BEMARCK STATION ON M. O. R.

MAPLE GROVE SHORTHORNS.

I am now offering 5 bulls from 10 months to 2 years old; imp. and home-bred; of the low, fleshy sort. Write for prices. W. B. CAMPBELL, Campbellcroft P.O. Garden Hill Station.

SHORTHORNS FOR SALE.

Two young bulls, 7 and 10 months; two heifers, 3 years old, with calves at foot; one heifer 1 year old.

JAS. RIDDEL, BEETON P. O. and STN.

CHARLES RANKIN, WYEBRIDGE, ONT.

Importer and breeder of

Shorthorns, Oxford Downs and Berkshire Pigs

Young stock always on hand.

SHORTHORNS (imported)

Two choice young imported bulls—one roan and one red. Write: THOS. RUSSELL, EXETER, ONT.

GREEN GROVE SHORTHORNS :

I am now offering a few heifers, Clarets, Floras, and one Missie; also a choice year-old bull, by Aberdeen of Markham.

W. G. MILSON, GORING P. O. and MAREDALE STATION.

Shorthorn Cattle, Lincoln Sheep

Imp. Prime Minister at head of herd. Imp. Clippers, Miss Ramsdens, and other Scotch families. Lincolns won more than half the money and first for flock at the Pan-American; International, Chicago, 1901 and 1902.

J. T. GIBSON, om DENFIELD, ONT.

QUEENSTON HEIGHTS SHORTHORNS

SCOTCH AND SCOTCH TOPPED

In service: Derby (imp.) = 32057 = ; Lord Montalls, by Collynie Archer (imp.) = 28390 = ; Some choice heifers and young cows with calf at foot, or in calf to imported bull at moderate prices.

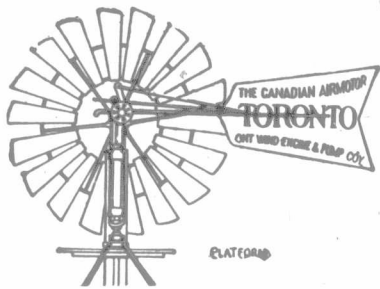
HUDSON USHER,

QUEENSTON, ONT. om

FARM 3 MILES NORTH NIAGARA FALLS

PLEASE MENTION FARMER'S ADVOCATE.

WINDMILLS



A GOOD ARTICLE IS WORTH A FAIR PRICE. A

CANADIAN AIRMOTOR

IS BUILT TO WEAR AND TEAR—VIZ.: WEAR LONGER THAN OTHERS; TEAR AWAY ALL THE TIME.

A little oil frequently and the wind will do the rest.

ONT. WIND ENGINE & PUMP CO. om LIMITED. TORONTO, ONT.

GEORGE D. FLETCHER,

BINKHAM, ONTARIO,

Breeder of Shorthorn Cattle, Yorkshire Swine, and Single-comb White Leghorn Fowl.

This herd contains such families as Mysies, Nonpareils, Crimson Flowers, Languishes, Butterflies and others, and is headed by my famous stock bull, Spicy Robin = 28259 =. Young stock for sale. Also eggs for hatching, \$1 per 15. Erin shipping station, C.P.R.

Shorthorns & Yorkshires

We are offering two Shorthorn bulls, 13 and 18 months, bred close to imported stock, at \$30 each. Two-months Yorkshire pigs, sired by our Toronto winner, at \$7. Embden geese eggs, 25c. each. Barred Rock eggs, five settings for \$2.

W. R. BOWMAN,

MT. FOREST, ONT.

NO HUMBUG'S PERFECT INSTRUMENTS

Hunnage Swine V. Stock Marker and Calf Dehorner. Stops swine of all ages from rooting. Makes 48 different ear marks, all sizes, with same blade. Extracts Horns. Testimonials free. Prices \$1.50 or sent \$1 for trial. If it works, send balance. Pat'd U.S. May 6, '02 for 17 yrs.; Canada Dec. 17, '01, 18 yrs. FARMER BRIGHTON, Fairfield, Iowa, U. S.

Shorthorns, Cotswolds & Berkshires

FOR SALE: A choice lot of this year's bull calves—reds and roans—from good milking dams; Bates and Scotch breeding. Also cows, heifers and heifer calves. Young pigs, two months old, of the long bacon type.

F. BONNYCASTLE & SONS, Campbellford, Ont.

Imp. Shorthorns and Lincolns

A. D. MCGUGAN, RODNEY, ONT., P. O. AND STA.,

Now offers one year-old roan bull, out of Imp. Day-spring, sire Abbottsford 1946; a prizewinner sure. Also a few choice heifers out of imp. and home-bred dams, and ram lambs out of imp. Dudding ewes.

R. MITCHELL & SON,

NELSON, ONTARIO.

Scotch Shorthorns. We now offer for sale our herd bull, Imp. Prince William, four years old, as sure and active as any yearling, and four bull calves from six to twelve months old, by imp. sires, and out of Imp. Lady Ythan, Mayflower and Roseberry dams. Also imp. and home bred heifers in calf.

Burlington Jct. Station and Tele. Office.

Shorthorns and Yorkshires

In Shorthorns we are offering four young bulls from 7 to 9 months, also a few heifers. In Yorkshires we can supply either sex of various ages. All at o J. R. McCallum & Son, living prices. Iona Sta. and P. O., Elgin Co.

For Sale: Very heavy, massive cows of Bates and Cruickshank breed. Two-year-old heifers in calf. Stock bull, Imperial 2nd, No. 28833. Bull calf, 11 months (Copper Boy 2nd = 39878 =), dam Flora = 32974 =; also dark red heifer calves. John McFarlane, Dutton, Ont.

WE HAVE FOR SALE 10 SHORTHORN BULLS

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

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

GOSSIP.

The British Remount Commission at Kansas City, Mo., that has been purchasing and shipping mules for the army in South Africa, has been disbanded.

Following are dates fixed for leading fairs in Manitoba and N.-W. T.: Edmonton, July 1 to 3; Calgary, July 9 to 11; Portage la Prairie, July 17 to 19; Winnipeg Industrial, July 21 to 25; Brandon W. A. A., July 29 to Aug. 1.

The 1902 English Derby was won, June 3rd, by Mr. J. Gubbin's brown colt, Ard Patrick (by St. Florian, dam Morganette), by three lengths. The same distance separated the second and third horses, Col. McCalmont's bay colt, Rising Glass, by Isinglass, and the Duke of Portland's Friar Tuck, by Friar Balsam. Eighteen horses ran.

At the Shorthorn sale from the herd of Mr. C. L. Gerlaugh, Osborn, Ohio, on June 20th, an average of \$100 was made for the 33 head sold. The highest price, \$1,705, was paid for the roan yearling bull, Master of the Ring, T. Ryan & Son, Irwin, Iowa, being the buyers. The highest-priced female, the red four-year-old imp. Missie 162nd, by Golden Victor, went to E. S. Kelly, Yellow Springs, Ohio, at \$1,525.

The offering of Mr. W. I. Wood, Williamsport, Ohio, the following day, comprising 44 head, sold for an average of \$359. The highest price, \$2,050, was given for the imported twin cow, Proud Fancy, by Pride of Morning, W. T. Miller & Sons, Winchester, Ind., being the purchasers. The roan yearling bull, Choice-of-the-Ring, brought the highest price in the list of bulls, \$1,550, and fell to the bid of Brown & Randolph Bros., Indianola, Iowa. Mr. W. D. Platt, Hamilton, Ont., bought at the Gerlaugh sale, imp. Lady Jane, two years old, for \$800, and at the Wood sale, Rose Linden, five years old, for \$300.

CHANGE OF FIRM NAME.

Attention is directed to the change in firm name of A. M. & R. Shaw, Brantford, Ont., breeders of Galloway cattle. Mr. H. R. Marston, having purchased the interest of Mr. A. M. Shaw, has formed a partnership with Mr. Robert Shaw, under the firm name of Shaw & Marston, whose advertisement appears in this issue. The new firm purpose pushing the business energetically, and the herd which has made so brilliant a record in prizewinning at leading Canadian shows may be expected to shine even more conspicuously than ever before.

THE HOME OF HIAWATHA.

Mares belonging to different owners are collecting from all parts of the country to the stud of Mr. John Pollock, of Papernill, Langside, to be bred to the champion Clydesdale stallion, Hiawatha, and give an excellent lesson on the different types of well-bred animals. The lot includes Mr. Alexander Guild's champion mare, Lady Margaret. Amongst several other noted breeding mares, such as Mary Miller, etc., on a visit to Hiawatha, is the dam of Mr. St. Clair Cunningham's grand horse, Alexander Everard. This is a beautiful type of mare, very Darnley-like and full of quality. There are also several well-bred fillies forward, and, although liberally patronized in the past, Hiawatha is likely to make a record season this year. Mr. Pollock has some splendid young stock got by him, and there are few, if any, more promising young horses in the stud than the two-year-old Barhead, and out of the Prince of Wyben mare, May Vobe, which is also dam of the noted three-year-old filly, Miss Taylor, which was champion at Barhead last month. This colt is very big and stylish, compactly put together and of rare quality, with exceptionally fine action and beautiful bones. The three-year-old horse, King Edward, bred by Mr. Spittal, and out of the same dam as The Summit, and only now beginning to come to hand, is like a horse that will also play an important part in the future. He has splendid, broad bones, nice straight silky hair, and a good catch at the ground, while he also goes well and is up to a useful size. Amongst the yearlings, that bred by the late Mr. Lockhart and got by the stud horse out of the same dam as the Londonderry stallion, Aries Prince, is perhaps the most valuable. He has been recently purchased from Mr. Clement, of Cheese Bazaar fame, and is a big, poor colt with grand bones and likely to develop into a high-class stallion. There is also another particularly promising yearling, got by the Park Mains stallion, Sir Evelyn (by Lord Stewart, out of the same dam as Prince Thomas), out of the well-known prizewinning Sir Everard mare, Lady Sibby, which, along with the Queenieburn St. Lawrence mare, Lady Jane, is within a short time of foaling to Hiawatha.—Scottish Farmer.

HOLWELL MANOR FARM

SHORTHORNS, SHROPSHIRE, YORKSHIRES, SCOTCH COLLIES.

D. G. GANTON, ELMVALE, ONT.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

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

Free Treatment

DR HOPE'S TINY TABLET TREATMENT

For LIVER KIDNEY and NERVE Troubles.

The three most prevailing causes of death in the present century, The Dr. Hope Medicine Co., Limited are so positive of the efficacy of their Treatment that they send Free Samples and their large treatise entitled "How to Live Long" on receipt of name and address. Write at once to DR. HOPE MEDICINE CO., LIMITED, TORONTO, ONT.

A Chance to Make Money.

I have berries, grapes and peaches a year old, fresh as when picked. I used the California Cold Process. Do not heat or seal the fruit, just put it up cold, keeps perfectly fresh, and costs almost nothing; can put up a bushel in ten minutes. Last year I sold directions to over 120 families in one week; anyone will pay a dollar for directions when they see the beautiful samples of fruit. As there are many people poor like myself, I consider it my duty to give my experience to such and feel confident anyone can make one or two hundred dollars round home in a few days. I will mail sample of fruit and full directions to any of your readers for nineteen (19) two-cent stamps, which is only the actual cost of the samples, postage, etc. Francis Casey, St. Louis, Mo. Advt.

For Sale: TWO CHOICE SHORTHORN BULLS, registered; sires, British Hope (30946) and Royal Charlie (30118). Also Yorkshires and Berkshires, both sexes. Write: C. & J. CARLUTHERS, Cobourg, Ont.

BELLEVUE SHORTHORNS.

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

EDWIN BATTYE,

GORING BAY P. O. AND PORT.

Centre Wellington Scotch Shorthorns

Young bulls, heifers and young cows for sale. Farm adjoining town on G. T. R. and C. P. R. Correspondence solicited.

H. B. Webster,

Box 66. FERGUS, ONT.

E. JEFFS & SON, BOND HEAD, ONT.

BREEDERS OF High-class Shorthorns, Leicesters and Berkshires. Young bulls and heifers; young boars and sows for sale. Write, or come and see.

Hillside Shorthorns and Shropshires.

Bulls, from 8 to 18 months old; heifers, various ages, of true type and fashionable breeding; also 25 ram lambs and 15 ewe lambs, from imp. sire. Will quote prices right for quick sales.

L. Burnett, Greenbank P. O., Ont.; Uxbridge Stn., G. T. R.

RAE YOUNG BULLS

of serviceable age for sale; also females of all ages. Roans and reds. Prices right.

K. & C. Parkinson, Thornbury P. O. & Stn., G. T. R.

Brookbank Holsteins

16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records.

GEO. RICE, Currie's Crossing, Ontario. OXFORD COUNTY.

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 stall. THOS. B. CARLAW & SON, Warkworth.

Exmoor Jerseys for Sale.

Heifer calves and deep-milking cows. A. Norman Smith, Meaford P. O. and Stn.

SUNNYLEA FARM.
For sale: Jerseys—6 yearling bulls; females of any age. Tamworths—30 boars and sows, different ages. Shropshire sheep—rams and ewes of good breeding. Prices reasonable. H. E. WILLIAMS, Knowlton, P. Q.

LAWNRIDGE STOCK FARM.

JERSEYS FOR SALE: Yearling bull, and bull 8 mos. old. Several fine registered and grade cows coming in every week. A few choice young heifers. Five Berkshire sows in pig. Finest strains.

J. L. CLARK, Norval station: G. T. R. Norval P. O.

Riverside Holsteins.

Victor De Kol Pietertje heads the herd, assisted by Johanna Rue 4th Lad, whose five nearest dams, including the record of his dam made at 25 months old, average ("official") 82.6 lbs. milk per day and 21.86 lbs. butter in one week.

MATT. RICHARDSON & SON, Haldimand Co. CALEDONIA, ONT.

CHOICE JERSEYS.

Am offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap. WM. N. HASKETT, Avon Manor, Markdale, Ont.

We have now on hand young females sired by **Nero of Glen Rouge 50241**, and cows and heifers bred to him. E. B. HINMAN & SON, GRAFTON, ONT.

Ridgedale Farm Holstein-Friesians for Sale.

2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. R. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C.P.R. om

BURNSIDE JERSEYS. For Sale: Two-year-old bull, Champion of Burnside; 1st prize Western Fair, London, last year; sire John Bull of Grovesend; dam tested 43 lbs. milk daily, 18 lbs. butter in a week. Yearling bull by Champion. Also young cows, heifers and calves. Five miles from London. J. A. Lawson, Crumlin, Ont. om

FOR SALE: A SPLENDID LOT OF Jersey Cattle.

41 HEAD TO CHOOSE FROM.

Close descendants of my most noted prizewinners, and closely related to many animals I have sold that have won easily in the Northwest and all over Canada. My shipments last summer ranged from Manitoba to State of Delaware, U. S.

MRS. E. M. JONES, BOX 324, BROOKVILLE, ONT., CAN.

72 Head of High-class Jerseys 72

IN THE BRAMPTON JERSEY HERD NOW FOR SALE. Two yearling bulls of first-class dairy breeding and sure prizewinners. Seven bull calves, the best we ever had. Also a large number of cows and heifers. We have what you want. Come and see, or address, stating what you want: B. H. BULL & SON, BRAMPTON, ONT. C. P. R. and G. T. R. stations within 2 miles of farm.

F. L. GREEN,

BREEDER OF Jersey Cattle and Yorkshire Pigs. Choice stock of each sex for sale.

PICKERING STATION, G. T. R. GREENWOOD P. O. CLAREMONT STATION, C. P. R.

JERSEYS FOR SALE

A few choice Jersey bulls and bull calves for sale at very low prices. Choice breeding; good colors. Write for prices.

W. W. EVERITT, CHATHAM, ONT., "Dun Edin Park Farm," Box 555. om

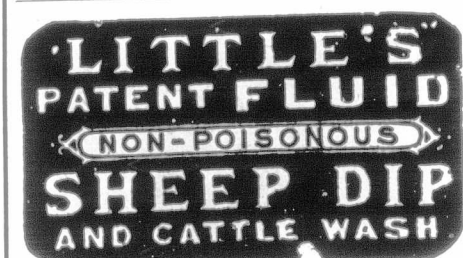
Wm. Willis, Newmarket, Ont.

Breeder of A. J. C. C. Jerseys and registered Cotswold sheep. Have yet two fine young bulls from Count, fit for service; also Yorkshire swine.

FOR SALE: Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Auchinbrain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Collie pups, from Perfection Queen. Address—T. D. McCALLUM, Nether Lea, Danville, Que.

SPECIAL OFFER FOR THIS MONTH.

4 Guernsey bull calves of the right sort, out of such cows as Rosland and Princess May, imported and sired by imported bull, "Masher." Ages—6, 9, 12 mos. 1 Ayrshire calf (a beauty), out of Nora of F. M. (7 mos.), by imported sire, and one sired by Matchless (2 yrs.). Write at once for particulars. Isaleigh Grange Farm, Danville, Que.



LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH
THE ORIGINAL Non-Poisonous Fluid Dip

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

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

Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

Beware of imitations.

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

SENT FOR PAMPHLET.

Robert Wightman, Druggist, Owen Sound. Sole agent for the Dominion.

FOR SALE: IMPORTED AND HOME-BRED AYRSHIRES,

including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

WM. WYLIE, HOWICK, QUEBEC.

SPRINGHILL FARM.

Importers and breeders of choice, deep-milking Ayrshires

Males and females for sale. ROBERT HUNTER & SONS, Maxville, Ont.

LIVE STOCK EAR LABELS REDUCED

Send for a circular and order early, before the rush. Large and small lots and odd numbers supplied. B. W. James, Bowmanville, Ont.

W. F. STEPHEN, Trout River, Que., breeder of Ayrshire Cattle.

A few choice bull calves for sale at reasonable prices; sired by Klondike of St. Anne 8897, and from deep milkers with good udder and teats. Carr's Crossing, 1 mile, G. T. R.; Huntingdon, 5 miles, S. L. & A. R. o

Ayrshires and Yorkshires

SPECIAL OFFERINGS: February, March and April calves, good colors, from heavy milkers, and sired by our imported bull. Very desirable calves. January litters: very promising. Moderate prices. Can supply you with anything you need. Write us.

ALEX. HUME, MENIE, ONTARIO. TELEPHONE: HOARD'S, G. T. R. om

J. YULL & SONS

Meadowside Farm, Carleton Place, Ontario, Breeders of Ayrshire cattle, Shropshire sheep, Berkshire swine, and Barred Plymouth Rocks, for sale.

A fine lot of the long Large English Berkshires for sale, ready to ship.

Show Ayrshires FOR SALE.—I offer 2 choice show heifer calves; also 3 August (1901) bulls, and 4 very fine March (1902) bulls by imp. sire, om W. W. BALLANTYNE, Stratford, Ont. "Nedpath Farm" adjoins city. Main line G. T. R.

DAVID A. MCFARLANE, Breeder of high-class AYRSHIRES. KESLO, P. Q.

Young stock for sale from imported and home-bred foundation. Prices reasonable.

Tredinnock Ayrshires.

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

Ayrshires

W. THORN, LYNEDOCHE, ONTARIO.

Breeder of prize-winning Ayrshires. Stock always on hand for sale.

AYRSHIRE

HERD OF 150 cows and heifers, bred from deep milkers, with large teats, of a commercial stamp. Established over half a century. J. & A. Wilson, Boghall Farm, Houston, Renfrewshire, Scotland. om

Devon Cattle

One of the oldest and best of the English breeds for quality with size, hardiness, and milking properties. Suitable for all climates.

Annual Sales: February and October JOHN RISDON, SECRETARY, Wiveliscombe, Somerset, England.

PEDIGREE AYRSHIRES.

Cows and heifers, all bred from prize-winning stock at the leading shows. Robert Wilson, Mansuræ, Bridge of Weir, Renfrewshire, Scotland.

English Shorthorns.

Booth and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdbook. Royal and Highland prizewinners included for the last two years. Close on \$400 won in prizes last year and this.

WM. BELL, Ratcheugh Farm, Alnwick, Northumberland, Eng.

HAMPSHIRE DOWN SHEEP

GREAT ENGLISH PEDIGREE SALES, July, August & Sept., 1902

Waters & Rawlence, Salisbury, Eng., will sell by public auction, during the season, upwards of

50,000 PURE-BRED EWES, LAMBS, RAMS.

including both rams and ewes from the best registered prize-winning flocks in the country. Commissions carefully executed. Address—

WATERS & RAWLENCE, SALISBURY, ENGLAND.

WALTON HERD OF PEDIGREE PIGS.

The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day. Its show-yard career is unique, the champion prize for the best Large White pig at the R. A. S. E. having been won by pigs bred in the herd in 1896, '97, '99 and 1901, besides leading prizes too numerous to mention at all the principal agricultural shows in England.

A choice selection of boars and sows for sale. Inspection invited. All purchases carefully shipped. For particulars, apply to the Manager, MR. J. HALLAS, Higher Walton, Warrington, England. Railway stations:—Warrington (Bank Quay) per L. & N. W. Ry.; (Central) per Midland, G. N. or G. C. Ry. Telegrams, "HALLAS Higher-Walton."

Robert W. Hobbs, Kelmscott, Lechlade, England.

One of the largest flocks in Oxford Down Flockbook. Numerous prizes obtained for ram lambs at principal shows. Rams and ewes always on sale.

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.

JOHN BRYAN & SON, Southleigh, Witney, Oxford, Oxon.

One of the oldest registered flocks of pure-bred Oxford Downs. Annual sale of rams. Oxford ram fair. Rams and ewes for sale at home. Inspection invited.

J. E. CASSWELL'S LINCOLNS. Loughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged 254 each; 14 of the best averaged 265 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearlings for sale; also Shire horses, Short-horns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R. o

E. T. CARTER, Wool TORONTO.

SUCCESSOR TO JOHN HALLAM, 83 & 85 Front St. E., TORONTO.

Leicestershire Tick and Vermin Destroyer

It effectually destroys Ticks, Lice, Worms or Grub, to which sheep, horses and cattle are subject, and enables the animals to thrive. It will be found far superior to other preparations used for the similar purpose. The proprietors will guarantee perfect success when used according to directions, as will be found on each box. It prevents scurf and scab, and renders the wool bright and clear. It is put up in tin boxes, price 30 cents each. One box is sufficient for twenty ordinary-sized sheep. It only requires to be tried to prove itself all that is claimed for it. Sold by druggists and grocers. Manufactured by G. O. BRIGGS & SON, 31 King Street West, Hamilton, Ont.

American Leicester Breeders' ASSOCIATION.

A. W. Smith, Pres., Maple Lodge, Ont. Pedigrees now being received for Vol. 4. For information, blanks, etc., address:

A. J. TEMPLE, Sec., CAMERON, ILL., U. S. A.

IMPORTED COTSWOLDS

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID, COURTICE P. O. SIX MILES FROM OSHAWA STATION, G. T. R. om

PRIZEWINNING COTSWOLDS.

Imported and home-bred stock, prizewinners at all the leading fairs. ELGIN F. PARK, om Box 21, Burgessville, Ontario, Canada.

PLEASE MENTION FARMER'S ADVOCATE.

JOSEPH FERGUSON, UXBRIDGE, ONT.,
BREEDER OF
Pure-bred Cotswolds—choice quality
om UXBRIDGE P. O. AND STATION.

CHAS. GROAT,
BROOKLIN, ONT..
OFFERS FOR SALE

Cotswold Ewes and Ewe Lambs
of good quality and breeding. Also a registered station, 1 year old, and one filly foal. Good ones. A Duchess of Gloster bull, 15 months old, for sale. Write for price and particulars. om

SUMMERHILL OXFORDS.
Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.
PETER ARKELL & SONS,
om Teeswater P. O. and Station.

BROAD LEA OXFORDS.
Can sell a few choice ewes of different ages, bred to our imported rams, May King 1st and Earl of Fairfield 2nd; also 75 good ewe and ram lambs, and an imported two-shear ram. Come and see our flock, or write us for prices, etc. om

HENRY ARKELL & SON, TEESWATER, ONT.
MILDMAY, G. T. R.; TEESWATER, C. P. R.

LINDEN OXFORDS
A choice lot of ram lambs (yearlings) and a few two and three shear rams fit for show and to head pure-bred flocks; imp. and home-bred, well covered, good quality. om R. J. HINE, Dutton, Ont.

FAIRFIELD LINCOLNS
Imported ewes and lambs. Can supply show flocks. om

J. H. PATRICK, ILBERTON, ONT., CAN.

COOPER SHEEP DIP
STANDARD OF THE WORLD for 60 years. Used on 250 millions annually. If local druggist cannot supply, send \$1.75 for \$2 (100 gal. pkt. to W. M. COOPER & NEPHEWS, CHICAGO.

OXFORD DOWNS
Imported and home-bred, for sale. This flock has won more first prizes for Canadian-bred pens than any flock in Canada. SMITH EVANS, Gourcock (near Guelph), Ont.

"FARNHAM FARM"
Oxford Down Sheep
An offering 40 choice yearling rams to head flocks. 50 superior yearling ewes, 70 ranch rams, 100 ram and ewe lambs of 1902. From imported dams, and a number from imported dams. All registered. Barred Rock eggs, 75 cents per setting. om

HENRY ARKELL, ARKELL, ONT.

Shropshires 40 FOR SALE. Shearling and two-shear rams, also one three-shear ram. Shearling ewes, and ram and ewe lambs by Imp. Thomas ram. C. P. R. Station, Streetsville Jct. om N. W. SWITZER, Streetsville, Ontario.

AGAIN STOP! AND LISTEN!!
FAIRVIEW SHROPSHIRE
Have this season produced a Great crop of high-class lambs. Do you want a flock header? If so, let us tell you that we have excellent imported and Home-bred rams of different ages. To sell at good values to purchasers. They are of the best breeding. Are of good size, and extra quality. om

JOHN CAMPBELL, Woodville, Ont., Can.

SHROPSHIRE
We are now offering a number of two-shear rams and ram lambs—Mansell strain; good ones and well covered. Price right. ROWAT BROS., Hillsdale P. O., Elmvale Sta.

HIGH-CLASS SHROPSHIRE
A flock of 75, of good type. Two-shear rams, shearling rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. Abram Rudell, Hespeler P. O., Ont. om C. P. R. and G. T. R.

W. S. CARPENTER,
"MODEL FARM," SIMCOE, ONT.,
IMPORTER AND BREEDER OF
Shropshire Sheep.

Ram and ewe lambs for sale. Well covered. Station One-half Mile from Farm, Wabash and G. T. R. om

SHROPSHIRE
At present I offer for sale: Shearling rams, shearling ewes, ram and ewe lambs. Also a few aged ewes. Prices reasonable. om

GEORGE HINDMARSH,
om AILSA CRAIG, ONT.

Our Improved Chester White Pigs are choice this spring. With pedigree, \$5 each. We have also, among others, a seven months' Yorkshire bull, among the best in Canada. om

J. F. PARSONS & SONS, Barnston, Quebec.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

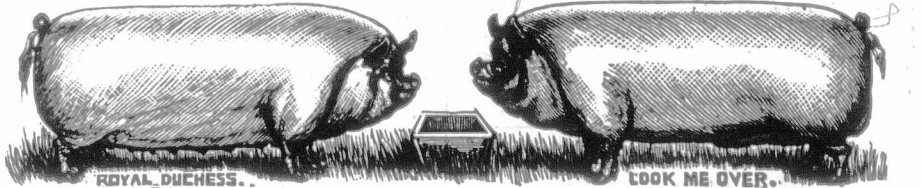
It is claimed that the world's butter record for a two-year-old heifer has recently been broken by the Holstein heifer, Duchess of Ormsby 2nd's Hengerveld De Kol, owned by A. N. McGeoch, Lake Mills, Wis., making at 2 years and 1 month and 29 days old 19.02 lbs. of butter in seven days in an official test. This claim is scarcely understandable in the face of the fact that the Canadian-bred Holstein heifer, Alta Posch, bred and owned by Hattie Bros., Norwich, is reported to have an official seven-days' record at 2 years 11 months and 28 days (21 days after calving) of 586 lbs. 2 ozs. milk, containing 21.661 lbs. fat, or equal to 27 lbs. 1 oz. butter 80 per cent fat, which gave her the world's record as a two-year-old and also as a three-year-old.

Sunnyside Stock Farm, the property of Mr. W. F. Wright, of Glanworth, Ont., lies in the county of Middlesex, about 12 miles south of London and 1 mile from Glanworth station. Mr. Wright's specialties in the pure-bred line are Chester White hogs, Shropshire sheep, and Mammoth Bronze turkeys. In hogs he is showing some exceptionally nice animals, so vastly improved are they in type that were it not for the drooping ears it would not be easy to distinguish them from the much-vaunted Yorkshires. At the head of his half-dozen splendid brood sows is the prize-winning boar, Glanworth Prince 1843, sired by Imp. Dandy 1380, dam Lady Bacon 1507. This boar is not only a prizewinner himself, but is the sire of prizewinners, a get of his winning second at Toronto last fall for boar under six months, while first, second and third at London went to his get in same class. At least two of the brood sows are of the same litter that produced the winners of first prize in bacon class at Guelph Fat Stock Show in 1900. Mr. Wright has lately purchased a very promising young boar for service, a Leighty 2106, by Cronje 1481, dam Annie 1699, by American King 1097. He is a very lengthy young animal, and should prove a successful sire. At present there are on hand for sale young stock of both sexes two and three months old, of splendid bacon type. In sheep Mr. Wright excels, his flock of 75 head being of Thomas, Buttar and Batch strains. For size, form, quality, lone, perfect covering and constitution they are equalled by few. This season's crop of lambs are by McLaren's 603, by Prince 276, by Adcote Premier. He is a big, strong, masculine chap, on very short legs, and is covered from the ground up. The lambs are a nice even lot, showing good form, and are thriving immensely. A large number of the breeding ewes are imported, still more of them are bred from imported stock. There are on hand for sale at present about 30 yearling rams and good ones. Later on there will be about the same number of lambs. Mr. Wright is justly proud of his Bronze turkeys. His two immense toms were both imported one raised by Mr. Johnson, of Hogsdown, Indiana, the other by James Ballinger, of Colorado, weighing, respectively, 33 1/2 and 40 lbs.; the hens are practically all imported from Iowa. The seventy odd youngsters are thriving nicely; some extra early hatches are doing wonderfully well. In other pure-bred poultry, Mr. Wright keeps B. and White Rocks, Red Caps, and Cayuga ducks.

On a flying visit to Mr. W. D. Flatt's Trout Creek Stock Farm, near Hamilton, Ont., recently, the females of the fine herd of Shorthorns were seen quietly grazing in the fresh pastures, looking like living pictures of health and of symmetrical proportions, while the stock bulls in their boxes and paddocks were found in fine condition, with well-fleshed forms and sound, straight legs and feet. Imported Speculator, the Toronto first-prize winner and Pan-American champion, has widened and deepened during the winter, and looks a short-legged and thick-fleshed bull, and one that will be hard to turn down in the show-ring if he comes out again this year. The imported yearling Marr-bred Missie bull, Republican, sired by Lavender Victor, and sold at Chicago last December for \$6,000, by Wanderer, has grown into a straight, smoothly-turned, stylish and well-proportioned bull, who is being used considerably in the herd, and shows fine proportions and quality, and can hardly fail to make a prepotent sire of good things. Another is Banff's champion, just a year old, a son of the \$5,000 champion bull, Lord Banff, and out of Imp. Fanny 62nd, by Royal Nottingham, who was out of the champion cow, Molly Millicent, four times first at the Royal Show. He is a young bull, of marvellous depth of body, smooth and thick, with grand hair and handling quality, straight in all his lines and having a grand head and carriage. He is one of the best young bulls we have seen in many a day, and is a credit to his sire and his breeder, and promises to make a reputation for himself in herd and show-yard. Trout Creek Banff, a roan bull calf of September last, is another son of Lord Banff that gives great promise, having a strong, straight back, level quarters, well-sprung ribs and a grand handling hide covered with mossy hair. He is out of Imp. Proud Amaranth, a grandly good cow of the same family as the famous Field Marshal, and is a daughter of the noted bull, Pride of Morning. A grand lot of young cows and heifers of various ages, good enough to enter the show-ring were seen in and around the barns, and altogether, the herd was found in excellent condition.

SUMMERHILL HERD OF Large English Yorkshires.

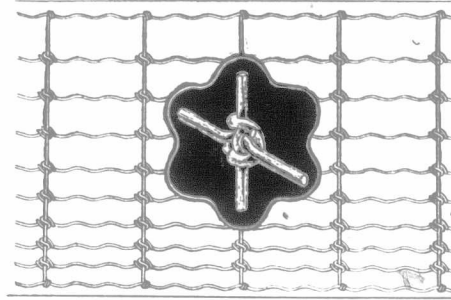
HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two, while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given; all the medals and every first prize but six won by the Summer Hill Yorkshires. When in need of the best write D. C. FLATT & SON, MILLGROVE, ONT. Telephone: Millgrove, Ont.

Hillcrest Herd of Large English Berkshires

Consists of imported and show sows; the sires are big, long fellows, of the bacon type. For Sale: a few grand young sows from 3 to 6 months old. JNO. LAHMEK, Vine, Ont. Vine Station, G. T. R. om



Ideal Woven Wire Fencing

The latest improved, up-to-date wire fencing. Made entirely from No. 9 hard spring wire, insuring strength and durability. Agents wanted. om

McGregor, Banwell Fence Co., Ltd.
WINDSOR, ONT.
Coiled spring and other fence wires.

Agents Wanted

for the New Pictorial Stock Doctor and Live Stock Cyclopeda, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages to agents. A full-page announcement of this book appeared in the ADVOCATE of the issue of June 1st. Particulars mailed free. Address WORLD PUBLISHING CO., Guelph, Ont.

Imported and Canadian-bred

YORKSHIRES.

A number of good young sows in pig, boars ready for service and young pigs from 2 to 3 months old, direct from imported stock. Pairs and trios supplied not akin. om

H. J. DAVIS, WOODSTOCK, ONT.
Importer and breeder of Shorthorns and Yorkshires.

YORKSHIRES.

A number of choice young pigs for sale, from 6 weeks to 6 mos. old, bred from D. C. Flatt's imported stock. om Fred C. Smith, New Hamburg, Ontario.

YORKSHIRES & POULTRY

Ready to ship. Yorkshires that will make winners for fall fairs. Correct type; easy feeders. Eggs reduced to \$1 per setting, from extra choice matings. W. Wyandottes, B. P. Rocks, W. and Brown Leghorns. Also pedigree Collie pups for sale. om

A. B. ARMSTRONG, Codrington, Ontario.

YORKSHIRES FOR SALE.

Boars fit for service, sows in farrow and ready to breed, and young stock on hand. Prices reasonable. om

WM. HOWE, NORTH BRUCE, ONT.
BRUCE CO.

Yorkshires—For the next 3 months I can supply either sex, that for ideal bacon type, smooth, even finish, are unsurpassed. Prices reasonable. **WM. TEASDALE,** om Thornhill Sta., and electric cars. Dollar P. O.

NEWCASTLE HERD OF TAMWORTHS

We are now offering a dozen boars fit to wean about 1st to the 10th May. A few young sows 3 months old, from Toronto Industrial winners. Prices right for quick sale. om

COLWILL BROS., NEWCASTLE, ONT.

Tamworths and Berkshires.

A choice litter of young Tamworths, farrowed March 1st, \$6 each, registered. Berkshire sows four months old. Mammoth Bronze turkey eggs in season, \$3 per setting, large stock; order now. Safe arrival guaranteed. om

D. J. GIBSON, BOX 38, BOWMANVILLE, ONT.
HAZEL DELL STOCK FARM.

Goldspring Herd Tamworths.

Offer choice Oct. and Nov. boars and sows. Also my stock boar, Advance. This is the spot for the best. Write for prices. They are moderate, quality considered. om

NORMAN M. BLAIN, ST. GEORGE, ONT.
BRANT CO.

FOR SALE:

Yorkshires and Holsteins

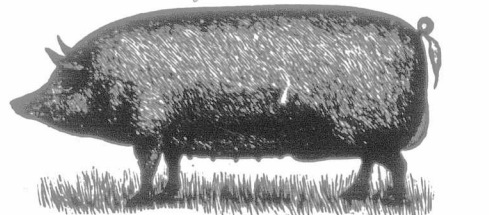
Best type and quality. Young stock constantly on hand. Prices right. **R. HONEY,** om Brickley P. O., instead of Warkworth.

YORKSHIRES.

TWO good 7-months-old, pure-bred Yorkshire sows, bred to a pure-bred Chester hog. For sale reasonable. om

R. H. HARDING, Thorndale, Ontario.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices. om

H. GEORGE & SONS, Crampton P. O., Ont.

"VIGILANT" NEST

SLIDING—ADJUSTABLE
(Patented Can. & U.S.)
The only nest in the World which positively prevents hens from eating their eggs.
Simple—Effective—Durable
No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to **L. P. Morin, Inventor, Mfr., 12 Antoine St., St. Hyacinthe, Que.**
Price 45c. each. AGENTS WANTED.



Blood will tell



When an animal is all run down, has a rough coat and a tight hide, anyone knows that his blood is out of order. To keep an animal economically he must be in good health.

DICK'S BLOOD PURIFIER

is a necessity where the best results from feeding would be obtained. It tones up the system, rids the stomach of bots, worms and other parasites that suck the life blood away.

Nothing like Dick's powder for a run down horse.
50 cents a package.

Leeming, Miles & Co., Agents, MONTREAL.
Write for Book on Cattle and Horses free.

STEEL ROLLER



Built in 6, 8, 9 and 12 foot lengths. Many real good improvements; in fact, a perfect beauty. Write for prices. See our disk next issue.

om **T. E. BISSELL, ELORA, ONT.**

EGGS From prizewinning Brahmas, Cochins, Langshans, Rocks, Wyandottes, Minorcas, Leghorns, S. Dorkings, Spanish Hamburgs, Red Caps, Pearl Guinea, Houdans, Polands, Games, Pekin, Rouen, Cayuga ducks. Eggs, \$1.00 per setting.
o **R. J. LAURIE, WOLVERTON, ONT.**

Choice White Wyandotte Eggs for Hatching:
\$1 per 15 or \$1.50 per 25. Satisfaction guaranteed. The Natural Hen Incubator is the greatest labor-saver and surest hatcher ever invented. Write for circular. o Agent, W. J. Chisholm, Dunkeld, Ont.

EGGS—BARRED ROCKS PEKIN DUCKS.
Illustrated descriptive CIRCULAR free. See it before placing orders.
o **H. GEE & SONS, Haldmand County, Fisherville, Ont.**

Eggs for Hatching

From a pen of choice Barred Rock hens, selected as persistent layers of large eggs, and mated with two large, strong, vigorous cockerels. Price, \$1 per setting, or three settings for \$2.

W. C. SHEARER, BRIGHT, ONTARIO.

EGGS FOR HATCHING Barred Rocks (exclusively). From two pens headed by two imported cockerels bred from a \$75 trio of A. C. Hawk's Royal Blue strain; \$1.00 per setting of 13.
o **A. E. SHERRINGTON, Box 100, Walkerton.**

EGGS FOR HATCHING From all the leading varieties of Dorkings, Houdans, Minorcas, Leghorns, Hamburgs, Polands; Ducks and M. B. Turkeys. Our fowls win at all the best shows in Canada, also Boston and New York. For particulars write **W. STEWART & SON, Menie, Ont.**

EGGS FOR HATCHING. Turkey eggs \$1 per setting (doz.); others \$1 per setting. Mammoth Bronze turkeys, Barred Rocks and W. Rocks, and Red Caps. Chester White swine. Good bacon type. Write for prices.
o **W. E. WRIGHT, GLANWORTH, ONT.**

IT'S THE MAN WITH Canadian Incubators

THAT DOES THE WORK.
CANADIAN INCUBATOR & BROODER CO., ONT. CATALOGUE -OM- TORONTO, CAN.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Mr. James Bowman, Elm Park Farm, Guelph, Ont., recently embarked for Great Britain, presumably with the purpose in view of making an importation of Aberdeen-Angus cattle to supplement his noted Elm Park herd.

The dates fixed for holding the leading Maritime Provincial exhibitions are as follows: St. John, N. B., Aug. 30th to Sept. 6th; Halifax, N. S., Sept. 10th to 18th; Charlottetown, P. E. I., Sept. 23rd to 28th. Plans for the new Winter Fair buildings at Amherst, N. S. have been prepared by Mr. F. L. Fuller, manager of the Government Farm at Truro, N. S. The date for this event is yet to be fixed. The site is that of the old Academy grounds.

Messrs. F. Bonycastle & Sons, Campbellford, Ont., breeders of Shorthorns, Cotswolds, Berkshires, and Barred Rocks, in ordering a change in their advertisement, write: "The calves we are offering are an extra good lot, red and roan, from choice milking cows, some of which are from a Cruickshank Duchess of Gloster bull, and the calves are by a Miss Ramsden bull. The prices quoted are low for such breeding, and they register them and pay express charges to any part of Ontario and Quebec.

A choice 200-acre farm in Brant Co., Ont., two miles from the thriving town of Paris and eight miles from the City of Brantford, is advertised for sale in this issue. The location is an extra good one for market and shipping convenience, and in one of the best farming districts in the province, and from the description, the farm is well equipped and in excellent condition.

Mr. Walter S. Park, Hatton, Bishop-ton, England, has sold the well-bred four-year-old Clydesdale stallion, Royal Token (10890) to Mr. E. J. Mansell, of London, Ontario. He was got by the noted breeding Prince of Wales horse, Royal Signet, out of the famous Darnley mare, Hatton Beauty, dam of Prince of Erskine and Kate Park, and several other notable prizewinners.

Messrs. Alfred Mansell & Co., livestock exporters, Shrewsbury, England, shipped from Avonmouth on the 29th of April, thirty Shropshire sheep bred by Mr. A. E. Mansell, and purchased by Mr. Robert Miller, Stouffville, Ont. These sheep consisted of 14 rams and 16 ewes, which, with the exception of one ram, were too young to include in the famous Harrington dispersion sale, so were kept by Mr. Mansell until his final farm sale at Bishton Hall last March. Mr. Miller is to be congratulated on obtaining these sheep, which are probably the best of Mr. Mansell's breeding Canada will obtain.

Mr. Peter Crawford, Dargavel, Dumfries, has sold two noted Clydesdale horses—Captain Alexander (10175) and Lord Smith (10894)—to Mr. Hay, Canada, two—Prince's Model (11146) and Royal Fortune (10432)—to Daltry Bros., London, Ont. Captain Alexander is a thick, strong-boned horse, bred by Mr. John M. Hannah, and got by the Cawdor cup champion, Prince Alexander (8899), which was bought when a yearling for £1,200. Captain Alexander won prizes as a yearling and two-year-old, and was the Dunblane, Doune and Callander premium horse later on. Lord Smith (10894) is a big, powerful horse, by Ethiopia (5750), which stood third as a yearling at the H. & A. S. Show, Kelso, in 1898. He has good feet, and broad, big loins, and was one of the best colts left by the old Keir stud horse in Ayrshire. Prince's Model is a right-bred one, his sire being the famous Moncreiffe Marquis (9953), which gained first prize at the H. & A. S. Show at Inverness this year. Royal Fortune was got by the thick, well-bred horse, Prince of Fortune (9826), which gained first prize at Glasgow Stallion Show when a four-year-old.

THE AYRSHIRE ABROAD.

For several years past Ayrshires have been increasing very much in favor in Sweden, where the dairy qualities of good cows of this breed have earned for them an excellent reputation in the great dairying districts. Numbers of bulls and cows of the breed are now regularly shipped to Sweden from their native home in Scotland, and for high-class animals good prices are freely paid. Several such shipments have recently taken place, one of the latest being a consignment of bulls recently despatched by Mr. Eklund, Inspector of Cattle Breeding for Sweden, who was specially sent across for the purpose of making a selection of animals calculated to improve the milking qualities of the native Swedish cattle.

Mr. Andrew Mitchell, Barcheskie, Kirkcudbright, has purchased from Mr. William Howie, Burnhouses, Kilmarnock, the very good Ayrshire cow, White Rose, with which that gentleman has been so successful in the leading show-yards for a year or two back. Practically, the cow has never been beaten in her class, and she has also to her credit the championships at Kilmarnock, Ayr, Glasgow, Galston, and the Highland Society. Mr. Mitchell also purchased from Mr. Howie the excellent three-year-old quey which was first in the uncalved class at Galston last month; also the two fine two-year-old queys, Aileen Aron and Queen of the Isles, with which Mr. Jas. Howie was first and third at Ayr. Mr. Mitchell is shipping this year to Cape Town, to the order of a South African buyer, a valuable consignment of two bulls and four heifers of the Ayrshire breed. Thirty-one head of Ayrshires were recently shipped from Edinburgh to South Africa.

The Good Points
IN A
CEMENT SILO

MR. GEO. LEITHWAIT, of Goderich, explains their superiority over wood, and the cost of one he built.

GODERICH, HURON COUNTY, ONT., DEC. 1, 1901.

THE RATHBUN COMPANY,
310-312 FRONT ST. W., TORONTO, ONT.,
Sales Agents for **THE CANADIAN PORTLAND CEMENT COMPANY, Limited.**

Dear Sirs,—I take pleasure in writing you a few lines telling you how pleased I am with the round concrete cement silo built for me by G. O. Echlin. It has not a crack nor fault, and is as hard as stone. I hope that my experience will be of benefit to others who propose erecting silos, as I have spent much time and trouble looking into this question.

A short time ago I built a small wooden stave silo, but found that the ensilage around the outside, or about ten per cent., was spoilt. Now, when I opened the cement silo, on November 1st, and took three or four inches off the top, I could not see any difference between what was in the center and that against the walls.

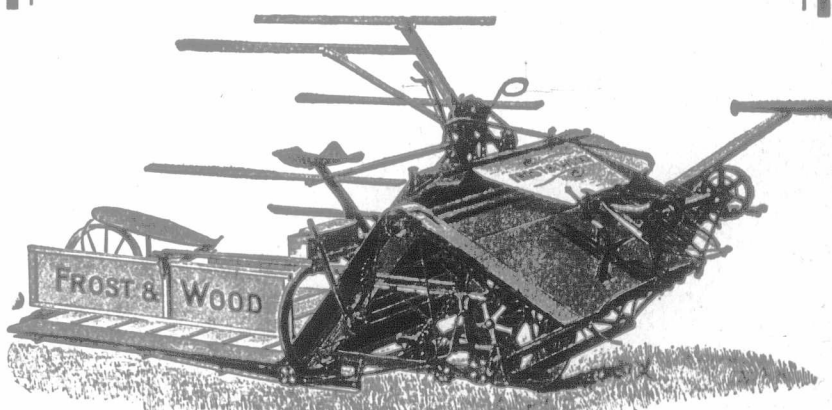
This silo has a capacity of one hundred and fifteen tons, and cost me one hundred and sixty-four dollars, as follows:
Thirty barrels of BEAVER PORTLAND CEMENT, \$90.00; forty-six yards of gravel, \$4.00; quarter-inch iron to build in walls, \$4.00; labor, four men eight and one-half days with mixing machine, \$66.00.

It is thirty feet high, fourteen feet in diameter, twelve inches thick at bottom and batter on outside reducing to 6 inches at top. The proportions of concrete were one of BEAVER PORTLAND CEMENT to twelve of good gravel. I would recommend the use of your cement where good solid, satisfactory work is required.
-om Yours truly,
GEO. LEITHWAIT.

A well-balanced man wants
A well-balanced Binder:

The Frost & Wood No. 3

IS PERFECTLY BALANCED.



Easy on the man; easy on the team.
Built to suit the hard-to-please man.
Simple parts. Accurately adjusted.
The only Binder equipped with the Force Feed Elevator and Eccentric Power Wheel.
Made to cut 5 ft., 6 ft. and 7 ft. wide.
You need the best: We have it.

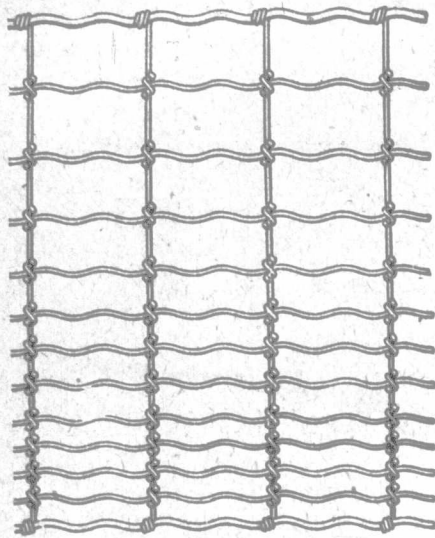
THE Frost & Wood Company LIMITED.

Head Office and Works:

Smith's Falls, Ont.

Branch Offices and Warehouses: Toronto, Ont.; London, Ont.; Winnipeg, Man.; Montreal, Que.; Quebec, Que.; St. John, N.B.; Truro, N.S.

LAMB FENCE



THE best is none too good. Lamb fence is made of the best high carbon wire, and has a continuation of spring throughout its entire length, automatically adjusting itself to the heat and cold.

H. R. LAMB,
LONDON, ONT.

WOODSTOCK STEEL WINDMILLS

Galvanized or Painted. For Power or Pumping. The **DANDY** Windmill with Graphite Bearings, runs easy and controls itself in the storm. **GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS AND SAW BENCHES.**

WOODSTOCK WIND-MOTOR CO.,
WOODSTOCK, ONT. (Ltd.)

ZANZIBAR PAINTS.

Just ask your dealer for **Zanzibar Barn Paint,** and give it a trial.

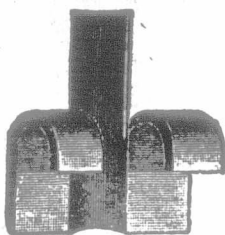
Low-priced, but good strong colors, and very durable. You can make your barns, roofs, silos, fences and all outbuildings waterproof and look clean and bright for a small outlay of money. **THEN, TOO:** Protect and brighten up your implements and wagons with

Zanzibar Agricultural Red, Green, and Black.

Made from the very best pigments. **BRILLIANT GLOSS, DURABLE COLORS, WEATHER AND RUST PROOF.**

The Zanzibar Paint Co., Ltd., Toronto. Write us if your dealer does not handle the goods.

THE ANCHOR WIRE FENCE



Is made throughout of No. 9 wire, all cross wires securely fastened with Anchor Clamp.

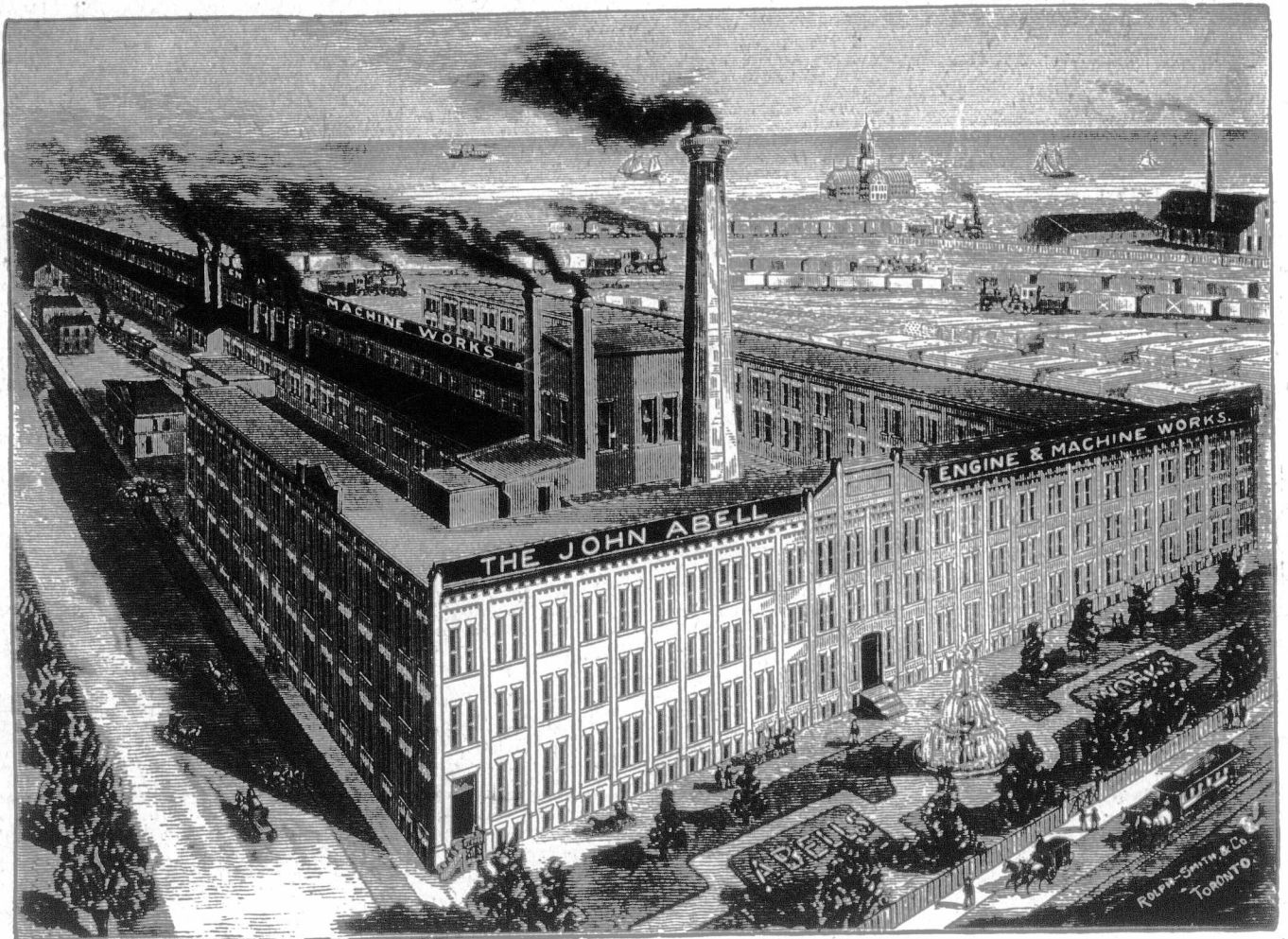
All kinds of fence wire in stock. Write for prices. **Agents Wanted.**

ESPLEN, FRAME & CO.,
MANUFACTURERS, - STRATFORD.

PLEASE MENTION FARMER'S ADVOCATE.

American-Abell Engine and Thresher

COMPANY, LIMITED.
SUCCESSORS TO



THE JOHN ABELL ENGINE AND MACHINE WORKS COMPANY, LIMITED.

TORONTO, CANADA.

"Cock o' the North" Threshing Machinery.

"THE FINEST EVER."

CATALOGUE FREE BY MAIL.

American-Abell Engine and Thresher Co., Ltd., Toronto, Canada.

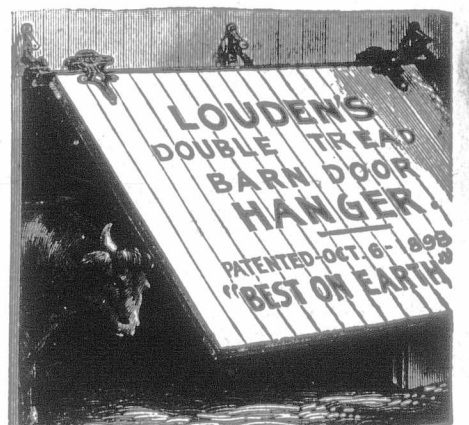
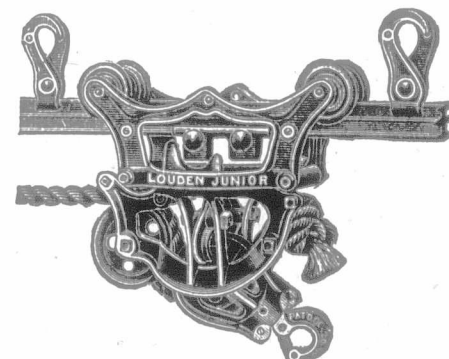
Mr. Robert Ness, Howick, Quebec, has sailed for Scotland and France, with the intention of making another importation of Clydesdale and Percheron horses.

\$7,500 FOR A JERSEY BULL.
Probably the most successful sale of Jersey cattle ever held on this continent was that of Mr. T. S. Cooper, Coopersburg, Pa., May 29th and 30th. A large number were in attendance, the sale-ring being graced by breeders from the Island of Jersey, Canada, and many States of the Union. Among the Canadian breeders of Jerseys present were Messrs. R. J. Fleming, President Canadian Jersey Cattle Breeders' Association, Toronto; D. O. Bull, Vice-president, of the firm of B. H. Bull & Son, Brampton; George Davies, Thorncliffe Stock Farm; and J. B. Ketchen, manager of Dentonia Park Farm, Toronto. Mr. Thos. Lawson, of Boston, Mass., secured the noted four-year-old bull, Flying Fox (imp.), an Island champion, and gave in return the handsome sum of \$7,500. The highest-priced cow, Lady Fontaine's Rosette (imp.), four years old, went to L. L. Bradbury, Los Angeles, Cal., for \$3,100; \$750 was the second highest price paid for a bull, and \$1,700 the second highest for a cow. Forty-eight bulls averaged \$351, the range of prices being from \$25 to \$7,500. Fifty-eight cows averaged \$154; range, \$100 to \$3,100. Sixty-one heifers averaged \$241; range, \$40 to \$241. Grand total for 167 animals, \$57,945, an average of \$347. The only Canadian buyers were the Estate of the late W. E. H. Massey, Dentonia Park, Toronto. They secured two cows, one two-year-old, two yearling heifers, one heifer calf, and Arthur's Golden Fox, a yearling son of Flying Fox, the price paid for the latter being \$500. Forty-seven animals, the get of Flying Fox, many of them young calves, averaged \$335.

LOUDEN'S GOODS ARE GOOD GOODS.

A prominent Dealer writes: "I have never sold any other goods that have given such satisfaction as your Hay Carriers, and I have made more money out of them this year than I have out of binders."

Another says: "I have handled all makes, but Louden's are the BEST."



We make twelve different styles of Hay Carriers, all up-to-date. Our Double-Tread Barn-Door Hangers are "the best on earth." Dealers who want "A Good Thing"—something that will sell and give satisfaction—should write at once for the agency. Catalogue and prices free on application.

LOUDEN MACHINERY COMPANY, WINDSOR, ONTARIO.



This is the Page Standard II Bar Fence, made of "Page" wire which is twice as strong as common wire. The continuous coil, note wavy appearance, allows for expansion and contraction which is important owing to Canadian climate. Our upright wires are in one piece and have strength of about 800 pounds. If made of pieces spliced at each horizontal, they would have a strength of only about 300 pounds. We also make gates, ornamental fences, poultry netting, nails and staples. **The Page Wire Fence Co., Limited, Walkerville, Ont.**