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

VOL. XXXVII. WINNIPEG. JANUARY 20, 1902. MANITOBA. No. 542

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CONTENTS OF THIS NUMBER.

| | PAGE. |
|---|----------------------------|
| THE MERITS AND DEMERITS OF AGRICULTURAL COLLEGE COURSES | 43 |
| THE WHEAT BLOCKADE | 44 |
| OBJECTIONABLE FEATURES OF HEDGE FENCES AND HEDGE FENCE COMPANIES | 44 |
| MAKE THE FAIRS EDUCATIONAL | 45 |
| STUDENTS GRAFTING AT ONTARIO AGRICULTURAL COLLEGE (ILLUSTRATION) | 45 |
| DEPARTMENTAL BUNCOMBE! | 45 |
| ADDRESS LABEL IMPORTANT | 45 |
| FARM SIFTINGS | 46 |
| RELEASE FROM THE CLASP OF THE OCTOPUS | 46 |
| ONE OF THE WHEAT KINGS | 46 |
| THOMAS R. BROWN (ILLUSTRATION) | 46 |
| PRESS COMMENTS ON OUR CHRISTMAS ISSUE | 46 |
| A STRONG PLEA FOR TECHNICAL EDUCATION | 47 |
| PRAIRIE FIRES IN THE TERRITORIES | 47 |
| THE EDUCATION OF THE HORSE | 47 |
| HORSE TRAINING AND EDUCATION | 48 |
| A CLOSE CALL FOR CRESCRUS | 48 |
| JOE PATCHEN (ILLUSTRATION) | 48 |
| MORE HORSES FOR SOUTH AFRICA | 48 |
| SAMPLE OF CANADIAN HORSES FOR SECOND CONTINGENT, CANADIAN MOUNTED RIFLES, DECEMBER, 1901 (ILLUSTRATION) | 48 |
| CARE AND FEED OF THE COLT | 48 |
| RAISING BETTER BEEF STOCK | 48 |
| ROSSER FARMERS' INSTITUTE | 49 |
| FARMING IN MANITOBA | 49 |
| WINNIPEG GRAIN EXCHANGE | 49 |
| LARGE FARMS AND THEIR MANAGEMENT | 49 |
| MR. JOHN D. ROSS (ILLUSTRATION) | 50 |
| BRITISH STOCK SALES IN 1901 | 50 |
| FARM HOUSE OF MR. JOHN D. ROSS, EGIN, MANITOBA (ILLUSTRATION) | 50 |
| TERRITORIAL CROP ESTIMATE BULLETIN | 50 |
| SOME BRANDON TESTS | 51 |
| BEES IN MANITOBA | 51 |
| PROFITABLE HOG RAISING IN THE WEST | 51 |
| PROFITABLE GRANARIES (ILLUSTRATED) | 51 |
| IMPROVING THE FAIR | 51 |
| TWO-YEAR-OLD SHORTHORN STEER (ILLUSTRATION) | 52 |
| CONVENTION WEEK | 52 |
| RE MINISTERS OF AGRICULTURE | 52 |
| AN IMPORTANT EDUCATIONAL ANNOUNCEMENT | 52 |
| SOUTHDOWN YEARLING WETHERS (ILLUSTRATION) | 52 |
| BRUNHILDE (ILLUSTRATION) | 52 |
| WHAT PURE AIR MEANS TO LIVE STOCK | 53 |
| BIBLE, KNIFE, PAPER—ALL GOOD | 53 |
| SPELTZ (EMMER) | 53 |
| DANGEROUS EDIBLES | 53 |
| SELF FEEDER FOR PIGS | 53 |
| SMITHFIELD CARCASS COMPETITIONS | 54 |
| THE SUFFOLK SHEEP | 54 |
| 12-MONTHS-OLD SUFFOLK EWES AT THE O. A. C. (ILLUSTRATION) | 54 |
| PRINCE WILLIAM JR. 8708 (ILLUSTRATION) | 54 |
| A WORD FOR THE FARMER'S BOY | 54 |
| DELAYS ARE DANGEROUS | 54 |
| SMITHFIELD SHOW FACTS | 55 |
| CANADA WOOLS | 55 |
| THE BACON PIG OF THE FUTURE | 55 |
| BREES UNDER SNOW | 56 |
| COMMENDED TO THE PEOPLE | 56 |
| LARGE CATTLE AND HORSE BARN (ILLUSTRATED) | 56 |
| TANKING HIDES FOR HORSES AND MATS | 56 |
| CO-PARTNERSHIP WITH NATURE | 56 |
| TESTIMONIALS | 56 |
| JERSEY BUTTER TESTS IN 1901 | 57 |
| DEATH OF SIR JOSEPH H. GILBERT | 57 |
| THE DAIRY TEST AT GUELPH | 57 |
| THE LATE SIR JOSEPH H. GILBERT (ILLUSTRATION) | 57 |
| CAN THE FARMERS COMBINE? | 57 |
| PRODUCING WINTER EGGS | 58 |
| WEIGHTS OF POULTRY | 58 |
| QUESTIONS AND ANSWERS—VETERINARY; OCCULT SPAVIN; LAMENESS—QUITTOR; BOTS AND THEIR TREATMENT; LIVER TROUBLE IN POULTRY; DEPRAVED APPETITE—PICA; WASHY COLT; UN-THRIFTY HORSE; COW'S MILK FOR COLTS AFTER WEANING | 58, 59 |
| MISCELLANEOUS: FERTILIZING LIGHT LAND; COLOR OF PIGS—A RIDGELING BULL; GRAY TURKEYS WANTED | 59 |
| AT THE OTTAWA EXPERIMENTAL FARM | 59 |
| MONTREAL MARKETS | 59 |
| CHICAGO MARKETS | 59 |
| BRITISH CATTLE MARKETS | 59 |
| 1902 FAIR DATES | 59 |
| HOME MAGAZINE, THE FAMILY CIRCLE | 60 |
| "TOTTIE'S PLAYFELLOWS" (ILLUSTRATION) | 60 |
| "JOHN ALDEN AND FRISILLA" (ILLUSTRATION) | 62 |
| THE QUIET HOUR | 63 |
| THE CHILDREN'S CORNER | 63 |
| "STUDYING OUR CHRISTMAS ADVOCATE" (ILLUSTRATION) | 63 |
| GOSSIP | 64, 67, 70, 71, 72, 73, 76 |
| AMERICAN CLYDESDALE BREEDERS | 70 |
| NOTICES | 67 |
| ADVERTISEMENTS | 41 and 42, 64 to 76 |

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

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VOL. XXXVII.

WINNIPEG, MANITOBA, JANUARY 20, 1902.

No. 542

The Merits and Demerits of Agricultural College Courses.

In order to give further information to our readers on the question of agricultural education, we submit an analysis of the agricultural courses given by the colleges which have been successful in attracting students. Many farmers, on being told that chemistry is one of the subjects taught at an agricultural college, agree as to the wisdom of such instruction, and say that they would like to be able to analyze their stock feeds, soils, etc.: a mistaken idea, and one that is not practical. The average graduate of a four-year course in agriculture is unable to properly conduct a chemical analysis of feeds or soils, even if he could afford the elaborate chemical outfit necessary.

WORK FOR THE SPECIALIST.

Soil analysis and analysis of feeds is the work of a specialist, the agricultural chemist, and any attempt to load a farmer's son up with chemical formulas at an agricultural college, or to turn him loose in a laboratory full of glassware, test tubes, retorts, filter paper, reagents, etc., is only waste of valuable time, time which should be given to discussion of principles and results of field and feeding experiments. Similarly with botany, a subject, as taught at many agricultural colleges, little applied and narrow in scope. Here again the student is made weary with endeavoring to memorize the Latin names with which it has been deemed necessary by the scientists to load their subject. Geology, as with the two preceding subjects, is a deep study, but of nonpractical benefit to the farm student, because he would have to delve too deeply and spend too much time to get information of questionable value to an up-to-date agriculturist. It is, of course, highly interesting to know that back of the ages the horse was a four-toed animal and that certain species of reptiles are now extinct, and that certain strata were formed during the Ice Age, yet such information given to the farmer will not aid him in feeding his horse better, husband his farm's fertility more carefully, aid him to put first-class products on the market, or help him to enjoy life better, so that we insist on a thorough appreciation of the practical in the shaping of an agricultural course. It is not possible for a university to give a course of any practical value to a farmer, in which opinion we are borne out by experienced teachers and educated farmers.

THE LONG COURSE MAKES TEACHERS.

In the Scottish Farmer is described the work required for the B. Sc. degree in agriculture at the University of Edinburgh. As that paper pertinently puts it, "B. Sc.'s in Edinburgh seem to need to know as much as all their teachers put together." It would doubtless suit those people who are wedded to higher education, but such a course is impracticable for work-a-day farmers in Canada. As one of the agricultural colleges puts it in their catalogue, "The advanced instruction (the four-year course) is designed to fit men for teachers and experimenters (in agricultural colleges and experiment stations); the special, or short course (of one or two years), is intended for young persons preparing themselves to become farmers, and who wish to avail themselves of technical and practical instruction in modern scientific agricultural methods."

It has been found that the long course students in agriculture, especially in those institutions which have a university connection, do not go back to the farm—in fact, the students feel not a professional but at some college, in an experimental station, or a position not necessarily con-

nected with agriculture. This statement is admitted by the colleges to be true, and was so found by the Manitoba Agricultural College Commission when lately visiting the different colleges.

The course outlined in the "Farmer's Advocate" we believe would be popular and practical, as a somewhat similar course in an American college (Wisconsin) has resulted in the greatest increase in number of students in the same time of any agricultural college on the continent. The subjoined schedule will aid the reader materially, and by its use he will be enabled to see where some colleges lack in the giving of practical and technical instruction.

As will be readily seen, the length of the time spent at the colleges varies. For our purpose the length, of course, matters little, provided the course is not too condensed, and that the subjects of greatest importance are given a sufficient amount of time in the curriculum. It must not be forgotten that an agricultural college is a professional school for the farmer as the medical school is for the doctor, etc., and therefore professional studies should occupy the student's time while there. Such being the case, it will at once be seen on scanning the subjoined schedule that some of the colleges devote too great a proportion of their time to non-professional subjects, such as literature, etc. In the case of Guelph, nearly as much time is given to subjects to be got at the common and high schools as is given to live stock, etc. In the North Dakota College term, it will be noticed that the hours for academic studies outnumber those given to agriculture, the Minnesota school being open to the same charge. All the courses, except Guelph, are deficient in poultry instruction; on the other hand, at that college too little time is given to farm dairying, and, in comparison, too much to poultry, though not considering the needs of that growing branch of farm industry.

The difference between the total hours of study, compared with the length of college term (for instance, Iowa's two year terms of eight months each, with 1,296 hours, and Wisconsin's two year terms of four months each, with 1,095 hours), is accounted for by a more condensed time-table and less time given to manual labor, military drill, etc.

THE SHORT COURSE HELPS THE FARMER.

Comparisons might be continued, but we prefer to let our readers study the schedule for themselves. Suffice it to say, that we are of the opinion that animal husbandry and field agriculture should be predominant in the course, plant life and horticulture, shop work and farm dairying coming next in importance. Valuable time should not be given to elementary inorganic chemistry with its formulas, atomic weights and combinations, nor in botany, to the memorizing of a lot of natural orders and their peculiarities; in fact, we know from practical experience that students without a particle of the instruction condemned above were able to appreciate and grasp fundamental principles and practices of agricultural chemistry and plant life delivered to them unburdened with the fripperies of scientific formulas or nomenclature. The "Advocate" therefore insists that the non-essentials be relegated to those institutions devoted to delving in the musty lore of the Greeks and Hebrews, and that the agricultural course should contain only those essentials which are inseparable from progressive agriculture. We deny the right or wisdom of letting men engaged in teaching general knowledge outline, shape or otherwise interfere in the making of an agricultural-college course. No province has money to throw away in experimenting in the running and equipping of an agricultural college, hence our demand for an up-to-date professional school in which the principles and practice of advanced agriculture will be efficiently taught.

ANALYSIS OF COLLEGE SCHEDULES, SHOWING APPROXIMATELY HOW THE TIME IS ALLOTTED AT SOME OF THE LEADING AGRICULTURAL COLLEGES.

| Name of College and Length of Course. | LIVE STOCK. Including Feeding, Breeding, Judging, Management and Veterinary Science (VS). | AGRICULTURE Field Crops, Soil Cultivation, Physics of Agriculture and the Principles Involved, Farm Drainage, etc. | PLANT LIFE AND HORTICULTURE. | SHOP WORK—Carpentry, Blacksmithing, Engine Practice. | FARM DAIRYING. | AGRICULTURAL CHEMISTRY. Literature, Arithmetic, Metric Composition, Geography, History, Etymology, Stenography, Languages, etc. | BACTERIOLOGY. | PARLIAMENTARY PRACTICE. | FARM BOOKKEEPING. | ECONOMICS. | GEOLOGY. | POULTRY AND BEES. | BIOLOGY. BOTANY (B), ENTOMOLOGY (E), ZOOLOGY (Z). | TOTAL HOURS. |
|---|--|---|------------------------------|--|----------------|--|---------------|-------------------------|-------------------|------------|----------|-------------------|--|--------------|
| | | | | | | | | | | | | | | |
| WISCONSIN— 2 years of 4 months each. | 330 60 (VS) | 390 | 203 | 161 | 152 | 70 | 28 | | 21 | 35 | 21 | 11 | | 1095 |
| GUELPH— 2 years of 6 months each. | 156 91 (VS) | 217 | 131 | 111 | 39 | 52 | 182 | | 237 | 26 | | 26 | 156 | 1353 |
| N. DAKOTA— 2 years of 8 months each. | 300 210 (VS) | 510 | 60 | 180 | 300 | 120 | | | 710 | 30 | 60 | 60 | | 2060 |
| MINNESOTA— 3 years of 6 months each. | 119 265 (VS) | 351 | 231 | 286 | 195 | 231 | 195 | | | 65 | 52 | | 65 | 1898 |
| NEBRASKA— 3 years of 6 months each. | 312 192 (VS) | 701 | 192 | 111 | 129 | 96 | 129 | | | | 18 | | 111 | 1632 |
| IOWA— 2 years of 8 months each. | 272 221 (VS) | 196 | 210 | 256 | 32 | 112 | 176 | | 684 | 32 | | 18 | 18 | 2490 |
| IOWA— 2 years of 8 months each. | 195 | | 272 | 192 | 64 | 100 | 128 | | 176 | | 32 | 32 | 64 | 1296 |

N. B.—The course upon which the "Advocate" plan is modelled; it will be at once noticed that this course is well balanced, essentials receiving the proper consideration, the course being a professional, not a general one.

A considerable part of this time is devoted to inorganic chemistry.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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AND N.-W. T.

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WINNIPEG, MANITOBA.

The Wheat Blockade.

The wheat blockade is a very evident fact. Farmers' organizations, boards of trade and all the newspapers in the West have been busy discussing the situation. We are in receipt of many enquiries as to the cause of this serious situation. The Winnipeg Board of Trade held two stormy meetings discussing the situation, and passed strong resolutions urging the C. P. R. to provide sufficient cars and locomotives, double track their line from Winnipeg to Fort William, double their storage capacity at the lake port, and in the meantime carry grain all rail to the seaboard at the same rates as are charged for rail and lake transportation.

These discussions will do good. If the West quietly submits to the present condition of affairs, we shall be long in obtaining relief: the eastern capitalist, railway magnate and Government must be awakened to the development and possibilities of the West. If the Canadian wheat route to the sea by rail and water is not developed fast enough to prevent such disastrous wheat blockades as exist to-day, we must look to American outlets via Duluth. It is doubtful if the independent spirit of the West, leavened by the new blood now arriving from the south, will permit its growth and prosperity to be hampered by sentiment, and if the trade channels mentioned are used, no blame can be laid to the long-suffering Western farmer.

The C. P. R. claim they have purchased all the cars and engines they could procure on the continent, and yet they have not half enough to handle the crop, nor have they half enough storage at lake ports.

The result of the blockade is that the farmer is either obliged to sell his grain to buyers who can't handle it, or else store it himself. Not being able to realize on the crop, he cannot meet his liabilities, and will have to pay heavily for the accommodation of being carried over. None lose but the farmer who has to pay the interest that the retailer, the wholesaler and the banks all collect, while the railroad profits by the blockade by its storage charges at the terminal elevators.

Objectionable Features of Hedge Fences and Hedge Fence Companies.

Early last spring the "Advocate" obtained information that some parties were talking of forming a hedge-fence company in Brandon, and in our issue of May 20th an editorial was published pointing out the undesirability of hedges, except for small garden rows, and warning farmers to be on their guard against hedge-fence fakes in general. In view of subsequent developments, the item in question is herewith reproduced, and we would like to ask those who have signed contracts for hedge fences if they do not think the advice contained therein is sound.

THE FENCE PROBLEM.

Farming in the older-settled sections of the West is undergoing a transition, from the rough-and-ready way of the pioneer to the systematic and scientific methods of the advanced agriculturist. A systematic rotation of crops, including seeding down to grass, is now recognized by all thoughtful men as a present-day necessity, if the productiveness of the soil and ability to grow a No. 1 hard wheat is to be maintained. In order to properly utilize the grass land, fencing becomes imperative, and herein lies one of the most difficult problems, owing to the cost of fencing material.

THE HEDGE FAKE.

An active demand for fencing, together with the expense of good fence pickets and wire, creates the opportunity for the faker with the patent fence, the slickest of whom is the patent hedge-fence man, with his alluring colored plates of beautiful blossom-covered hedge-rows, with nature's growth so marvelously trained that the mesh is close enough to intercept the gopher and, at the same time, strong enough to be "bullet-proof." These wonderful combinations of hedge plants (at so much a thousand), that are sure to grow, and a few strands of barb wire (at wholesale), are bound sooner or later to be offered to the Manitoba farmer, and, like the farmers in every other civilized country, experience bought and paid for is likely to be the only thing that will convince them of the uselessness of the hedge fence. Doubtless, too, local companies will, in due time, be organized to sell and plant hedges, and farmers will be offered special inducements to invest some of their surplus cash in the shares of these companies, whose only hope of success is in the gullibility of the public. Those who remember the osage-orange and locust hedge fakes that were successfully worked some years ago—and many may have cause to remember—will not be so easily caught in the meshes of the patent-hedge man.

HEDGES UNSUITABLE.

Hedge fences are totally unsuited to the conditions of prairie farming, when one considers what the growing of a hedge means. For the growing of any kind of trees or shrubs in this country, cultivation is absolutely essential. Think of the labor necessary to thoroughly cultivate a strip of three or four feet along both sides of a hedge a mile or two in length, and to keep down all weeds and grass (including twitch-grass), for several years; then, to insure a thick undergrowth in the hedge, it must needs be kept closely and frequently trimmed for all time to come. As a reward for all the labor, the hedge, even if it has grown fairly well, is at best a poor substitute for a wire fence. It collects snowdrifts, which break down the hedge and keep the land adjoining wet until late in spring, and in the event of soil drifting from the adjoining fields, the results to the hedge would be disastrous. Anyone who desires a nice bit of hedge along the garden border will be well repaid for the labor necessary to obtain it and keep it in shape, but few who stop to consider are likely to undertake to hedge-fence even the boundary line of a quarter-section farm.

Under the title of The Manitoba Farmers' Hedge and Wire Fence Company, Limited, operations have been carried on this past summer, and contracts have been made with farmers whereby the Company undertakes, for certain considerations, to set out hedge plants for the farmer in the spring of 1902. These contracts are very one-sided arrangements, and contain some objectionable features, which, for the benefit of our readers, we refer to somewhat in detail.

The Company gives no post-office address on

the contract, and there is absolutely nothing on the contract to identify the whereabouts of its officers. While the Company agree to set out hedge plants in the spring of 1902, there is absolutely nothing in the contract as to what kind of plants are to be used; they might be osage-orange or English buckthorn, or any other plant that won't live in this climate. Of course, the Company agrees to replant in the spring of 1903 and 1904 "where necessary to secure a sufficient stand of plants."

When the hedge grows sufficiently robust so that the Company "considers the plants of sufficient size," then they undertake "to attach to the bodies of the plants" three parallel strands of "barbed wire, which is to form the wonderful combination of hedge and wire fence. It is presumed that fence posts will be required to carry these three strands of barbed wire, but nothing is said in the contract about furnishing or planting the posts, so of course the farmer would do that.

The farmer undertakes to prepare the ground under instructions from the Company, and to properly protect, manure, cultivate and keep free from damage, weeds and grass, and in the event of the Company determining that the farmer is not giving due care and cultivation to the hedge, then the farmer agrees to let the Company put in men and teams and do the work to the Company's satisfaction, and to charge up the cost of the work to the farmer. After the farmer has complied with all the terms of the agreement, which includes payment of all claims in full, the Company will "guarantee that the said hedge" (with three parallel strands of barb wire) "will turn ordinary farm stock."

Another interesting clause reads: "It is agreed that no verbal arrangements made with any agent, and not included therein (in the contract), shall be binding upon the Company." This conveniently relieves the agent of all responsibility, and he can talk as glibly as he pleases.

The terms are quite moderate: 50 cents per rod at time of planting, and another 50 cents per rod at time of resetting, and then 25 cents per rod as the hedge is plashed (this means when the three parallel strands of barb wire are attached to the bodies of the plants). In addition, the farmer agrees to pay "interest at the rate of seven per cent. per annum on the amount of the first two payments remaining unpaid from the date of planting said hedge." The three strands of barb wire are worth about 11 cents per rod, and if any farmer will do the work of preparing the ground and cultivating it, as he agrees to in the contract, and set out a row of native maples or caraganas, which can be got for a trifle, he can have all the hedge fence he wishes at one quarter the expense, but, of course, he would not have the pleasure of signing a contract.

There is one other feature about the contract that is especially interesting, so much so that we reproduce a facsimile of it. This portion is at the bottom of the other contract, which is duly completed by being signed and witnessed, and then this lower portion, which is semi-perforated, is also signed and witnessed. It reads:

"I, of the Municipality of, in the Province of Manitoba, farmer, hereby agree that if I shall not have paid to the Manitoba Farmers' Hedge & Wire Fence Company, Limited, the amount due to the said Company, under agreement of even date herewith, amounting to the sum of dollars, that the said sum shall be, and I hereby grant, a lien and charge upon my lands, and bear interest at the rate of seven per cent. per annum from the date hereof and be payable on demand.

"In witness whereof I have hereto set my hand and seal this day of A. D. 1901.

"Signed, sealed and delivered in the presence of"

In this last clause, we take it, lies the kernel of the whole matter. For it may be assumed that, supposing the Company set out hedge plants and reset them the following spring, and that the bulk of the plants die, as in all probability they would, the farmer would, in disgust, not give very careful cultivation to the plot, then the Company, being the sole judge, could claim that the farmer had failed in his part of the contract, and they could collect on the strength of this last part of the contract the full amount with interest from the date on which it was first signed, from six to nine months before a single plant had ever been set out, or register it against the land of the farmer the same as a mortgage.

Make the Fairs Educational.

The boards of management of the large exhibitions will soon be making arrangements for the fairs of 1902. Strenuous efforts are made as year succeeds year to have each exhibition surpass its predecessor in order that large crowds may be attracted and the annually-increasing expenditures met. A glance at the financial statement of any of our big fairs will show that a very large proportion of the total receipts are derived from the grand stands. Thousands of visitors pass through the gates and go directly to the grand stands without ever looking at any other part of the fair. This being the case, it is but natural that the management should pay most attention to those features that bring the most revenue, and hence the effort to provide attractions each year that will surpass anything previously presented. This implies increased outlay for attractions and additional facilities to accommodate the crowd. With all fairs this can only go so far. The limit must sooner or later be reached, the public becomes surfeited, and there comes a time when nothing new or sufficiently startling can be put on the boards.

The Winnipeg Industrial has not yet reached this stage, although some of the big fairs in the east are apparently "up against it," but the time has come, even at Winnipeg, when plans should be made looking to avoid the snags against which older fairs have run.

WHAT THE PEOPLE WANT.

In this vast new country, whose one great industry is agriculture, the people naturally, and rightly enough, enjoy the carnival element of the fair, and against clean attractions we make no complaint, but we desire to enter a strong plea that greater prominence be given purely agricultural and industrial features. The people are anxious for information, for practical education, and while there may be little direct complaint, there being no precedent in the visitor's mind to judge by, there is a general feeling among those attending the fair that there is a great lack of the instructive. With a little attention directed towards these features, much could be accomplished, and there is no doubt in the world but that the public would appreciate the innovation, and when the public taste becomes satisfied with platform attractions, as it undoubtedly will in a few years, these other and more lasting features will have gained in strength and save the exhibition from oblivion.

A REMEDY SUGGESTED.

In the industrial and agricultural departments immense improvements could be made were the main building converted into a hive of industry instead of a dead show of shop goods, and the British Columbia building transformed from a great empty space, with a little noxious-weed exhibit stuck in one corner, to a place where the products of the mine, the forest, the fisheries and the field could be exhibited in such a way as to instruct as well as entertain. These several departments of our Federal and Local Governments should have permanent exhibits arranged and kept up-to-date from year to year. The Experimental Farms of the Province and Territories might also have permanent exhibits, showing specimens of the best varieties of grains (in straw), grasses (all properly named), etc.; specimens showing the results of various experiments, such as smut tests, etc., and in a hundred other ways provide an exhibit that would serve to attract the thousands that annually visit the fair, and particularly those from the States to the south.

In industrial exhibits could be shown the processes of manufacture of flour from wheat to bread, with the various by-products and their uses, of linseed oil and oil cake, of binder twine, leather, baking powder, candy, the curing of meats, printing, bookbinding, etc.

In the live-stock departments great improvements are capable of being made. The judging should be made more of a feature of the fair. Comfortable seating should be provided, the work should be done on schedule time, thoroughly advertised, and treated generally as one of the most important features of the week, and not as some-

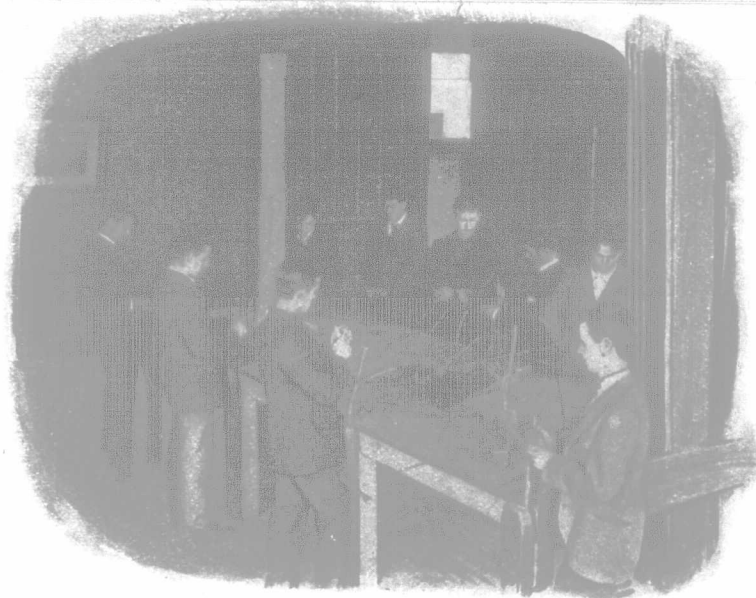
thing to be got through with as hurriedly as possible.

RESULTS THAT WOULD BE OBTAINED.

We have not the least hesitation in saying that if a large covered arena with ample seating were provided for the judging of stock, the work to be done at stated times, well advertised, live-stock catalogues supplied, and every animal wear a number corresponding with the catalogue for identification purposes, this feature would become one of the most popular of the show.

Some city fair-board directors may be skeptical of such a statement, but we know whereof we speak. All down the circuit of the big fairs in the Western States, where improvements similar to those above described have been adopted, the results have been most satisfactory. The writer spent a week at the Minnesota State Fair, and while there were counter attractions in front of the grand stand, the live-stock judging arenas were crowded from early morning until late afternoon. The people are just as eager for knowledge on the improved breeds of live stock in Manitoba and the Northwest as in the adjoining States. "Provide the facilities for seeing and learning, and the people will not be backward in showing their appreciation!"

Coming more to detail, our plan would be to provide a large oval circus tent, with seats arranged amphitheatre style, the central space divided in the middle and enclosed with woven-wire fence. The judging of different classes could then be proceeded with at one time, and as the



STUDENTS GRAFTING AT ONTARIO AGRICULTURAL COLLEGE.

judge finished each class they would parade around the whole ring in order of merit, and could thus be viewed intelligently by the audience.

In the sheep and swine barns practically the same programme could be carried out, with a little attention to details. Someone may ask, "What is the object of this extra expense and fuss?" The answer: "To benefit the one great industry of this great West—agriculture. Live-stock husbandry must be the keystone of a permanently successful agriculture, and by affording the public an opportunity of seeing and learning about the characteristics and qualities of the various breeds, and by stimulating a desire for more and better stock, the exhibition would be fulfilling a far higher mission and doing a greater and more lasting work for the country than by simply catering to the amusement of the thoughtless!" In order to carry out these suggestions and perfect all details, a competent live-stock superintendent is needed at the Winnipeg and all other big fairs. This is a matter that should engage the attention of the live-stock associations when they meet in annual session next month.

The Christmas number of the "Farmer's Advocate" is to hand, and is worthy of that reliable farm journal. This special number contains over sixty pages of most interesting articles from the pens of some of the very best writers on farm work, printed on fine paper and profusely illustrated, the whole being enclosed in a very handsome cover. The number is a very fine one and is very creditable to the publishers of the "Advocate."—(Melita Western Progress.)

Departmental Buncombe!

There has come recently to the editorial table of the "Farmer's Advocate," printed matter emanating from the Department of Agriculture, Ottawa, which matter is conclusive evidence that reorganization or a shaking up in some respects is necessary before the said Department can claim to do effective work. Under the caption of Farmers' Bulletins, two tracts are issued by authority of the Minister, edited by the Chief Veterinary Inspector. The subject matter of these bulletins betrays a lack of professional knowledge. Symptomatic anthrax is a term scientists have dropped, for various reasons. Judging by a clause in one of the bulletins (No. 5), one would think that our farmers were somewhat acquainted with contagious pleuro-pneumonia, a belief shared in, unfortunately, by our British confreres across the water, which belief has done the Canadian live-stock interests much harm. Clipped or rehashed matter from a veterinary text-book does not make an ideal farmers' bulletin. The use of such terms as ecchymoses, savius pus, flagellae, anaerobic, mediastinum cannot be too severely condemned in a publication for popular use. Nowadays the tendency is to suspect a lack of knowledge on the part of the person using big words and phrases unfamiliar to either audiences or readers. There is no use in spending public money on pamphlets written away over the heads of the intended readers. This is one reason why tons of such matter is never read at all, but goes into the rubbish heap.

With some experiment stations it is a practice to get out bulletins frequently to let people know that the writers are doing something in an attempt to earn their salaries, and we suppose the same idea must have struck the author of these documents. If the said official is aching for something to do, we would suggest that some investigation work be done with that scourge of the Red River Valley, swamp fever. In conversation with a farmer of the Stonewall district, the fact was elicited that within a radius of 2½ miles of that man's farm 85,000 worth of horses died last summer from swamp fever. We are of the opinion that the annual losses in the West from swamp fever exceed greatly the combined annual losses from glanders and anthrax,

in which opinion we are backed up by Dr. S. J. Thompson, P. V. I. for Manitoba. Minnesota has already made an appropriation of a large sum of money to investigate the disease, while a department supposedly looking after the live stock of this country does little or nothing to stamp out the trouble which has in some cases ruined settlers whose all, beyond a few cattle and a homestead, consisted mainly of one or two teams of horses. The horses owned by such men are each worth three or four ponies, which are the horse stock mainly afflicted with glanders, according to the bulletin to hand. Accompanying the bulletins was a sheet regarding tuberculin testing of cattle. This list is dated Dec. 16, 1901, and contains the name of the Canadian veterinary officer in Great Britain who resigned his position some time ago, of which fact the Chief Veterinary Inspector cannot be cognizant. It is evident that the Department needs to get rid of some of its parasites and replace them with new blood, up-to-date knowledge and strenuousness.

Address Label Important.

We desire every subscriber to note carefully the date on the address label on the paper in order to see that due credit has been given for remittance. If same is not correct, write us at once, giving full particulars as to amount of remittance, date of sending, and whether sent by registered letter, money order, or an ordinary letter. We do not hold ourselves responsible for moneys sent in the latter way. The date on your label serves as your receipt, showing the date up to which your subscription is paid.

Farm Siftings.

Years ago when a farmer went back East and related accounts of the crops out West, the down Easters thought he lied. To-day, however, the Eastern man has progressed a step, recognizes that there is a market up West for his live stock, and possibly brains, when he has any to spare. The Easterner's idea of the West was very aptly expressed by Varsity, the journal of Toronto's University, a short time ago when discussing measures to be submitted to the students' mock parliament. One of the measures was "the settling of Varsity girls in the Northwest to raise the standard of culture!" Some of the eastern farm hands up for the harvest expressed a similar idea, only in slightly different language. It is not yet understood that Canada's greatest heritage lies west of the Great Lakes. The go of the West is disturbing to eastern minds. This has been shown in a very practical way recently in the grain blockade under an eastern regime. The Western officials of the C. P. R. had not the wherewithal to get out the grain, and unless the fellows down east open up and grasp the situation, the blockade will not be relieved by next harvest. There is a growing feeling in the West, judging from our newspapers, which is bound to grow in intensity as the new settlers arrive from the south, namely, that the West would be bettered if its grain were marketed at Duluth and its cattle at Chicago.

The question of culture leads up to our school system, which all will admit is by no means perfect. In fact, it seems to be that the aim of teachers is to turn out teachers to teach somebody else to become teachers, and so on, indefinitely. The teachers of to-day are, in the majority of cases, arrayed against farming as a profession, which, together with an educational system bent on making every smart farmer's boy or girl a member of the learned professions, in a way explains why the children leave the farm.

The controversy over Alberta oats gets hotter and hotter. I certainly think Albertans have a right to kick against using the name Alberta and thus labelling their district as a producer of an inferior article. It was doubtless all done to "bear" prices, in spite of the denial of the grain dealers' organ, the Commercial. Judging from what few copies I have seen of that paper, it is properly named, if we interpret the word in its lowest sense—anything for money!

This year has seen no diminution of farmers flitting to the east for a winter's gossip and rusting. How much better if the trip were shortened, or made to include a visit to the fat-stock shows, or to include attendance at a short course in judging live stock and grains at some agricultural college! Sometimes a farmer uses money to go east which should be used to meet his liabilities in the West, but feels no qualms of conscience for so doing.

A neighbor, who has a threshing machine, protests strongly against "boiler inspection" as now carried out in Manitoba. He states that "not only is such inspection no guarantee against explosion, but the boiler is invariably weakened—the result of the test!" It's just a chance if the inspectors know any more regarding boilers than the owners whose boilers they inspect. Another proof of the need of more technical education! What have the T.P.A. to say on the matter of boiler inspection? INTER PRIMOS.

Release from the Clasp of the Octopus.

The last straw has broken the camel's back, and a new order of things is to be instituted. The grain-growers of the Territories held a meeting at Indian Head recently and organized for protection. Between car shortage, grain blockade, and a wheat market "beared" to a point favoring of stealing the farmer's produce, the farmers have been crushed between the upper and nether millstones. The Western men have now taken the bit between their teeth, and with the help of the Territorial Government and the agricultural societies will seek to remedy matters. C. W. Peterson, Deputy Commissioner of Agriculture, took charge of the organizing, having had successful experience in the same. He urged the necessity for combination by the grain-growers to force the corporations to listen to them and release them from the vice-like grasp in which they are now held. Several noted agriculturists took part, notably Senator Perley, Messrs. Snow, Brennan, Angus Mackay, W. R. Motherwell, Miller and Hamilton. Membership fee was fixed at \$1.00, agricultural societies becoming members by payment of \$5.00. Annual meetings will be held in December of the central association, and the branches in November. The first annual meeting will be held at Indian Head, March 12th, when permanent officers will be elected and the organization perfected. The gentlemen named will go before the institutes and press home the aims of the Association and the advantages to be derived from membership in it.

One of the Wheat Kings.

As shown by the tabulated statement of some of the big crop growers in our Christmas issue, Thos. R. Brown, Regina, a portrait of whom is herewith reproduced, had a total crop of 27,640 bushels off an area of 1,072 acres. The following further statistics will be of interest. The custom in many parts of the Territories is to take two crops off after a summer-fallow without plowing, and this system Mr. Brown says gives them better results than either spring or fall plowing.

The second crop without plowing is called a stubble crop. Sometimes this follows backsetting, but generally a summer-fallow. The yields obtained by Mr. Brown on the several plans of cultivation are instructive, showing strongly in favor of summer-fallow.

| WHEAT. | | | |
|----------------------------|--------|----------|----------|
| Cultivation Given. | Acres. | Average. | Bushels. |
| Summer-fallow..... | 132 | 45 | 5,840 |
| Breaking..... | 100 | 36 | 3,600 |
| Summer-fallow stubble..... | 75 | 32 | 2,400 |
| Breaking stubble..... | 130 | 18 | 2,340 |
| Total..... | 497 | 33 | 16,340 |
| OATS. | | | |
| Summer-fallow..... | 45 | 90 | 4,050 |
| Summer-fallow stubble..... | 85 | 50 | 4,250 |
| Breaking stubble..... | 75 | 40 | 3,000 |
| Total..... | 205 | 60 | 11,300 |

These figures speak plainly enough, but we would just call attention to one item, that of the 160 acres of breaking yielding 36 bushels per acre. Allowing \$4.00 per acre for the breaking and backsetting, and \$7.00 for seeding and harvesting, it would leave \$7.00 per acre to pay for the land, the 36 bushels per acre being worth, at



THOMAS R. BROWN.
One of the Wheat Kings of the Canadian Northwest.

50 cents, \$18.00. Now, there are thousands of acres all through the West of choice wheat land that can be bought for less than \$7.00, and that, if properly handled, will be as likely to produce enough wheat to pay for them in one year as in the above case. And this is only one instance of thousands that might be cited. Talk of the possibilities of the West!

Press Comments on Our Christmas Issue.

A VALUABLE IMMIGRATION MEDIUM.

Perhaps no Canadian publication does its country more and better justice than the Christmas number of the "Farmer's Advocate." From the title cover to the last fly leaf it is pictorial representation of what our Western prairies and plains can do in the way of agriculture and stock-raising. Every illustration is a high-class art production. As a specimen of Canadian lithography, the front cover page is a gem and its prominent feature is a fine photogravure of King Edward VII. Inside is an illustrated description of His Majesty's herds and stud. The agricultural and stock-raising development of Alberta and British Columbia come in for a large share of notice. Among the illustrations are a number of photogravures of paintings by Canadian artists. These do as much justice as black and white can do for the originals, many of which have been seen by us. There are 60 pages of valuable and interesting reading, among which is an article on "The Northwest Rebellions," by Rev. R. G. MacBeth. The Christmas "Advocate" would make a valuable medium as an immigration agent. It should and will receive the recognition and appreciation it deserves from every Canadian who receives it. (Dufferin Leader, Carleton Place.)

THE BEST PUBLICATION OF THE YEAR.

The Christmas number of the "Advocate" is

the best publication that has reached our office this year; it reflects credit on the publisher. It is a work of art, and wherever it goes it will delight its readers and benefit the West.—(The News, Carberry, Man.)

WILL BENEFIT THE WEST.

The Christmas "Farmer's Advocate" is to hand, and is a most elaborate production. The colored frontispiece is both effective and unique, which includes a beautiful photogravure of King Edward VII. The pages are brimful of instructive and entertaining articles, and embellished with a wealth of views representing Manitoba and Northwest farms, ranches and scenery. Wherever it goes it will delight its readers and benefit the West.—(Boissevain Globe.)

WORTHY OF A PLACE IN EVERY FARM HOME.

The Christmas number of the "Farmer's Advocate" is a beautiful one. It is an art gallery and library combined—the illustrations being of the highest order and the information concise and accurate. King Edward VII. and the Royal herds at Windsor are the prominent features, but there are also sixty pages of instructive and entertaining articles. It is a publication worthy of a place in every farm home.—(Neepawa Press.)

We have seen nothing more effective and unique than the colored frontispiece, which includes a beautiful photogravure of the farmer king, Edward VII., followed up within by a careful description of the Royal farms and herds at Windsor.—(Regina Leader.)

Just which set of features are the more tempting it would be hard to say. Among the portraits a Brandon lady and her article have the place of honor. One specially patriotic feature is the publication of sketches of a dozen leading Canadian artists, with photogravures of paintings selected from among the best of their works.—(Brandon Times.)

It is safe to say that the Christmas "Advocate" will be warmly received and win the appreciation which it richly deserves. It surpasses by far anything its staff have hitherto issued, and is a splendid representation of Western Canada.—(The West, Regina.)

An art gallery and library combined would be an appropriate description of the Christmas number of the "Farmer's Advocate." Winnipeg, recently issued. As Canadians, cover and contents alike "do us proud."—(The Banner, Russell.)

The "Farmer's Advocate" has issued a Christmas number which, for quality and quantity of illustrations it is difficult to equal. The cover is very attractive and appropriate. Many eminent men and women and many beautiful and amusing scenes are contained in it, such as "A Visit to Old Friends," "The March of Civilization," and "A Halt in Piccadilly." It is a 50-cent number and goes with the "Advocate" free.—(Somerset Century.)

The Christmas number of the "Farmer's Advocate" is indeed an excellent one. It is very profusely illustrated with scenes of Western life and herds of stock, and contains an immense amount of reading matter. The frontispiece is very artistic.—(Elkhorn Advocate.)

The Christmas number of the "Farmer's Advocate" is a very neat piece of work, and contains a lot of interesting pictures and reading matter. We wish them success in their efforts.—(Deloraine Times.)

The "Farmer's Advocate," one of the best agricultural journals in Canada, is to hand with a splendid Christmas number. The cover is in itself a work of art, and the reading matter is entirely devoted to the agricultural interests of the country lying between Lake Superior and the Rockies. The articles are profusely illustrated, and many portraits of prominent Albertans appear.—(Calgary Herald.)

The Christmas number of the "Farmer's Advocate" appears in an elaborately ornamental cover. The issue is well illustrated and contains many articles of interest to Western farmers.—(Edmonton Bulletin.)

A beautiful Christmas number is the "Farmer's Advocate," published at Winnipeg, Man. It is a royal number. The colored frontispiece includes a beautiful photogravure of the farmer king, Edward VII., and is followed up within by a careful description of the royal farms and herds at Windsor. Then follow over 60 pages of instructive and entertaining articles, some of special interest to British Columbia. A striking photograph of Rev. R. G. MacBeth, the author-clergyman of Vancouver, accompanies an excellent article on Rebellion Reminiscences. Mr. R.

M. Palmer writes on Condition and Progress of British Columbia Agriculture, 1901. The article is illustrated by photographs of Hon. John Douglas Prentice, Minister of Agriculture, and Mr. J. R. Anderson, his deputy. Scenes are depicted from the farm of Mr. T. Ladner, Delta. To one patriotic feature we must specially refer, viz., the publication of sketches of a dozen leading Canadian artists, with photogravures of paintings selected from among the best of their works. It is safe to say that the Christmas "Advocate" will be warmly received and win the appreciation which it richly deserves.—(The Vancouver World).

A Strong Plea for Technical Education.

The following excerpt from a speech delivered some time ago by Hon. J. A. M. Aikins, K. C., shows that gentleman to have been an ardent supporter of technical education, especially for the farmer, by the creation of an agricultural course in the university. We have, however, in a series of articles shown that university connection for the Agricultural College is neither desirable, feasible nor practical, in which opinion we are backed up by the farmer members of the commission, who have arrived at that conclusion from personal contact with the successful colleges in Canada and the United States. To Principal Patrick and Hon. J. A. M. Aikins undoubtedly belong, in a great measure, the credit of getting the commission appointed by the Government, and while in error in desiring to tack the agricultural teaching on to the university, they did so from the standpoint of economy, being of the opinion that parts of the university equipment could be utilized for agricultural-college work. Aside from the above exception which we have taken to the direction in which agricultural college work should be guided, we are heartily in accord with the sentiment of the utterances of the eminent K. C.

"We all wish to see in Manitoba a strong university, giving high training in those subjects most useful for the welfare of the people of this part of Canada, most necessary for Manitoba. Teach about the Aztec period if you will, but do not neglect the present. Teach them how to work out a binomial theorem, but first how to win bread more easily by knowledge and thought. Teach them of honorable people of ancient days and foreign countries, but above all teach them how the pursuits indigenous to this country can be conducted with as much science and high art as those of any age or in any other country. Let me speak plainly. If to the lash-driven, sun-burned Hebrew in Egypt, the land of Canaan, traversed by mountain, in many places covered with sand and afflicted at times with drought, was a land of promise, how much more should Canada be a land of promise to the Canadians, limited only as it is by oceans on the east and on the west, on the north by a pole so distant and undiscoverable that it has not yet been found, and on the south by a friendly nation, so self-satisfied that it counts itself the possessor of infinite space; our lakes and rivers teeming with fish, our forests the envy of almost every other nation, our mountains split with seams and veins loaded with precious minerals, and our old riverbeds, moss-covered, containing gold and playing hide-and-seek with the discoverer, whom it crowns, when successful, with that gold; our broad prairies yet almost untilled, waiting only for the industry of the intelligent agriculturist to make them smile out in fruitfulness? If all these undeveloped resources promise so much, why is it that every year hundreds of our best young men leave us for the United States and other countries? May not our system of education be to some extent responsible for it? High education in letters and art is made easy in Canada, and every year our colleges and universities are turning out hundreds of young people trained in philosophy, in theology, in letters, in law, in medicine, in pedagogy, far beyond the national demand, and, as in commerce, Canada is made a slaughter market for the overproduction of the United States, so the United States is made a market for our surplus in the higher commodity, character and culture and common sense combined in the individual youth, who commands there a higher price than he can here, and the financial reward attracts him from his own country. And we cannot blame him. But the question arises, cannot a man make as much in those pursuits particularly suitable to this country: in supplying food products, in agriculture, in lumbering, in mining, and the manufacture of the raw material so abundantly produced here? Has not the farmer who has conducted his business intelligently (scientifically, if you will) been successful in Manitoba? Ten, fifteen or twenty years ago, many a farmer came here without money, but with energy and a good knowledge of farming, and a thoughtful mind, and now, at middle age, he is well off and can retire. Have not men grown rich out of mining and manufacturing, and why not more? Largely because the attention of young Canadians has not been pressed toward the development of our national

resources and because they have not been specially trained along those lines which will enable them with ease and profit to develop them. One grows enthusiastic over what one can do easily and successfully, but when, through want of knowledge, there is severe labor or failure in agriculture or other occupation, there is dissatisfaction and abandonment. Yesterday a young man, son of a farmer, came into the office asking my assistance to secure a position in the railway shops. I asked him why he did not stick to the farm, and his reply was, "Too hard work—there ain't no money in it," and I was not surprised there was not for him. The first recorded command given to humanity was to replenish the earth and subdue it, and have dominion over the fish of the sea and over the fowl of the air, and over every living thing that moveth on the earth. In this most ancient and honorable occupation of tilling the earth and raising herds, why should not the best teaching and training be given, so that with less toil greater results would be accomplished, and so that Canadian children would be attracted to our prairies, instead of being educated and given to foreign countries? Why not make our home pursuits more attractive to our sons, instead of scouring the earth and finding in some dark corners uncultivated peoples and beg them to share with us our heritage?

"I hope that in laying the foundations of our university, the Government and University Council will make provisions for higher teaching and training in agriculture and subjects essential to it, and thus make Manitoba more attractive to Canadians and keep our sons at home."

Prairie Fires in the Territories.

J. H. G. Bray gave an interesting address on the above topic before the Agricultural Society at Medicine Hat recently, from which we make a few excerpts, as showing the practical nature of the talk.

The results of prairie fires the past season were very disastrous, several stockmen losing their hay and their winter feed, obliging them, late in the fall, to provide winter camps and remove their cattle from their accustomed ranges, at great expense and hardship. Prairie fires originate from various causes. In the late summer months the trouble is sometimes caused by lightning, but more generally it is the result of carelessness on the part of travellers in throwing down a half-burnt match or leaving a camp-fire unextinguished. Nearly all the prairie fires in this district emanate from the Canadian Pacific Railway line, and from the Company's locomotives. The great trouble of late years has been to get the C. P. Ry. Company to plow the fire-guards and cut the weeds upon their right-of-way at the proper season. The Prairie Fire Ordinance gives all railway companies the right to burn the grass 300 feet on each side of their track, but there is no provision as to what their fire-guards shall be. In a great many instances, notably on the Crow's Nest Pass Railroad, fire-guards are plowed too close to the track, and numerous fires are caused by sparks from locomotives passing over the fire-guards and igniting the prairie grasses. The C. P. R. did not see fit to plow their fire-guards until the weeds were full-grown and ripe.

Now, the ground at that season becomes so hard that a man and team cannot possibly do good work, and these tall weeds not being buried, but simply laid down, leave the fire-guards foul, and consequently not fire-guards at all in the true acceptance of the term.

On one occasion a party of railway men were sent out under a roadmaster, with instructions to follow up a prairie fire and put it out. The men tried to do their best, but without proper appliances and without water could do nothing, but having followed the fire for miles, got lost and suffered terribly from thirst. On another occasion a section foreman was engaged in burning off the right-of-way, and there happened to be a break in the fire-guard; it had not been plowed. The fire broke through this opening and got away, burning thousands of acres of the best feed in the district, and obliging stockmen to move their cattle to the Red Deer River, at great loss and expense, their ranges being completely destroyed, thereby causing them great loss and unnecessary expense. The section foreman was fined \$50 and costs for what is considered as the Company's negligence in not having the fire-guard plowed at that particular spot.

A good suggestion was made that additional legislation should be enacted to compel all railway companies to plow their fire-guards at the right time, and do the work properly, and that a fire-guard inspector be appointed to see that the work was done. Other speakers were Robt. McCutcheon, on "Horticulture"; Jas. F. Sanderson, on "Horse Breeding," and J. A. Grant, on the "Aims of Agricultural Societies." The matter of prairie fires will likely be taken up at the annual meeting of the Western Stock Growers' Association at Macleod next April.

The Education of the Horse.

Education is a term seldom used to express the development of the physical and intellectual faculties of the horse. When we hear of an educated horse, it usually suggests the idea of a trick horse or a circus horse. The term break is commonly used; it suggests the idea of conquering or quelling by force, and, unfortunately, this is too often the case. If a horse have vicious habits, as kicking, shying, running away, etc., it would be quite correct to speak of breaking him of those vices; but we can hardly say that a green colt is vicious, as he has had no opportunity of developing the most of the usual forms of vice, although he may be predisposed to them. Therefore, I claim that the term is misapplied, as you cannot break or cure an animal of a vice or habit which he does not possess. However, the term is so commonly used it may be better to continue its use to express the idea that certainly would be more clearly expressed by "education."

A horse is useful in proportion to the extent to which his physical and intellectual powers are developed, or, in other words, to the extent of his ability and education to perform whatever service is required of him. A colt should be handled and educated gradually from the time he is born, but in many cases he is allowed to run almost wild (sometimes not even halter-broken) until he is three or four years old, or until the time arrives that he is required for work, when, without any preparatory training or handling, he is hitched, either singly or with a mate, and expected to go to work at once. This, we claim, is irrational. It pays to take some time and trouble with a colt before asking him to perform the functions of a horse. To properly break or educate a colt, it requires a man of good common sense, one with considerable patience, one who understands horses, and who does not expect to teach the animal everything he should know in an hour or two. The man who undertakes the task should study the individuality of the colt, should use him kindly, if possible, and endeavor to avoid any conflict between his wishes and the will of the colt, but if such should arise, he should be in a position to gain the mastery, even though he has to use harsh means. On general principles, we give the following hints, although in some cases more severe measures may be necessary.

We will suppose we have a three-year-old that is simply halter-broken, and we expect him to go to work in the spring. In the first place, we would like a large box stall, or, failing that, a paddock or yard in which to give him the first few lessons. The first step is to give him a mouth, or, in other words, accustom him to the bit. This is a point that is often sadly neglected or abused; often a bit is put into his mouth for the first time and he is at once hitched, either singly or with a mate, and driven. Not being accustomed to the bit, and not understanding its use, he is apt to either shrink from its pressure or become excited from the pain caused, when he will plunge and bolt and be very hard to control. This makes the mouth sore, and often makes a side-puller or a lugger. The value of a horse, especially the saddle or light-harness horse, depends to a great extent upon his "mouth"—hence the advisability of taking some pains on this point. The better way is to put on a nice light bridle with an ordinary snaffle or straight bit, and allow the colt to wear it an hour or two a couple of times daily, in his stall or paddock, until he becomes accustomed to the bit and no longer fights it; then increased pressure can be put on by attaching reins to it and fastening them to a surcingle. Do this for a few hours each day, gradually tightening the reins until he will steadily yield to the pressure and submit to its restraint. In the meantime it is well to put some harness on to get him used to it. A little more may be added each day, and the straps should be allowed to hang loosely, not low enough to be trodden on, but hanging about his legs in order that he may learn that they will not hurt him. All this takes only a few minutes of the trainer's time each day, and if the lessons be commenced about this time of the year, there will be ample time before spring. Having thus given him a fairly good mouth, and having accustomed him to the harness, it is well to teach him to drive. For this purpose we prefer to take him singly, with the lines passed through the shaft loops and extending along his sides and thighs, in order to the more readily prevent him turning around, as he can easily do if the lines pass through the terrets. We would drive him without having him hitched to anything. Use as few words as possible, but pronounce the words distinctly. Always use the same word to express the same action. When we say "Whoa," let him know that he is to stand still; when we say "Back," teach him that he is to step backwards, etc. If (as is often the case with those driving both colts and horses) we say "Whoa" when we simply want him to go steady, or

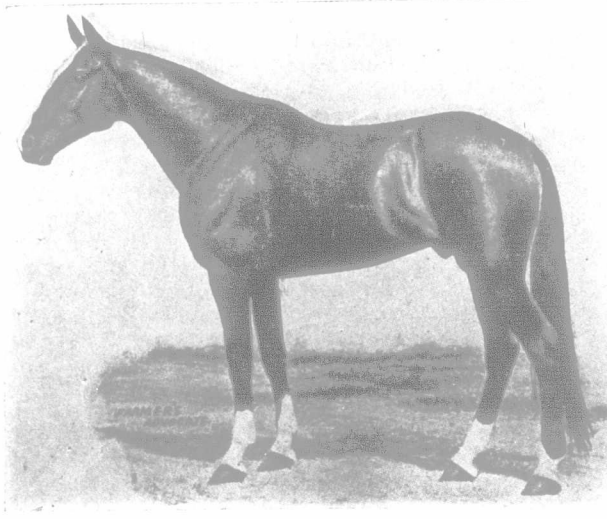
"Whoa, back," when we want him to break from a trot into a walk, and many such terms, we must of necessity confuse him and cannot expect good results. Let us use certain words to express certain ideas; always use the same words, and teach him that he is to obey. By driving him this way a few times, getting him to rein well and obey the word of command promptly, we soon have him ready to hitch. If we have a good, well-broken, steady but prompt horse, it is well to harness the colt with him and drive a few times without hitching, but unless we have a first-class mate we prefer hitching him singly. For this purpose everything should be strong. If our harness or rig be old and weak, it may break, frighten the colt, cause him to run away and undo all the good we have done. We want good strong harness, fitting him comfortably, and a good strong two-wheeled rig. Even when there is snow, we prefer a two-wheeled rig to a cutter. It is good practice to drive a kicking-strap (or, more correctly speaking, an anti-kicking strap) the first few times. This is a precaution that it is well to take, as even though we have been very careful in our preliminary education, a colt will sometimes try to kick when first hitched, and if he succeed he may not only injure himself and give his driver trouble, but acquire a vice that is often hard to cure. When once we commence driving him, we should give him a lesson every day until he becomes handy. When we tie him at first, we should select a fence, building, or some place where he cannot run forward or around, and use a strong rope, tied around the neck and run through the ring of the bit. Use a rope that he cannot break, in order to teach him that he must remain where tied. If he once acquire the habit of breaking ties, he will become a nuisance; but if tied securely at first, there will be little trouble. After he is fairly handy in single harness there will be little trouble in getting him to go in double harness, and when we commence this it is well to drive him on alternate sides for a while. A well-broken horse should drive equally well on either side, or singly. "WHIP."

Horse Training and Education.

We sometimes buy a horse or raise one that is hard to catch in the field, a fault that is perplexing and causes loss of time and patience. Sometimes we carry oats and salt, and then fail to catch the horse. We call out all the members of the family and run the risk of somebody getting hurt in the mix-up. This may be thought a queer time to write about catching horses, when they are all tied by the head in the stable, but there will very likely be a summer in 1902. Must we endure this teasing for years? Not necessarily so, and now is the time to do the mending. A small field of an acre or two, near the barns, is a very handy place for a number of purposes. Fence in a piece of grass some place, with a good fence, and have it ready for the first time you turn out the work horses in the spring. The horses being in the field, just hand a whip to the hired man and take one yourself, step out and call the horses, approaching them gently, attempting to catch one. He will skip out and leave you, but not very far. Now is your time. You stand near one end of the field and your mate near the other, cracking the whips, keeping the horse on the run until he is well sickened of the game, and you will have little trouble after a few lessons. Give an old horse a lesson of this kind and he will soon begin to look you in the face and beg you to come and take him with you. This hint is seasonable to those who have not such a training place and who own such a horse or horses. SANDY COLTS.

A Close Call for Cresceus.

It is said that when Cresceus, the American trotter, who has done the mile in the record time of 2 mins. 2 1/2 secs., was foaled he was such a three-cornered and unpromising colt, his disgusted owner ordered his throat to be cut. The deed was so far done that the horse carries the scar of the wound to this day, when Mr. Ketchan's trainer begged him off. Cresceus is described as a chesnut, wonderfully muscular, but with a coarse head and neck, a rather roach back, and enormous feet; he by no means captivates the eye, but has remarkably smooth action, with immense stride.



JOE PATCHEN, PACING RECORD 2.01.
Sold for \$15,000 at Chicago horse market in 1897.

More Horses for South Africa.

We give in this issue a good engraving of a photograph of a group representative of the 996 horses recently purchased by Mr. Walter Harland Smith, Toronto, for the Second Contingent, Canadian Mounted Rifles, selected in December, 1901, the following memo. showing number of horses purchased in each district. It may be mentioned that Mr. Smith was requested, in collecting these horses, to seek for none in Middlesex County, as Col. Dent was at that time operating in that district.

| Ontario— | Horses. |
|----------------------|---------|
| Essex..... | 7 |
| Kent..... | 62 |
| Lambton..... | 51 |
| Elgin..... | 9 |
| Huron..... | 32 |
| Perth..... | 19 |
| Oxford..... | 24 |
| Norfolk..... | 15 |
| Brant..... | 9 |
| Wentworth..... | 34 |
| Welland..... | 15 |
| Waterloo..... | 12 |
| Haldimand..... | 15 |
| Halton..... | 22 |
| Peel..... | 43 |
| Wellington..... | 12 |
| Cardwell..... | 12 |
| Simcoe..... | 40 |
| West York..... | 36 |
| North York..... | 22 |
| Ontario..... | 64 |
| West Durham..... | 28 |
| Northumberland..... | 40 |
| Hastings..... | 17 |
| Frontenac..... | 30 |
| Lennox..... | 15 |
| Ottawa District..... | 100 |
| Manitoba..... | 785 |
| Quebec..... | 80 |
| Nova Scotia..... | 31 |
| Total..... | 996 |

Care and Feed of the Colt.

As regards rations, I would, of course, recommend good sound oats and bran, a very little flaxseed meal, carrots, and good bright hay. A little corn ensilage once daily is also recommended, although I have had no experience using it. Skim milk can be fed with great benefit to young colts, and if fed judiciously nothing will give better results. Continue giving the colt a grain ration when going on pasture the following summer, and if at all convenient have him gently handled and halter-broken. As he grows up he will require to be carefully broken to harness—the first operation being to teach him that he has a mouth. Use great kindness and patience in biting him, and on no account lose your temper or you will almost certainly spoil him. In England what is termed a "dumb jockey," or biting harness, is frequently used before the colt is harnessed. A belt or surcingle fastened around the girth and checked from the bridle serves a similar purpose. With this rigging the colt may be turned into a yard for an hour or two daily and he will afterwards be much more tractable; in fact, partially broken. Our horses are not well broken, according to European standard, and many foreign buyers find it necessary to break them again after importation, with the view of teaching them better horse manners. This, of course, refers only to carriage horses, however. In raising that class it will certainly pay to be very particular in the breaking and handling of colts, as many a promising, highly-bred young horse is absolutely spoiled through imperfect or careless breaking.

In addition to breaking, the colt must be taught obedience under all circumstances, and accustomed to all city sights and sounds. With the draft horse there is usually little trouble in this respect, and buyers will rarely enquire whether or not the horse is accustomed to steam or trolley cars. But in carriage horses it is different. No horse is safe or fit for a carriage until he can be relied on to stand under a volley of artillery. ALEX. GALBRAITH.

Raising Better Beef Stock.

To the Editor "Farmer's Advocate":
Sir,—In the Mark Lane Express, Dec. 9, 1901, I read that the number of exportation certificates granted by the Shorthorn Society during the period from July 30 to Nov. 4, 1901, was as follows: To Canada, 131; United States, 122; Germany, 17; Russia, 15; New Zealand, 3; Australia, 1; South America, 1; Siam, 1. Canada heads the list, and the importations are greater than at any corresponding period since 1881-1883. Many of them are of the milking strains, which, from the dairy standpoint, is very gratifying, and the other imports which must be increased in future in face of the keen competition for the British trade of foreign beef, which now amounts, alive and dead, to about twelve and one-half million dollars a month. The Mark Lane Express, commenting upon the leading article in the "Farmer's Advocate" for November on the same subject, says: "The Canadians know what they are at," and it is sensibly urged that "Canadian farmers who are inclined to beef production would do well to set about rearing a better class of beef animals by the use of pure-bred males of that type." In spite of the perfection of the American dressed-beef industry, Americans evidently find it more profitable to ship their choice beasts alive than in the carcass form. London, Eng., Dec. 6. JOHN DYKE.



SAMPLE OF CANADIAN HORSES FOR SECOND CONTINGENT, CANADIAN MOUNTED RIFLES, DECEMBER, 1901. PURCHASED BY MR. WALTER HARLAND SMITH, TORONTO, THE WIDELY-KNOWN AND SUCCESSFUL DEALER IN HORSES.

Rosser Farmers' Institute.

The members of this organization met on the evening of January 10th to hear addresses from A. P. Stevenson, Nelson, the Manitoba representative of the Forestry Division of the Interior Department, and Dr. S. J. Thompson, P. V. S., Winnipeg. The first speaker dealt with "Tree-planting," and stated that it came before "Fruit-growing." Failures have been due invariably to lack of soil preparation and the attempt to grow the wrong varieties. It was useless to attempt to grow eastern nursery stock. It was always too tender for our climatic conditions. Two crops at least should be grown before land is used for tree-planting. Cottonwoods, elm, ash, and birch need a deep, moist soil; maple, Russian poplar, and willows do well on high land. Plant one-year-old trees. For shelter purposes, the trees should be planted 4 feet apart each way, kept cultivated for a couple of years, after which time the trees will keep grass down. Mix varieties of trees in the plantation, and thus improve its appearance. The following evergreens do well: native spruce, larch, and tamarack. The great thing in transplanting evergreens is never to let the roots get dry, and, as far possible, keep out of the wind and sun during the transplanting period, and plant somewhat deeper than before, and plant firmly. Norway spruce, Austrian pine, and red cedar will not grow here. The speaker preferred the dry-earth mulch to the rotted straw. Never heap earth up around a newly-planted tree; better to leave the soil saucer shaped. The essentials to successful tree-growing in the West are: Cultivation! Cultivation!! Cultivation!!!

Dr. S. J. Thompson, in speaking of swamp fever, gave his opinion that the use of cultivated hay in place of the wild variety will tend to get rid of that wasteful disease. The Doctor took up "Corn Cultivation," preferred Minnesota sweet, and reported good results from its use for fodder. Harvesting can be done with the open binder. Plant in hills 3 feet apart each way. Vaccination was recommended as a preventive of black-leg.

Farming in Manitoba.

BY S. A. BEDFORD, SUPT. EXP. FARM, BRANDON.
HOW AND WHERE TO BUILD.

After securing the farm, one of the first things to be done is to clearly define its boundaries, either by a furrow or with stakes, so that no mistakes are made in the cultivating of the land or the location of the buildings. Some ludicrous errors have been made from a lack of this precaution in the early history of the country, large areas of a neighbor's land have been broken up, and in other cases houses were built on the road allowances.

Often the whole appearance of a homestead is spoiled or much inconvenience caused by an unwise selection of a building site.

An ideal site for a farmhouse should be located within reasonable distance of the main thoroughfare, but at the same time sufficiently removed from the road to permit of a driveway being laid out and a few trees and flowers planted in front of the building. The site should be sufficiently elevated to afford good drainage and command an extensive view, but this does not mean that the house is to be placed on the top of a bleak and exposed hill, where it is impossible to protect it with trees and ledges.

In laying out the buildings care should be exercised to keep them parallel with the road allowances, for buildings set askew are a constant offence to the eye and make it difficult to construct straight roads or fences.

A very common mistake made by the newly-arrived settler is to devote too much time to building during the first year, overlooking the fact that the following year's crop depends altogether on the amount of breaking and backsetting properly done during the first year. It is often better to put up temporary buildings at first, with the idea of replacing them in a few years, when a portion of the farm is brought under cultivation.

As it is important that the stock buildings should be convenient to the dwelling, the sites of both should be considered at the same time. This is especially desirable if it is intended at some future date to erect a bank barn, for this kind of building requires more or less of a ridge for the best results.

In the early history of the country many of the low log buildings were placed under the shelter of a hill, with the result that they were often completely covered with snowdrifts, and the snow had to be tunneled through every morning before the stock could be fed.

A good supply of pure water should be secured within a reasonable distance before the site is finally decided upon, and every precaution taken afterwards to keep it uncontaminated.

In many parts of the country the veins of

water are very narrow and difficult to locate, but before finally rejecting an otherwise desirable site a number of test holes should be sunk with a two-inch auger attached to a long iron rod; by this means it is often possible to discover good springs in a very unpromising location.

The size and cost of the dwelling house will depend largely on circumstances, and will vary all the way from a shanty-roofed log building, costing \$25 for doors and windows, suitable for a bachelor with very small means, to the more elaborate frame building, costing anywhere from \$500 to \$1,000. A two-storey frame building 18 by 22 feet will be found very suitable for a small family, and should be built for \$700, not counting the teaming.

Where it is possible to procure building legs, the stable can be built with scarcely any cash outlay, a few glazed windows being all that it is necessary to buy. Where it is impossible to procure logs, the car-roofed lumber stable is very popular as a temporary building. If properly built, with tar paper between each layer of boards, it is quite warm, quickly built, and as quickly taken to pieces again when it is desired to replace it with more permanent buildings; when the material can be used over again. Such a stable, 18x20 feet, will cost \$75, and will hold three cows and four horses. Whenever practicable, a basement barn with stable should be the ultimate aim of the farmer, for they are particularly suitable for the Northwest.

Winnipeg Grain Exchange.

The annual meeting of the Grain Exchange was held in Winnipeg, January 5th, 1902. The following were elected officers for the year:

President—C. A. Young.
Vice-President—G. V. Hastings.
Secretary-Treasurer—Chas. N. Bell.
Council—D. Spink, Wm. Martin, A. R. Hargroff, John Love, Thomas Thompson, Robert Muir, E. O'Reilly, G. R. Crowe, T. B. Baker, C. Tilt, and F. W. Thompson.

Committee of Appeals—F. W. Thompson, H. S. Paterson, S. P. Clark, N. Bawlf, Thos. Thompson, F. Phillips, and W. W. McMillan.

Arbitration Committee—Robt. Muir, S. Spink, G. R. Crowe, T. B. Baker, E. O'Reilly, C. Tilt, and W. L. Parrish.

The retiring president, Wm. Martin, made a statesmanlike address, referring to the objects and work of the Grain Exchange, reviewed at length the record grain crop of Manitoba and the Territories in 1901, placing the estimate at close to 65,000,000 bushels, and in the following words forecasted the probable development of the spring-wheat region:

"The interest aroused in the wheat territories of the Northwest might cause us to glance for a second at the history of the development of the spring-wheat territory on this continent. I cannot do this better than by repeating the remarks that I heard from an American a short time ago, when waiting for a train at a station in Southern Minnesota. This man was evidently interested in land in Manitoba, and was pointing out to his friends the desirability of the country as a field for the investment of capital. A large railroad map was hanging on the wall, and, pointing to it, and laying his hand on the State of Iowa, 'There, gentlemen,' he said, 'when I knew the West first, was the spring-wheat country of America. Now it only grows corn and hogs. Then the spring-wheat territory moved to Southern Minnesota, again to be crowded out by corn and hogs. Then so North Dakota, and now it has moved across the line to Manitoba. And further,' he said, 'in that country you can grow better wheat, and more of it to the acre, than ever could be done in Iowa, Minnesota or North Dakota. As wheat went north, corn followed it, and with corn came cattle and hogs and greater prosperity for the farmer. Corn is now grown successfully as far north as the middle of North Dakota, and will, some day, be grown in Manitoba as successfully as where it is now.'

"Gentlemen, that man only narrated well-known facts about the past, and I believe he spoke the truth about the future. We can see with our own eyes how wheat is pushing further into the north and west; how territories that were thought good only for pasture or ranching are now under the plow. We know that beyond the boundaries of Manitoba is a great country now engaged in growing wheat; a country vaster in extent than our own Province, and one that in two or three years will far exceed us in cereal productions; we see railways reaching out constantly into new territory, carrying settlement into districts that were blanks on our maps of yesterday.

"The projection of the Canadian Northern, heading for the coast, taps a country which to the minds of our southern neighbors seems perilously near the Arctic, but which we believe is but the latest trek of the spring wheat, seeking for a new field of settlement away from the persistent crowding of corn and the attendant hog."

Mr. Martin spoke strongly in favor of the coarser grains, drawing attention to oats and

flax as remunerative crops for the farmer to grow. He considers that flax is the only farm product on which a tariff would do good. The transportation question was also taken up, the speaker citing the 4,500 mile increase west of the Great Lakes and east of the Rockies, and referring also to the completion of the C. N. R. to Port Arthur, over which road he hoped the promised reduction of 2 cents per hundred pounds would still be carried out. Mr. Martin took up the car shortage in the following trenchant sentences:

"The contemplation, however, of extended railroad mileage and reduced freight rates—satisfactory as they are—falls into the background of the farmer's vision when he sees in the foreground only a blank where the necessary car ought to be. I know I am trenching on dangerous ground when I touch on this question, but as no one can deny that there has been a car shortage, I think I can safely refer to it. If the scarcity of cars is a hardship to the farmer, it is still more so to the dealer, and, at the same time, it is flattering to the producing power of the country, that in a year when the railway mileage is greater than ever before, when the record of its crop movement exceeds so largely the greatest achievements of the past, the carrying powers of our great railway system are yet insufficient to prevent a blockade, hampering to the trade and exasperating to the farmer. The pictures of great piles of grain stacked up in country towns, where the elevator capacity is large enough to provoke boasting as to its extent, may seem a theme for lamentation to some, but these same pictures will be used as the greatest emigration advertisement for the country. The fact is, that we, in our car capacity, are just feeling the effects of the greatest commercial boom that ever struck the American continent. Look where you will, the same picture presents itself; from California in the west, to Pennsylvania in the east, we see railroad systems almost paralyzed by the amount of business offered them, and that not only in wheat, but in everything in the way of transportable merchandise. In North Dakota the railway lines are blocked with wheat as badly as our own. The Grand Forks Herald, of recent date, says: 'The freight-car famine which has been the source of a great deal of inconvenience throughout the wheat belt during the greater part of the fall and early winter, is still causing a great deal of trouble in some sections of the State, where for some time it has been an impossibility to get a car for love or money. The elevators are full to the brim, and all vacant buildings have been filled with wheat and flax, and for the past few weeks farmers have been unable to sell a bushel of wheat, for the reason that elevator men have no place to store it, and are quite unable to get a car to ship any out and make more room.' And that is in the United States, in the territory served by two of the most powerful railroad systems in the world—in a territory whose wheat crop was said by one of the great American crop experts to be only an average one. Can we wonder then, that in our new country, with a crop that is phenomenal—in some places double an average crop—that there should be a temporary break-down in our carrying capacity? With all this, it may be some satisfaction to the men who are unable to market their crop, to know that they are losing nothing in the matter of price; that the enforced delay in realizing their cash may not be an unmixed evil, and that they stand an even chance of coming out with better financial results than those who appeared earlier more fortunate in getting rid of their produce."

THE RAILROADS MUST GET READY.

"Meantime, the warning given this season must not be lost. The country has given a demonstration of its possibilities. The Government Bulletin of December gives an estimate of 1,475,950 acres ready for crop in 1902. A favorable spring will easily see a wheat acreage seeded far in excess of the 2,011,835 acres sown in 1901, and the acreage of the Territories will likely double that of the past year. An average yield on such an acreage will put our sixty-five millions in the shade, and the railroads and other commercial interests may soon look for the time when the hundred million mark in the record of our wheat yield will be reached.

"We begin the new year satisfied that in spite of temporary drawbacks, the country is prosperous; that the developments taking place will provide a field for the industry of all, and we may congratulate ourselves on the fact that we have a country big enough and rich enough to provide a living for the farmer, the merchant, and the newspaper man, and that without the necessity of them being so closely crowded together that the one need be hampered by the presence of the other."

One of the most artistic Christmas numbers issued this year is that of the "Farmer's Advocate."—(Killarney Guide.)

Large Farms and Their Management.

THE J. D. ROSS FARM, ELGIN, MAN.

The immense yields of grain in Manitoba and the Territories in 1901 has drawn considerable attention to those Provinces. In few cases, however, does "the man with the hoe" receive any consideration. Large farms take considerable executive ability and energy to make them financially successful, and we take pleasure in describing the methods followed to attain such a desired end.

The house shown is situated on the S. $\frac{1}{2}$ 24, 6, 22, which is five miles north-west of the rising town of Elgin, in what the people of the vicinity call the garden of Manitoba. The above farm was homesteaded in Sept., 1882, by C. W. Miller, where he farmed successfully until the fall of 1892, when he sold it, with other lands, to the present owner, John D. Ross, for \$15 per acre. The farm has since been added to from time to time, until at present it contains 2,080 acres, or three sections and a quarter, which is all under cultivation. This year's crop consisted of 1,200 acres of wheat, 200 acres of oats and other grains, which crop yielded something over 37,000 bushels of grain all told. There was 600 acres of summer-fallow, the balance being under grass and pasture. The owner considers the best way to keep the farm up is to summer-fallow at least one quarter of the farm, as the fall in this country is so short for plowing after harvest that it does not give much time to plow in the fall, whereas if a man has a good large summer-fallow, it gives one a chance to have a fair share prepared for crop for the next spring, and by the time two crops of wheat are taken off, and the third year, with part of it in coarse grains, brings it around for summer-fallow again, and by rotation of crops in this way the land is kept in good heart and can be farmed with much less expense and better results than if cropped heavier. To farm this land, twenty-six working horses are kept. In the spring and during seeding they are worked in four-horse teams as much as possible, four horses on each of the three 23-shoe drills. Four-horse harrows are used, and for spring plowing use four horses on each gang plow, the gang plows being all two-furrowed fourteen-inch plows. The horses are worked from a quarter to seven in the morning to a quarter to twelve, two hours being taken for noon, hitching up at a quarter to two and working until a quarter past six in the evening. These hours are kept up the summer through, except when threshing, when work may run to seven o'clock, and sometimes later if the weather is catchy. After seeding, half of the summer-fallow is plowed very light, choosing the part that is at all grassy or dirty, then harrow, and any choring or fixing up to be done around the farm and hauling out the manure is attended to. All that kind of work is done about July 1st, when plowing of the summer-fallow is commenced, using five horses on each gang plow, plowing it good and deep, and plowing the part that was not plowed before first, finishing up with what was plowed light before. It is found by doing it this way that any that is plowed twice kills all twitch grass and makes a good clean summer-fallow; in fact, the owner is of the opinion that this kind of summer-fallow and spring plowing is the only way to kill twitch grass. When summer-fallow is only plowed once it only cultivates the grass and helps it to grow. The summer-fallow is not harrowed after this plowing unless necessary by reason of weeds growing, as it is found that the land works much nicer in the spring if not harrowed in the fall, and makes a much better seed-bed, and the crop is much cleaner afterwards. By the time summer-fallowing and haying are done, the wheat is generally ready to cut, when seven binders are started in to cut the crop, using four horses on each binder as far as can be. If not enough to put four horses to each binder, three are used on the balance. With the seven binders the owner generally counts on averaging one hundred acres per day, and is generally done cutting about the 28th or 29th of August. A threshing machine is kept, and if the grain is fit to thresh, threshing is started the moment cutting is done. If cutting is finished at nine o'clock in the morning, steam is up ready to start as soon as the horses are unhitched off the binders and onto the wagons. If the grain is not fit to thresh, a few stacks are built in the barnyard, which are not threshed until the last thing, for feed for winter; otherwise all threshing is done out of the stook, using six teams hauling to the machine and four pitchers in the field; generally run from fifteen to eighteen hundred bushels per day while threshing wheat. The home threshing is done first; after that a few jobs around are taken while the weather is fine, but as soon as the weather breaks or it gets cold in the fall, the machine is pulled in. A J. I. Case twenty-horse compound traction engine and American Advance separator are used. As soon as the home threshing is done, all the teams are started plowing, again using five horses on each gang plow as long as health and weather will per-

mit. Four gang plows and two three-horse teams on walking plows are employed. Walking plows are preferred to do the striking out of lands with and finishing up furrows, as it saves time and makes much nicer work in finishing a furrow. Two men are hired by the year, five more for seven months, eight or nine more through harvest, and when threshing starts six more, as it takes 22 or 23 to take care of everything at that time. The wages bill this year will amount, all told, to a little over \$3,000. That takes in all threshing, and pays for the home threshing too, which is the largest item of expense.



MR. JOHN D. ROSS.

British Stock Sales in 1901.

For the following resume of British stock sales in 1901 we are indebted to that unique sale record compiled by Mr. W. W. Chapman, F. S. S., wherein are recorded upwards of 1,800 separate sale results, which are a most valuable means of reference from which to obtain the general range of values of pedigree stock in the Old Land during the period under review, which is published in extenso in the Farmers' and Stock Breeders' Annual, London, England.

Commencing with Shire horses, the top price for a stallion was £1,627 10s., obtained by Mr. Crispe. The same breeder also made the top price of the year for colt foals, £252, and brood mares, £981 15s. Sir J. Blundell Maple, Bart., made top values for three-year-old stallions, £367 10s.; two-year-old stallions, £472 10s.; four-year-old mares, £567; also for three-, two- and one-year-old fillies, namely, £430 10s., £577 10s., and £546, respectively, whilst the top price of filly foals was £110 15s. A gelding sale of record proportions also took place during the year, namely, one held by the late Lord Wantage, when 51 Shire horse geldings made an average of £88 17s. 2d., with the top price of £173 5s.

There were a considerable number of Hackney sales held during the year, and some high prices realized, amongst them the following: £304 and £451 10s. for stallions and three-year-old stallions, and £141 15s. for a colt foal, at Mr. J. Barler's sale; £420 for a brood mare at Mrs. Edmondson's sale, £294 for a two-year-old filly at the same sale; and £315 15s. for a three-year-old filly at Mr. Moore's sale.

In Clydesdale sales, from the authority we are using, we find that the highest sale values recorded in the public press were: For stallions, £651; two-year stallion, £126; brood mares, £351 15s., and yearling fillies, £158 11s.; all at the sale of Mr. J. Lockart. Sir J. Gilmour made top price for three-year-old stallion at a public sale, £136 10s., and Mr. H. Webster's £210 and £162 15s. were the best recorded prices for three- and two-year-old fillies.

In the cattle section the Shorthorn leads the way. The sales held last year were not on the whole so satisfactory to the vendors as were those held the previous year, mainly on account of the loss of the Argentine demand. Mr. Duthie's notable sale heads the list, and his £682 10s. for a bull calf tops the male sale prices for the year; £164 17s. was the top price for a cow, made at Mr. J. A. Preece's sale. For two-year-old heifers the top figure was £152 15s., at Mr. H. Dudding's sale; for yearling heifer, £78, at Mr. J. Wilson's sale; and for heifer calves, £162 15s., at Mr. Anderson's sale at Saphock.

Aberdeen-Angus also had a capital year, the best sale prices being: Bulls, £189 (J. H. Bridges); bull calves, £110 (A. Eggingson); cows, £136 (same breeder as last named); two-year-old heifers (W. Whyte), £156 1s.; yearling heifers (A. Whyte), £110 5s.; and ditto heifer calves, £42.

Hereford cattle had a remarkable sale year, on account of the dispersal of the two noted herds owned by Mr. J. Price and Mr. Tudge. The latter made top recorded price for bulls, £346 10s.; and the former for bull calves, £126; cows, £220 10s.; two-year-old heifers, £210.

The best recorded prices for Galloways were: Bulls, £35 14s.; yearling bulls, £43; cows, £35 14s.; two-year-old heifers, £50, and yearling heifers, £25.

Jerseys sold remarkably well, particularly for the best specimens. The top recorded price for bulls is £76 15s., at Lord Rothschild's sale, but Col. McCalmont ran him very close with another that made £75 12s. At no less than four different sales there were cows that went over the century, a very notable fact for the breed. At Lord Rothschild's one made £136 10s. At the Duke of Marlborough's one made £126. At Mr. R. J. Pope's one made £115 10s.; and at Lady G. Greenall's one made £105. The top prices for two-year-old and yearling heifers were £63 and £57 15s., both realized at Lord Rothschild's sale.

The best prices for Ayrshires were bulls £40 and cows £24. The best prices for Dexter and Kerry cattle were bulls £25 5s. and cows £74 11s., both at Mr. Robertson's sale.

Sheep.—In connection with this section there is no question but that owing to the falling off in the export demand the supply of rams in all breeds was in excess of the requirements, and hence for other than tiptop ones the demand was poor. The highest and lowest prices realized at public sales were as follows: Yearling rams—Leicesters, from £12 10s. to £4 10s.; Cotswolds, £23 2s. to £3 3s.; Lincolns, £54 12s. to £22 12s. 6d.; Oxford Downs, £178 to £3 3s.; Shropshires, £420 to £3 3s.; Southdowns, £40 19s. to £3 3s.; Hampshire Downs, £37 16s. to £4 10s.; Suffolks, £36 15s. to £4 4s.; Wensleydales, £25 to £3; Border Leicesters, £122; Dorset Horns, £17 17s. to £3 13s. 6d.; Kent or Romney Marsh, £43 1s. to £3; Devon Longwools, £22 1s.; Black-faced Mountain, from £100.

The top prices for ram lambs were as follows: Leicesters, £6 10s.; Cotswolds, £12 12s.; Lincolns, £3 2s. 6d.; Oxford Downs, £42; Shropshires, £189; Hampshire Downs; letting for the season, £105; selling, £92 8s.; Suffolks, £63; Southdowns, £22 1s.; Dorset Horns, £13 13s.; Wensleydales, £15.

The top prices for yearling ewes were: Leicesters, £3 11s.; Cotswolds, £2 10s.; Lincolns, £6 6s.; Oxford Downs, £1 13s.; Shropshires, £26 5s.;



FARM HOME OF MR. JOHN D. ROSS, ELGIN, MANITOBA.

Southdowns, £6 1s.; Hampshire Downs, £8 5s.; Suffolks, £8; Wensleydales, £4 10s.; Border Leicester ewes, £15 4s. 6d.; shearling ewes, £8 8s.; Dorset Horn, £5 5s. Shropshire ewe lambs made from £21, and Suffolk ewe lambs made from £5 2s. 6d.

Territorial Crop Estimate Bulletin.

Owing to the prolonged threshing operations in the Territories, caused by the bountiful crop of the past season, complete threshing returns will not be available in the Territorial Department of Agriculture until the latter part of the winter, which will materially delay the issue of the annual crop bulletin. It has, therefore, been decided to publish the following estimate for the season of 1901, which has been compiled on a basis of several thousand returns of actual threshing results from all over the Territories, now at hand in the Department.

The yield per acre may be considered as correct within a fraction, but an element of uncertainty always enters into approximating the area under cultivation in any country presenting the unique features of the Territories, where the crop area is an ever-increasing factor, varying in its volume in sympathy with the influx of new settlers and the ability of older settlers to extend their operations. This condition, of course, involves a corresponding uncertainty in the estimated yield. A final report of the season's crop, based on complete actual threshing returns, will be issued in March or April next, but in the meanwhile the following estimate will serve as a fair indication of what may be expected to those who for business reasons are interested in the question:

| District. | Bushels threshed. | Acres. | Yield per acre. |
|----------------|-------------------|------------|-----------------|
| | 1900. | 1901. | 1900. |
| WHEAT. | | | |
| Assiniboia— | | | |
| East..... | 1,239,111 | 3,912,447 | 165,235 195,218 |
| Central..... | 1,780,368 | 6,917,889 | 192,558 236,979 |
| West..... | 1,548 | 8,360 | 47 283 |
| Saskatchewan— | | | |
| East..... | 400,616 | 770,237 | 23,535 35,235 |
| West..... | 24,028 | 59,500 | 1,165 1,750 |
| Alberta— | | | |
| North..... | 477,575 | 757,344 | 25,539 29,634 |
| Central..... | 44,669 | 79,908 | 2,115 3,870 |
| South..... | 50,379 | 140,658 | 2,670 5,595 |
| Territories. | 4,028,294 | 12,676,343 | 412,864 508,564 |
| OATS. | | | |
| Assiniboia— | | | |
| East..... | 609,938 | 1,980,328 | 46,487 52,203 |
| Central..... | 615,394 | 2,372,871 | 41,013 49,923 |
| West..... | 11,316 | 46,901 | 466 960 |
| Saskatchewan— | | | |
| East..... | 269,344 | 497,204 | 9,303 12,543 |
| West..... | 36,653 | 82,338 | 1,071 1,611 |
| Alberta— | | | |
| North..... | 1,806,308 | 4,892,390 | 56,422 79,642 |
| Central..... | 538,063 | 827,710 | 13,129 22,309 |
| South..... | 276,276 | 414,224 | 7,548 10,248 |
| Territories. | 4,226,152 | 11,113,066 | 175,439 229,439 |
| BARLEY. | | | |
| Assiniboia— | | | |
| East..... | 33,146 | 119,381 | 3,299 3,689 |
| Central..... | 24,322 | 77,163 | 1,794 2,109 |
| West..... | 838 | 3,905 | 36 96 |
| Saskatchewan— | | | |
| East..... | 59,250 | 88,224 | 2,607 2,757 |
| West..... | 1,942 | 3,413 | 79 94 |
| Alberta— | | | |
| North..... | 182,811 | 372,776 | 7,280 8,540 |
| Central..... | 41,405 | 55,072 | 1,181 2,111 |
| South..... | 10,592 | 16,815 | 468 648 |
| Territories. | 353,216 | 736,749 | 17,044 20,044 |

Some Brandon Tests.

| Name of variety. | Date of sowing. | Date of ripening. | No. of days maturing. | Weight of straw per acre. | Weight of grain per acre. |
|----------------------|-----------------|-------------------|-----------------------|---------------------------|---------------------------|
| Speltz | May 15 | Aug. 29 | 106 | 4,720 | 3,080 |
| Red Fife wheat | " 15 | " 28 | 105 | 6,460 | 1,720 |
| American Beauty oats | " 15 | " 28 | 105 | 4,480 | 2,320 |
| Mensury barley | " 17 | " 20 | 95 | 3,660 | 2,320 |

WHEAT AND RAPE MIXED.

A mixture of Dwarf Essex rape and wheat has also been recommended, the object being to feed off the rape after the wheat has been cut somewhat higher than usual. The rape germinated, but only such plants as were on the outer edges of the plot survived, and the yield of rape was not sufficient to pay for the seed, and besides the yield of wheat was apparently reduced.

| Quantity sown per acre. | Wheat. | Rape. | Sown. | Ripe. | Yield per acre. | Weight per bush. |
|-------------------------|--------|-------|--------|---------|-----------------|------------------|
| 7 pecks | 2 lbs. | none | May 15 | Aug. 28 | 25 | 40 |
| 7 " | none | " 15 | " 15 | " 28 | 28 | 40 |

WHEAT AND FLAX MIXED.

In some parts of the United States success is reported with a mixture of flax and wheat. This plan has been tested on the Experimental Farm during the past year, but with poor results. The flax germinated and grew for a time, but the wheat soon choked it out, and only a few spindly plants survived, and they produced no seed, and the flax apparently injured the wheat.

| Quantity sown per acre. | Wheat. | Flax. | Sown. | Ripe. | Yield per acre. | Weight per bush. |
|-------------------------|---------|-------|--------|---------|-----------------|------------------|
| 7 pecks | 1 peck. | none | May 15 | Aug. 28 | 21 | 37 |
| 7 " | none | " 15 | " 15 | " 28 | 25 | 39 |

Bees in Manitoba.

LOOK OUT FOR HUNGRY BEES.

To the Editor "Farmer's Advocate":

When I wrote the "Advocate" last, as to the results of last summer's work in the apiary, I had only good to say of the season; from earliest spring right up to the day the honey-flow ceased, about September 1st, all was just as one could have wished it to be. But a change came then, and an experience new to me, at least, has to be recorded as a consequence. From that time on we had a long spell of cool, rainy weather; in fact, with the exception of a very few days, the whole fall was cool. This prevented the feeding-up for winter with sugar syrup, as I usually do. So towards the end of September I put the hives on the scales, one after another, and brought each up to the necessary weight for wintering by giving combs of beautiful sealed honey. Then I thought everything was right and settled for winter. But when, on November 5th, I began to move the hives to the cellar, they did not seem to be quite as heavy as they should be; so on the scales they went again, disclosing the fact that many had lost in weight as much as ten or twelve pounds, while very few had lost less than eight. This loss in weight averaged about the same as that experienced during the whole previous winter! So more combs of honey had to go, till none were left, and still some hives were lacking, and had to go in as they were.

This remarkable decrease in weight of stores I attribute to the absence of such late-flowering plants as wild buckwheat and French weed, due to the prevailing cool weather. Usually these plants bloom quite freely almost as late as plowing can be done, and I have seen bees as busy as bees could be on wild buckwheat in the stubble field when no one would have suspected that flowers were to be found anywhere. From such sources, I have no doubt, the bees make up, in ordinary seasons, the amounts consumed in the hives.

Anyone who has had a similar experience, and who, like myself, has been obliged to put colonies away with light stores, can, of course, still provide against starvation. Perhaps the best and most convenient way to do this is to mix good granulated sugar with liquid honey till it can be kneaded into cakes. These cakes can be laid on the frames directly over the cluster and beneath the cloths. This is better than using cakes of candy made in the frames, as the cluster is not disturbed by the placing of them in the hives.

Now a word about your Christmas number, which is to hand. It is a beauty—inside as well as out. That cover! Well, I think it would be a shame to spoil it by writing an essay or anything else on it—even for five dollars. And the inside is equally striking in the variety and quality both of the reading matter and of the illustrations. Wishing you many happy returns of the season, and your readers a holiday number equal to this every time, I remain,

Red River Valley. J. J. GUNN.

Profitable Hog Raising in the West.

To the Editor "Farmer's Advocate":

We generally keep seven brood sows of the Berkshire breed (the sows are well graded); in fact, some of them are eligible for registration) and a good registered Berkshire boar. We prefer the Berkshires, as they are easy keepers, very contented and nearly always ready for the knife. We breed our sows to have the young pigs coming early in April, and then again in October. Allow the young pigs to suck six weeks in the spring and eight weeks in the fall. Sows are fed heavy during nursing season with wheat, barley and oats chopped together, with one-third (bulk) bran added. Sows also get a run to grass when convenient. After the young pigs are weaned, they are fed shorts, bran and oats chopped fine, about equal parts of each. The spring litters are allowed free run after weaning season until late in July, or as long as they do no harm to the growing crops. Whenever they start to destroy crops they are shut up until harvest is over, and then again turned out without any feed except slops until stubble fields are gleaned, which generally lasts until winter time. They are then closed up to finish for the market, feeding them on: wheat, 1 bushel; barley, 1 bushel; oats, 2 bushels, chopped; bran, 1 bushel. All mixed together. They are fed all they will eat up clean twice a day, with this mixture. We think that our hogs do not get as fat as with all heavy grain, such as wheat and barley.

Our fall litters are wintered over with bran, shorts and oat chop, about equal parts of each, and some roots, when we have them to spare. We feed very little milk, as we only keep enough cows for use of the house, the youngest pigs always getting what milk or slops there is. In spring they are turned out to Bromo grass, with two small feeds of grain per day, and allowed to run this way until the end of June, and then shut up and finished same as spring litters. We generally feed until they reach the weight of 210 pounds. Our stabling is only an old one, built of poles and not properly divided off, but we intend

building a larger hogpen next summer, and would be glad to get plans from some of your readers.

We never yet had to feed No. 1 wheat, as we are always able to buy damaged wheat cheap, and just as good as the best for hogs. We had an experience with heated wheat one season and found it of very little value.

We generally sell our hogs in March and August, and although the profits are not very large, it is always a help, and the money comes in when the farmers' pockets are beginning to feel empty.

Regina District. A. & G. MITCH.

Portable Granaries.



PORTABLE GRANARY ON FARM OF SENATOR PERLEY, WOLSELEY, ASSA.

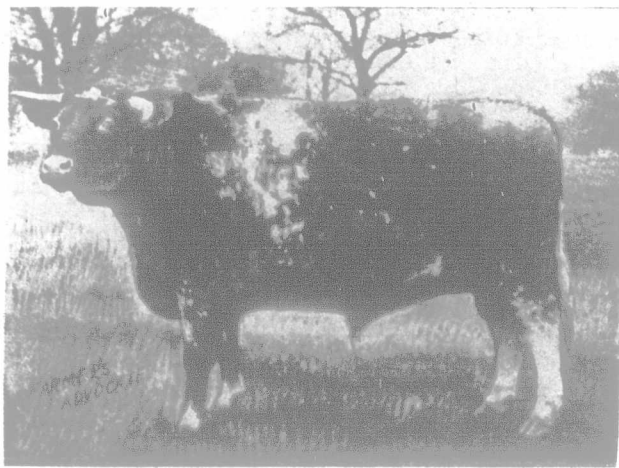
The following is a description of the granary used altogether in this district. It holds about 1,200 bushels, costs, new, about \$55, and is convenient to move around. The grain is elevated into it from the threshing mill, and needs very little shovelling, and grain is as safe in it as in an elevator, if it is necessary to hold it over. The size is 16 x 12 feet by 8 feet high. The studding, joists, plates and sills are 2 x 6 in.; rafters 2 x 4 in.; good siding is used, and the roof is shingled. Two 2 x 6-in. pieces are nailed on the end plates to keep the building from spreading endways, and two to the side studding to keep all solid the other way. Three 2x6-in. pieces are first laid on the ground, and for sleepers for the floor nine 2x 6 in., 12 feet long, are firmly toe-nailed to them; 2x6-in. studding, 8 feet long, are nailed to the sleepers; 2x6-in. plates on top with the cross braces; a pitch roof is put on; a window, or trap, is put in each gable, as high up as possible; and a door in the bottom part. When filling the granary, boards are nailed across the door, inside, with a spout and slide in it, about the height of a bag, by which a great part of the contents can be run out without any trouble. As there is a six-inch space, this does not interfere with the locking of the door.

The lumber required is as follows: Three pieces 3x6 in. (sills), 16 feet long; thirteen pieces 2x6 in., 12 feet long (joists and plates); seventeen pieces 2x6 in., 16 feet long (posts and plates); nine pieces 2x4 in., 16 feet (rafters); twenty-two pieces 6x1 in. (flooring), 16 feet long; thirty-six pieces 6x1 in., 16 feet long (siding); forty-four pieces 6x1 in. (siding), 12 feet long; 260 feet roofing; 2,000 shingles. A handy man with tools can build a granary as above described in two days.

Indian Head. GEO. LANG.

Improving the Fair.

We congratulate the public-spirited ratepayers of Toronto upon the overwhelming majority with which they carried the by-law granting \$133,500 for the erection of new buildings for the Industrial Exhibition. The business and municipal leaders of Toronto are backed up by the people in determining that the fair of the future is to excel its predecessors in utility, attractiveness, and success. In 1900 the side-show and faker element, ran riot and signs of degeneracy, from a mercantile and manufacturing point of view, had set in. This alienated public sympathy and confidence; but last season witnessed a very decided improvement and a determination on the part of the management to make it par excellence a real industrial exhibition of an attractive character, but not surfeiting the people with "attractions." Public confidence has evidently been restored, for the money once refused is now cheerfully voted. Great credit is due the press of Toronto for their share in the good work. Foremost among the needs is a new main building, which should be a veritable hive of industry; a new dairy building, where products, apparatus and dairy processes can all be properly represented under one roof; better accommodation for the carriage exhibits; and a suitable pavilion where the judging of cattle and other live stock can be viewed by the public, making it what it should be, a valuable educational feature of the fair. Our people are hungering for information, and can be educated to appreciate a high-grade fair as well as a circus, as witness the success of the Ontario Winter Fair. The Pan-American ran to "attractions," "fireworks" and the "midway," and was a great financial failure; the Glasgow Exhibition tended in the other direction, and proved a boon to the great Scottish city and a wonderful financial success. Toronto is on the right track, and the other big Canadian fairs will feel the stimulating and healthful influence of its example.



TWO-YEAR-OLD SHORTHORN STEER.
Exhibited at the Scottish National Show, 1901, by Lord Roseberry.

Convention Week.

Arrangements are well advanced for the winter conventions of the Live Stock Associations, which are to be held in Winnipeg on February 18th, 19th and 20th. This being the week of the Bonspiel, single-fare return tickets will be purchasable from all points on Monday, Tuesday, and Wednesday, 17th, 18th, and 19th. Tuesday, the 18th, will be Sheep and Swine Breeders' day; Wednesday, Cattle Breeders', and Thursday, Horse Breeders'. The forenoons of each day will be devoted to business, reports of committees, election of officers, etc.; the afternoons to a stock-judging institute, which will be held in the large, well-lighted implement warehouse on the corner of James and Princess streets. On Tuesday, experts will deliver lectures on the bacon hog and the mutton sheep, using representative specimens of the different breeds to illustrate their lectures. On Wednesday afternoon, cattle of the beef and dairy types will form the subject of the lectures, and on Thursday, horses, draft and light, will be taken up. Prof. Curtiss, of the Agricultural College of Iowa, has consented to lecture on the beef breeds of cattle, and there is no more capable live-stock lecturer on the continent, his work at the College and in the showing attesting to his qualifications. The success of the stock-judging classes for farmers and breeders, which have been held under the direction of Prof. Curtiss, also prove his ability and popularity. Last year 300 of the leading beef-cattle breeders attended this class, and this year no less than 500 applications are in.

Prof. Carlyle, a Canadian, who has won international reputation in Agricultural College work and the judging ring, and for many years has been Instructor in Animal Husbandry at the Wisconsin Agricultural College, is expected to take up the work on the bacon hog and also on dairy cattle.

Dr. Hopkins, associate editor of the "Farmer's Advocate," who for two years was Instructor in Animal Husbandry at the Agricultural College at Madison, Wis., will do the stock-judging work on the mutton types of sheep.

THE HORTICULTURAL SOCIETY.

The annual meeting of the above Society will be held on the Friday following the live-stock associations, and a judging institute is planned by them also. Superintendent Bedford is to give an address on the judging of vegetables and field roots, using specimens of various roots and vegetables to illustrate his lecture. This address will be given in the afternoon in the City Hall, and should be of very special interest to gardeners and to all who are called upon to judge these classes at the local shows. Other speakers at the Horticultural Convention will be: Angus McKay, Superintendent Indian Head Farm, on "Fruit-growing in the Territories"; A. P. Stevenson will talk on "Forestry," and A. McIntyre on the "Improvement of School Grounds." "Insectivorous Birds" will be the subject of a talk from Mr. Atkinson, and Mr. Burch will speak on the "Propagation of House Plants."

THE DAIRYMEN.

The Manitoba Dairy Association will meet in annual convention on the Thursday of convention week, and a full programme is being arranged.

Re Ministers of Agriculture.

The Canadian Gazette, of London, England, in a recent issue advocating the supplying of government stallions, etc., takes occasion to make the following insinuation:

"A Dominion or Provincial Minister who would make a department of agriculture as Mr. Chamberlain has made the Colonial Department of the Imperial Government would earn the gratitude of all Canadians, and receive unqualified support."

If the insinuation is meant to include the Hon. Jno. Dryden, we must take issue with the writer, and suggest a new telescope for that person.

An Important Educational Announcement.

Nature Study and Domestic Science Training at the Ontario Agricultural College.

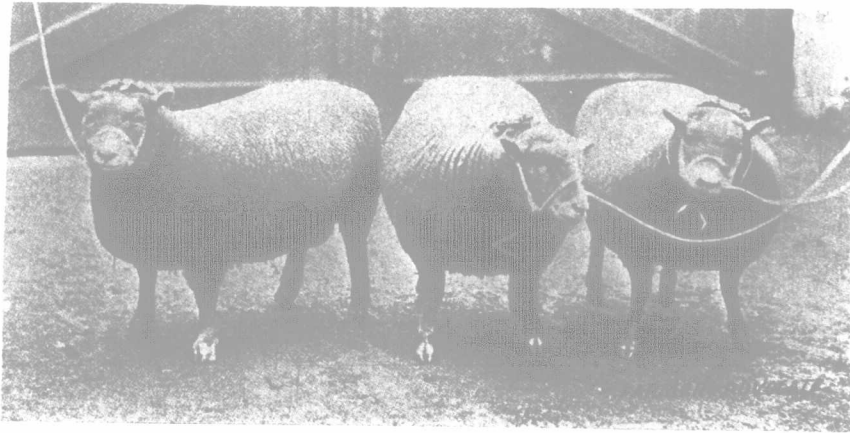
(From our Ontario and Eastern Edition.)

Two or three years ago, Sir William Macdonald, the Montreal millionaire, with a generosity marked by equal wisdom and patriotism, devoted \$75,000 to the purpose of introducing Manual Training into the Public Schools of Canada. Later, he gave \$10,000 to provide prizes for boys and girls in the seed-grain competition. Last week his munificence received another practical exemplification in his placing the sum of \$125,000 at the disposal of the Ontario Government, to be devoted to the furtherance of Nature Study and Domestic Science in the Public Schools.

We have not at hand the text of the conditions governing the last gift, save the semi-official announcement that it is to be expended, in part at least, in the erection of suitable buildings in connection with the Agricultural College at Guelph, in which instruction will be given to teachers in Nature Study and to women in Domestic Science in relation to agricultural life; and that the donor hopes by this means to prepare teachers to train children to understand and love nature so that life on the farm, for both men and women, will become attractive, enjoyable, and successful.

The acceptance of the gift places a heavy responsibility on the shoulders of its immediate recipients, since the use of it will be watched and criticized by the farmers and educators of the country as well as by the maker of the gift. There will be no disagreement as to the laudability of the purpose to which it is designated, but there will be strongly-marked diversity of opinion as to the best means of accomplishing such purpose.

In the crisis of Prussia's humiliation succeeding the disastrous days of Jena and Friedland, the schoolmaster, Fichte, taught the King and



SOUTHDOWN YEARLING WETHERS.
Champion pen of Shortwools, Smithfield Show, 1901.
PROPERTY OF COL. M'CALMONT, M. P.

his counsellors that what they would desire to see in the nation's life they must plant in the nation's school. Frederick William, convinced of the truth, declared that although territory, power and prestige are lost, his people must strive to regain them by acquiring intellectual and moral power; national education was immediately elevated to the rank of a separate and important branch of state administration, and to-day the world stands astonished at the progress Germany has made as a result of the adoption of that wise policy. There are a good many people in Canada who, with Sir William Macdonald, believe in Fichte's doctrine, and who think also that our present educational system is not sowing the seed in the schools best adapted to the life of this nation. It is foolish to close our eyes to the fact that the traditional school—the school of the present day—does not prepare for life on the farm or in the factory so well as it prepares for a non-industrial life. The "Farmer's Advocate" does not desire to see our Public and High Schools converted into trade schools. It claims as much general culture for the farmer and mechanic as for the merchant or teacher, but it contends that without sacrificing literary culture or mathematical training in the least degree, methods of teaching and subject matter of instruction can be so modified as to prepare the future industrialist—be he farmer or manufacturer, lumberman or miner—for far more efficient living, for a life richer in enjoyment and usefulness. At the present moment, to mention one particular, there are hundreds of young men and women preparing to become teachers in the Public Schools of the Province of Ontario who are spending a great deal of time in memorizing the vocabularies, conjugations and declensions of Latin, French, and German. Few of them will go far enough to turn this learning to practical account, while the disciplinary or cultural value of the smattering is insignificant compared with what they would derive from a similar investment of time and effort in a more extended knowl-

edge than they are getting of general history and geography, English literature and those subjects that Sir William Macdonald desires to see taught in the new school about to be founded. The quarter of a million that he is giving to the cause of elementary education in this country is witness not only of his wise and princely generosity, but also of his conviction that the present system is leaving an important work undone.

But, "What is Nature Study, anyway?" will be asked, and the answers will be various. The term is even more likely to be misunderstood than "Manual Training," which no longer ago than last year a Canadian university principal confused with Technical Education.

The new educationist says that the proper center of study is the child, but a more common opinion is that there are two centers, viz., man and nature. The man-studies, or humanities, as they are commonly called, are such as language, literature, history and ethics, while the nature-studies are those based on the objective environment—the sciences. The formal or expression studies—reading, drawing, writing, numbering, etc.—are or should be subsidiary to the two groups named, although they are pretty commonly given paramount place in our Public Schools.

Man, in his attempts to gain knowledge of nature, divides it into more or less related groups of objects, and the truths that he has discovered pertaining to each is called a science. Botany is the science of plants, entomology of insects, astronomy of the celestial bodies, and so on through a long and increasing list. Agriculture, domestic economy and the various other trades are applications of the truths taught in the pure sciences, and may be called applied sciences. In each of the sciences there are truths within the comprehension of the little child as well as those that tax the understanding of the ablest thinkers. To many people nature study means simply elementary science, and nature study taught under the aegis of an agricultural college is likely to be the elements of the sciences peculiarly applicable to agriculture.

This rather prevalent idea is true only thus far, that elementary science is for the most part the subject matter of nature study. Prof. Bailey, of Cornell, happily says that when a teacher is thinking mostly of his subject he is teaching science, but when he is teaching genuine nature study he is thinking mostly of the child. To put the child into right relations with his environment, or surroundings, and to give him power to make the best use of his faculties, are the primary purposes of nature study; the scientific knowledge acquired is secondary. The "how" the fact is taught is more important than

the "what." It is the method of teaching far more than the subject-matter of his lessons that will measure the efficiency of a nature-study teacher. A nature-study school will fail to accomplish the purpose of its existence if it is not a real model school in which the students-in-training will be directed in the actual practice of teaching children. Not every one who knows the alphabet can teach it successfully; there is even a wider step between knowing elementary science and teaching nature study. It is vastly easier to teach a grown person a fact in science than to teach him how to deal with that fact in training a class of young children. Lectures on learning to ride a bicycle would be about as useful in acquiring that art as lectures on the pedagogics of elementary science would be in acquiring the art of teaching nature study. If there is not to be actual model-school practice, then the school should be called an elementary-science school, and it will but do



BRUNHILDE.
Two year-old Aberdeen-Angus heifer. Grand champion of the Birmingham and Smithfield Shows, 1901.
BRED AND OWNED BY LORD STRATHMORE.

the work which should be done in every High School and Collegiate Institute that pretends to give the academic preparation for intending teachers.

But, again, nature study correlates with reading, mathematics, English composition, geography, and literature; indeed, they correlate so intimately that they must go hand-in-hand to avert serious harm to both classes of studies and consequently to the child. If the intimate unity and interdependence of the man-studies and the nature-studies be adequately realized, and the proper methods of teaching them be acquired by practice, the new Nature-study School for teachers will be nothing short of a Normal School. There is no valid reason why the existing Normal Schools at London, Toronto and Ottawa should not be made as genuine nature-study schools as the one projected at Guelph, and, conversely, that the latter should not be as real a Normal School as any of the former. If this desirable possibility become a fact, Sir William Macdonald's generous gift will produce rich and far-reaching results. It will enlarge the usefulness of all the Normal and Model Schools, hasten reform of the High School course for Public School teachers' certificates, and in a short time improve the standard of teaching throughout the Public Schools of the country. But an isolated academic course in science in the new school will fall far short of these glorious possibilities. Recent addresses of the Hon. Mr. Harcourt, Minister of Education, show that he is abreast of the best thought in the matter of adapting the system of education to the needs of the country, a fact that increases our hopes of great things from the proposed school.

Note.—Since the foregoing article was put in type, an outline of the conditions governing the employment of Sir Wm. Macdonald's gift has been published, but it is not yet made clear whether or not the attendants at the school are to receive practice in teaching nature-study work. We will deal further with the subject in next issue. There is also an intimation of legislation in the Province of Ontario this season, making it permissible on the part of groups of rural school sections to consolidate and establish graded schools, which would mean discarding the present small schools in use, the pupils all attending one large, graded school, with more modern building and equipment and larger staff. What say our readers to this proposition? It is said to be in operation successfully in several Western States localities.

What Pure Air Means to Live Stock.

Among the principal organs of the animal body are the lungs, in which changes go on unceasingly during the healthy life of the animal. The changes are: 1st, the taking of oxygen (the life-giving gas) into the blood; 2nd, the throwing off of the poisonous material (carbon dioxide gas) of breathing air; 3rd, the formation of heat, the result of the exchange.

The lungs consist of a large number of small air cells, over which are distributed a large number of very fine blood vessels. Some of these little blood-carrying tubes bring impure blood to the lungs, where is exchanged carbon dioxide, ammonia and water for oxygen, as a result of which the heat is generated, thus warming the blood, which also becomes a brighter red in color. The purified blood is then taken to the heart, from where it is pumped to all parts of the body, where it assists in nourishing and building up the various tissues. Oxygen is only to be got from pure fresh air, hence it is at once evident that the purification of the blood, the growth and warmth depends on its being able to get an ample supply of oxygen. It is impossible to get the best results from live stock which are starving for fresh air. Pure air with its great complement—light—means economy of feed and the absence of germ diseases, notably tuberculosis. As that essential, pure air, cannot be freely supplied in poorly-ventilated stables, we shall endeavor to show, in a series of articles on ventilation, how live stock may be ensured a supply of pure air, which ranks equally high as a nutrient with food and water.

Bible, Knife, Paper—All Good.

I received the premium knife a few days ago, and I must say I am highly pleased with it, as it always holds a good edge, the nickel handle makes it strong and durable and not bulky as a wooden handle would necessarily be in a knife of that size. Your paper is giving good satisfaction. The Bible you sent me last year for two subscribers was worth more than the money sent for both.

COLIN McINTYRE.

Charles A. Vader, Calgary, Alta.: "We like the 'Advocate' very much, and are much pleased with your Christmas number." January 13th, 1902.

Speltz (Emmer).

To the Editor "Farmer's Advocate":

I noticed in your paper recently a good deal of interest shown in speltz. I have grown a considerable quantity of this grain the last two years, and have been well pleased with the results. During the season of 1900, when other grains, including oats, were a failure practically, a field of speltz averaged 1,750 pounds to the acre, against 950 of oats and 600 of wheat. Last spring I sold a considerable quantity for seed to farmers in this district, all of whom report to me very encouraging returns. Mr. K. McIvor's yielded 60 bushels per acre (48 pounds to bushel), and R. Langtry from 6 bushels of seed threshed 243 bushels. My own crop, while a good one, did not go quite so much, because I put the bulk of it on pretty rich land, and the straw grew so rank and long that a good deal of it became lodged. However, I had 50 bushels to the acre, and getting it threshed early, before the heavy rains set in, have a beautiful bright sample. I have been feeding it by way of experiment, and am very highly pleased with the results. I think horses and cattle will put on flesh more rapidly on speltz than on oats, and while I have not fed any to poultry, have heard it highly spoken of as well suited for all kinds of fowl. Have fed considerable of it to hogs, but found it necessary to crush it to get the best results, and I know of no other feed, if treated in this way, that will put flesh more rapidly on this animal. With horses, it is just as well to feed it whole, as the kernel is pretty well protected with a thick hull, causing the animal to chew it pretty thoroughly, with little tendency to bolt the food. With regard to the most suitable soils on which to sow it, I am in favor of a sandy loam. Indeed, it may be sown on a very light soil and produce a good crop, where oats on the same land would be almost a failure. It should not be sown later than the 10th of May, and the first of that month is even better. I found in my case it took a little longer than oats to mature. This grain is grown to a considerable extent in Dakota and Minnesota, and I believe is becoming popular there. Prof. Worst, of N. Dakota Agricultural College, told me that from a careful comparison made in feeding stock, that in nutrition it was fully equal to barley, while yielding 25 per cent. more. Prof. Zavitz, of Guelph College, made a similar statement to me when I visited there two weeks ago. I wrote Mr. S. A. Bedford, Supt. of Brandon Experimental Farm, and received the following letter from him:

Brandon, Dec. 28th, 1901.

Mr. H. S. Simpson:

Dear Sir,—Your letter of 24th inst. received. We have tested speltz for two years, and find that the yield is larger than that of any other grain grown by us. I enclose herewith a memo. giving the yield for each kind of grain this year as compared with speltz.

Yours truly,
S. A. Bedford, Supt.

COPY OF MEMO.

SPELTZ VS. WHEAT, OATS AND BARLEY.

| Kind of Grain. | Weight of Grain per Acre. |
|---------------------------|---------------------------|
| Speltz..... | 3,080 |
| Mensury barley..... | 2,320 |
| Red Fyfe wheat..... | 1,720 |
| American Beauty oats..... | 2,320 |

I may add, in conclusion, that I have found the straw an excellent fodder, and that both horses and cattle seem to prefer it to either oat or wheat straw.

HAVEY C. SIMPSON.

Wallace Municipality, Man.

H. C. Simpson, Virden, Man., January 2nd, 1902: "I may add that I came across a great many farm papers in the Colleges while away, but in none of them did I find a more up-to-date and clever one than the 'Advocate.'"

Dangerous Edibles.

One of our American contemporaries has the following to say of a recent occurrence:

"The St. Paul representatives of three meat-packing houses—Armour, Swift, and Morris—were fined \$25 each, recently, for the use of preservatives in sausage and meat products, such as are supplied to consumers by the retail meat dealers and grocers who sell meats. Investigation disclosed that scarcely any of these products offered to the public were without the presence of preservatives of some kind, principally borax, salicylic acid, and occasionally formaldehyde. The use of these is forbidden by law. It is the same general proposition as the 'embalmed beef' which caused the army so much trouble in Cuba and the Philippines. Only there they used the preservatives in larger quantities. The preservatives retard the digestion of the meat, and of course injure the stomach."

If there is one thing, as Canadians, we can congratulate ourselves on, it is the absence of filled cheese, oleomargarine, etc. Counterfeits of edibles are prohibited and are not manufactured in Canada. We produce the real thing!

Self Feeder for Pigs.

In reply to the inquiry how to make the feeders mentioned in my article on the care of fall pigs, which appeared in the Nov. 5th issue of the "Advocate," I will endeavor, as briefly as possible, to describe how my feeders are made. My first one was nothing but a dry-goods box with an extra bottom put in, slanting so that the feed would run to one side when the supply became nearly exhausted. I also removed a board in the side at the bottom, in front of which I built a trough of hard maple, the length of the box. I then covered the opening in the side of the box with a hard maple board, which I made to slide up and down in a groove. I then fastened securely in front, and behind this board, two pieces, also of maple, at each end in which I put a row of gimlet holes, quartering across the pieces so there would be no danger of their splitting one into the other. These holes should not be more than a quarter to a half inch higher than the one below. I then put two holes in each end of the long board and cut out the space between, making a slot running lengthways of the board and of the same width as the size of the holes in the upright pieces. I then inserted into one of these holes, and through the slot, a five or six inch wire nail to hold the board at proper height to make the right opening. Any farmer will understand that if this opening should be too wide the pigs would work out more feed than they would eat, thus causing a waste of feed; also, that chop would require a wider crack than fine middlings. This feeder I used for some time, and it did splendidly for a test, but the box was not strong enough, so I built one in my feed alley where the pigs could get at nothing but the trough. I am using this one yet, but later I converted the partition between two pens into a feed box, with a trough at each side, to which I added a strip of iron about four inches wide on the outside of the board that regulates the feed supply. It is an advantage to bevel the bottom of this board, taking off the side next the chop for a distance of two or three inches up from the bottom, and the iron on the outside will keep the pigs from gnawing off the thin edge and thus making the opening too large. In this double-trough box the center of the bottom is raised to a sufficient height to let the feed slide each way to the troughs. The box may be made any width desirable. I have left a space three feet wide behind my feeder for a gate between the pens. Sometimes pigs seem to eat too much. For the first day or two, should they do this, I pull out the nails at each end of the board, and shut it off when I think they are eating too much; but they soon get used to it, and the board can be left up all the time.

By putting the feeder at the partition between the pens, it leaves the front along the feed alley clear for the drinking trough, which should seldom, if ever, be dry. My feeders are made of maple flooring, all matched tight. Sometimes chop will not work down readily, especially if ground coarse. To overcome this difficulty, I took several pieces of wire a couple of feet long; the exact length does not matter. At one end I bent the wire so as to form an eye or lobe small enough to prevent the head of a nail or screw from passing through; then again near the middle of the wire I give it an easy bend with the hands, bringing both ends nearly together. I then fasten these wires on the slanting bottom of the feeder by putting a nail or screw through the eye which I have bent in one end of the wire, allowing the middle or round end of the wire to project through the crack and into the trough just far enough to allow the pigs to work them back and forth with their noses. In order to prevent their being rooted too far to one side, I drive a nail on each side, allowing the wire to be shoved about four or five inches. The working of the wires will work the feed through a much smaller crack than would otherwise be possible.

I use elevated nests in part of my pens, and with but few exceptions the pigs keep them dry and clean. I have room overhead for a couple of loads of straw, and over each nest I made a chute or box, which runs to the roof, with an opening on one side at the top. This allows me to mow the straw in tightly without danger of filling up the holes. I also use a part of the overhead space for soft corn which is not fit to crib. My pen is warm enough to keep out frost in any ordinary weather. My walls are made of 2x6 studs, sealed inside and sided outside with matched siding, the six-inch space being filled with sawdust well mixed with dry, air-slacked lime. I do not remember the proportion, but will say this, that the greater the percentage of lime, the less danger there will be of rats and mice making their home in it. I have seen many better pens than mine, but I have yet to see any man with a cleaner, more contented lot of pigs than mine, and they do not squeal themselves hoarse nor attempt to tear the pen down when I go in to look at them.

J. J.

Smithfield Carcass Competitions.
LONDON, ENGLAND, 11TH DECEMBER, 1901.

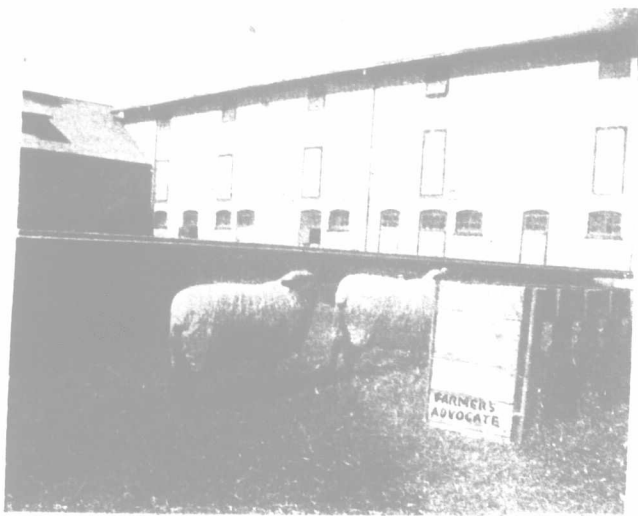
| STEERS UNDER TWO YEARS OF AGE. | | Weight on arrival. | Age in days. | Average daily increase. | Fasted live weight. | Cold dead weight. | Per cent. |
|--|---------------------------|--------------------|--------------|-------------------------|---------------------|-------------------|-----------|
| Prize. | Exhibitor. | | | | | | |
| 1. | Col. Henry Platt, C. B. | 1,633 | 721 | 2.26 | 1,388 | 1,070 | 65.88 |
| 2. | J. Douglas Fletcher | 1,396 | 708 | 1.97 | 1,355 | 884 | 62.24 |
| 3. | F. C. Sullart | 1,282 | 690 | 2.10 | 1,260 | 829 | 65.79 |
| 4. | H. G. Murray Stewart | 1,047 | 683 | 1.57 | 1,043 | 718 | 68.84 |
| Average of the ten exhibits. | | | | | 1,282 | 826 | 65.45 |
| STEERS OVER TWO YEARS OF AGE. | | Weight on arrival. | Age in days. | Average daily increase. | Fasted live weight. | Cold dead weight. | Per cent. |
| Prize. | Exhibitor. | | | | | | |
| 1. | His Majesty the King | 1,409 | 1,051 | 1.39 | 1,388 | 914 | 66.31 |
| 2. | G. Young of Cadboll | 1,392 | unknown | | 1,398 | 885 | 64.69 |
| 3. | Sir Walter Gilbert, Bart. | 1,382 | 850 | 1.35 | 1,321 | 881 | 64.25 |
| 4. | Thomas Biggar & Sons | 1,283 | | | 1,252 | 820 | 65.49 |
| Average of the eight exhibits | | | | | 1,355 | 860 | 63.13 |
| HEIFERS UNDER THREE YEARS OF AGE. | | Weight on arrival. | Age in days. | Average daily increase. | Fasted live weight. | Cold dead weight. | Per cent. |
| Prize. | Exhibitor. | | | | | | |
| 1. | His Majesty the King | 1,372 | 966 | 1.44 | 1,318 | 880 | 65.04 |
| 2. | John of Cadboll | 1,280 | unknown | | 1,226 | 790 | 64.45 |
| 3. | The Duke of Newcastle | 1,324 | 1,074 | 1.28 | 1,324 | 856 | 64.65 |
| 4. | J. Douglas Fletcher | 901 | 576 | 1.55 | 865 | 541 | 65.82 |
| Average of the six exhibits | | | | | 1,153 | 744 | 64.52 |
| In 1898 steers under two years old dressed | | | | | | | 65.20 |
| In 1901 | | | | | | | 65.45 |

The Suffolk Sheep.

BY J. M'CAIG.

The question of the making of breeds is an interesting and instructive one to the shepherd. Methods vary considerably. In some cases the work is done by straight transformation by the help of another breed, or in some cases of more than one breed; in other cases it has been done by a change of environment combined with selection, and in others by crossing and selection combined. Selection, indeed, may be assumed to be always operating; for to anyone who is trying to institute or improve a breed, particularly by crossing, there must always be more or less chaos, or perhaps, rather, variation, in the individuals before him, out of which he seeks to bring order by the preserving and perpetuating of types of animals that more truly represent his ideal than do the animals rejected.

The Rambouillet differs quite distinctly from its Spanish progenitors, though it received no help to its transformation by the infusion of new blood. It is differentiated from the Spanish Me-



11-MONTHS-OLD SUFFOLK EWES AT THE O. A. C.

rino by having a longer and less yolky fleece and a fleshier and larger carcass. This difference is due to a change of environment, combined with careful selection. The fine wool of the Saxony is the product of special treatment and management for the production of wool of the character desired.

Existing English breeds owe much to the help of the earliest improved of English sheep, particularly the Leicester and Southdown. The Long-wool breeds have been helped by the Leicester. The chief benefit conferred has been that of giving early maturity and of improving the quality of the wool. Both the Lincoln and Cotswold probably owe to the Leicester a reduction of coarseness of bone and an improvement in the fleshiness and roundness of rib.

The Southdown has operated in a still wider sphere. The Hampshire, Shropshire, Suffolk, and indirectly the Oxford, are all indebted to it. It is a somewhat remarkable thing that the derived breeds have perhaps outstripped in popularity the original improving breed. This is perhaps due to the fact that the original perfections of form that have been secured in such hands as those of Bakewell and Ellman are higher than can be successfully maintained by the bulk of inexperienced breeders, and the product of the outcrossing of these breeds on local varieties has shown a very satisfactory sheep, and perhaps one that carries with it a ruggedness of constitution resulting from the infusion of new blood into a hardy primitive breed. The favor in which these derived or improved breeds stands has led to the greatest perfection in these breeds themselves, to such a degree that scarcely any perfection of form can be claimed to exist in one breed, either original or derived, that cannot be paralleled or claimed for any other. The best types of all the English breeds are good sheep, showing variations of fleece, form, habits and size that differentiate them and make each separately suited to a special class of circumstances and environment.

The old Norfolk sheep is the last class of local sheep that has risen to prominence among English breeds. It was formerly a heath sheep. It was originally a very black-faced, horned animal, with long legs, accented by a long face, narrow, flat body and light hams. This type has given way to a modern sheep, showing an approximation to the Southdown type, which in other words may be designated as an early-maturing type, and it now is brought closer to the ground and has a broader-set, fleshy body, and has attained greater weight.

Concurrently with the improvement of carcass has come an improvement in wool. Primitive black-faced sheep show a tendency to darkness of skin and wool. These defects are essentially to be counteracted by selection and breeding, and this matter has been assiduously attended to in modern English flocks. This along with the high mutton qualities of the breed, both as to form, quantity and quality, give the Suffolks a specific and important place among the English breeds. Breeders of Suffolks in the Old Land might deem a defence of their breed uncalled for, and might claim in certain flocks a steady improvement and development and a consistent pursuit of pure breeding over a period of seventy-five years. They can also point to the triumphs of the breed at Smithfield, the most distinguished battleground of the meat animals in the world. It is the case, however, that the adoption of the breed has not reached any widespread proportions on this side of the water. Recent years have been marked by a steady stream of importations of the Lincoln, Leicester, Cotswold, Oxford, Shropshire, Southdown, and Dorset, in different numbers suited to the tastes and relishes of fanciers on this side of the water. It is to be noted, too, that last year and this have brought in some fine types of Hampshires, the typical hurdle and fast maturing breed of the live-stock farm of the world. It is in order to expect a more general introduction of the Suffolk by reason of their home reputation and the success that has attended the introduction of all the other prominent English breeds.



PRINCE WILLIAM JR. 8708.

Four-year-old Clydesdale stallion, champion over all ages, International Show, Chicago, 1901. Weight, 2,050 pounds.

OWNED BY ALEX. GALBRAITH, JANESVILLE, WISCONSIN.

A Word for the Farmer's Boy.

Wm. Thompson, President of the National Live Stock Exchange, in an address at St. Joseph, Mo., recently, paid the following tribute to the farmer's son:

"It is an acknowledged fact that the welfare of our nation, our government, our churches, banks, schools, railroad interests, commercial relations, interstate and international, depend largely upon the success of our unlimited agricultural resources. I say the agricultural resources are unlimited if only husbanded upon economical principles. This being true, and as this is the greatest industry of our country, why should it not receive the greatest attention and most thorough study? Why should farming not be a profession handed down from one generation to the next, and thus constantly improved? Should not the farmers' sons, as well as other young men, follow agriculture as a profession? They, by right of birth and rearing, should be the agriculturists of the next generation. At present you will find farmers' sons in all branches of industry. Many of them will say: 'Sorry is the day I left the old farm.' In former days the boy of the farm had a hard life; toiled early and late, with but few hours free from labor, wherein he could cultivate a taste for knowledge. And when once interested, his chances were so meager he could scarcely satisfy the desire to learn more about his chosen profession.

"The surroundings of the farmer's boy have now changed. His work has been lightened by labor-saving machinery. The marvelous system of newspapers, those great educators of the people, bring him wisdom and information from all parts of the world and place them at his disposal wherever he is.

"The people of the whole country show their interest in him by liberal appropriations of money through the legislatures for more and larger agricultural schools, where it will be possible for him to become more familiar with his chosen profession. Besides this, our nation highly honors his calling. The agriculturist is to be found connected with all our leading industries. They are in the majority in our legislative bodies, and, of a truth, upon them we depend for laws to protect our institutions, and such laws are felt through the entire system of our government. The farmer is an important factor in our national life. All encouragement should be given to the son to follow in his father's footsteps. Then shall poverty be wiped out, and all cities prosperous and flourishing. The farmer's son can largely make or mar the future of our country."

Delays are Dangerous.

The address label on your paper will show if your renewal subscription for another year has been properly credited. Possibly you have neglected sending in your renewal. If so, delay no longer. Kindly forward the amount to-day.

Mr. A. M. Robertson, Caledonia, "Christmas number to hand, and much appreciated." January 6th, 1902

Smithfield Show Facts.**WEIGHTS AND DAILY GAINS.**

This the greatest and most important of the English fat-stock shows was held from the 9th to the 13th of last month. Its entries numbered as follows: Cattle, 273; sheep, 157; pens of pigs, 96; and for the carcass competitions, 24 head of cattle and 46 head of sheep.

The championship honors of the show in the cattle department, alive, was secured by Brunhilde, an Aberdeen-Angus heifer, property of the Earl of Strathmore, weighing 1,832 lbs. at two years and nine months. The champion honors for best animal under two years was secured by a grand young white Shorthorn steer weighing 1,478 lbs. at one year and eight months (and showing an average daily gain of 2.38 lbs.), the property of H. M. the King.

The Long-wool champion prize in the sheep section was secured by a pen of Cheviots, property of Mr. J. McDowall, and that for the Short-wools by one of the grandest pens of Southdown yearling wethers seen for many years at this show, from Col. McCalmont's flock.

In the carcass competition premier honors and champion in the cattle section was secured by an exhibit of H. M. the King's, a grand heifer of the Aberdeen-Angus breed, weighing, fasted, 1,348 lbs. at two years and eight months, dressing 889 lbs., or 65.94 per cent., and showing a daily gain from birth of 1.44 lbs. The carcass afterwards sold for the English record price of 16 shillings per eight pounds, net weight.

The Suffolk breed came out into clear prominence in the carcass sheep competitions, the champion prize going to the carcass of a wether by a Suffolk ram, out of a Black-faced mountain ewe.

The cattle section was a fair average of former years, the Shorthorns, the Devons and Herefords being hardly so good as in some previous years, whilst, on the other hand, the Sussex cattle have not been so good for many years.

We give the number of entries present in each class named, the average daily gain of the whole class, and the highest and lowest daily gain in the same:

CATTLE.

Herefords.—Steers under two years—Average, 2 lbs. 0.55 oz.; highest, 2 lbs. 1.76 oz.; lowest, 1 lb. 13.49 oz.; number present, seven. Steers over two and under three years—1 lb. 12.90 oz.; highest, 1 lb. 15.27 oz.; lowest, 1 lb. 11.30 oz.; number present, five. Heifers under three years—Average, 1 lb. 7.73 oz.; highest, 1 lb. 10.23 oz.; lowest, 1 lb. 4.97 oz.; number present, three.

Shorthorns.—Steers under two years—Average, 2 lbs. 2.61 oz.; highest, 2 lbs. 10.25 oz.; lowest, 1 lb. 14.24 oz.; number present, nine. Steers over two and under three years—Average, 1 lb. 13.51 oz.; highest, 1 lb. 15.31 oz.; lowest, 1 lb. 11.03 oz.; number present, six. Heifers under three years—1 lb. 15.96 oz.; highest, 2 lbs. 3.48 oz.; lowest, 1 lb. 9.00 oz.; number present, eight.

Aberdeen-Angus.—Steers under two years—Average, 2 lbs. 9.23 oz.; highest, 2 lbs. 5.22 oz.; lowest, 1 lb. 11.92 oz.; number present, nine. Steers over two and under three years—Average, 1 lb. 14.32 oz.; highest, 1 lb. 14.36 oz.; lowest, 1 lb. 14.27 oz.; number present, two. Heifers not exceeding three years—Average, 1 lb. 10.25 oz.; highest, 1 lb. 12.72 oz.; lowest, 1 lb. 6.00 oz.

Galloways.—Steers under two years—Average, 1 lb. 15.18 oz.; highest, 2 lbs. 3.25 oz.; lowest, 1 lb. 13.67 oz.; number present, five. Steers over two and under three years—Average, 1 lb. 9.47 oz.; highest, 1 lb. 12.43 oz.; lowest, 1 lb. 6.61 oz.; number present, eight. Heifers not exceeding three years—Average, 1 lb. 5.84 oz.; highest, 1 lb. 7.97 oz.; lowest, 1 lb. 4.71 oz.; number present, three.

Cross-bred.—Steers under two years—Average, 2 lbs. 3.38 oz.; highest, 2 lbs. 7.40 oz.; lowest, 1 lb. 14.26 oz.; number present, twelve. Steers over two and under three years—Average, 1 lb. 13.91 oz.; highest, 2 lbs. 1.81 oz.; lowest, 1 lb. 6.14 oz.; number present, twelve. Heifers under two years—Average, 1 lb. 15.10 oz.; highest, 2 lbs. 1.92 oz.; lowest, 1 lb. 12.79 oz.; number present, nine. Heifers over two and under three years—Average, 1 lb. 10.72 oz.; highest, 1 lb. 13.61 oz.; lowest, 1 lb. 5.17 oz.

SHEEP.

This department was throughout a good one. Mr. J. Pears' remarkable pens of Lincoln wether lambs and Col. McCalmont's pen of Southdown yearling wethers standing out above any other pens in the show. Each breed had two classes, one for three wether lambs and the other for three yearling wethers. We give the number of entries in each class, and the average daily gain of the same for each of the breeds named; also average weight in pounds of the first-prize pen of three lambs and yearlings:

Leicesters and Border Leicesters.—Lambs—Average, 9.75 oz.; number present, four; weight, 164. Wethers—Average, 6.79 oz.; number present, five; weight, 271 lbs.

Cotswolds.—Lambs—10.08 oz.; number pres-

ent, two; weight, 185 lbs. There were no yearlings entered.

Lincolns.—Lambs—11.81 oz.; three pens; weight, 236 lbs. Wethers—8.55 oz.; four pens; weight, 345 lbs.

Southdowns.—Lambs—8.09 oz.; seventeen pens; weight, 178 lbs. Wethers—4.84 oz.; ten pens; weight, 235 lbs.

Hampshire Downs.—Lambs—10.48 oz.; nine pens; weight, 226 lbs. Wethers—6.72 oz.; ten pens; weight, 308 lbs.

Suffolks.—Lambs—10.91 oz.; nine pens; weight, 218 lbs. Wethers—7.45 oz.; five pens; weight, 316 lbs.

Shropshires.—Lambs—9.24 oz.; five pens; weight, 165 lbs. Wethers, 6.26 oz.; four pens; weight, 267 lbs.

Oxford Downs.—Lambs—10.35 oz.; four pens; weight, 193 lbs. Wethers—6.31 oz.; two pens; weight, 283 lbs.

Dorset or any other pure Short-wooled.—Lambs—9.10 oz.; two pens; weight, 203 lbs. Wethers—5.89 oz.; three pens; weight, 278 lbs.

English Cross-breeds.—Lambs—10.56 oz.; eight pens; weight, 240 lbs. Wethers—7.34 oz.; five pens; weight, 308 lbs. Oxford-Hampshire cross in both classes.

SWINE.

The entry of swine was a small one in number, but good in quality, and is noticeable as being the first one at which the live weights were collected at this show. The following is the average daily gain of each class named, the number of entries present, the age in days and weight in pounds of first-prize pens:

Large Whites.—Two pigs under nine months—1 lb. 5.02 oz.; age, 267 days; weight, 332 lbs.; two pens. Above nine and under twelve months—1 lb. 8.17 oz.; four pens; age, 358 days; weight, 455 lbs.

Berkshires.—Two pigs under nine months—1 lb. 3.14 oz.; age, 270 days; weight, 336 lbs.; ten pens. Above nine and under twelve months—1 lb. 4.01 oz.; eight pens; age, 358 days; weight, 486 lbs.

Tamworth.—Two pigs under nine months—1 lb. 3.37 oz.; four pens; age, 247 days; weight, 364 lbs. Above nine and under twelve months—1 lb. 3.41 oz.; four pens; age, 247 days; weight, 499 lbs.

Single pigs, any white breed, under twelve months—Average of class, 1 lb. 4.29 oz.; eight pens; age, 358 days; weight, 503 lbs.—A. Hiscox, Yorkshire. Any black breed—Average, 1 lb. 0.62 oz.; two pens; age, 359 days; weight, 370 lbs. Berkshires, under 12 months—Average, 1 lb. 3.25 oz.; age, 318 days; weight, 442 lbs.—N. Benjafield. Tamworth—Average, 1 lb. 4.92 oz.; five pens; age, 357 days; weight, 478 lbs.—R. Ibbotson.

Canada Wools.

What is the remedy for the continued low price of wools and the indifferent demand for them by the merchants and wool dealers. Since my previous letter the price for Canada combing in the States has dropped 1½c. The continued depression of our worsted factories has kept them out of the purchasing market, so that the demand to-day is for "Down" wools, and it may surprise the wool-growers to know that the demand is very much in excess of the supply. The result is that foreign cross-bred and English Down are being imported in considerable quantities.

The sooner our farmers know that coarse wools are not wanted, the better. There is little enquiry for this type of wool from any source. They are only fitted for carpet warp, and for that there is limited demand. For blankets the trade requires a softer wool to give the fabric a big, bulky feel. These long, coarse wools make a heavy, cold blanket. As a proof of this, the manufacturers endeavor to secure the softer wools of Central Canada, Quebec and the Lower Provinces, in preference to Ontario wools.

Now, what is the use of sheep-raisers persisting in retaining breeds of sheep the wools of which are not wanted? Would it not be better to try a change? There is an unlimited demand at present, and it looks as if the demand will continue for "clothing" wools. Why not get the large-bodied Down sheep? The wool is more valuable. To-day clothing wool commands from 3c. to 4c. per pound more than combing wools. A bright, silvery Leicester with a fine staple is always marketable, but the coarse, dull Leicester is no more wanted than is the straight-haired Lincoln—a wool without a redeeming feature for the Canadian market. The same remarks also apply to the coarse, kinky Cotswold.

It is not my desire to advocate any particular breed of sheep, but it is said in reference to the Dorset Horns that they are "dog-proof," and this is an important consideration; while the sheep is well bodied and hardy. The wool yield compares favorably with the Downs and its nature is not "brashy" and tender. In the British market to-day the Dorset lamb wool is 2c. to 3c. above any other home-grown wool. The beauty of

this wool consists in its glistening, silvery nature, being peculiarly adapted for the better grades of underwear.

Another satisfactory breed is the "Cheviot." Thousands of pounds of this wool is being imported to fill the demand for a soft Canada "extra" pulled which cannot be obtained. Where is the sense in sheep-raisers persisting in maintaining coarse, carpet-wool sheep when every wool dealer in the country could tell them that these wools mixed among other and better wools in the local buyers' hands degrades the pile. Again, these coarse-wooled sheep are more apt to have cotted fleeces than are the Down sheep. It is a safe assertion to make, that every pound of wool now held by our merchants and wool dealers would have been marketed ere this, at good figures, had those wools been clothing instead of combing, while the importation of substitutes would naturally be that much less.

Consider this carefully, and in the next letter it may be possible to suggest some better method of marketing the wool and some suggestions about conditioning and grading the wool so that the grower can get the full value, which he at present is not getting. "PITREAVIE."

The Bacon Pig of the Future.**FROM THE COMMERCIAL POINT OF VIEW.**

Mr. John M. Harris, Calne, Wiltshire, says: Speaking as a bacon-curer who personally sees weekly, both alive and dead, some thousands of pigs from nearly all the West of England counties, I am sure it is most important to breeders, feeders and curers that pigs be well bred, and by this I do not mean the pigs one often sees at the agricultural shows, winning prizes, which are masses of fat, with heavy shoulders, necks and jowls.

The most profitable style of hog to produce, both for the consumer and for the producer, is one with a light jowl, small head, narrow and light shoulders, long and deep in the sides, thick flank, square hind quarters, tail well set up, fine hair, and made to weigh from 140 lbs. to 160 lbs. before it is seven months old, or 4 scores at five months old, if required for pork.

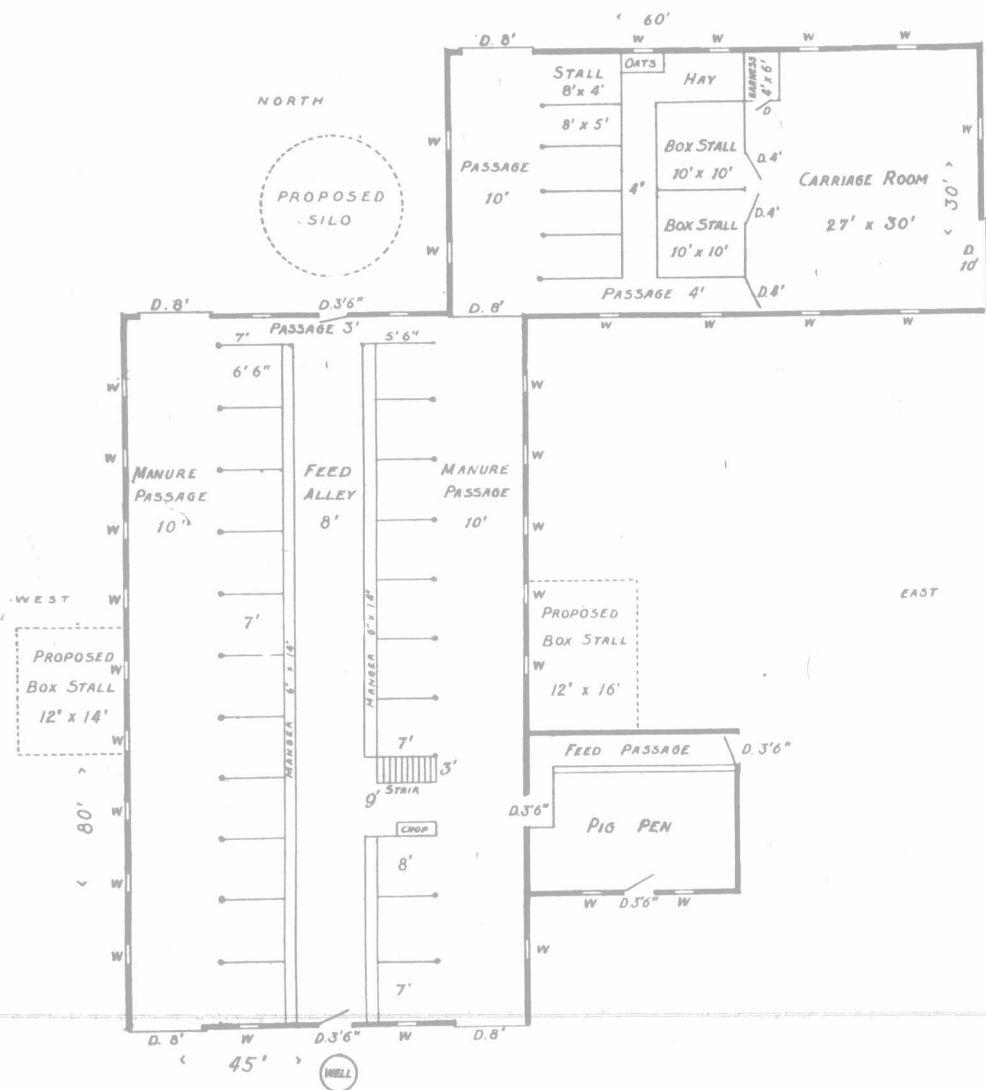
The pig is the only animal for which the feeder gets paid for the whole of the carcass, as the head, feet and skin are weighed; whereas, in the bullock and sheep, these parts are not weighed; this is an advantage of nearly 20 per cent. in favor of the pig.

A farmer can feed his pigs entirely on the produce of his farm without going to the expense of any artificial and costly foods; tail wheat, barley, oats, peas, beans, potatoes, of which top price cannot be made, can, by being ground into meal, be turned to good profit, especially if mixed with separated milk, whey or buttermilk, which is otherwise of little value; and it is a strange fact, though nevertheless a true one, that pork is the only meat of the same or greater value than it was twenty or thirty years ago. The influence of food upon the quality of meat produced by different foods is most striking; pigs fed on maize, rice, linseed, kitchen refuse from hotels, workhouses and other large establishments, also butchers' offals, making a very soft, bad-quality meat, whilst barley, wheat, beans, peas, with skim milk, whey or buttermilk, will make the very best quality. On the proper feeding and management, then, depends whether pig-keeping pays or not. The frequent complaints heard of pig-keeping not paying are attributable to this, for while one farmer never keeps a pig, "because it does not pay," his neighbor fats some hundreds in the course of a year, to the considerable advantage both of his farm and his pocket.

The value of manure from fattening pigs is considerable; I have, with many practical men, seen the difference in the crops and produce of a farm where pigs have for some years been fed and those of other farms where the milk has all been sold.

The great opponent of the British dairy farmer, viz., the Dane, when in 1887 he was prohibited from sending his live pigs to Germany, as he had done for years, started bacon-curing factories, and since then, by improving his breed of pig, he has, to a large extent, captured the English bacon trade, besides enriching himself and his country. The Canadian bacon now coming in such enormous quantities to England is, and will be, a keen competitor with Denmark, as the Canadian and Danish farmers are intelligent enough to learn what is required and then to produce it!

The English and Irish farmers have, in many cases, kept to the same breed as their father and grandfather before them, doubtless thinking that what was good enough for them will do now, with the result that through breeding in and in, and from all shapes and forms, the English and Irish pig has become the thin-bellied, heavy-shouldered wretch, alike unprofitable to the breeder, the curer, and the merchant.



BASEMENT PLAN OF MR. J. P. BEATTIE'S CATTLE AND HORSE BARN, MIDDLESEX CO., ONT.
Cattle barn, 45 x 80 ft.; horse barn, 30 x 60 ft.; hogpen, 18 x 24 ft.; windows, 2 x 3 ft.—8 lights;
manger post to edge of manure gutter, 7 ft.; V-shaped water trough, 2 ft. above alley floor;
1 ft. manger board next cattle—open next alley; ceiling of stable, 8 ft. 8 in. high;
manure gutter drop, 6 in.; sloping in from back, 20 in.; from manger to
drop, 2 in. fall on floor; from wall to gutter, 1 in. fall.

Bees Under Snow.

"One year I had snow ten feet deep over a part of the hives, so that I lost track of several of them altogether, the wind bringing the snow from a peculiar direction, over and around a knoll. Of these colonies, not a single one was alive on the first day of the next May."

"This certainly has a bad look from your experience. How do you account for these losses?"

"The difficulty seems to be that, as soon as the hives are covered with snow, the pure air is cut off to a certain extent, which, combined with the warmth from the ground, and the snow not allowing that, and the warmth from the bees, to escape, makes the conditions so unusual that the bees become uneasy, break the cluster, go to breeding, consume an undue amount of stores, and die of diarrhea and exhausted vitality before any of the brood, or brood of sufficient extent, emerges from the cells to take the place of the old bees which are prematurely dying off under these conditions. Young bees brought on the stage of action under such conditions do not seem to have the strength and vitality of those which emerge from the cells during September and October."

"Then you would not advise leaving bees where they are liable to be drifted under snow during winter?"

"No, not till I know what the result would be in my locality. Why I say this is, that some say they are successful in thus wintering, and I am bound to believe them. To know this result, without any great loss, I would try two or three colonies for a winter or two. If they winter well, you can safely try more; and when you are sure of the ground you are treading upon, then you can risk the whole apiary or reject the plan as the case may be. This is the only safe way to venture into anything we are not conversant with."—(Doolittle, in Gleanings.

Commended to the People.

(From our Ontario and Eastern Edition.)

Dear Sir,—Allow me to offer my congratulations on the superior number of your journal which you present to your readers for the Christmas of 1901. I have no hesitation in saying that it is a decided improvement on anything you have given us hitherto. It contains a variety of matter, both artistic and literary, which will be of great interest to your many readers. Such enterprise deserves recognition by all of our people, and I heartily wish you additional prosperity for the new year upon which you are entering.

Yours very truly,
JNO. DRYDEN,
Minister of Agriculture.

Toronto, Dec. 28th, 1901.

Large Cattle and Horse Barns.

The accompanying diagrams show the arrangement of Mr. J. P. Beattie's large barn, completed last season, to be used mainly for fattening export cattle. The smaller barn to the rear is for horses and vehicles. On the west side of the cattle barn are eleven double stalls, seven feet from manger post to edge of gutter-drop. The first four stalls from the north are 6 1/2 ft. wide, the remainder 7 ft. There is no back to manger next feed alley, there being an open space between bottom of V-shaped water trough (made of 2-in. plank) and feed-alley floor, through which hay and straw are fed to cattle, grain (or silage) being fed over the trough. On the east side of feed alley, between stairway and north end, our engravers have shown one stall too many. This row of stalls (7 feet wide each) are 1 1/2 ft. shorter (5 1/2 ft.) at the north end, in order to suit the smaller young cattle. At south end they are 7 feet long. The three stalls south of the chop box are 8 ft. wide each, for large milch cows. Next season box stalls for calves, etc., are to be placed under the approaches on opposite sides of the stable, and a door through the wall in each case will take the place of one of the windows. One of these stalls may be used for storing roots. The manure passages are wide enough to drive a team and sleigh or wagon through to remove the droppings. Many otherwise fine barns are defective through having manure passages too narrow. At the cattle's heels the manure gutter drops six inches, sloping gradually outward 20 inches toward the passage, with a fall of one inch from wall to gutter. The stable, as will be seen, is well lighted and is roomy. Walls, floors and passages of cattle barn throughout are of cement concrete, and walls of pig house and horse stable of large white brick. The horse stable is all cement floor, except carriage room, which is clay. Horse stalls are plank floor over the cement. There is a window, not shown on plan, just south of door at east side of pig house.

Tanning Hides for Robes and Mats.

Nothing sets a cutter off so much or is so conducive to the comfort of the driver as a good robe, and for those of our readers who are not convenient to a first-class tanner, and yet wish to make into a robe a good hide that they may have, the following recipe is given, which has been used in a large tannery for many years, in tanning fur or wool skins for robes, mats, etc.: If the skin is not fresh, soak it thoroughly in soft water (never use hard water in tanning), then beam or scrape off all meat or loose fiber. Then put the skin in a lukewarm bath made of water with enough oil of vitriol to make it as sharp as vinegar, with a little salt added. Leave the skin in this 24 to 30 hours, when the native grease should all be removed and the glue in the skin loosened from the fiber of the skin so as to give the tanning materials an opportunity to operate directly on the glue and fiber. Now wash the skin thoroughly, wool or fur, with strong soft-soap suds, removing all dirt or grease from wool or fur; then rinse in clean water.

Dissolve in hot water,
2 ozs. alum, 1 oz.
Glauber salts, 1 oz. bo-

rax, saltpetre the size of the end of your thumb, and add a little salt. Add this mixture to sufficient water, that is a little below blood heat, to cover the skin. Leave skin in this 24 hours; stir it up occasionally so that the liquor will reach all portions of the skin. Now strip out all the liquor that can be with the hands and hang up in the shade to dry, far the sun will make it hard. When bone dry sprinkle the flesh side with water, fold up until the leather is evenly damp, not wet; then stretch to length, then to width, then pull it back to its natural shape. If the skin is handled according to directions the leather will be as soft and pliable as velvet. Success in making leather depends more on the manner of handling than on the materials used. To tan a skin without first removing all native grease and oil means that the leather will soon become rotten.

Where the necessary attention to detail cannot or will not be given, it will be money in pocket to the owner, and probably mean the saving of a good hide, to send it to a first-class tanner or furrier.

Co-partnership with Nature.

Do farmers know that no other legitimate business in the world presents greater opportunities for profit than theirs? Take the possibilities of a kernel of corn for illustration. Planted on a piece of earth 2 by 2 by 1 feet, and it will produce two ears, each containing 400 kernels, or an increase of 800 per cent. in four months time. Where is the trade or business in any city which will return half so great a profit per annum on an investment? The growth of vegetation pays Nature—she grows rich. And if a field of corn, increasing at this marvelous rate, does not pay its owner, there surely must be something the matter with the man. It is not the plant or the field, or the business which is at fault. For ever and ever, so long as the world holds men, there will be a demand for food, and every particle of it must come out of the earth or the sea. And every ounce of food is, first of all, a plant. For ever and ever, then, will there be a demand for plants. The growing of food plants can never cease to be profitable if the right man and correct management are at the helm.

Testimonials.

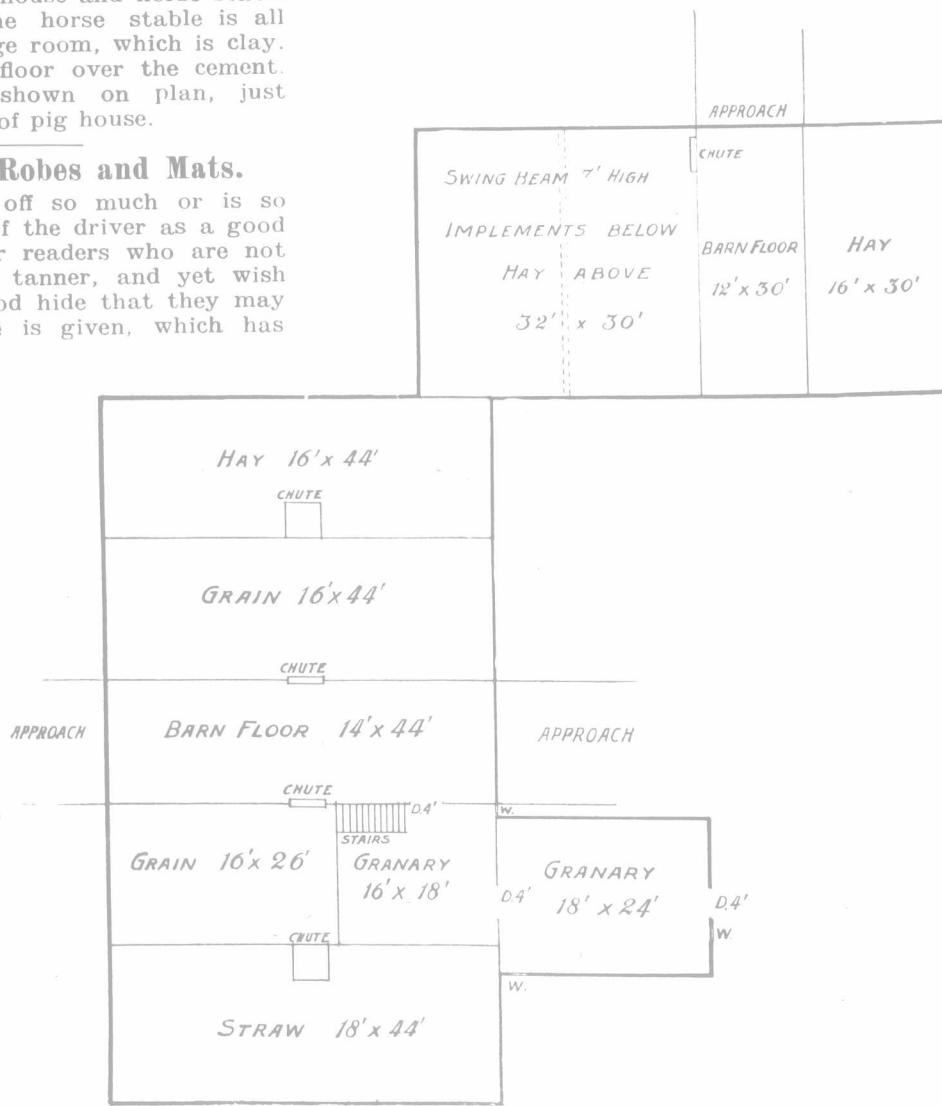
W. L. Werry, Pilot Mound, Man., Dec. 30th, 1901: "Out of all the mail I receive, your paper is the one I look forward to."

Thomas I. Lokier, Glenella, Man., January 5th, 1902: "Your Christmas number is the best yet."

Angus French, Lacombe, Alta., December 23rd, 1901: "I would not like to be without the 'Farmer's Advocate.'"

Alexander Sutherland, Cypress River, Man., January 8th, 1902: "I consider yours a good paper."

H. Nichol, Brandon, Man., January 3rd, 1902: "Allow me to congratulate you on your Christmas number; better each year."



SECOND-FLOOR PLAN OF MR. J. P. BEATTIE'S BARN.

Outside posts (cattle barn), 18 ft.; hip-roof posts, 16 ft.; from barn floor to peak, 40 ft.; large hay and straw chutes (cattle barn), 4 x 4 ft.

Jersey Butter Tests in 1901.

Last year 338 seven-day buttermaking tests of that number of cows were reported to the American Jersey Cattle Club, the highest being 25 lbs. 11 ozs. In amount of butter produced, the seven-day tests ranged as follows:

| | |
|-----------------------|----|
| Between 14 and 15 lbs | 87 |
| Between 15 and 16 lbs | 63 |
| Between 16 and 17 lbs | 52 |
| Between 17 and 18 lbs | 41 |
| Between 18 and 19 lbs | 30 |
| Between 19 and 20 lbs | 19 |
| Between 20 and 21 lbs | 19 |
| Between 21 and 22 lbs | 6 |
| Between 22 and 23 lbs | 4 |
| Over 23 lbs | 12 |

The cows producing the largest amount of butter for different periods are as follows:

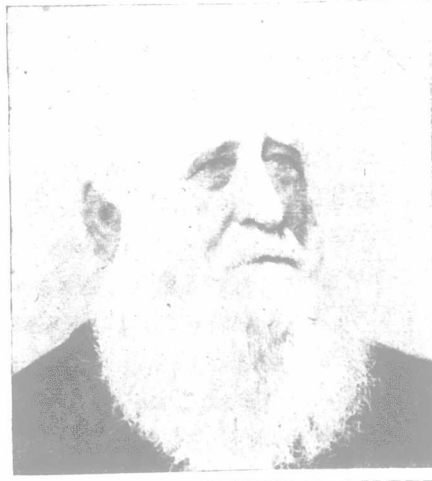
| | |
|--|---------------------|
| Largest 7-day test— Nina Ress of Sennett 103282 | 25 lbs. 11 ozs. |
| Largest 10-day test— Brown Bessie 20th of H. F. | 21 lbs. 13 1/2 ozs. |
| Largest 14-day test— Pilot's Becky 158692 | 30 lbs. 3 1/2 ozs. |
| Largest 17-day test— Koffee's Winnie | 38 lbs. 1/2 oz. |
| Largest 28-day test— Luna K. 140380 | 61 lbs. 3 1/2 ozs. |
| Largest 30-day test— Adelpha Marigold 133768 | 91 lbs. 10 1/2 ozs. |
| Largest 365-day test— Nellie Jeff 116282 | 435 lbs. 4 ozs. |

Death of Sir Joseph H. Gilbert.

We note the recent death of Sir J. H. Gilbert, for so many years associated with the late Sir John B. Lawes in agricultural experimental work at Rothamsted, England. He was a native of Hull, and was educated at Glasgow and other universities. Since 1843, he conducted the Rothamsted laboratory work. The work of these two great investigators has never been surpassed.

The Dairy Test at Guelph.

We give herewith a tabulated statement of the result of the dairy test at the Ontario Provincial Winter Fair held at Guelph last month. The awards were made by the following scale: 20 points for each pound of fat, 4 points for each pound of solids not fat, 1 point for each 10 days in milk after the first 30 days (limit 10 points):



THE LATE SIR JOSEPH H. GILBERT.

Can the Farmers Combine?

The success of co-operative dairying in Canada, the Farmers' Binder Twine Factory at Brantford, Ont., and the progress now being made by several pork-packing establishments, the stock of which is mainly held by farmers, has caused many to look forward to the time when a much larger proportion of the products of the farm might be advantageously disposed of in that way.

Fifty farmers near the town of Solomon, in Central Kansas, embracing men of all political parties, last summer formed a co-operative grain-buying company. Their number included 90 per cent. of the wheat raisers of that section, some producing as much as 20,000 bushels and most of them having at least 5,000 bushels as the season's yield. Their investigations showed that the local buyers were paying 14 cents a bushel less than the Kansas City market, while 8 cents margin would meet the expenses. Their company had but \$2,500 capital; each member had but one vote; the officers elected included a banker, a former member of the legislature, and, as manager, a practical grain buyer and miller. They bought a small elevator, instructed the manager to pay within 8 cents of the market, this margin meeting the transportation charges, and began business. As was to be expected, the rival buyers

sought to take away the business by paying more than the farmers' company, and did so for several weeks. Here was where the farmers met the situation. Under their agreement whenever more was paid elsewhere the members were instructed to sell in that market, but for every bushel sold thus one cent was paid to the co-operative company. As a result the farmers' elevator stood still, but the treasury was kept full and the members gained six to seven cents a bushel on their wheat. One day a railroad blockaded their elevator with coal cars. They made no complaint, but transferred their shipments to another road. The cars were soon moved and since then plenty of transportation has been furnished. As the rival buyers ceased high figures the elevator began business, and during the summer and early fall has purchased 80 per cent. of the wheat marketed at that point. The profits have been enough to pay dividends amounting to about fifty per cent. on the original investment of the members. The success of the plan has resulted in the organization of many other similar companies.

The plan of these farmers, observes the New York Independent, is nothing more than co-operative bargaining, and differs from the usual co-operative effort of farmers in that it is managed by experienced business men. The same collective impulse that has been the basis of manufacturing combinations or "trusts" is here applied to the farmers' affairs and furnishes an example of what can be accomplished when there is at the bottom, not politics or revenge, but business. The vagaries of some radical political methods and advice in the West in past years have given false impressions of possibilities in farmers' combinations. Hundreds of Grange stores have met with failure because they were political in their nature rather than businesslike. Farmers have sought to limit the product of fields by agreement or have attempted to obey the injunctions of "hold your wheat" circulars in a haphazard, formless manner, resulting in nothing practical or effective. It has usually been found in the end that they were being used by speculators for personal gain.

Such enterprises, to be successful, must not be paternal or sectional, but practical and wholly businesslike—and those who embark must bear in mind that they assume the additional cares and risks incident to trade and commerce.

| NAME OF COW, ADDRESS OF OWNER, AND PRIZE AWARDED. | Total pounds in 48 hours. | Total pounds fat. | Total pounds solids not fat. | Total points for fat. | Total points for solids not fat. | Points for days in milk. | Aggregate points. | FIRST TEST. | | | SECOND TEST. | | | THIRD TEST. | | | | | | | | | |
|---|---------------------------|-------------------|------------------------------|-----------------------|----------------------------------|--------------------------|-------------------|--------------|---------------------|-------------|--------------------------|--------------|---------------------|-------------|--------------------------|--------------|---------------------|-------------|--------------------------|------|-----|------|--|
| | | | | | | | | Pounds milk. | Test per cent. fat. | Pounds fat. | Percent. solids not fat. | Pounds milk. | Test per cent. fat. | Pounds fat. | Percent. solids not fat. | Pounds milk. | Test per cent. fat. | Pounds fat. | Percent. solids not fat. | | | | |
| <i>Shorthorn cow, 36 months and over—</i> | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Bonnie Doon 35018. | 106.6 | 3.809 | 9.17 | 76.18 | 36.68 | .3 | 113.16 | 35.8 | 3.6 | 1.288 | 8.4 | 3.00 | 53.6 | 3.55 | 1.902 | 8.7 | 4.06 | 17.2 | 3.6 | .619 | 8.8 | 1.51 | |
| L. D. Currie, Hillsburg. | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Irish Ivy 36816. | 99.7 | 3.906 | 8.63 | 78.12 | 34.52 | | 112.64 | 35.0 | 4.1 | 1.435 | 8.8 | 3.08 | 47.1 | 3.9 | 1.836 | 9.0 | 4.23 | 14.6 | 4.35 | .635 | 9.1 | 1.32 | |
| A. W. Smith, Maple Lodge. | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Indian Rose 25005. | 113.6 | 3.511 | 9.82 | 70.22 | 30.28 | | 109.50 | 38.0 | 3.1 | 1.178 | 8.8 | 3.34 | 59.0 | 2.9 | 1.711 | 8.6 | 5.07 | 16.6 | 3.75 | .622 | 8.5 | 1.41 | |
| Jas. Brown, Norval. | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Jubilee's Julia 23523. | 89.4 | 3.129 | 8.08 | 62.56 | 32.32 | | 94.90 | 29.8 | 3.45 | 1.028 | 9.1 | 2.71 | 44.3 | 3.45 | 1.528 | 9.0 | 3.98 | 15.3 | 3.75 | .573 | 9.1 | 1.39 | |
| H. K. Fairbairn, Thedford. | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Golden Gem 31958. | 61.7 | 2.336 | 5.55 | 46.72 | 22.20 | .9 | 69.82 | 20.8 | 3.7 | .769 | 8.9 | 1.85 | 31.2 | 3.75 | 1.170 | 9.0 | 2.80 | 9.7 | 4.1 | .397 | 9.3 | .90 | |
| H. K. Fairbairn, Thedford. | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Amelia Maud 24022. | 43.4 | 1.737 | 3.88 | 34.74 | 15.52 | | 50.26 | 16.1 | 3.55 | .571 | 9.0 | 1.44 | 20.6 | 4.2 | .865 | 8.9 | 1.83 | 6.7 | 4.5 | .301 | 9.2 | .61 | |
| Alex. McKinnon, Coningsby. | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Shorthorn heifer, under 36 months—</i> | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Belvedere 3rd 35576. | 65.6 | 2.723 | 6.16 | 54.46 | 24.64 | | 79.10 | 23.4 | 4.0 | .936 | 9.4 | 2.19 | 29.5 | 3.65 | 1.076 | 9.4 | 2.77 | 12.7 | 5.6 | .711 | 9.5 | 1.20 | |
| H. C. Graham, Ailsa Craig. | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Juliet 35301. | 53.8 | 2.091 | 4.95 | 41.82 | 19.80 | .9 | 62.52 | 16.6 | 3.5 | .581 | 9.1 | 1.51 | 28.6 | 3.9 | 1.115 | 9.2 | 2.63 | 8.6 | 4.6 | .395 | 9.5 | .81 | |
| H. K. Fairbairn, Thedford. | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Lady Thorndale, Vol. XVI. | 28.8 | 1.065 | 2.74 | 21.30 | 10.96 | | 32.26 | 9.6 | 3.9 | .374 | 9.6 | .92 | 14.5 | 3.6 | .522 | 9.5 | 1.37 | 4.7 | 3.6 | .169 | 9.6 | .45 | |
| H. J. Davis, Woodstock. | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Ayrshire cow, 36 months and over—</i> | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Annette 2493. | 79.1 | 3.677 | 7.70 | 73.54 | 30.80 | 9.1 | 113.44 | 26.5 | 4.6 | 1.219 | 9.6 | 2.54 | 39.5 | 4.7 | 1.856 | 9.8 | 3.87 | 13.1 | 4.6 | .602 | 9.9 | 1.29 | |
| W. M. Smith, Scotland. | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Nelly Grey 2957. | 102.1 | 3.800 | 8.66 | 76.00 | 34.64 | .3 | 110.94 | 33.8 | 3.85 | 1.301 | 8.4 | 2.83 | 51.6 | 3.6 | 1.857 | 8.5 | 4.38 | 16.7 | 3.85 | .642 | 8.7 | 1.45 | |
| N. Dymont, Clappison. | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Annie Laurie of Brookside 3339. | 101.8 | 3.488 | 8.89 | 69.36 | 35.56 | | 104.92 | 34.1 | 3.25 | 1.108 | 8.7 | 2.96 | 50.4 | 3.45 | 1.738 | 8.7 | 4.38 | 17.3 | 3.6 | .622 | 9.0 | 1.55 | |
| H. & J. McKee, Norwich. | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Queen 2227. | 67.8 | 2.758 | 6.08 | 55.16 | 24.32 | 9.8 | 89.28 | 23.1 | 4.2 | .970 | 9.0 | 2.07 | 33.6 | 4.0 | 1.344 | 9.0 | 3.02 | 11.1 | 4.0 | .444 | 9.0 | .99 | |
| N. Dymont, Clappison. | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Briery Banks Susie 2847. | 81.1 | 2.868 | 6.81 | 57.36 | 27.24 | 3.5 | 88.10 | 26.2 | 3.2 | .838 | 8.3 | 2.17 | 41.1 | 3.7 | 1.520 | 8.5 | 3.49 | 13.8 | 3.7 | .510 | 8.4 | 1.15 | |
| N. Dymont, Clappison. | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Ayrshire heifer, under 36 months—</i> | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Ladysmith 11071. | 81.1 | 3.605 | 7.50 | 72.10 | 30.00 | 3.8 | 105.90 | 25.3 | 4.55 | 1.151 | 9.4 | 2.37 | 42.4 | 4.4 | 1.865 | 9.2 | 3.90 | 13.4 | 4.4 | .589 | 9.2 | 1.23 | |
| W. M. Smith, Scotland. | | | | | | | | | | | | | | | | | | | | | | | |
| 2. White Rose 13194. | 78.7 | 3.122 | 7.26 | 62.44 | 29.04 | 1.0 | 92.48 | 27.1 | 4.1 | 1.111 | 9.3 | 2.52 | 38.5 | 3.9 | 1.501 | 9.2 | 3.54 | 13.1 | 3.9 | .550 | 9.2 | 1.20 | |
| H. & J. McKee, Norwich. | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Ruby 2nd of Hickory Hill 10446. | 59.7 | 2.396 | 5.46 | 47.92 | 21.84 | 5.3 | 75.06 | 19.6 | 4.1 | .803 | 9.3 | 1.82 | 30.0 | 4.0 | 1.200 | 9.1 | 2.73 | 10.1 | 3.9 | .393 | 9.1 | .91 | |
| N. Dymont, Clappison. | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Lady White 11072. | 56.7 | 2.287 | 5.23 | 45.74 | 20.92 | 6.6 | 73.26 | 19.2 | 4.1 | .787 | 9.0 | 1.72 | 28.4 | 4.0 | 1.136 | 9.4 | 2.66 | 9.1 | 4.0 | .364 | 9.4 | .85 | |
| W. M. Smith, Scotland. | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Esoterie 10321. | 44.8 | 1.784 | 4.25 | 35.68 | 17.00 | 8.4 | 61.08 | 15.0 | 4.0 | .600 | 9.5 | 1.42 | 22.0 | 4.0 | .88 | 9.5 | 2.09 | 7.8 | 3.9 | .304 | 9.5 | .74 | |
| W. M. Smith, Scotland. | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Holstein cow, 36 months and over—</i> | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Winnie Win 2161. | 119.4 | 4.078 | 10.91 | 81.56 | 43.64 | | 125.20 | 40.6 | 3.4 | 1.380 | 9.1 | 3.69 | 59.5 | 3.4 | 2.023 | 9.2 | 5.47 | 19.3 | 3.5 | .675 | 9.1 | 1.75 | |
| Geo. Rice, Currie's Crossing. | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Queen DeKol 2nd 1819. | 87.2 | 2.674 | 7.41 | 53.48 | 29.64 | 9.9 | 93.02 | 29.6 | 3.0 | .888 | 8.5 | 2.51 | 43.0 | 3.0 | 1.290 | 8.5 | 3.65 | 14.6 | 3.4 | .496 | 8.6 | 1.25 | |
| G. W. Clemens, St. George. | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Cornelia Artis 565. | 74.6 | 2.222 | 6.19 | 44.44 | 24.76 | 4.7 | 73.90 | 26.5 | 2.9 | .768 | 8.2 | 2.17 | 36.8 | 3.0 | 1.104 | 8.4 | 3.09 | 11.3 | 3.1 | .350 | 8.3 | .93 | |
| G. W. Clemens, St. George. | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Holstein heifer, under 36 months—</i> | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Pauline Pietertje Clothilde. | 92.8 | 3.477 | 8.69 | 69.54 | 34.76 | | 104.30 | 30.6 | 4.1 | 1.254 | 9.5 | 2.90 | 46.6 | 3.6 | 1.677 | 9.3 | 4.33 | 15.6 | 3.5 | .516 | 9.4 | 1.46 | |
| Geo. Rice, Currie's Crossing. | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Mercena 3rd 2711. | 94.4 | 3.386 | 8.19 | 67.72 | 32.76 | 2.5 | 102.98 | 32.8 | 3.2 | 1.049 | 8.5 | 2.78 | 47.3 | 3.75 | 1.773 | 8.8 | 4.16 | 14.3 | 3.95 | .564 | 8.8 | 1.25 | |
| Jas. Rettie, Norwich. | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Cornelia Schuiling 2713. | 74.5 | 3.494 | 6.87 | 69.88 | 27.48 | | 97.36 | 25.3 | 4.75 | 1.201 | 9.0 | 2.27 | 36.1 | 4.65 | 1.678 | 9.4 | 3.39 | 13.1 | 4.7 | .615 | 9.3 | 1.21 | |
| Jas. Rettie, Norwich. | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Ianthe Jewel Med 2708. | 76.8 | 2.889 | 6.74 | 57.78 | 26.96 | 6.4 | 91.14 | | | | | | | | | | | | | | | | |

Producing Winter Eggs.

BY JOHN B. PETTIT.

The hens that are most profitable are those that lay during those seasons of the year when eggs are scarcest and, as a natural consequence, highest in price. Any person keeping fowls is pleased when the egg-basket is well filled during the winter months, for then it is that the product of a well-managed flock goes a considerable way toward meeting the expenses of the house or keeping a fat pocketbook. In order, then, that our flocks may be most profitable, we must provide conditions which will be conducive to egg production.

It has been ascertained that laying hens depend less upon the seasons of the year than they do upon the weather. The old idea that hens could lay only during the spring and summer months, and that they had to rest during the winter to prepare for the next summer's work, has been exploded. All that is necessary to get eggs during the severest weather is to have comfortable quarters and conditions corresponding with the summer season when "any old hen" will lay, and good hens will lay the year through, with the exception of the time necessary for moulting.

The first and essential thing for winter eggs is warmth. Hens that are compelled to wade around through snow or slush to dig out a scant supply of food from barnyard refuse will not lay. And if they are fed all they can cram into themselves and have to roost in some old, open shed, or cold, drafty henhouse, the results will be none the more pleasing. The house should be so constructed that there be an apartment for roosting that is warmer than the remainder of the building. This should be so close and warm that water would not freeze in it when with the birds, even on the coldest of nights. The remainder of the building need not be so warm, for the fowls will keep themselves warm during the day with the exercise they must have in order to promote health and produce eggs. This exercise is best brought about by compelling them to dig all their grain feed out of deep straw or litter of some sort. If the day apartment is warm enough that the combs of the large-combed breeds—such as Leghorns and Minorcas—do not get a little frosted at the points and begin to sting, it is quite comfortable enough. Do not promote too great heat during the day by using large areas of glass. Remember that as soon as the sun leaves this glass it begins to attract the cold, and in a very short time the fowls that were enjoying the sun's rays through the glass are shivering with cold. Keep your fowls warm by exercise during the day and by good, close quarters during the night.

The next problem is that of feed. What, how, when and where shall we feed? To thoroughly answer that question one would have to write a short volume, so in this short article one cannot do it justice. However, one thing is certain, in order to get best results we must feed a variety. Take into consideration what a mixture an active hen will gather during a day in summer. Then in your efforts to get winter eggs, follow nature and biddy will be pleased and repay you for your trouble. What hens mostly need is nitrogenous matter, and this should be kept in mind in selecting our grains and other food. Do not fail to give lots of bulky food, such as mangels, sugar beets, cabbage, and boiled potatoes and turnips. Mix the two latter in the soft feed, and the former give raw. These go to promote health as well as variety, and take the place of too much grain, which produces fat, and a fat hen will not lay. Then a little meat or green bone (ground) should be fed at least twice a week. The grains should be fed in straw or some other litter, and if corn is used it should be cracked quite fine. A hen will dig harder for a little piece of cracked corn than for any other grain. Soft feed should be fed in clean troughs, and in such a way that the hens cannot get into it with their feet. Feed regularly and not too often. Send the fowls to bed with full crops, but make them work until they are tired in getting them filled. Give plenty of clean, fresh water. This is essential, as to produce an abundance of eggs, hens must have lots of water.

Now, I have found, and I believe that thousands of others have also, that it is the easiest thing in the world to get hens that are warmly housed too fat. In our desire to please the hen we overdo the thing, and before we know it we have a flock of sluggish, lazy, fat fowls that will not and cannot lay. The great secret is to keep them busy all the time and yet have it so that when their day's work is done they will be full and contented, and as near as possible the condition in which they would be after roaming the fields during a summer day. Fat fowls have been the reason of disappointment to many who have put large sums of money into fine, warm buildings, with the intention and expectation of soon making a fortune.

Finally, if we wish our hens to lay in winter as they do in summer, we must provide them summer conditions.

Weights of Poultry.

The following were the dressed weights of some of the leading exhibits at the Smithfield (London, England) Table Poultry Show last month:

| 1st prize | | The couple. | |
|-----------|-------------------------------------|-------------|------|
| | | Lbs. | Ozs. |
| " | Dorking cockerels | 20 | 8 |
| " | Dorking pullets | 15 | 8 |
| " | Indian Game pullets | 15 | 10 |
| " | Langshan pullets | 13 | 15 |
| " | Black Orpington pullets | 17 | 14 |
| " | Buff Orpington cockerels | 17 | 11 |
| " | Plymouth Rock cockerels | 18 | 11 |
| " | White Orpington pullets | 18 | 11 |
| " | O. E. Game and Dorking pullets | 11 | 1 |
| " | Dorking and I. Game cockerels | 18 | 6 |
| " | I. Game and Dorking pullets | 14 | 10 |
| " | Dorking and Bf. Orpington cockerels | 17 | 9 |
| " | Blk. Orpington and Dorking pullets | 16 | 3 |
| " | Farmyard cockerels | 17 | 10 |
| " | Farmyard pullets | 22 | 8 |
| " | Aylesbury drakes | 23 | 13 |
| " | Pekin ducks | 15 | 13 |
| " | Pekin and Aylesbury ducks | 20 | 2 |
| " | Toulouse ganders | 32 | 8 |
| " | Cross-bred geese | 35 | 11 |
| " | Turkey cocks | 59 | 6 |
| " | Turkey hens | 49 | 10 |

The Toronto Poultry Show held last week surpassed all previous exhibitions, especially in the number of outside entries, but the bulk of the cups and trophies were won by local exhibitors.

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.

OCCULT SPAVIN.

I have a horse, twelve years old, lame on one hind leg. He took lame last June. At times he is all right. Then, again, he will go lame for half a day; sometimes a few minutes only. Then, again, he will be all right for a week. There is no enlargement at all. I pared his hoof down well, but could find nothing wrong. It appears to hurt him to step over in the stall. Can you tell me what is wrong, and what to do for him? He is doing well other ways.

F. E. M.

Melita.

Ans.—Your horse is afflicted with what is termed by the professional, occult spavin. To make the diagnosis more certain, what is termed the spavin test is given. It is as follows: One man takes the horse by the head, and on a word from the examiner trots the horse up. The examiner lifts the leg supposed to be affected and flexes it tight up to the body and holds the leg in that position for a minute or so; that done, he lets the leg down and gives the word to the groom. If the hock joint is affected, the horse will limp. The most effectual treatment is the hot iron; in many cases, a good blistering is, however, sufficient. Would advise consultation with a competent veterinarian, however, before resorting to heroic measures. The formula for a blister and method of application can be readily found in the veterinary columns of almost any of the issues of the "Advocate." We would advise you to get a copy of "Veterinary Elements" (price \$1.50) from this office and read up the subject.

LAMENESS—QUITTOR.

I have a mare, seven years old. About two years ago last summer, her foot broke out just above the hoof at heel, which caused her to be lame. After some time she would get better, and then it would break out again. After breaking, it would grow down near hoof. What is the cause, and best treatment?

L. L.

Boissevain.

Ans.—Your mare is suffering from what is termed quitter, which will now need the attention of an expert veterinarian and the thorough use of the knife. Any other form of treatment is likely to be expensive and unsatisfactory. The cause of the trouble is usually a nail wound, in which matter (pus) formed and did not escape by the wound, but made its way out by the coronet. Until the wound is thoroughly opened up and cured no cure need be looked for.

BOTS AND THEIR TREATMENT.

A new remedy for the above troublesome parasite of horses, said to be successful, is Bisulphide of carbon. While every horse is said to have bots, in few cases, comparatively, is trouble caused by them. The drug mentioned is given in three-dram doses at two-hour intervals, the drug being given three times. The bisulphide weakens the bot, and they are then in a fit condition to be removed, which is done with a dose of two drams of tartar emetic dissolved in water, and given one day later than the bisulphide. Better results will be had from the use of a purgative dose of aloes than from the tartar emetic. The purgative mentioned should not be used for mares in foal.

LIVER TROUBLE IN POULTRY.

My chickens are dying off one at a time. They take sick, seem to get weak, and die in about two days. I examined one after it died, and the liver and heart seemed to have had inflammation. The liver was soft and apparently rotten. The chickens have a diarrhea, and the gizzard is full of green froth; the same in mouth.

A. L.

Wetaskiwin.

Ans.—Your poultry are evidently affected with a disease of the digestive system; most probably the liver is the organ affected. This organ often gets out of condition in poultry, due to lack of exercise and overfeeding, from tainted, mouldy or poisonous food, or from some obstruction to the circulation of the blood. This disease is oftenest seen in fat birds; occasionally infectious diseases will leave, as a result, this disease. It rarely pays to doctor sick fowl; prevention is far better than attempted cure. You might give twenty grains of Epsom salts as a purgative, and then follow it with a daily dose of Epsom salts 10 grains and baking soda 2 grains. In addition to the causes mentioned above, impure drinking water, exposure to drafts, cold rains, etc., during moulting, or dirty henhouses, will result in digestive troubles almost certainly.

DEPRAVED APPETITE—PICA.

I have four pure-bred Shorthorn calves, ages 6 to 8 months old. I feed them good hay, whole oats twice daily with bran, and salt occasionally. They have taken to eating the boards in their loose stalls. I have used coal oil on woodwork, but with no success. Can you inform me, through your valuable "Advocate," what is the matter with them, and what can I do to stop them?

Calgary, Alta.

SUBSCRIBER.

Ans.—See Jan. 6th issue answers in veterinary column, under "Deprieved Appetite," "Pica or Licking Disease."

WASHY COLT.

Will you kindly give me a cure for diarrhea in colt. When suckling, if allowed to follow his mother when driven on the road, he would take diarrhea. Now he is coming two years old. I drive him on the lines, and as soon as he gets warmed up in the least, if I only drive him a mile, he takes diarrhea very badly. He appears to be in good health. His hair is a little dry, but he eats well and is in good flesh. Do not feed roots.

A. P.

Ans.—Your colt is what we call washy—that is, he is congenitally predisposed to diarrhea when exercised. A permanent cure cannot be expected. It is possible the predisposition may disappear as he grows older. You will need to be very careful in feeding him. Do not give anything of a laxative nature. Always water before feeding, and do not allow any water after a meal if you intend giving any exercise. The following powders will prevent the trouble as long as their administration is continued, but it would not be good practice to give them constantly. Still it would be well to try them: Pulverized gum opium, 1½ ozs.; pulverized catechu, 3 ozs.; prepared chalk, 3 ozs.; mix, and make into 12 powders. Give one night and morning in boiled oats.

UNTHRIFTY HORSE.

I have a horse coming four years old, apparently in good health. He eats very well. I feed him clover hay and one half gallon of oats three times daily, but he is very gaunt and thin all the time; has been so for about three weeks. I have had his teeth examined by a veterinarian, and pronounced all right. Is there anything I can give him to fatten him and cause him to carry a bigger barrel than he now has. I am giving him of the following powders: Sulphur of iron, 2 ozs.; gentian, 2 ozs.; ginger, 2 ozs.; cream of tartar, 2 ozs.; saltpetre, 1 oz.

OLD SUBSCRIBER.

Ans.—The mixture you are giving is a very good tonic and should improve the appetite and digestion. If you would give him a boiled feed night and morning for a few weeks it will probably have the effect of giving him a little more middle. Boil about 1 part, by measure, of barley and three parts oats, all the better if a little flaxseed be added. Of this, feed, if he is idle, about five quarts. If working, feed more. Feed a reasonable quantity of good hay.

COW'S MILK FOR COLTS AFTER WEANING.

Would you please advise me if you recommend cows milk for colts, weaned, up to one year of age, of the light breeds? If so, do you prefer skimmed milk over the milk fresh from the cow? Some people claim skim milk gives more bone to the growing colt. Is this so?

J. N.

Ans.—I know of nothing so good for colts after weaning as cow's milk. The best results are obtained by giving the milk fresh and warm from the cows. While skimmed milk is good, it is not nearly as good as the whole milk. Skimmed milk contains no bone-forming substances not found in whole milk, and it lacks substances that are valuable as food for growing animals.

Miscellaneous.

FERTILIZING LIGHT LAND.

Will you please give me the best method of fertilizing light land in districts where few cattle are kept, as this is a problem I have to solve in the immediate future?
W. G. H.
Shoal Lake.

Ans.—One of the best ways of fertilizing light land where barnyard manure is scarce is by plowing under some crop. The best plants for this purpose are what are known as legumes—peas, vetches and clovers, etc. We have had good results in growing clover here, where the seed is sown without a nurse crop of grain. In this case the mower should be run over the land when the weeds are a foot or so high to prevent them from going to seed. The clover is then left until early fall, when it is plowed under. From experiments carried on at the Central Experimental Farm, it is found that a crop of clover plowed under is equal to ten tons of barnyard manure per acre. Where it is found impossible to grow clover, I would recommend the growing of peas. These should be plowed under when they are in full bloom, using a chain on the plow to cover the plants. We have had excellent results on this farm from the use of leguminous plants as green manure.
S. A. BEDFORD, Supt.

Brandon Exp. Farm.

COLOR OF PIGS—A RIDGELING BULL.

1. Should the pigs from a pure-bred Yorkshire white boar be all white, although the sows bred to him are part Berkshire? 2. Also, have a bull, eleven months old, apparently a ridgeling. Is there any remedy for the same? Will he be any use for service?
W. S. L.

Ans.—1. The pigs sired by Yorkshire white boars are almost invariably white, even from Berkshire sows. There are rare exceptions, some of the pigs in the litter coming spotted, and occasionally, but very rarely, one or more marked like the Berkshire. 2. The bull, having his testicles held up in his body, may serve and be fruitful in a few cases, but such are rarely sure stock-getters or nearly so, and it would be unwise to depend upon him as a breeder or to use him to any considerable extent, as a large proportion of his offspring, if he got any, would be liable to the same defect. Better feed him for beef.

At the Ottawa Experimental Farm.

A visit to the Central Experimental Farm at this season of the year finds the officials and employees exceedingly busy; in fact, they are generally busy the year round, but just at present the work is mostly being done in the buildings. The Director, Dr. Saunders, is completing his annual report, which comprises over 1,200 pages of manuscript. Prof. Grisdale and Mr. Frank C. Hare, of the Department of Agriculture, who has charge of the Government poultry-fattening stations throughout the Dominion, have gone to Nova Scotia to address the Farmers' Institute meetings. Mr. Hare will remain in the Maritime Provinces until the end of the month. Mr. A. G. Gilbert, of the Poultry Department, is also in the Maritime Provinces, addressing meetings of various kinds.

BANNER OATS POPULAR.

Three carloads of seed grain are arriving from the Western Experimental Farms, two from Indian Head and one from Brandon. There is an increasing demand for Banner oats, and as a result a considerable proportion of the shipment is made up of that kind. Dr. Saunders says that the Banner oat seed that is being sent down from the Western Farms was selected from grain that yielded as much as 120 bushels to the acre during the past summer. He further states that the yield of Banner oats on the Central Farm for the past seven years has been in the neighborhood of 60 bushels to the acre. The yield for the past season was a trifle under 50 bushels to the acre, owing to the unfavorable weather and the intense heat when the oats were forming. He is of the opinion they are the best oats for the average farmer. Owing to the rush of work, the Farm officials have found it impossible to start the distribution of seed grain as early as they did last year, when they commenced about the 3rd of January. The work is under the supervision of Mr. Fixter, the Farm foreman. The quantity is limited, and attention will be paid to applications as they arrive.

FEEDING FOR MILK.

On Feb. 1st the Farm officials intend to start an experiment with the milk cows, with a view of finding out which ration produces the most, and milk of the best quality. They have twenty-seven milk cows, but only eight will be experimented with, as only that number will be fresh milkers then. Four of the cows will be fed mash, dry hay, ensilage and roots while the other lot will be fed dry provender, ensilage, roots and hay.

FATTENING STEERS LOOSE OR TIED.

A feeding experiment that is being watched by farmers in this part of the Province with considerable interest is being carried on at the Experimental Farm this winter. Prof. Grisdale, last fall, on his return from England, purchased twenty-seven three-year-old steers throughout the Ottawa Valley and district for the purpose of carrying on an experiment to find out whether it was more profitable to feed animals for beef chained up or to let them run loose in a box stall, and if loose, the amount of room required. They were put in the barn on the 23rd of November, and divided into three lots, with nine steers of the same age to the lot. Nine were chained up in stalls, another nine were turned loose in a box stall, and the third nine were turned loose in another box stall with about two-thirds the room allotted the second lot. When they were placed in the stable they weighed on an average 1,290 pounds each. Up to the present writing they have been fed two-thirds ensilage and one-third roots pulped, amounting to fifty pounds per

day per steer. When weighed on the 8th inst., the average weight of the three lots was 1,400 pounds, showing a gain of 120 pounds in about six weeks. Each lot is making about the same gain, and as each lot is being fed on the same ration, it will be interesting to know just the final result of the experiment about May 1st. The experience of most practical feeders who have tried loose feeding is decidedly favorable to that plan. The ration will be changed on the 13th inst., when gluten meal will be added and the amount will be gradually increased as the steers require it.

The above experiment is being carried on with the same number of two-year-old and yearling steers. The two-year-old steers were put in the stable on the same day as the three-year-olds, and weighed 1,072 pounds. Their average weight last week was 1,147 pounds. The yearlings weighed 953 pounds when put in the stalls, and when weighed last Wednesday they averaged 1,075 pounds, showing a gain of 122 pounds in six weeks. The three-year-old steers that are in this experiment are all dehorned except the nine that are chained in the stable.

***Montreal Markets.**

Montreal, Jan. 18.—About 700 head of butchers' cattle, 6 calves and 150 sheep and lambs offered today, and trade was good, with somewhat lower prices for all kinds of cattle, excepting the very best heaves. Prime heaves were rather scarce, and sold at from 4½c. to 5c. per lb.; pretty good animals sold at from 3½c. to nearly 4½c., and the common stock at from 2½c. to 3½c. per lb. The two best veal calves on the market were sold for \$20, over 5c. per lb.; the others brought from 3c. to 4c. per lb.

Sheep sold at from 3c. per lb., and the lambs at from 4c. to 4½c. per lb.

Fat hogs sold at from 6½c. to 6¾c. per lb., weighed off the cars.

Chicago Markets.

Chicago, Jan. 18.—Cattle—Receipts, 300, steady; good to prime, nominal, \$6.50 to \$7.40; poor to medium, \$4 to \$6; stockers and feeders, \$2.25 to \$4.75.

Hogs.—Receipts, 21,000, active, 10 cents higher than early yesterday; mixed and butchers' \$5.90 to \$6.55; good to choice heavy, \$6.35 to \$6.60; rough, heavy, \$6 to \$6.25; light, \$5.60 to \$6.10; bulk of sales, \$5.95 to \$6.35.

Sheep.—Receipts, 1,000; sheep, heavy, closed weak; lambs, plain, closed weak; good to choice wethers, \$4.30 to \$5; western-fed sheep, \$4.25 to \$5.10; native lambs, \$3.50 to \$6; western lambs, \$5 to \$6.

British Cattle Markets.

Liverpool, Jan. 17.—(Special.)—Cattle are quoted steady at 12½c. to 13½c. per lb. (dressed weight); refrigerator beef is firm at 10c. to 10½c. per lb.

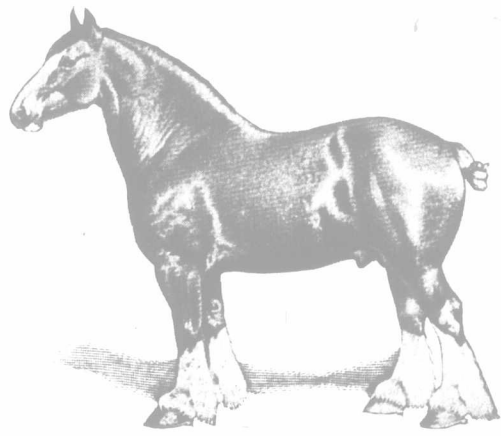
1902 Fair Dates.

Portage la Prairie.....July 17 and 18
Winnipeg Industrial.....July 21 to 26
Brandon, Western Agriculture and Arts Association.....July 29 to Aug. 1

Last Call! J.A.S. Macmillan's Sale

HIGH-CLASS REGISTERED CLYDESDALE MARES AND COLTS

- QUEEN NATALIE, in foal.
- NATALIE, in foal.
- JENNY JUNE, in foal.
- MOSETTE, in foal.
- PRINCESS DARNLEY.
- PRINCESS HAMLIN, in foal.
- PRINCESS ZANA, in foal.
- ELLA, in foal.
- CARRIE, in foal.
- MARGUERITE.
- PRINCESS MACKAY.
- BARON AVENEL.



- GRACIE.
- CANNA.
- CARMEN SYLVA, in foal.
- GILLIAN MCGREGOR, in foal.
- CATRINE.
- GRACIA, in foal.
- GRETNA.
- LADY D.
- LADY LIPTON.
- LADY JAFFREY.
- PETER THE GREAT.

SHORTHORNS AND BERKSHIRES

TERMS.—Approved joint notes bearing 8 per cent. interest, payable October 1st, 1902. Six per cent. discount for cash. Breeding list shown at time of sale.

Brandon, Friday, January 31st, 1902



"A commonplace life," we say and we sigh;
But why should we sigh as we say?
The commonplace sun in the commonplace sky
Makes up the commonplace day.

"The moon and the stars are commonplace things,
The flower that blooms and the bird that sings,
But sad were the world and dark our lot,
If the flower failed and the sun shone not;
And God, who sees each separate soul,
Out of commonplace lives makes His beautiful whole."

Uncle Silas.

He was a glum, unattractive old man; nobody could deny that. He had been a sailor, but not much of a one; for he had never smelled salt water, and most of the time had merely coasted along one of the big lakes. He had never read much of anything, and had nothing to tell out of papers or books; and such observations as he had made in the world, he kept mostly to himself. He knew that he was disagreeable, and a knowledge of that fact made him additionally so.

This being the case, he was naturally shunned, more and more, even by such as were obliged to be near him; and this was the case with the Mowbray family. He was a kind of mortgage on such financial resources as they possessed; for the house in which they lived had been deeded them by the will of a relative, upon condition of their taking care of Uncle Silas during the remainder of his life.

Irksome enough it was to Mrs. Mowbray, who was only a cousin-in-law to the old sailor, and had much rather not have him in the house; but she was a good woman, meant to do her duty, and succeeded fairly well.

One autumn afternoon Uncle Silas was in the front yard with his chair leaned up against the side of the house. His face was a vinegar-cruet, and every angle of his body said, "Keep off." The children did not go anywhere near him; they never did; they had learned better. "He should be petrified into a statue, and labelled 'Loneliness Couchant,'" thought one gay girl, as she passed. "Why are we encumbered with him?" thought Mrs. Mowbray, as she glanced out of the window. "But he has a right here, and we must endure him."

Young man, if you expect to become aged (and you well may, for life is sometimes terribly tenacious), look well after your mind and heart; keep them both as active as possible; otherwise you will be a very lonely individual. Without books, magazines, papers, or congenial companionship, Uncle Silas was passing a dreary old age.

There was a rush and a scream in the little front yard; Gladys, the eldest daughter, came frantically rushing to the house. "Joey has fallen into The Dry Well!" she cried. "He pried up a board to see what was there, and slipped in. Oh, he is dead! My poor little brother! Save him! save him, somebody!" she shouted, with the inconsistency of grief.

Several men were there, in a very few minutes; but none of them dared do anything excepting to let down a candle to see if there were any poisonous gases in the well. It went out before it had gone down very far. "He's probably dead, by this time," they murmured, mournfully, while the mother stood by, wringing her hands and trying not to faint.

There was a falling back among the men. Uncle Silas crowded to the edge of the old well, with a long rope that he had found somewhere. In apparently an instant or two's time, he had tied one end of it to a tree near by, and the other to his body.

"Avast there!" he shouted, "and bear a hand! Let me down quick, and pull me up quicker when I give three hauls at the rope!"

"You will be strangled," exclaimed the foreman of the fire company, stepping between him and the well. "Are you crazy, man? The well is full of damp!"

"Avast, I say!" shouted Uncle Silas, giving the foreman a push that sent him against the tree. "I will get the boy, dead or alive—probably alive. Mind the anchorage"—pointing to the tree—"and don't let go. Cast the lead!"

He was gone ten mortal hours, the mother thought, though it was really but a few seconds, before there were three tugs at the line, and the little boy came up, alive though unconscious, with the rope tied carefully around him; but no Uncle Silas. He came a few hours later.

The day the old sailor was buried in the family lot, Mrs. Mowbray kissed the stern, weary old face. "We did not know what a treasure we had in him," she sobbed.—(Will Carleton's "Everywhere.")



"TOTTIE'S PLAYFELLOWS."

Hints for Wash Day.

Try washing red table linen in water in which a little borax has been dissolved.

Add a few drops of ammonia to the blue water to whiten the clothes.

Clothes turned right side out, carefully folded and sprinkled, are half ironed.

Sprinkle salt on a wine stain and pour hot water through until it is gone.

Wet fruit stains with alcohol or pour boiling water through them.

Kerosene in the boiling water whitens clothes safely, especially such as are yellow from lying. Put in a tablespoonful to each gallon of suds.

For very yellow or grimy things, make an emulsion of kerosene, clear lime water and turpentine in equal parts. Shake them together until creamy, then add a cupful to a boilerful of clothes and boil for half an hour.

The same emulsion is good for very dirty things, such as jumpers, overalls, working shirts, children's trousers. Use it in conjunction with strong suds, as hot as the hand can bear, and rub a little directly upon dirty grease spots. Let the clothes stand five minutes before washing out, and be sure to have the second suds and the rinsing water as hot as the first.

If coffee is spilt on linen the stains can be removed by soaking the part in clear, cold water, to which a little borax has been added, for twelve hours.

If the stain is from tea or fruit, do not put the articles in cold water, or the stain will become set. Simply pour boiling water over it until it disappears, which it will do if quite fresh.

"Tottie's Playfellows."

In the Christmas number of the "Advocate" we gave our readers as one of its pictures "A Christmas Box," it being a hamperful of little pussy cats which had just arrived at their destination. This time we also offer them another four-legged little quartette of arrivals, the baby puppies of Tottie's own Queen Mab.

Tottie has stolen away from her nurse to have a frolic with her new treasures. Her eyes beam with mischief as she first offers and then withdraws an imaginary morsel wherewith to tempt them to the extreme end of the ledge upon which they have inquisitively gathered to look at her. She knows that if she can only get them far enough away from the restraining paw of their mother, they will fall almost plump into her arms, and then won't they have a high old time together? Toby, being the most adventurous of her four-legged majesty's babies, has already landed safely and been caught by his little mistress, from out of the shelter of whose arms he looks complacently at the excited group above him. The artist has caught and given expression to the mixed sensations with which the mother doggie watches mischievous Tottie. There is maternal pride in her restless offspring, there is evident doubt of Tottie's intentions, and also just a suspicion that she may join in the coming game of romps herself. H. A. B.

Georgia is nothing if not original when it comes to rhymed obituaries. Here is the latest:

"He has climbed the golden hills—
Heaven was always his intention;
Fought through the war, died with the chills
And never got a pension."

An Afternoon at a Women's Institute.

BY LAURA ROSE, ONTARIO AGRICULTURAL COLLEGE.

In this fast-moving age nothing comes as a great surprise; still, I must say that on my last Institute trip I was surprised. I have watched from the first the development of Women's Institutes, but I had not thought to see them make such rapid progress, and that was the pleasant surprise I received. Why, it was not unusual for the women to outnumber the men at the meetings, and when, as was often the case, a separate meeting was held, the hall would be full, and it did me good to see the businesslike way in which most of the meetings were conducted.

Many ladies, and, for that matter, men, too, will say, "But what good are these meetings, anyway?" I wish all such inquirers could attend some of the sessions of such Institutes as those of East York, Halton, Brant, and others equally as flourishing. In the first place, the Institute brings women with like interest together. All are to a more or less extent interested in homemaking and housekeeping, and something pertaining to these usually forms the basis of the papers read, the address given, or the informal talk or discussion.

At several of our meetings we had what we called "A chat with housekeepers on house-keeping." We started with Monday, taking it as wash day. The ladies told their method of washing flannels, colored and white clothes; what washing preparations they used; discussed washing machines, etc. Then followed a little talk on starching, drying and folding the clothes. Next came ironing day, and many useful hints were thrown out to make easier that hot work—the use of an old saucepan and tin cover to heat the irons in, rubbing the irons over with bathbrick before heating, the use of wax to keep the irons smooth when ironing, what clothes should receive extra care and those which might be slighted—really there was so much to say on the subject we just had to leave it to hasten on to mending day. The truth of the old adage, "A stitch in time saves nine," was emphasized—darning weak places to prevent holes—a rent is much better darned with ravellings carefully taken from a strip of like material than when mended with silk or cotton thread, even though it be an exact match.

Thursday we treated as calling day. It was shown there was much need for sociability—a pleasant interchange of visits amongst the homes—not the formal calls or "at homes" now fashionable in the city, but more after the good old days when friends came to spend the afternoon and take tea. There was a warmth and genuineness about that old-time hospitality which we would do well to imitate. That we cultivate the social side of our character is just as essential as seeing that the family is well fed or that they attend church regularly. Just in this particular the Women's Institutes are doing a good work among the ladies in the country. It brings them together, they get acquainted, and other interests enter into their often too monotonous lives.

Friday was discussed as sweeping and dusting day. The use of the broom and carpet-sweeper was talked over, the latter being considered more hygienic and easier, although it must be used in connection with the broom. The feather duster was denounced, as it only scatters instead of gathering up the dust.

Saturday, perhaps, was considered the most important day of all, as the preparing of food for our bodies was assigned as that day's work. General methods were brought out, such as the necessity of using the measuring cup and scales. Instead of using so much time and material in the preparation of fancy cakes and rich pastries, it was deemed better to have simpler and more nutritious dishes, such as scalloped potatoes, tomatoes or salmon, milk toast, omelets, etc.; a hot dish followed by fruit is better than fruit followed by cake.

A little talk on making the Sabbath a day of peaceful rest and quiet enjoyment, both for the young as well as the old, brought out some commendable thoughts. One lady told how certain books were reserved for Sunday use only. Others said they provided a special treat in the way of homemade taffy, fruit or nuts; while another said the customary Sunday walk with "Pa" was the treat her little folks looked forward to during the week.

Who can estimate the good resulting from earnest women discussing together problems which affect so vitally the home and all its varied interests.

Drill Sergeant, who has been worrying raw recruit for a considerable length of time in drill lessons, but can never get him to understand the order—"Right about face." Raw Recruit (to himself, with a sigh of relief): "Thank goodness, I am right about something."

The boarder was sitting at breakfast, vainly endeavoring to cut a piece of steak. He called the landlady, and said: "The next time you give me steak you might give me two pieces." "Why?" said she. "Because I have a box upstairs wanting a couple of hinges."

Ingle Nook Chats.

My dear Guests,—

The holiday festivities are over, and the souvenirs given by loving friends, and memory, are all that now is left of that memorable time. Memory is by some claimed to be a precious boon, and so perhaps it may sometimes be considered; when life still glows in roseate hues, no doubt the memory of past happiness, nay, even of grief, but enhances present joy; but when a heart is bowed beneath a sorrow too deep for words, does not the brightness gone before but more forcibly draw our attention to the gloom of the present? Ah, well, there is always the future to which to look forward, and for those who may chance to dread even that there is consolation in remembering that—

"The clouds have a silver lining, don't forget!
And though he's hidden, still the sun is shining,
Courage instead of tears and vain repining,
Just bide a wee and dinna fret."

A strange mood for the Hostess, you think? Well, are not women proverbially creatures of caprice; one cannot always account for moods.

I was pleased to be favored with photographs of three of my "Advocate" pen-friends, "Moache," "Puss," and "Essex," and thank them very much for remembering; indeed, in the matter of gifts I was very fortunate, although I did not hang up my stocking.

An exceptionally bright letter from "The Baby," a new guest, gave me much pleasure. Here's the hand shake, and just deposit your baggage in the most convenient corner and appropriate the cosiest seat you can find. "Mother's girl and father's boy all in one,"—what an important little personage "The Baby" is. Fortunate parents to have such a sunbeam about their home; may you never shine less brightly, girlie dear. Yes, it is pleasant to receive many letters, but one sometimes grows lazy about answering them. I always like my guests to send a letter along with their work; it makes us more at home with one another, you know. Plenty of time yet for that "mantle" to descend; be careful how you use it should it alight upon you. Come again and often, "Baby." "Weary Wiggins' Brother."—Thank you for your letter. Anything concerning the old friends of "Wayside" always interests me. "W. W." should find his present work congenial; compliments of the season to him when you write.

Jessie D.—I am glad you find pleasure in the Ingle Nook; please make yourself comfortable, and continue to share your company with us. You are fortunate in your first attempt.

There are several other new arrivals to whom I should like to speak individually, but space will not permit, so I offer them, collectively, my sincere thanks for their kind wishes and also for their co-operation, without which we should certainly fail to succeed.

OUR COMPETITIONS.

A large portion of the work sent in response to Contest XVI. was below the average. However, there were some very creditable poems received. The prizes have been awarded as follows: Class I, Miss Jessie Dunphy, Upper Blackville, N. B.; Class II, Miss Jennie Crosby, Brazil Lake, Yarmouth, N. S.; Class III, Miss Maud Jose, Rossmore, Ont. Other contributors were: Arthur D. Lloyd; R. E. L.; Frank Rae; Netta M. Nixon; Betsy S. Kelly; "Antrim Farm"; Martha Frankforth; L. Galbraith; A. L. McDiarmid; Bessie Bray; Fanny Fulton; Geo. H. Meid; Alex. Bell; Alice Ethel Bingham; Clara Hartel; John Dunlop; Alice Bull; "Thorndale" (a letter and poem came from Thorndale, but was not signed).

Contest XVII., announced last issue, is easy and amusing, and I hope to receive many contributions to it.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

PRIZE POEM—CLASS I.

The New Year.

(By Miss Jessie Dunphy, Upper Blackville, N. B.)

I know not what of gladness,
Of revel or of mirth,
I know not what of sadness,
May greet the New Year's birth.

No need to know! For ever clear
Before me as I roam,
Hope's perfect music still I hear,
And know—beyond is home.

Time's iron hand may banish youth,
May banish peace and rest;
But I have proved each year this truth,
Who hopes is truly blest.

PRIZE POEM—CLASS II.

The New Year.

(By Jennie Crosby, Brazil Lake, N. S.)

The New Year is coming! We hail him with gladness,
We welcome him gaily with laughter and mirth;
Although in our hearts there are touches of sadness,
As the dear old year dies at his successor's birth.

The merry bells ring through the air cold and clear,
'Tis the holiday season and none wish to roam;
In every direction good wishes we hear,
From strangers abroad to the dear ones at home.

As the new leaf is turned, may old age and youth
From the world's grasping struggles for power and
wealth rest;
May they hold high the standard of love, peace and
truth,
And in all their doings be graciously blest.

A few days ago a beggar accosted a Jew, who was standing at the door of his "ole clo'" shop, with the remark: "Could ye oblige me with tuppence for my bed?" "Mine gootness," replied the Jew, "tuppence for a bed. Bring it in."

Something About Tunbridge Wells.

"A Happy New Year to you" is my message to all who on the first days of the second year of our new century take up their old friend, the "Farmer's Advocate." After satisfying themselves with the beautiful illustrations, the timely articles and most interesting correspondence upon its earlier pages, who knows but they may turn to our Home Magazine, and, giving a glance at Mollie's little corner, send her, in thought, a kindly greeting across the turbulent wintry waves of the big Atlantic Ocean which rolls between us? Believe me, my friends, you have the heart of Mollie with you even though her visible self is for the time being in a very beautiful and story-full (not strictly historical, you understand) corner of the English county of Kent. My gaddings have come to an end for awhile, and I am again at quiet anchorage with my dear old relative at Tunbridge Wells.

One of my late letters told of that dreadful fog which lasted four days and which followed so closely upon the triumphal procession of the Royal travellers through London. And now, over a month later, there are still roses to be gathered in sheltered nooks, and belated blossoms smile up at you as you take your morning constitutional between the box-lined flower beds in the garden or amidst the greenery which never wholly forsakes the lanes and hedgerows of the dear Old Land. Neither birds nor flowers become frozen into utter speechlessness here. There are with us always the holly and the ivy and the other greeneries, which manage to hold their own in spite of anything which that imp of a Jack Frost may do. So far he has treated us very kindly. He has touched us but slightly, and probably this being his usual kind consideration for Tunbridge Wells is the reason why invalids choose it for their winter residence, and thus too is accounted for the anomaly that a place so avowedly healthful should yet be so full of pale-faced people languidly reclining in bath-chairs, each drawn at leisurely pace by a human biped who has become so accustomed to his daily round that he looks about as intelligent as a bit of mechanism. Never in my life have I seen so many invalids, never have I seen so many bath-chairs. One meets them by dozens, mostly occupied by rheumatic sufferers, and if one did not get used to the sight one would become reduced to a condition of chronic depression, and end, perhaps, by needing a bath-chair oneself. Not that all are invalids who come to Tunbridge Wells. By no means. There are a good many who apparently lead indifferent butterfly society lives here as elsewhere. Nor are we without our struggling poor. There are times when I put on my thinking-cap and wonder, and wonder, why everybody seems to want to live in cities, to crowd and elbow one another, when there is space and to spare in our big Northwest. It is computed that London's population increases by forty thousand yearly, and the problem of the housing and feeding of this vast multitude is a very serious one for England. Homes on the grand stretches of prairie in the Dominion would solve it for them, and open another channel through which her Colonies can help the dear old motherland to which they are proud to belong and whose battles they are so ready to fight, as ready now as when that weary war at first began, for I hear of another Canadian contingent having started for South Africa. May God guard our gallant boys and bring them safe home again. A kind voice asks me upon what doleful subject am I writing that I heave so portentous a sigh? "I think I am trying to do the impossible," is my reply. "I believe I am trying to carry the affairs of the nation upon my shoulders." "Don't do that, my dear, but instead, just tell them something of what you saw of Tunbridge Wells when we took our last pleasant drives together."

I suppose every one who has read the novels of nearly a century ago is familiar with Tunbridge Wells as a fashionable resort where "the elite" met and gossipped, where the Beau made his finest bow to the Belle, who returned his greeting with the most graceful and most sweeping of courtesies; where scandals were inuendoes, and where reputations were torn into shreds, and where elopements were arranged, when society met at the "pump room," where it "drank the waters" and took its turn at the public baths. The people who frequented the Tunbridge Wells of that day usually arrived in their own big lumbering travelling carriages or coaches, with postilion-ridden horses and a retinue of servants. Only "people of quality," as they liked to be considered, could afford to come to the Wells, and they would endeavor to time their visit to coincide with that of one royal personage or another.

Many of the old landmarks still remain, an old-time flavor lingering around them, but the inflated descriptions of some of the writers of long ago have perhaps led us to entertain misleading expectations as to their size and grandeur, though they cannot deprive one altogether of a certain amount of satisfaction in planting one's 20th-century foot upon the actual spot where our great-great-great-very-great-indeed progeni-

tors stood as they made their elaborate bows and courtesies so long ago. "Did you say, madam, that you would take both those specimens of the Tunbridge ware?" said an impatient voice from behind the counter of a shop under the Pantiles. "Yes! both," I said, though I had meant only to take one before I went off into that reverie in which I had pictured Beau Brummell twirling his cane and doing the "exquisite" to attract a glance from demure little Lady Betty Nonpareil as she was about to follow her grandmother, the Marchioness, into the family coach. One thing about those old novelists strikes me as significant. Whilst keenly alive to the conversational sallies of their heroes and heroines, they would have us think they were nearly all blind to the beauties of nature, for they say so little of the lovely rides and drives around the neighborhood. Here I am reminded that the state of the roads and the "stand and deliver" people who frequented the unprotected avenues to even the larger towns of those days might probably be the real reason for their silence. What gallant, think you, would dare to have offered to take his lady-love for drives, such as ours, to the High Rocks, to the Toad Rock, to the site of the Lower Cricket ground which you so heartily admired, to the old castle, to the spots where now stand the huge Hotel Wellington, or the Spa Hotel, etc., etc.? That was the day of fainting maidens and even swooning waiting-maids, the day when women only required backbones strong enough to support their whalebone hoops, and, higher up, those cushioned monstrosities, with the erection of which none but a Court barber could be entrusted. Ah! my dear, in those days if a woman had brains (and, depend upon it, they were no more born without them than now), she took the greatest pains to conceal the fact, lest the dreaded cognomen of "Blue Stocking" should fall to her lot.

But my time is up, my space is filled to overflowing. If the bath chairs of to-day have superseded the Sedan chairs of long ago, the pillion of the dependent woman-rider has been succeeded by the woman who rides to hounds and her sister who mounts her bicycle and goeth wherever she listeth. When we count our losses and our gains, I fancy that we shall not have much cause to quarrel with the sum total. Adieu. MOLLIE.

"John Alden and Priscilla."

Who that has read anything worth reading, has not enjoyed Longfellow's idyll of the wooing by proxy of the Puritan maiden, Priscilla, by "John Alden, the comely, the youthful," on behalf of the stalwart Miles Standish, the captain he almost worshipped, and for whom he would have laid down his life? His captain asked more than his life of him, he asked the sacrifice of his heart's desire, for John loved Priscilla too, and had dreams of his own concerning her. How loyal was the messenger, how the message was received, and how he sped in his wooing is the theme of the poem of which our picture is one of the illustrations.

John, the student acting as secretary or scribe for Captain Miles Standish, is aroused from a reverie, in which the Puritan maiden has for the last half hour been the central figure, by the fateful words of his master:

"Go to the damsel Priscilla, the loveliest maiden of Plymouth,
Say that a blunt old Captain, a man not of words
but of actions,
Offers his hand and his heart, the hand and the heart
of a soldier.
You, who are bred as a scholar, can say it in elegant
language.
Such as you think best adapted to win the heart of a
maiden."

Was ever such a coil? Was ever such an errand
given to a lover? Poor John Alden!

"His heart standing still in his bosom,
Thus made answer and spake, or rather stammered
than answered:

"Such a message as that, I am sure I should mangle
and mar it;
If you would have it well done,—I am only repeating
your maxim,—
You must do it yourself, you must not leave it to
others!"

Futile expostulation! Hear what the gallant
captain replies:

"Truly the maxim is good, and I do not mean to
gainsay it;
But we must use it discreetly, and not waste powder
for nothing.
I was never a maker of phrases.

I can march up to a fortress and summon the place
to surrender.

But march up to a woman with such a proposal, I
dare not.

I'm not afraid of bullets, nor shot from the mouth of
a cannon.

But of a thundering "No!" point-blank from the
mouth of a woman.

That I confess I'm afraid of, nor am I ashamed to
confess it!"

So through the woods John Alden went on his
errand.

"Must I relinquish it all?" he cried with a wild
lamentation.

"Must I relinquish it all, the joy, the hope, the
illusion?"

But the loyal heart was prepared to do even this.
He says to Priscilla:

"So I have come to you now, with an offer and
proffer of marriage
Made by a good man and true, Miles Standish, the
Captain of Plymouth!"

Mute with amazement and sorrow, with eyes
dilated with wonder, feeling his words like a blow,
the maiden replies:

"If the great Captain of Plymouth is so very eager
to wed me,
Why does he not come himself, and take the trouble
to woo me?
If I am not worth the wooing, I surely am not worth
the winning!"

Poor John makes a great tangle of his argu-
ments, and the quick-witted Priscilla has a good
answer for them all; but at last John rises to
his theme, and gives so exhaustive a catalogue of
the virtues of Miles Standish that—

"As he warmed and glowed, in his simple and
eloquent language,
Quite forgetful of self, and full of the praise of his
rival,
Archly the maiden smiled, and, with eyes overrunning
with laughter,
Said, in a tremulous voice, 'Why don't you speak for
yourself, John?'"

The next scene, that in which John Alden tells
Miles Standish how he has failed in his wooing,
borders on tragedy, but Priscilla, who has in

them a good turn in offering them a picture of
the lovers as they walk through the woods near
Plymouth, the land of the Pilgrims. H. A. B.

Care of the Sick.

Let in sunshine.

Banish all confusion.

Cleanliness is the first rule.

Make mustard plasters thin.

Ask the doctor as to visitors.

Don't ask questions of sick people.

Wear a clean dress and a bright smile.

Flowers are permissible, but never in profu-
sion.

Simple surprises are a pleasure to a conva-
lescent.

Rheumatic patients should lie between woolen
sheets.

Eat a cracker or two before going into the
room of contagion.

A sandwich of minced raw beefsteak often
tempts an invalid.

A mustard plaster mixed with the white of an
egg will not blister.

Watch the ventilation and gauge the tempera-
ture by a thermometer.



"JOHN ALDEN AND PRISCILLA."

large measure the saving grace of humor as well
as a good share of practical common sense, on
asking Alden for an account of the dreaded inter-
view, says:

"Now that the terrible Captain has gone in pursuit
of the Indians,
Where he is happier far than he would be commanding
a household,
You may speak boldly."

Thereupon he tells of his own despair and the
direful wrath of Miles Standish.

"Whereat the maiden smiled, and said between
laughing and earnest,
'He is a little chimney, and heated hot in a
moment!'"

As all love-stories should, this one also ends
happily. Friendship is restored between the stal-
wart captain and his loyal friend, and at the
wedding of John and Priscilla, Miles Standish,
after gravely saluting the bride and wishing her
joy of her wedding, says as his last word:

"I should have remembered the adage.—
If you would be well served, you must serve yourself;
and moreover,
No man can gather cherries in Kent at the season of
Christmas!"

If our picture should induce our readers to
turn again to their book-shelves and take down
from them Longfellow's story of the Courtship of
Miles Standish, the "Advocate" will have done

The sick chamber should be plainly furnished
and no heavy hangings.

The best night light is a candle weighted with
a nail and made to float in a glass of water.

All woollens or similar goods should be re-
moved from the room where contagion is under
treatment.

Humorous.

Why did the penny stamp? Because the three-
penny bit.

Self-made man, examining a school—"Now, my
boy, what is the capital of 'Olland?" Boy—"An
'H,' sir."

What made Charing Cross? Watching London
Bridge. Who taught London Bridge? The same per-
son who taught Water-loo.

He was about to strike the one-armed man, when
an old gentleman interfered, and said: "Ah, you
surely would not strike a man who has only one
arm?" "Wouldn't I?" he said. "If he lifted his
hand to me I would strike him if he had no arms at
all."

Some time ago, in the court of a certain Scottish
burgh, a man was charged with the theft of a pig.
The worthy Bailie, in sentencing the prisoner, re-
marked that pig-stealing in the burgh had lately been
too rife, and finished his peroration thus: "And un-
less I make an example of you it's very certain none
of us will be safe."

THE QUIET HOUR.

Nursing Our Wrongs.

" Sometimes we fondly nurse our grief
With soothing, tender care;
And then to see how fast it grows,
Makes e'en its owners stare.
We feed it with the richest food
A fertile mind can give,
When smarting under fancied griefs
From those with whom we live.
And with this food it thrives so well,
And grows to giant size,
That though rich blessings strew our path,
They're hidden from our eyes.
'Tis wiser far to take our griefs
And troubles day by day
To Him who waits and yearns to bear
Our every grief away."

In the Sermon on the Mount, one sentence of the Lord's Prayer is particularly enforced, and a terrible penalty attached to the disregard of it. Not only does the punishment for an unforgiving spirit stand in the very heart of the prayer—"Forgive us our debts as we forgive"—but our Lord goes back after finishing the prayer to make this petition even more startlingly emphatic. "But if ye forgive not men their trespasses, neither will your Father forgive your trespasses." The same warning is given over again in the parable of the unmerciful servant. In this case the forgiveness, given freely at first, is taken back. The servant whose enormous debt has been forgiven, finds that when he shows no mercy to his fellow-servant, he forfeits everything.

Now, I am going to speak very solemnly to-day. Some of you are smarting under wrongs which you have received, or fancy that you have received. Perhaps you carry the unforgiving spirit so far as not to be on speaking terms with the person who has injured you. Sometimes people dare to keep this up for years. Often the first cause of offence is almost forgotten, but each one is too proud to make the first advances towards a reconciliation. I say people dare to do this, for it is a very daring thing to do, although it is so common that no one seems to be alarmed by it—common among professing Christians!

Think what it means to go on day after day without a hope of forgiveness, not daring—if we are honest—to ask our Father to forgive us as we forgive. It is no use asking for pardon when one is openly defying the awful warning, "If ye forgive not men their trespasses, neither will your Father forgive your trespasses." If we would not be shut out from God's mercy we must do our very utmost to effect a reconciliation. God will neither accept us nor our gifts while we are cherishing an unforgiving spirit. "If thou bring thy gift to the altar and there rememberest that thy brother hath ought against thee, leave there thy gift before the altar, and go thy way; first be reconciled to thy brother, and then come and offer thy gift." It does not say that thy brother must be reconciled to thee—that is not always within our power—but we are bound to do our part.

A sullen, half-hearted forgiveness is worth very little. Let us try to be imitators of God, for "as far as the east is from the west, so far hath He removed our transgressions from us." As Beecher says, "A forgiveness ought to be like a cancelled note, torn in two and burned up, so that it can never be shown against the man."

" 'Tis not enough to weep my sins,
'Tis but one step to heaven—
When I am kind to others—then
I know myself forgiven."

But perhaps we are not outwardly at enmity with anyone, and yet are nursing the memory of some small wrongs or slights. We say we can forgive but not forget. Are we really forgiving after the pattern of Him who freely forgave those who nailed Him to the cross? He showed no sign of resentment towards those who heaped insult after insult on Him—insults beside which our trifling wrongs fade into nothingness.

" What? Wearied out with half a life?
Scar'd with this smooth, unbloody strife?
Think where thy coward hopes had flown
Had Heaven held out the martyr's crown.
How could'st thou hang upon the cross,
To whom a weary hour is loss?
Or how the thorns and scourging brook
Who shrinkest from a scornful look?"

Why is a slighting word so hard to bear? We are ready enough to own that we fall far short of perfection, but if anyone else hints at such a thing, and we hear of it, we are at once stirred up to indignation. Why? Are we seeking to please men or God? The world's opinion of us is of very little consequence, and proves very little as to our real character. One who is seeking for popularity will lead a very unquiet life, and probably fail to win the applause he is living for. No one admires a man who has no backbone; who, like the old man with the ass, is willing to go to any lengths to win approval from men.

Christ generally encourages by promises rather than by threats, and there is a great promise attached to this question of forgiveness—"If ye forgive men their trespasses, your heavenly Father will also forgive you." But, as a free and hearty forgiveness of injuries is a very difficult

grace for weak and hasty human beings to cultivate, a solemn warning is also given. Our Lord says that the unmerciful servant was delivered to the tormentors, and adds, "so likewise shall My heavenly Father do also unto you, if ye from your hearts forgive not everyone his brother their trespasses." From your hearts! Don't let our forgiveness be a matter of kind words and actions only towards those who have injured us. Emerson knew human nature well, knew that an outward kindness may sometimes be an insult, when he said,—

" Gifts of one who loved me,—
'Twas high time they came.
When he ceased to love me,
Time they stopped for shame."

Every thought must be in captivity to our Master. It is possible to control our thoughts, although many people indolently exclaim, "We can't help our thoughts." We have to help them, or forfeit forgiveness ourselves. "One more verse and I have done."

" Kind hearts are here: yet would the tenderest one
Have limits to its mercy: God has none!
And man's forgiveness may be true and sweet,—
But yet he stoops to give it. More complete
Is Love that lays Forgiveness at thy feet,
And pleads with thee to raise it! Only Heaven
Means Crowned, not Vanquished, when it says
'Forgiven.'"

HOPE.

THE CHILDREN'S CORNER.

Studying Our Christmas Number.



Toby and Trotters and Tim
Took a fancy to study the news,
So they hunted around
And an "Advocate" found,
Which they promptly began to abuse.

The three little mischievous dogs
Had never, you see, been to school,
So of course couldn't read—
Didn't try to, indeed—
For they hated to do things by rule.

They tore Father Time into shreds,
Made mince-meat of Edward the King—
That finished the cover—
Then tried to discover
Some pictures that Christmas should bring.

" There's a horse that is having a drink!"
Said Tim, with his paws on the book,
And five nice little cats!
Are they looking for rats?
And here's Santa! Oh look! fellows, look!"

" Piccadilly " they voted just right,
They kissed the sweet " Christmas Queen,"
Barked at horses and hogs,
Admired all the dogs,
But read not a word in between.

COUSIN DOROTHY.

PICTURE COMPETITION—CLASS III.

Tired Travellers.

A little boy once got the present of a monkey. His name was Willie. The monkey was young, and he taught it to do a lot of tricks. Willie had a sister. Her name was Bertha. She did not go to school, but Willie did, and the monkey stayed with her. One day the monkey followed him to school. The boys and girls liked to see it going through some tricks that Willie had taught it. He gave it the name of Jack. Willie had no father, and two years later his mother died. They came to a strange place, and had no friends. A short time after his mother died he got a chain for his monkey and started out for town. After he got there he did not know where he was going. He wandered round looking for some place to rest. He sat down on different doorsteps, but when the owners of the houses found him they would send him away. He would linger in front of the house and let his monkey go through some tricks; but even that would not coax them to let him stay. The sun was going down, and he was very tired; so was his monkey. So they sat down on a log at the back of a house. He expected to be driven away by angry words. But when the door opened, a pleasant-looking lady appeared and asked him if he was a stranger, and said she had never seen him before. He told her his story, and she asked him to bring his monkey and come in and stay till morning, which he did.
MARTHA D. CROWE (aged 10).

PICTURE COMPETITION—CLASS IV.

Tired Travellers.

About the year 1870, over in the western part of Ontario, lived a widowed mother and her son Bill. A few months before, a terrible accident happened. Her husband was a bricklayer, and while on a very high scaffold was walking backwards on account of

some bricks falling, but he walked too far and fell on a large, rough rock and was killed. Billie being a manly little fellow (only eleven), wished to take the household cares on his own hands, and always looked up the advertisements in the "Farmer's Advocate." One evening his wish was gratified, for there was a little monkey for sale very cheap, and six months' credit. You may depend that he lost no time in securing him, and was soon on the streets. Billie's mother, before he went out, made him a little blanket trimmed with gold braid for his monkey. Then off he started, looking quite gay. His first day he did very well, but many disappointments happened before he was through. On this particular day, which was the turning point of his career, and which he thought the worst day he ever had, he sat down on an old doorstep, despondent, sad and weary, thinking of all the refusals he had had this morning, when he beheld a stranger coming along the road (who afterwards turned out to be an artist of great renown). When the man saw the little lad and his monkey, he was so taken with the picture that he asked him to remain in that position a few minutes. After using his brushes a little, he took Billie's address, then proceeded on his way. Some time afterwards, when Billie came home from a good day's work, he was surprised to get a message requesting him to be at a certain place that evening. When he arrived there, the artist gave him one-half of what he got for the picture, and asked him how he would like to paint pictures. Billie was delighted with the idea, so the artist promised faithfully to be his teacher without charge. Billie was never so happy as he was that night, and in after years, when he was asked how he got to be so great, he would say, "By looking up the advertising columns in the 'Farmer's Advocate.'"
CHARLES CHAPMAN (aged 9).

If you wrote that story yourself, Charlie, you are surely cut out for an author.—C. D.

The Magic of a Whistle.

I have heard his boyish whistle in the dark and dewy gloam,
As he trudged across the meadows, as he drove the cattle home,
I have heard him trill a measure with the cadence of a lark,
And his boyish reason for it is: "It frightens off the dark."
Off there seems a something lurking in the tall grown plots of grass,
And his blood runs cold at thinking it may grab him should he pass,
But he knows fear cannot linger in a brain for very long
If two lips are pursed for whistling and a heart is tuned to song.

Though the eerie shadows hover and the clouds shut out the stars,
Up the pasture path he whistles, whistles taking down the bars,
And the tune he pipes would surely any tired heart regale,
When he times it to the splashing in the frothed-o'er milking pail,
All the shadows, all the darkness grow affrighted at the joy,
And the happiness that bubbles from the glad heart of a boy,
While Fear's pickets scout and scatter 'fore the hosts of Courage strong,
If two lips are pursed for whistling and a heart is tuned to song.

In my worldly walks of living, in my struggle after pell,
His philosophy of courage I have taken to myself,
When the clouds of care and trouble veil the blessed air of hope,
And misfortune waits to grab me as along the path I crope,
When beset by fear I falter; see of light no feeble spark,
Then his boyish plan I welcome, "for to frighten off the dark."
And I reach my hopes' bright haven, since one cannot wander wrong,
If two lips are pursed for whistling and a heart is tuned to song.

—R. F. Green, in the Detroit Free Press.

People You Like.

The man who pronounces your dinner absolutely faultless.
The individual who always laughs vociferously at your puns.
The acquaintance who regrets that he has not your exquisite artistic taste.
The photographer who says you are really one of the finest subjects he ever had.
The tailor who says it is a pleasure to make a suit for a man with a figure like yours.
The lady whom you overhear whisper to a friend that you are the cleverest man she knows.
The visitor who remarks that your boy is the handsomest little fellow he ever saw, and that he bears a striking resemblance to you.—Puck.

The Sunshine of Smiles.

There is one kind of sunshine which it is needful to bring into every home, and that is the "sunshine of smiles." Next to the sunlight and warmth of heaven is that of a cheerful face. No one can long withstand its influence; no one can mistake it. A bright eye, an unclouded brow, a sunny smile, a loving word, all tell of the peace and joy that dwell within. One glance at such a face has lifted the mists and shadows from many a heavy heart and scattered the fogs from many a burdened spirit. A bright, warm, cheerful face inside the home will drive away gloom and render it impossible for it to exist. The room of disease, which may look at times on the most elegantly furnished room a few days, will vanish away before the bright, sunny, cheerful sunlight. Open, therefore, the windows of your heart, and let the sunshine in.

GOSSIP.

Professor Thos. Shaw, Professor of Animal Husbandry at the Minnesota Agricultural College, has resigned his position there and will assume the editorial garb, after April 1st, on The Farmer, Minnesota. The Professor is well known to our readers and to the stockmen. All will be pleased to hear that he is extending his circle of usefulness.

The illustration in our Christmas number of Mr. Rankin's Melrose Stock Farm, Hamiota, only partially indicates the excellency of the live stock on that farm. The show-yard victories of the stock have been numerous. The stallion, McBain, is a capital getter, his stock having been winners at Brandon, Winnipeg, Oak River and Hamiota. Nancy Lee (2429), by McBeith (2215), has a filly foal at foot by McBain (2270). Mr. Rankin states that mares are being bred to McBain for fall colts. A young bull was sold recently to H. A. Fraser, of Hamiota. Wheat averaged 37 bushels per acre, oats 53 bushels, 100 loads of green oat sheaves being kept for feed. Barley averaged 50 bushels per acre. Potatoes were a good crop, Bromo grass also yielding well.

The Pipestone farmers are to be congratulated on the fact that one of their number, George Forke, has had the enterprise to invest in a good draft horse, Gartachoil 10200. This typical Clydesdale is a light bay, with white on face and three legs, and was foaled June, 1898, on the farm of Jas. McConnell, Wigtownshire, Scotland. Gartachoil was got by Prince of Galloway (8919), his dam being the Top Gallant mare, Grace 13918. Mr. Gartachoil is, therefore, full of the blood of the noted Prince of Wales (673) and the equally noted Darnley. Mr. Forke procured this stylish, active, clean-boned horse from Alex. Galbraith's salesman at Brandon.


The Manitoba Poultry Show will be held in Winnipeg, Feb. 17th to 21st. The time of the show is the same as that allotted for the meetings of the Live Stock Associations and the Bonspiel. Single-fare rates will obtain, so that poultry fanciers will be able to visit the show at a nominal outlay. Farmers and their wives in the city at that time would do well to compare the aristocrats of poultrydom on show and notice how much the pure-breds are superior to the dunghill plebians which in too many cases now infest the farmyards of this western country. The secretary of the Poultry Association, C. H. Wise, reports the receipt of a \$50 cheque from Lord Strathcona for the Association.

M. Maw, proprietor of Maw's Poultry Farm, St. John's, Winnipeg, is the Manitoba and Northwest agent for Cyphers Incubators. These incubators won the gold medal at the Pan-American, and first at Winnipeg Industrial Exhibition in 1901. Ten years' guarantee goes with each incubator. Mr. Maw will be pleased to give information as to prices, etc., and will forward descriptive catalogue to any one inquiring. Cut bone, lean beef, oyster shells, limestone grit for poultry, and all poultry supplies are kept on hand, besides high-class climatized turkeys, geese, ducks and standard varieties of poultry.



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THE OLD RELIABLE

GOSSIP.

Joe Lawrence, Clearwater, Man., gave the "Advocate" a call recently when en route to the Old Country.

One of the interesting features of the business done at the Union Stock Yards, Chicago, in 1901 was the sale of pure-bred cattle. Seventeen sales were held, at which 1,200 head were disposed of at an average price per head of \$408.77.

A purchase or interest so Western men is that of a pure-bred Angus yearling bull, Laird of Alta, by J. D. McGregor, Brandon, Man. Mr. McGregor has long been the champion Daddie breeder in Canada, his herd at present containing over 300 breeding females. With a determination to only have the very best, he visited the Chicago International to select a worthy representative of the breed to head his herd. He secured the aforementioned bull from A. C. Binnie, Alta, Iowa, whose stock were so successful in hot competition at the International. Laird of Alta is a lengthy, low-set bull, with evidence of a strong constitution, besides having, especially on the loin, the Angus characteristic of putting first-quality meat in the region of the highest-priced cuts.

Mr. O. King, of King Bros., Wawanesa, breeders of Yorkshires, called at this office recently. He reports good demand and ready sale for Yorkshires, and recently sold eight head to go to Alberta.

One of the educational features of the Chicago International Show which deserves especial comment was the exhibit of cereals and forage crops by the Animal Husbandry Department of the Minnesota Experiment Station. Considerable ingenuity was shown in the getting up of charts (colored), which may well be dubbed—Feeds and Feeding, illustrated!

Amongst recent sales Mr. John A. Turner, of Balgreggan Stud Farm, Calgary, has recently made is the young Clydesdale stallion, Combination, a grandson of the famous Balgreggan Hero, and a colt of great promise, bred by himself, and possessing, as his name denotes, size and good breeding quality. His purchaser is Mr. S. Hinkson, Pine Lake, Alta. Another is Solitaire's Prince, a very good young stallion, his dam being the prize Balgreggan Hero mare, Solitaire, bred by Mr. Bryce Wright, of DeWinton, Alta., and now the property of Mr. Turner. This one was sold to H. Raikes, Pine Lake, Alta. Mr. Turner intends spending two months in Ontario for the purpose of selecting some choice young stallions. Intending purchasers will find it to their interest to communicate with him, as he has always some good individuals, of either sex, of show merit, at reasonable prices.

A visit to the establishment, at Kildonan, Manitoba, of Jos. Mitchell affords an admirer of a good horse an opportunity to drink his pleasure to the fill. Mr. Mitchell brought down a number of high-grade Hackney horses, three and four years old, from the ranch of the Rawlinson Bros., Calgary, whose ex-stud veteran, Robin Adair, gained first-class laurels at the Pan-American and New York Horse Shows. The horses are being trained to drive singly, tandem and four-in-hand, and promise to make the finest specimens of horseflesh for heavy leather that have been seen in Winnipeg for many a day, if ever. With a general air of good breeding, they are clean-cut in the throat, fairly long necks, sloping shoulders, strong kidney, deep-barreled fellows, with plenty of bone and muscle. Although only educated a little as yet, they show a tendency to go high, both fore and hind, and to travel fast. The farm is very convenient to the city, its appointments in the way of a residence, horse barns, paddocks and hennery being strictly up-to-date.

Amongst the largest crops of wheat, says the Hartney Star, that have been raised this season are:

J. D. Ross, 27,000 bushels; C. Thomas, 25,000 bushels; H. Cowan, 18,000 bushels; A. L. Henry, 13,000 bushels; F. Hill, 16,000 bushels; H. Galbraith, 11,000 bushels; F. Henry, 11,000 bushels; J. Keeler, 15,000 bushels; M. Galverly, 13,000 bushels; B. Roper, 9,000 bushels; R. Jackson, 9,000 bushels; Fry Bros., 12,000 bushels; Ed. White, 1,000 bushels; C. Robinson, 17,000 bushels; Henry James, 4,000 bushels; J. Turnbull, 8,000 bushels; W. Turnbull, 10,000 bushels; A. Turnbull, 11,000 bushels; J. Underhill, 12,000 bushels; Jas. Barber, 14,000 bushels; Wm. Barber, 10,000 bushels.

Besides the amount of wheat named, all the above men raised large quantities of oats, in some cases up to 12 and 15 thousand bushels. A few of the yields will serve as a specimen of what the land averaged:

Geo. Davidson's crop yielded 32 bushels to the acre; Geo. Jasper's, 35; B. Roper's, 28; Ed. White's, 30; C. Robinson's, 25; R. Brundson's, 40.

\$5,000

IN final disposition of the persistent jugglery of names by a would-be competitor in such regard we offer Five Thousand Dollars to be divided in equal amounts of One Thousand Dollars each between the State Experiment Stations of Wisconsin, Minnesota, Vermont, Ohio, and Cornell University, if the DE LAVAL CREAM SEPARATORS did not receive the GRAND PRIZE at the PARIS EXPOSITION, provided the concern which has indulged in so much unscrupulous advertising in this connection will, within ten days, deposit a similar amount, to be used in like manner, with Major Henry E. Alvord, Chief of Dairy Division, Department of Agriculture, Washington, D. C., if the De Laval machines did receive such an award, decision in the matter to be left to Major Alvord, who was in Paris in an official capacity, and who is undoubtedly familiar with the facts.

TESTS OF SEPARATORS.

It being agreed and a part of the understanding that such amounts shall be used by the various Experiment Stations named in the conduct and publication during the year 1902 of thorough practical-use tests of all makes of CREAM SEPARATORS or other creaming devices which may choose to enter same.

THE DE LAVAL SEPARATOR CO.

New York, January 2, 1902.

Alex. Galbraith, Janesville, Wisconsin,

OFFERS FOR SALE AT

The Beaubier Stables, Brandon, Man.,

An extra superior lot of Imported

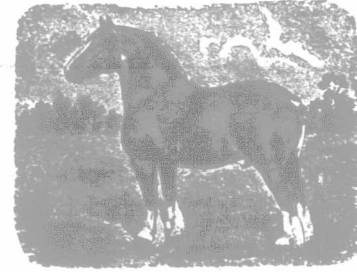
Clydesdale Stallions.

Also a few choice

Hackneys, Yorkshire Coachers and Percherons.

Every horse in the lot, without exception, is a prize-winner, and all thoroughly guaranteed. If interested, call and examine this superb lot of horses, or write for particulars at once to—

JAMES SMITH, AGENT, BRANDON, MANITOBA.



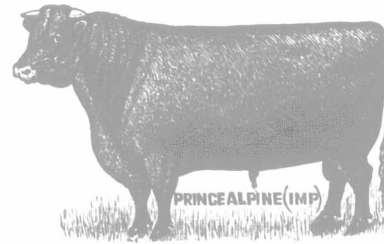
W. S. LISTER, MARCHMONT STOCK FARM, BRIDGE OF..... MIDDLECHURCH, MAN.

SCOTCH SHORTHORNS

Of the celebrated Glenythan family. Prince Alpine (Imp.) and Baronet (Imp.) at head of herd.

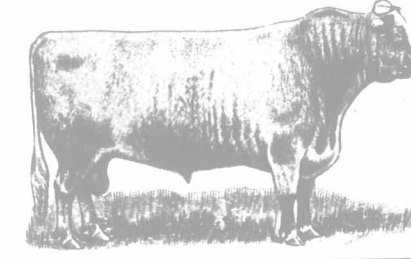
80 HEAD TO SELECT FROM.

BERKSHIRES: Two boars at \$15.00 each (crated); sows in pig at \$25.00. Farm seven miles north of Winnipeg. Telephone connection.



PRAIRIE HOME STOCK FARM

CLYDESDALES, SHORTHORNS, SHROPSHIRE, BERKSHIRES and YORKSHIRES.



Shorthorn herd headed by Judge, Imp. Jubilee, and Ribbon's Choice. Ayrshires of the best quality; herd headed by Surprise of Burnside. Oak Lodge Mighty 7th and a large number of high-class sows represent the approved bacon type of Yorkshires. The Berkshire boar, Victor (Teasdale), sweepstakes at Brandon and Winnipeg, 1900, and 30 sows of faultless conformation and superior breeding, make up the Berkshire herd. Farm one mile from the station. Visitors welcome. Prices and quality right.

THOMAS GREENWAY, PROPRIETOR, Jas. Yule, Manager. Crystal City, Man.

AS SUPPLIED TO

H. R. H. THE PRINCESS OF WALES

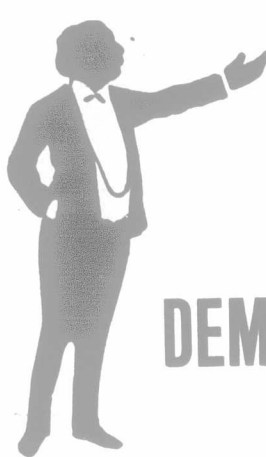
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Ogilvie's New Rolled Oats.
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ASK YOUR GROCER FOR **OGILVIE'S PRODUCTS** THE BEST THE WORLD PRODUCES

Please Mention The Farmer's Advocate.

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HORSE AND STEAM POWER CATALOGS FREE
KANSAS CITY HAY PRESS CO
439 MILL ST. KANSAS CITY MO

CONVENTION WEEK IN WINNIPEG



Live Stock and Horticultural Associations.



DEMONSTRATIONS IN JUDGING LIVE STOCK *and* VEGETABLES.

JUDGING 1.30. P. M.

Living animals will be used in stock-judging work. Class-room: J. I. Case Warehouse, corner Princess and James streets. Horticultural work in City Hall.

Forenoon and Evening Sessions: Election of officers, business, and addresses by prominent speakers.

Horticultural convention will be addressed by Prof. Macoun, of Central Experimental Farm; Superintendents Bedford and Mackay, of Brandon and Indian Head Experimental Farms; and others.

February 18th.—Sheep and Swine Breeders.
Swine—Prof. Carlyle.
Sheep—Dr. A. G. Hopkins.

February 19th.—Pure-bred Cattle Breeders.
Beef Cattle—Prof. Curtiss.
Dairy Cattle—Prof. Carlyle.

February 20th.—Horse Breeders' Association.
Draft and Light Horses—
Profs. Curtiss and Carlyle.

February 21st.—Horticulture.
Vegetables and Field Roots—
Superintendent Bedford.

Single-fare return tickets from all points for sale from February 17th to 19th; good to return until February 24th.

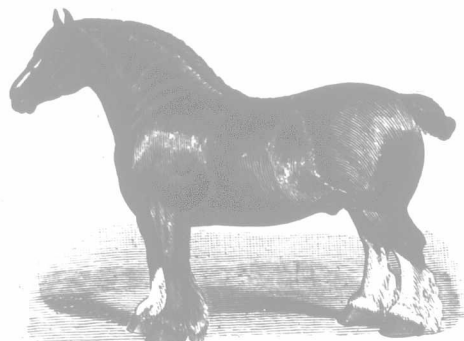
For programme and full particulars address the secretaries:

Horse Breeders'—
George Harcourt, Winnipeg.

Sheep and Swine and Pure-bred Cattle Breeders'—
George H. Greig, Winnipeg.

Horticultural Society—
Melvin Bartlett, Winnipeg.

J. E. SMITH

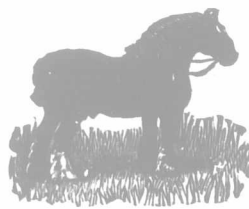


SIR ARTHUR.

OFFERS FOR SALE: two imported Clydesdale stallions, rising 4 years old, descended from Darnley (222) and Prince of Wales (673), and two Canadian-bred Clydesdale stallions from imported stock. Clydesdale mares and fillies. All registered. One hundred and fifty head of Shorthorns—bulls, cows and heifers. Golden Measure (imp.) and Lord Stanley II stand at the head of the herds. I will sell at lower prices than any man in Canada for the same class of stock. A number of choice improved farms for sale or to rent. Address—

J. E. SMITH,
Smithfield Ave.,
Telephone 4. BRANDON, MAN.
P. O. Box 274.

CLYDESDALES and SHORTHORNS



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

FOR SALE:
The Clydesdale stallion,

Patrick McGregor 8386.

Foaled Apr. 19th, 1895. Sire Prince Patrick, by Prince of Wales; dam Judy 3956, by McGregor. For particulars, apply to—

John Wanless, Belmont P. O., Manitoba.

WANTED!

By a farmer with large experience, care of or situation on farm—stock or grain. C. F. SMITH, 180 Logan St., WINNIPEG.

ADVERTISE IN THE FARMER'S ADVOCATE.

One Clydesdale stallion,

Five years old, good bone, and good stock-getter. For breeding, price, etc., apply to W. J. CHURCH, Box 189, ARTHUR, ONT.

FARM HORSES

For Sale.

Clyde and Shire Bred.

Prices reasonable per carload. Write:

High River Horse Ranch,

HIGH RIVER, ALBERTA.

For Sale: Clydesdales, Shorthorns.

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

POPLAR GROVE

HEREFORDS



PRIVATE Dispersion Sale

OF THIS FAMOUS PRIZE-WINNING HERD.

Owing to ill health, I will sell my entire herd of about 100 head at close prices. A rare opportunity to secure some splendid show and breeding stock.

J. E. Marples, Deleau, Man.

Herefords.

The meat-makers. Range favorites and stocker-getters. FOR SALE: bulls of the right age and type. Also Barred Rocks—eggs or chickens. FRED WEST, DELEAU, MANITOBA.

ADVERTISE IN THE FARMER'S ADVOCATE.

OAK GROVE FARM.



Shorthorns and Yorkshires.

Four choice young bulls by that grand-bred bull, Masterpiece, by Grand Sweep (imp.). A choice lot of heifers by Masterpiece, Knuckle Duster (imp.), Lord Lossie 2nd, and Pleasant King.

Boars fit for service. Brood sows and suckers. I am offering bargains to make room.

Also a fine lot of birds: W. P. Rocks, Correspondence solicited. JAMES BRAY, LONGBURN, MANITOBA.

GALLOWAYS:

Bulls and heifers for sale.

APPLY TO

T. M. CAMPBELL, "HOPE FARM," St. Jean Baptiste, Manitoba.

D. FRASER & SONS,

EMERSON, MAN., Breeders and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale. 9-y-m

SHORTHORNS

I am offering three red bulls, one aged, of the heavy-fleshed type, also well-bred females. LEICESTERS of both sexes for sale. GEO. ALLISON, R. R. STATION, ELKHORN, C. P. R. Burnbank, Man.

SHORTHORNS FOR SALE

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

Shorthorns, Shropshires, Yorkshires, Buff Plymouth Rocks.

YOUNG STOCK OF ALL CLASSES FOR SALE.

J. S. LITTLE, OAK LAKE, MAN.

SHORTHORNS

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

RIVEREDGE FARM. Shorthorn Cattle and Standard-bred Horses. Herd headed by Sittyton Stamp (imported). Females bred from or tracing to Windsor (imported). A. TITUS, NAPINKA, MAN.

CHOICE

Shorthorn Bulls FOR SALE.

All nearly 2 years old. Apply for pedigrees and particulars:

FOREMAN, Castle Farm, TEULON, MAN.

Shorthorns, Tamworths and Yorkshires FOR SALE.

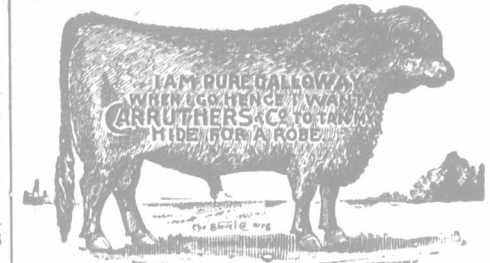
10 bull calves for sale, 8 to 11 mos. old. 3 Yorkshire boars, fit for service. 1 Tamworth boar, fit for service. White Wyandotte cockerels.

W. G. STYLES, ROSSER, MAN.

HEREFORDS.

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

JOHN WALLACE, CARTWRIGHT, MAN.



"What a Wise Old Chap!"

He has left his hide in good hands. Send for our circular in reference to custom tanning. We send samples of work with circular.

CARRUTHERS & CO., TANNERS,

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

Shorthorns and Clydesdales.

Six Shorthorn bulls for sale, sired by Indian Warrior 2nd and Sittyton Hero 7th, sweepstakes bull at Winnipeg in 1900 and 1901. Females of the best Scotch families, headed by the best bulls (regardless of price), makes this herd second to none for breeding and quality. Correspondence solicited.

J. G. WASHINGTON, Elysee Stock Farm, Nings, Man.

Thorndale Shorthorns.
 25 BULLS, and about
 100 FEMALES, of all ages, to choose
 from.
JOHN S. ROBSON, Manitou, Man.

SHORTHORNS

Have sold all bulls of serviceable age,
 but have a few choice females to go yet.
 Prices right; pedigrees good; cattle
 typical.

Wm. McDonald, Pilot Mound.

Lakeview Stock Farm.

SHORTHORNS FOR SALE.

I am offering for sale bulls and heifers of good quality. Cheap if sold soon.

THOMAS SPEERS,
 OAK LAKE, MANITOBA.

SHORTHORNS. Persons wishing to purchase young stock of either sex will do well to call on us before buying elsewhere. Some youngsters of choice quality and breeding for sale at reasonable prices. Correspondence solicited.
PAUL BROS., Killarney, Man.

CYPHERS INCUBATORS.

Gold medal at Pan-American; first at Winnipeg Industrial, 1900 and 1901. Ten years' guarantee.

Poultry Supplies

Fresh cut bone, 3c. lb. \$2 50 per 100 lbs.
 Cut lean beef, 3c. lb. 2 50 " "
 Crushed oyster shells. 1 00 " "
 Sharp cut limestone grit. 1 00 " "

Also bone mills, shell crushers, wire netting, incubator thermometers, leg bands, and general poultry supplies. I keep acclimatized utility breeds of

TURKEYS, GEESE, DUCKS, CHICKENS,

and have stock and eggs for sale. Incubator and poultry catalogue mailed free. 20 prizes, 2 medals, 1 diploma, at Winnipeg Industrial. Address:

MAW'S POULTRY FARM, WINNIPEG, MAN.

J. H. KINNEAR & SON, SOURIS, MAN.,
 BREEDERS OF SHORTHORNS.

IMP. BARON'S PRIDE 28855 head of the herd. Three young bulls for sale, aged 14, 10 and 9 months.

Maple Grove Stock Farm

SHORTHORN BULL CALVES FOR SALE.

From three months to eight months old. Sired by Lord Stanley 25th—29247. Also have left a few

P. R. COCKERBILLS,

WALTER JAMES, ROSSER, MAN.

15 miles west of Winnipeg, on main line C. P. R.



T. DOUGLAS & SONS, STRATHROY, ONT.

Scotch Shorthorns.

100 HEAD TO SELECT FROM.

Offer for sale 20 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28861, at head of herd. Farm one mile north of town.

YORKSHIRES!

Boars all sold. A few sows left. Order at once or you will be too late. Some choice White P. Rocks and Pekin ducks. Address:

KING BROS., Wawanesa, Man.

For Sale: A Tamworth boar, fit for service. Also a fine litter of pigs, three months old.

Apply to **LEWIS E. HUTCHISON,** Neepawa, Man.

Pedigreed Improved Yorkshire Pigs.

Sows and boars, four months old, for sale.

YORK SHAW, MIDNAPORE, ALTA.

Chambers' Barred Rocks

are winners. The shows prove it. Read the record. Has also Blk. Minorcas, Hamburgs, S. C. B. Leghorns, and S. L. Wyandottes. Eggs, \$2 a setting. See my exhibit at the next Brandon show. Stock bred by me is fit to head any yard. Write for particulars. **THOS. H. CHAMBERS, Brandon.**

Authorized Capital,
\$500,000.00.
 Head Office, Wawanesa, Man.

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By proper construction of and care in working about farm buildings, danger of loss from fire is reduced to a minimum. Nevertheless, the most careful farmers carry fire insurance, considering it folly to take chances. That you never had a fire is no evidence that you will not be burned out to-night.
 But how about insurance against hail? Foresight and care do not influence hailstorms. That you never had hail is no guarantee that it will not come your way this year. Then why take chances? It is not evidence of good judgment to do so. The cost is trifling. There is a business side to farming. This is a business proposition. Think it over.

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 OFFICE AND SAFE DEPOSIT VAULTS,
323 AND 325 MAIN STREET, WINNIPEG
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WHAT THEY THINK OF IT

Should Appeal to Westerners.
 I do not know of anything in the shape of a premium that should so appeal to the average man in this western country.—C. H. Shera, Port Arthur.

A Dandy.
 I think that your thermometer and barometer is a dandy. I am well pleased with it. I thank you very much for it.—Charles S. Yeo, Douglas, Man.

Sensible.
 It is both useful and ornamental; the most sensible premium I ever got with any paper.—D. McGregor, Forrest.

The Best.
 The best premium I have seen.—J. N. Johnson, Underhill.

Nothing Could Be Better.
 Where the weather conditions are so closely watched all the year round as in this country, nothing could be better.—David Elliot, Sourisford.

A Leader.
 I don't see how you can send it with such a good paper. But I look to the Free Press as a leader. Long may it prosper.—Thomas Speers, Oak Lake, Man.

Best Ever Sent Out.
 Best premium ever sent out.—John Parr, Bradwardine.

Never Anything Equal to It.
 Have been getting premiums from newspapers for the last ten years, and have never got anything to equal it.—Walter F. Popple, Minto, Man.

All He Could Wish.
 It's all I could wish.—David Kirkpatrick, Sr., Kemnay.

All Right.
 It is all right; worth the subscription.—V. E. Casselman, Lauder.

The Best.
 It is the best I have received or seen since I came to this country.—H. Kolterman, Lacombe, N.-W. T.

Most Useful Ever Seen.
 It is the best and most useful premium I ever received or saw.—G. Ernest Gregory, Cochrane, Alta.

THE WEEKLY FREE PRESS for one year and the combined **Thermometer and Barometer**, as referred to above, to any address for **\$1.00.**

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 Special attention to collections. Solicitor for "Farmer's Advocate," Winnipeg. 24-a-m

LOCAL AGENTS WANTED TO REPRESENT THE WESTERN FARMERS' Live Stock Insurance Co.
 HEAD OFFICE: ROOM 251 GRAIN EXCHANGE, Winnipeg.
 Chartered by the Manitoba Govt. and the N.-W.T. P. O. Box 1382.
 D. PRITCHARD, President. H. S. PATERSON, Secretary.

DR. BARNARDO'S HOMES.
 The managers of these institutions invite applications from farmers and others for the boys and youths who are being sent out periodically from their English training-homes. The older boys remain for a period of one year at the Farm Home at Russell, during which time they receive practical instruction in general farm work before being placed in situations. Boys from eleven to thirteen are placed from the distributing home in Winnipeg. Applications for younger boys should be addressed to the Secretary, 115 Pacific Avenue, Winnipeg, or P.O. Box 296; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Barnardo, Man.

KEEP YOUR STOCK CLEAN.

FLEMING'S SHEEP DIP IS ONE OF THE NECESSITIES OF A WELL-KEPT STABLE.

It kills all kinds of vermin on cattle. Cures scratches, mange, etc., with one application. Used by the foremost breeders. It's worth a trial. Write us.

FLEMING'S DRUG STORE, Brandon.

Canadian Pacific Rail'y

THE QUICKEST AND BEST ROUTE TO THE EAST AND WEST.

THROUGH CARS TO TORONTO, MONTREAL, VANCOUVER, SEATTLE.

Passengers' comfort assured in through tourist cars to TORONTO, MONTREAL, BOSTON, VANCOUVER, SEATTLE.

Rates quoted for tourists to California, China, Japan.

AROUND THE WORLD. For full particulars apply to the nearest C. P. R. agent, or write

C. E. M'PHERSON,
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J. M. PERKINS, SEEDS.

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1902 Seed Annual ready Jan. 1st. Send for it.

Manitoba Commission Co'y,
 LIMITED,
 LICENSED AND BONDED.
 Consign your grain and save middleman's profit. Perfectly reliable.
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 P. O. BOX 1382.
 H. S. PATERSON, MANAGER.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

ROBERT MILLER'S SHORTHORN SALE.

A red-letter day in Shorthorn circles in Canada will be the 5th of February, the day following the annual meeting of the Dominion Shorthorn Association in Toronto, when Mr. Robert Miller, the honored president of that important organization, will, as advertised, offer at auction 45 head of high-class Scotch-bred Shorthorns, all imported or bred straight from the best of importations and most popular strains. The reduced railway fares to those attending the convention of breeders at Toronto on the 4th make the date most convenient and favorable for a large attendance at the sale, as Mr. Miller's farm at Stouffville is only 27 miles from Toronto, on the Midland division of the G. T. R.

The Millers were amongst the first, if not the very first, to import Shorthorns from Scotland to Canada, and for 66 years, without a break, the family, grandfather, father, and son, have maintained an honorable record as breeders and a herd second to none on the American continent in high-class breeding and individual merit, many of the principal herds in the United States and Canada having been founded on selections from this herd, including those of Messrs. Cochran, Edwards, Platt, and Cargill, the latter of whom started with the only cow that ever beat the famous Bow Park show cows, imported Haverling Nonpareil, and Lady Isabel. This cow was bred by Mr. Miller, while such noted prizewinning and breeding bulls as Vice Consul, Salamis, Duke Lavender, Lord Strathallan, Crown Prince of Strathallan, Guardsman and Strathearn were imported or bred by Mr. Miller. Such a record entitles this sale to the favorable consideration of breeders all over this continent, since Mr. Miller is prepared to risk his reputation on the statement that no more richly-bred or better lot of breeding cattle individually has ever been offered at public sale in Canada than those included in the catalogue of this dispersion. Mr. Miller is only anxious that those interested in Shorthorns shall see the cattle sold, and is willing to be rated according to the standard of the offering.

The advance sheets of the catalogue show a list of young cows, heifers and bulls of a rich variety of the favorite families in the herds of the late Mr. Cruickshank, of Sittlyton, and Mr. Campbell, of Kinellar, and in the herd of Mr. W. S. Marr, Uppermill, and other leading Aberdeenshire breeders, and includes typical representatives of Cruickshank Lovells, Lavenders, Brawith Buds, Nonpareils, Butterlys, Village Girls, Broadhooks, and Duchesses of Gloster; Marr Misses, Princess Royals, Bealys, Roan Ladies, Claras, and Floras; B Kinellar Claret, and Misses, and an imported Flower Girl, half-sister to one sold in the Canadian combination sale at Chicago last June for \$900, sired by the great bull, Nonpareil Squire, and in calf to the Cruickshank-Willis bull, Bapton Chancellor. No. 22 is a grand imported five-year-old Broadhook, a show cow, from one of the most valuable families in Scotland, estimated by the standard of value in the auction ring there, while they are also great prizewinners. She has a beautiful, thick heifer calf by Cornelius, a full brother to the Highland Society champion, Corner Stone, and is again in calf to the Brawith Bud bull, No. 1 in catalogue, a son of Imp. Sittlyton Stamp, and whose granddam was Imp. Golden Crest, bred by Amos Cruickshank. The first female in the catalogue is a three-year-old Cruickshank Flora, bred in Aberdeenshire, one of the families that have been breeding the bulls making the highest averages for Lord Lovat in the annual sales the past three years, and that produced for Mr. Duthie the calf that brought the record price of \$3,250 at his last October sale. No. 2 is a yearling heifer of the same family, sired by Cornelius, himself a prizewinner and own brother to the champion, Corner Stone. The Duchesses of Gloster descend from Imp. 12th Duchess, by the great Champion of England, and are a standard sort, highly esteemed wherever known, while the Village Blossoms, Nos. 6 and 7, are bred from the grand old Cruickshank cow of that name that has bred such a long list of prizewinners and champions. Space will not admit of reference to all, and there would be little object, since all interested may have the catalogue for the asking. The list of bulls includes the grand five-year-old Brawith Bud, Golden Crown (No. 1), one of the best of present-day sires. No. 2 is a Prince Royal, one of the great bulls of the year, recently imported, having bred, as good as his breeding, royally true form and first-class quality, and is considered one of the best that has ever been in the herd, which is saying a great deal. No. 3 is a pleasing roan Cruickshank Flora calf, pronounced by Mr. Marr the best calf he had seen in America. No. 4 is a thick red son of the grand old cow, Village Fairy, now in her 16th year. Royal Gloster is a red son of a fine Duchess of Gloster cow. No. 4 in catalogue. No. 6 is out of Imp. Lady Dorothy 42nd, and by a grand Cruickshank bull. No. 7 is a Nonpareil and as nice as is often seen.

It is now a long while since so good a lot of cattle have been offered for sale in Canada, and there is no prospect, so far as we can see, of another of the same character. Hence we confidently anticipate a grand rally of Shorthorn breeders and farmers interested in improving their stock at this sale at Burnbrae Farm on Feb. 5th.

The annual meeting of the National Lincoln Sheep Breeders' Association was held at Chicago, Dec. 3rd, 1901. The following officers were elected: President, John Geary, London, Ont.; Vice-President, Robert Knight, Marlette, Mich.; Secretary-Treasurer, Bert Smith, Charlotte, Mich. Directors—J. J. England, Caro, Mich.; Jno. T. Gibson, Denfield, Ont.; M. L. Wasson, Stockbridge, Mich.; Robt. S. Robson, Ilderton, Ont.; S. H. Warren, Ovid, Mich.; F. H. Neil, Lucan, Ont.

Mr. James Bowman, Guelph, Ont., breeder of Aberdeen-Angus cattle, calls attention to an error in the report of the cattle carcass competition at the International Live Stock Show at Chicago, in giving credit to the Michigan Agricultural College for the breeding and feeding of the Angus steer, Elm Park, Lad, winner of first prize and championship in the block test there over all breeds. This steer was bred by Mr. Bowman and fed him up to June, 1901, on his Elm Park Farm, at Guelph.

The Clydesdale and Hackney stallions and mares advertised in this issue by Mr. O. Sorby, Guelph, Ont., will be found to be of the most desirable type, combining in high degree, size, action, quality and breeding of the best. The Clydesdale stallions have proven winners in hotly-contested competition at the leading shows in Canada, and are up-to-date in all respects, while the Hackneys are of as high-class character of their breed. Parties looking for such stock should write Mr. Sorby, or better, see his horses, which will bear the closest scrutiny.

W. G. Pettit & Son, Freeman, Ont., report the following recent sales of Shorthorns and Shropshires: To James Haryett, Maynooth, Ont., one yearling ram and four yearling ewes; to W. G. Sanders, St. Thomas, Ont., the imported yearling bull, Scottish Rex, bred by Alex. Campbell, Deystone, Aberdeen, Scotland, got by Count Amaranth, of same family as the great show and breeding bull, Field Marshal; to L. G. Harris, Canning, N. S., the imported bull, Scottish Knight, bred by John Young, Taborries, Aberdeen, Scotland, got by Scottish Prince, of the popular Princess Royal family, out of Fanny 4th, of the noted Jilt family; to W. E. Alton, Nelson, Ont., the yearling imp. bull, County Duke, bred by Alex. Campbell, Aberdeen, Scotland. This young bull belongs to the noted Campbell Claret family that was very popular with the late Sylvester Campbell, of Kinellar. He was got by Count Amaranth, out of County Maid, by that great Cruickshank sire, Clan Alpine. To Andrew Robb, Newry, Ont., one home-bred cow, Fidget 3rd, a great milk and grand breeder. She is forward in calf to our imp. stock bull, Scottish Pride, a Cruickshank Clipper by the noted sire, Star of Morning. Messrs. Pettit write: "We have still on hand for sale four imported bulls, one and two years old; five imported in dam, 12 to 15 months old; and 10 home-bred bulls, from 9 to 16 months, got by imported bulls and mostly from imported cows of the most popular Scotch families. We are issuing a new catalogue, which will be ready to mail about the last week in January, giving full particulars of our young stock. We will be pleased to mail them to interested breeders."

WOVEN-WIRE FENCING.—Every farmer knows the advantages and economy of a good, heavily-galvanized steel-wire fence, but there is a surprisingly large number who do not know that improved machinery has made it possible to buy the best kind of a wire fence in a roll, already woven, ready to stretch and staple to the posts. The drawback to wire fences has been the expense and trouble of building them, and since this has been overcome, the use of steel-wire fences has increased at a wonderful rate in every part of the country, on the farms of the East and the ranches of the West. One of the most desirable and all-around useful forms of ready-woven wire fence is known as the Ellwood Steel Wire Fence. It has heavy cables, between which are diamond-shaped meshes, smaller toward the ground, larger toward the top. This form of construction holds poultry perfectly and economizes on wire in the top meshes, where strength is needed, but where a close mesh would serve no good purpose. There are dealers handling this fence in almost every town in the country, and it should not be overlooked by anyone interested in good fences at low prices.

INNES BROS., OF WOODSTOCK, ONT., have purchased from Dalgety Bros., Dundee, Scotland, and London, Ont., Clydesdale importers, the good colt, Yarbent (11234). He is rising three years, and a great colt, having size, style and action, and combines the blood of the two greatest families known to Clyde breeders, viz., Darnley (222) and Prince of Wales (673), being sired by that noted sire, Prince of Brunstane (9977), the sire of the champion two-year-old stallion, Marmion, that was first and champion at the West of Scotland Union Agricultural Society's Show held at Barrhead, Oct. 17th. A yearling gelding got by him was sold the same day for £100, being the record price for a gelding of his age. We hope the Innes Bros. will get the liberal patronage they so richly deserve, as they have spared no money in selecting a good sire for Oxford County.

Walter James, Rosser, Man., is down east on a purchasing tour. He secured a yearling Shorthorn heifer from Jno. Gardhouse, Aberfeldy Stock Farm, Highfield, Ont.

Mr. James Walsham, breeder of Jersey cattle, of Portage la Prairie, Manitoba, purchased from Messrs. B. H. Bull & Son, of Brampton, Ont., Brampton Gold Prince, the first-prize bull calf under six months at Toronto and Ottawa in 1901. Mr. Walsham writes: "The bull, Brampton Gold Prince, arrived O. K. I have looked him over and like him well. He is one of the finest bulls that I ever saw."

The noted imported Island-bred Jersey bull, Distinction's Golden, is advertised for sale in this issue by Mr. Robert Davies, Tadmorden, Toronto. This bull has been the chief sire in Mr. Davies' herd of Jerseys at Thorncliffe farm for the last four years, and he has made his mark indelibly on his progeny, the females of which especially uniformly show superior dairy form and characteristics, his get having for three years won the first prize for the best progeny of one sire at the Toronto Industrial Exhibition in keen competition. Distinction's Golden is deeply-bred in the blood of the famous Island bull, Golden Lad, and is distinctly of the modern Island type—handsome, stylish, and fine, yet strong, rugged, vigorous, deep-ribbed, and full of spirit, yet docile and tractable. He is in the prime of life, and his offspring have improved with his years. He is a bull that should improve any herd in the country and give satisfaction in every respect.

The survival of the fittest is well exemplified in the splendid herd of Shorthorn cattle and flocks of Cotswold and Shropshire sheep owned by the estate of the late Joseph Bell, on the Cedars Stock Farm, which is situated in the County of Simcoe, about three miles west of the town of Bradford, which is the firm's P. O. and R. R. station. It is doubtful if there was a man in Canada that better understood the inborn characteristics of Shorthorns than the late Mr. Bell, and during his long experience in the breeding and care of this breed of cattle he continuously brought his good judgment into action in the selection of the sires he used on his herd and in the weeding-out of the inferior ones, and to-day his careful selection and good taste is amply demonstrated in the rare good animals that can be seen on the farm. The dams generally are a big, broad-backed, fleshy, short-legged lot, sired by the following well-known bulls: Baron of Manchester, sired by Imp. Vengarth 47192; Brilliant 15824, by Imp. Mexico 1114; Duke of Cedarvale 19666, by Imp. Hopeful 15278; Aberdeen Jock 24503, by Imp. Aberdeen 18949; Ronald 25325, by Imp. Kinellar Sort 18957. The present stock bull is Heir at Law 34563, sired by Prince Arthur 23377; dam Myra's Lily 22014. He is a beautiful roan, two years old, weighs 1,700 pounds, and is one of the low, short-legged kind, with his flesh evenly distributed, and is quality from the ground up. The young things in the stables from him are certainly a splendid lot and show that no mistake was made when he was selected to head the herd. The families principally represented among the dams are the Countess, Duchess, Stamford and Strawberry. The Stamfords are well represented in the cow, Stamford Jewel 22681, sired by Imp. Hopeful. She is a typical Shorthorn, and one of the big, broad sort that everybody is looking after. The Strawberrys are represented by the cow, Juno, by Aurora Borealis 20354. She is another well-balanced, well-proportioned animal. The Duchess family is represented by Zephyr Beauty, a cow that is hard to beat. The Countess family is represented by the grandly-built cow, Estella. There are a number of others that are every whit as good as those mentioned. Among the younger ones are about a dozen heifers, some with calves, others carrying their first calf, and others not bred. They are the right sort, showing a depth of body and symmetry of make-up that develops into the good ones. There are about 25 head in the herd, of both sexes and all ages, and there are no "keep" ones among them, any or all of them are for sale, the Messrs. Bell believing that the nimble sixpence is more profitable than the slow shilling. The Shropshires are of the well-known Campbell breeding, and are a rare good lot and extra well covered. The Cotswolds are imported and home-bred, a part of them being from the well-known Bostwick flock. As with the Shrops, so with the Cotswolds, they are a splendid lot, and can be bought worth the money.

LIVE STOCK MEETINGS.

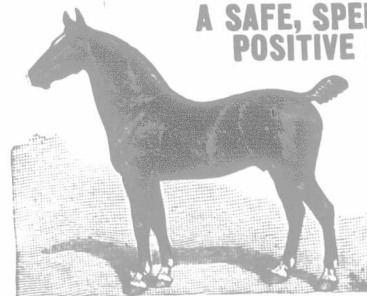
Toronto, first week in February, 1902.
Feb. 3.—Monday—2 p. m., Hackney Horse Society, Albion Hotel; 7:30 p. m., Directors Shorthorn Association, Albion Hotel.
Feb. 4.—Tuesday—11 a. m. and 2 p. m., Dominion Shorthorn Breeders' Association, Richmond Hall, 27 Richmond St., West.
Feb. 5.—Wednesday—11 a. m., Directors Ayrshire Association, and 2 p. m., Ayrshire annual meeting, Richmond Hall, 27 Richmond St., W.; 7:30 p. m., Carriage and Saddle Horse Association, Albion Hotel.
Feb. 6.—Thursday—10:30 a. m., Shire Horse Association, Albion Hotel; 2 p. m., Horse Breeders' Association; evening, dinner, if any.

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GOSSIP.

Among the horses purchased in the Old Country on his recent tour, by J. A. S. Macmillan, Brandon, is that noted Hackney stallion, Grand Duke of York 4289, Vol. X., a bay with white hind heels. He is by Pioneer (1088), out of Polly 2385, Vol. 7, by Driver 958. He was bred by Henry J. Hamer, Peterborough, Yorkshire, England.

In our January 5th issue will be noticed an illustration showing the weighing of the cattle previous to going before the judges, at the Chicago International Show. Prominent in the picture are two Manitobans, Jno. Wallace and his stockman, Jno. Waldie, from Cartwright, Man. All must admire the courage shown by Mr. Wallace in taking his Herefords the long rail trip to Chicago to exhibit at the International there. It was no discredit to us to be beaten in such classes as were shown there.

This is the last call for the mammoth sale of J. A. S. Macmillan, Brandon, to be held in Brandon the last day of January, 1902. As we have stated before, this offering will include high-class Clydesdales, principally brood mares in foal, all of them well bred and good individuals; several useful grade horses and a number of registered Shorthorns in calf to a well-bred, well-made Shorthorn bull; 15 grade cattle and a number of pure-bred Berkshire sows will fill up the sale list. The venue will be held at Dr. Fisher's sale stables on 8th street, Brandon, midway between the Beaubier and Palace Hotels. Sale will commence promptly at 10.30 a. m. The registered stock will not come under the hammer until the afternoon. The terms of the sale are very liberal, and should be no hindrance to prospective buyers. Approved joint notes will be drawn, payable November 1st, 1902, bearing interest at 8 per cent. per annum; 5 per cent. discount will be allowed for cash. Go to this sale whether you intend to buy or not. You will meet old friends, besides other breeders, an opportunity no up-to-date farmer can afford to miss. From Mr. Macmillan's studs and flocks have come winners galore. Their offspring and some of the individuals themselves will come under the hammer of the auctioneer that day. Brandon has plenty of hotel accommodation, and good railroad connections, both C. P. R. and C. N. R.

\$9,000 FOR A HEREFORD BULL.

At the dispersion sale, at Chicago, on Jan. 7th, of the herd of Hereford cattle belonging to Mr. Thos. Clark, of Beecher, Ill., the three-year-old bull, Perfection, champion at International Show, 1901, was sold to G. H. Hoxie, Thornton, Ill., for \$9,000. The highest-priced female was Polly Peacham, sold at \$900. The average for females was \$388, and the average for all Mr. Clark's herd, \$507. At the close of the sale it was announced that Mr. Clem Davis had sold his bull, Babe, the sire of Perfection, to Jesse Adams, Mowena, Ill., for \$10,000, which is the highest price ever paid for a Hereford bull.

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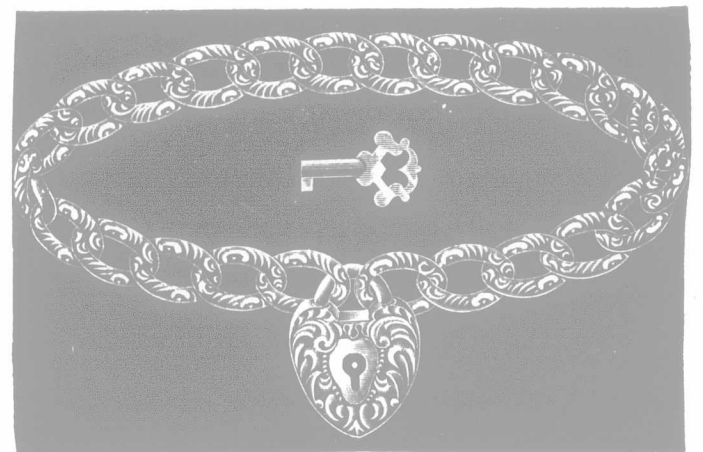
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| No. 4. | No. 14 Silver Watch..... | 8 |
| No. 5. | 7 Jeweled Gent's Elgin in 3 oz. Nickel Case..... | 10 |
| No. 6. | 7 Jeweled Gent's Elgin in Gun Metal Case..... | 11 |
| No. 7. | 7 Jeweled Gent's Elgin in Sterling Silver Case.... | 14 |
| No. 8. | 7 Jeweled Gent's Elgin in 20-year Filled Case..... | 18 |
| No. 9. | 7 Jeweled Gent's Elgin in 25-year Filled Case..... | 21 |
| No. 10. | 15 Jeweled Gent's Elgin in 3 oz. Nickel Case..... | 15 |
| No. 11. | 15 Jeweled Gent's Elgin in Gun Metal Case..... | 15 |
| No. 12. | 15 Jeweled Gent's Elgin in Sterling Silver Case.... | 18 |
| No. 13. | 15 Jeweled Gent's Elgin in 20-year Filled Case..... | 21 |
| No. 14. | 15 Jeweled Gent's Elgin in 25-year Filled Case..... | 25 |

Ladies' Watches.

| No. | Description | New Subscribers. |
|---------|---|------------------|
| No. 15. | Gun Metal Swiss Chatelaine..... | 4 |
| No. 16. | Sterling Silver Swiss Chatelaine..... | 6 |
| No. 17. | Nickel American O. F., large size..... | 5 |
| No. 18. | Gun Metal American O. F., large size..... | 5 |
| No. 19. | Nickel, small size..... | 9 |
| No. 20. | Gun Metal, small size..... | 10 |
| No. 21. | Sterling Silver, small size.... | 10 |
| No. 22. | 7 Jeweled Elgin in 20-year Filled Hunting Case.... | 20 |
| No. 23. | 7 Jeweled Elgin in 25-year Filled Hunting Case.... | 22 |
| No. 24. | 15 Jeweled Elgin in 20-year Filled Hunting Case.... | 23 |
| No. 25. | 15 Jeweled Elgin in 25-year Filled Hunting Case.... | 25 |

Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows:

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

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O.F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.

No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

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

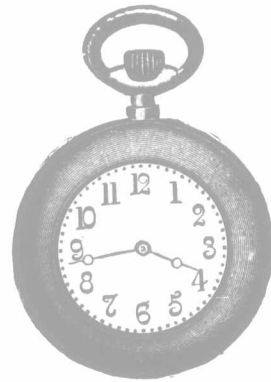
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

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

The WM. WELD CO., Ltd., Winnipeg, Man.



The Ready Built **ELLWOOD** STEEL WIRE FENCE Stays Up

So nicely woven of strong steel wire that the tension is the same all over. Stretch it tight. Contraction amply provided for. Low in price; high in quality. Sold everywhere. If your dealer hasn't it, write to

American Steel & Wire Co. Chicago, New York, San Francisco, Denver.

Government Approval of the Spramotor.

The following extracts will show how the Spramotor is regarded by some of the leading Government officials. They have purchased the Spramotor only after making elaborate and exhaustive tests. These facts should mean something to you. Profit by the experience of others—

This is to certify that at the contest of spraying apparatus held at Grimsby, under the auspices of the Board of Control of the Fruit Experimental Station of Ontario, in which there were eleven contestants, the Spramotor Co., of London, Ont., was AWARDED FIRST PRIZE.

H. L. HUIT & M. PETIT, Judges. Dept. of Agriculture, Toronto.

I have great pleasure in stating that the Spramotor ordered from your Company has given entire satisfaction.

JOHN DRYDEN, Minister of Agriculture.

The London Spramotor combination is the only reliable pump I know for applying mechanical mixtures.

GEORGE E. FISHER, Chief Inspector, San Jose Scale Investigation.

Dept. of Agriculture, Ottawa.

I used your Spramotor in my apple orchard of 1600 trees. It is easy to handle and perfect in action. I never had my orchard looking cleaner than at the end of last season.

GEORGE JOHNSON.

Cattle Quarantine Station, Quebec.

I have much pleasure to inform you that the outfit bought from you for disinfecting is giving us the greatest satisfaction.

J. A. COUTURE, D.V.S., Inspector.

I have the honor to apply to you for five Spramotor machines of the same size, No. 1-B, and one Spramotor Knapsack. I remain, gentlemen, Your obedient servant, NICKOLAS KRUKOFF Representative of the Ministry of Agriculture, Russia.

Write a postal card with your address to THE SPRAMOTOR CO., LONDON, ONT.

And they will send you a complete treatise on Spraying and full particulars regarding their Spraying Machines.

THE **Canadian Packing Co.** LONDON, ONT.

ASK YOUR GROCER FOR **CPG** LARD, BACON, HAMS, CANNED MEATS.

GUARANTEED **Choice and Pure.** GOLD MEDAL, PARIS, 1900.

CHOICE **Scotch Collie Pups** FOR SALE. BOTH SEXES.

D. G. GANTON, "Holwell Manor Farm," ELMVALE, ONT.

GOSSIP.

The British Royal Commission on Tuberculosis, who have accepted Sir James Blyth's generous offer to place at their disposal for experimental purposes two of his farms at Stansted, Essex, will commence work there early in the year, the necessary structural alterations now being in hand. The Commission is the outcome of a statement made by Prof. Koch at the International Congress on Tuberculosis held in London last summer, that human and bovine tuberculosis are two totally different diseases. The experiments which it is intended to carry out at these Essex farms are expected to occupy about two years, and will extend over a very wide range, and, in addition to all kinds of bovine animals, will include several other species.

GOSSIP.

The first annual meeting of the shareholders of the Brandon Binder Twine Co. will be held in the City Hall on Jan. 22nd, at 2.30 p. m. Directors for the coming year will then be elected, and other important business transacted.

The following were elected officers for the ensuing year at the annual meeting of the Regina Agricultural Society: President, G. Spring Rice; 1st Vice-President, G. Michaelis; 2nd Vice-President, R. H. Williams. Directors—Robt. Sinton, W. M. Williamson, F. N. Darke, S. A. Clark, W. C. Pettingill, Regina; J. B. Hawkes, Balgonie and Hickvale; Robt. McKell, Camden; A. McLaren, Cottonwood and Fairville; P. Brett, Edenwald and Hedgesford; H. C. Lawson, Kennel and Longlaketon; S. E. Armstrong, Lumsden and Carsdale; Jas. Badley, Pense and Coulee; S. Beach, Sherwood; W. C. Cullum, Rose Plain; Cornelius Martin, Wascana.

At the annual meeting of the Brandon Machine Works Company, the following directors were elected for the ensuing year: E. H. Johnson, D. A. Hopper, R. M. Matheson, H. L. Adolph, R. Lowe, James Glass, D. H. Scott, James Shiffrit. The officers are as follows: President, D. A. Hopper; Manager, James Shiffrit; Assistant Manager, F. D. Adolph; Sec.-Treas., Wm. Hopper.

MORE CLYDESDALES FOR CANADA.

"Messrs. Dalgety Brothers," says the Scottish Farmer, "have recently shipped five well-bred Clydesdale stallions to James Dalgety, London, Canada. Two they purchased from Mr. Peter Crawford, Dargavel, Dumfries; two from Mr. James Drummond, Pitlochrie, Dumfriesshire; and one from Mr. Scott, Biggie, Kirkcaldy. These are useful, thick horses of superior breeding and pedigree. Mr. Thomas Smith, Bacon Point, Chester, has sold the two choicely-bred horses, Chester Prince (11008) and Village Boss (11226) to Messrs. Bawden & McDonel, Exeter, Ont. These horses were both bred by Mr. Smith, and are superior animals. Both were got by the big, powerful, brown horse, Prince Pleasing (10268), a horse of great weight and substance, with a remarkable record in the showing. The dam of Chester Prince was the well-bred mare Red Rose (12663), by Macgregor (1487), from a good-breeding mare by the Stewarty premium horse, Scots Wha Hae (4006). The dam of Village Boss was that noted prize mare, Baroness (13609), bred at Springhill, and got by The Summit (9442), out of the dam of the champion Baron's Pride (9122). These horses should do good service in Canada."

CATTLE TESTING.

The Dominion Department of Agriculture have issued a circular stating that experience has shown it to be undesirable, for many reasons, to test dairy cattle with tuberculin from March 1st to October 1st. Those advanced in pregnancy cannot be safely tested, and the removal of animals from field to stable, flies, heat, etc., make the test unreliable. The Department, therefore, will not undertake tests during the period mentioned for dairymen or others. Applications must be made to the Department at Ottawa direct. The following is the complete list of official veterinarians appointed to test (at any time) breeding cattle intended for export to the United States: Prince Edward Island—W. H. Pethick, V. S., Central Bedouque. Nova Scotia—William Jakeman, D. V. S., Halifax. New Brunswick—J. H. Frink, V. S., St. John. Quebec—J. A. Couture, D. V. S., Quebec; V. T. Daubigny, D. V. S., Montreal; A. E. Moore, D. V. S., Montreal; C. H. Higgins, D. V. S., Montreal. Ontario—Wm. Stubbs, V. S., Toronto; J. H. Tennent, V. S., London; Geo. H. Higginson, V. S., Iockland. Manitoba—Chas. H. Little, V. S., Winnipeg. Northwest Territories—J. C. Hargrave, D. V. S., Medicine Hat. British Columbia—J. B. Hart, D. V. S., Vancouver.

American Clydesdale Breeders.

At the recent annual meeting of the American Clydesdale Society, in Chicago, Secretary Alex. Galbraith presented his annual report, showing \$2,650 in the treasury, which a few years ago was about empty. Fifty-seven new members have joined the Association since last meeting. Reference was made to the sweeping victories achieved by Clydesdale geldings in harness at the International Show, and a committee was appointed to draw up a resolution expressive of the appreciation by American Clydesdale breeders of the enterprising and generous action of Messrs. A. and W. Montgomery, of Scotland, in sending across so many valuable geldings for competition at Chicago show, at a great pecuniary sacrifice. Alex. Galbraith retired from the office of Secretary and Treasurer, which he has held for the last seven years, and H. B. Ogilvie was elected to that position. N. P. Clarke was re-elected President, and Alex. Galbraith Vice-President. The Executive Committee consists of those three officers, with the addition of James Z. Melay, Robert Miller, David McCrae, and Andrew Davidson. The following twelve members were chosen as Directors: Wm. Graham, Ontario; A. B. McLaren, Ill.; J. H. Bass, Indiana; Robt. Holloway, Ill.; August Post, Iowa; Wm. Smith, Ontario; H. Biedenfeld, Ill.; Andrew Crawford, Iowa; E. H. Peed, Indiana; B. R. Harrison, Ohio; J. A. S. Macmillan, Manitoba; and J. A. Turner, N.-W. T.

HAVE YOU TESTED "SALADA"

CEYLON TEA? It is pure, delicious and refreshing. It is sold only in lead packets. **BLACK, MIXED or GREEN.** Send us your name on a postal, mentioning whether you drink Black, Mixed or Green, and we will mail you free sample. Address: **"SALADA," TORONTO.**

We'll Take the Lump.

We agree to take off a lump of any character from either horses or cattle with Fleming's Lump Jaw Cure or forfeit all pay. This certain remedy for Lump Jaw has proved equally effective for cure of Spavin, Splint, Curb, Ringbone, etc. Our guarantee covers lumps of every description. Very easy to use; can't harm; doesn't scar.

FLEMING'S LUMP JAW CURE

is sold by most druggists, or will be sent prepaid by mail to any address. Price \$2 per bottle, or three bottles for \$5.

FLEMING'S LUMP JAW CURE

Northcote, Ont., July 31st, '99.

Fleming Bros., Gents.—In my practice here in doctoring cows, horses, etc., I have come across your medicine for Lump Jaw. My experience with the medicine has been very satisfactory, and I find it does all you claim for it.

WESLEY PHILLIPS, V. S.

A postal will bring our new illustrated Pamphlet to readers of this paper.

FLEMING BROS., Chemists
Room J, 58 Bay Street, TORONTO, Ont.

NO SPAVINS

The worst possible Spavin can be cured in 45 minutes. Curbs, Splints and Ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write to-day. Ask for Pamphlet No. 1.

FLEMING BROS., 58 Bay St., Toronto, Ont.

IMPORTANT SALES OF PURE-BRED STOCK

JOHN THORNTON & CO. will SELL BY AUCTION during NEXT SPRING the following first-class Herds:—

THURSDAY, FEBRUARY 20.—LORD BARNARD'S Herd of SHORTHORNS, at the Raby Home Farm, Staindrop, Darlington.

FRIDAY, MARCH 14.—MR. CARSON'S JERSEYS, principally of the famous "Golden Lad" strain, at Theydon Bois, Essex.

WEDNESDAY, MARCH 19.—The entire and celebrated Herd of RED POLLED CATTLE belonging to J. E. PLATT, Esq., at Howbury Hall, Bedford.

THURSDAY, MARCH 20.—LADY DE ROTHSCHILD'S JERSEYS, at Aston Clinton, Tring.

FRIDAY, APRIL 11.—CAPT. DUNCAN'S Herd of SHORTHORNS, at Waresley Park, Sandy.

Catalogues may be had of JOHN THORNTON & Co., 7 Princes Street, Hanover Square, London, W., who undertake commissions, shipment and insurance. -om

SECOND ANNUAL ONTARIO PROVINCIAL AUCTION SALES

OF PURE-BRED CATTLE AND SWINE

will be conducted under the auspices of The Dominion Cattle, Sheep and Swine Breeders' Associations

At OTTAWA, ONT., FEB. 12th, 1902, and at GUELPH, ONT., FEB. 26th, 1902.

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

Reduced Passenger Rates. Special Rates to Buyers.

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

A. W. SMITH, A. P. WESTERVELT,
President, Secretary,
Maple Lodge, Ont. Parliament Bldgs.,
Toronto, Ont.

It is hoped to interest some Winnipeg ladies in a cat show, as in other up-to-date cities it is considered the correct thing to exhibit the feline beauties.

FOR SALE: TWO EXTRA GOOD **SHORTHORN BULLS**

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

YORKSHIRE SWINE—BOARS AND SOWS. -om

RICH. GIBSON, DELAWARE, ONT.

GREAT DISPERSION SALE OF Shorthorn cattle, Cotswold sheep, German Coach fillies and Berkshire Sows.

I will sell by public auction, on Wednesday, 29th January, 1902, about 40 head of Shorthorns—23 females, 5 bulls, the rest calves. Also 19 Cotswold ewes, 4 ewe lambs; 3 fillies, by the German Coach horse, Amandus; 3 Berkshire sows. Stock in fair condition. Terms: 9 months' credit, on approved security, or 5 per cent. discount per annum.

Farm 10 miles south of Stratford, G.T.R. Teams will be at Stratford on morning of sale to convey intending purchasers to farm. Catalogues mailed on application after January 8th.

Capt. T. E. Robson, M.P.P. Chas. Youngs,
(Auctioneer.) Brookdale P.O.,
ONT.

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 prize winner. **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.

CLYDESHIRE HORSES

SCOTCH SHORTHORNS, LEICESTER SHEEP.

Stock of different ages and sexes for sale. Two stallions, colts, and a few young bulls now ready. Also choice rams and ewes. Our flock won 1st prize at Toronto, Ottawa and Chicago in 1900. Write for what you want. My motto: The best is none too good.

J. M. GARDHOUSE, Rosedale Stock Farm,
Malton, G.T.R.; Weston, C.P.R. Highfield, Ont.

BAWDEN & McDONEL, EXETER, ONTARIO,

IMPORTERS OF **Clydesdales, Shires** AND HACKNEYS.

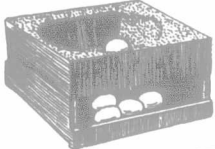
OUR last importation of 14 Stallions comprises winners at the leading shows in England and Scotland; all of which we are offering at living prices, including the champion Shire stallion, Belshazzar. -om

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

PLEASE MENTION FARMER'S ADVOCATE.

"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.



Corn Planting

must be well and carefully done, as the future crop depends upon it. For all purposes, in any soil, on all kinds of ground nothing equals the
SPANGLER CORN PLANTER.
It saves time, labor, money and insures the crop. You know when it is working; you can see the corn on its way to the ground. Made with or without fertilizer attachment. New device for sowing peas, beans, castor, corn, etc. We also make the famous Spangler Low-Drop Grains and Fertilizer Drill. Write for catalog and circ.
SPANGLER MANUFACTURING CO., 518 Queen St., York, Pa.

Clydesdales and Ayrshires

Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry. -om
ROBERT NESS & SONS, Howick, Que.

4 Imp. Clydesdale Stallions

31 Imported Shorthorn Cows and Heifers.
7 Canadian-bred Cows and Heifers.
3 Imported Shorthorn Bulls.
5 Canadian-bred Bulls. -om
GEO. ISAAC & BROS., BOMANTON, ONT.
COBourg STATION, G. T. R.

Wm. Brash, Ashburn, Ont.,

BREEDER OF -om
CLYDESDALE HORSES and SHORTHORN CATTLE.

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

FOR SALE: CLYDESDALES and SHORTHORNS.

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

6-POLLED ANGUS BULLS—6

Six young bulls, from 6 to 16 months old; prize-winners among them. All for sale. -om
Alex. McKinnon, Hillsburg P. O. and Station.

FERRY'S SEEDS

For
**The Farmer
The Gardener
and
The Housewife**

They cost a little more. They are worth a great deal more than the ordinary kind. Sold everywhere. 1902 annual free.
D. M. FERRY & CO.
Windsor, Ont.

90 HEAD

High-quality,
Early-maturing

Herefords

Prizewinners.
Young bulls,
cows,
heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. -om
H. D. SMITH, COMPTON, QUE.

HEREFORDS FOR SALE.

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

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Scotch-bred Shorthorns—8 young bulls, 10 to 15 months old—are advertised for sale in this issue, also several heifers, and collie pups, by L. K. Weber, Hawkesville, Ont.

Shorthorn breeders will be interested in the information that the cow, Missie 153rd, sold by Mr. W. S. Marr, Uppermill, Aberdeenshire, at the International Live Stock Show and sale at Chicago in December last, and purchased by Messrs. W. C. Edwards & Co., produced a dark roan heifer calf on January 8th, which is regarded as a great acquisition to their herd.

We are in receipt of the catalogue of the 50 head of Red Polled cattle, property of Mr. Jas. E. Platt, Bedford, England, advertised in the Farmer's Advocate to be sold by auction on March 19th by John Thornton & Co., auctioneers. This is a noted dual-purpose and dairy herd of Red Polls, and the pedigrees and footnotes show that representatives of the herd have been very successful prizewinners at the Royal and other leading shows in Great Britain, while the portraits indicate beautiful animals, and the records at English dairy shows as well as in America testify to the excellence of the breed as milkers, and the cattle give every appearance of being good feeders and flesh-producers, and the absence of horns is also in their favor. There is room for this useful breed in Canada, and any one desiring to give them a trial should apply for the catalogue as per the advertisement.

Mr. Edwin Battye, Gore Bay, Ont., writes: "Our importation arrived here on the 3rd of December. They are a nice lot of cattle: Four beautiful yearling heifers, English foundation, Scotch topped, three of them by Rosario (75471), by Wiltshire Count (69824); dam Rose Blossom by Clan McAlpine, grandam Rosebush, by Gravesend. Another yearling, Picture 4th, is from Golden Robin, out of Picture 2nd by Premier Pansy, bred by John Garne, of Great Rissington a son of his celebrated cow Fatted Pansy. Golden Robin (68713) was bred by J. D. Willis, by Roan Robin (57992), dam Golden Sunshine by Royal James. Golden Robin won 1st at Oxfordshire Show, 1st at Royal Counties Show, 1st at Norfolk Show at Yarmouth, and 2nd at Lincolnshire Show in 1894. Roan Robin was used by Mr. Duthie, J. D. Willis, and in the Queen's herd at Windsor, and was bred by A. Cruickshank. These are beautiful heifers, full of quality, sweet and well-proportioned, especially good in heart-girth. One cow, Winsome Beauty 3rd, is a rich roan and is Scotch-bred, three years old last March, bred by Messrs. Law, in Scotland, and sold at their sale last fall for 150 guineas. She is in calf to Archibald, sold at a high price for export, and he was by Lavender Archer, a Duthie-bred bull by Scottish Archer, out of a Sityton Lavender cow. Chippenham 1st prize and champion at Chippenham Show, 2nd at Shire Show, 2nd 1897, 3rd at Somerset Show at Oxfordshire, and reserve and H. C. at B. W. F. Show at Cardiff in 1898. Winsome Beauty 3rd was 1st-prize yearling at Elgin and Nairn in Scotland, and 1st-prize three-year-old at Doncaster in 1901. She is sired by Lord James, bred by C. E. Law, and won 1st prize and the Shorthorn Society's prize at Aberdeen, 1st at Keith and Elgin in 1895. This is a gem of a cow, good color, and thick-fleshed and a grand heifer and of great substance, yet small and nicely-balanced—an all-round heifer calf, and she has a beautiful heifer calf, the image of herself, by Sovereign (77937), sired by Pride of Fame (73238), dam Sunbeam 3rd by Cairnmoor (62250), and bred by Mr. I. McWilliam. Sovereign won 1st at Keith. Another good one is Jilt 22nd, red-roan, sire Spicebox. She is of fine Scotch type, a large cow, long, deep and wide, great spring of rib, good in the crops and heart-girth, and a grand breeder, her last year's calf being bought for the King's herd for 75 guineas at Mr. H. Dudding's sale, and considered one of the best yearlings at Sandringham now. She has now a good heifer calf at foot by Pride of Fortune (73240), bred by Mr. Duthie, sire Pride of Morning (64546), and out of Flora 92nd, by William of Orange. She is now in calf to Royal Emperor (79809), Imp., bred by W. S. Marr, the bull we intend to keep for our stock bull, described in "Advocate" of the 20th of Nov., 1901.

FOR SALE:

Three young St. Lambert bulls; best breeding, color and dairy form. -om
T. PORTER, MOUNT DENNIS, ONT.

The Sunnyside Herefords.

Imp. Sunny Slope Tom 1st No. 8985 at head of herd. The blood of Lord Wilton, Garfield, Grove 3rd and Beau Real represented. Special offering: 5 bulls, from 8 to 11 mos.; 10 cows and heifers, from 11 mos. to 3 yrs. old. Inspection and correspondence solicited. -om
O'NEIL BROS., Southgate, Ont.
Lucan station, G. T. R. Hederton station, L., H. & E.

45 Head Imported and Home-bred Scotch Shorthorns of the best families and of the greatest merit

WILL BE SOLD BY AUCTION, ON

Wednesday, the 5th day of February, 1902,

BY
Robert Miller, Stouffville, Ontario.

Sale will consist of absolutely straight cattle of the most valuable ages and in the most valuable condition, of the following families: Cruickshank Village Girls, Village Blossoms, Lavenders, Brawith Buds, Broadhooks, Butterflies, Duchesses of Gloster, Floras, Nonpareils, and Secrets; Marr Missies, Claras, Princesses Royal, and Floras; Campbell Clarets and Minas.

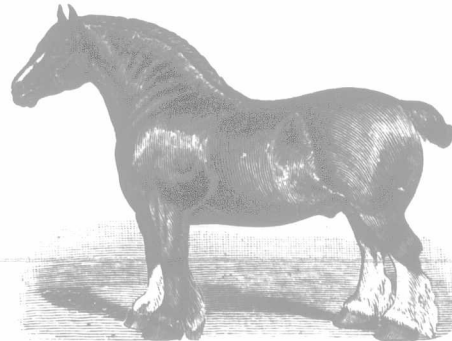
THERE WILL BE NO RESERVE. ASK FOR CATALOGUE.

R. W. BARCLAY, WEST LIBERTY, IOWA, AUCTIONEER.

Stouffville is 27 miles from Toronto. Farm 1 1/4 miles from station.

Annual meeting of Shorthorn Association will be held in Toronto day before sale.

Imported Stallions for Sale.



JAMES DALGETY, 229 HYMAN STREET, LONDON, ONTARIO.

THIRD consignment, per S.S. "Orthis" from Glasgow, due to arrive end of January, 1902.

DALGETY BROS., DUNDEE, SCOTLAND., the largest importers and exporters of horses in Canada, have on hand just now a choice selection of above, including several prizewinners. Our third consignment includes some extra good horses, being sired by such noted sires as Mains of Airlies, King's Knight, Royal Stamp, etc., etc. They combine size, quality and action, and all good colors; age, from two years upwards; and will be for sale at

BLACK HORSE HOTEL,

FRONT STREET, TORONTO, ONT.,

on Tuesday, 4th February, for one week; after that at our own stables, London, Ont. Any one in need of a good stallion should not miss seeing our stock before buying. Prices right. Apply: -om

IMPORTED JERSEY BULL

FOR SALE:

The prizewinning sire, imported

DISTINCTION'S GOLDEN

Is docile and sound. His get have won the family prizes for three years at Toronto Exhibition. -om

APPLY

ROBERT DAVIES,

THORNCLIFFE STOCK FARM, TODMORDEN, or 34 Toronto St., Toronto.

HIGH PARK STOCK FARM.

GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited. **A. M. & ROBERT SHAW,** P. O. Box 294, Brantford, Ont.

Scotch-bred Shorthorns AT OAK GROVE ARE famous for size and quality. Eight bulls from 10 to 15 months old; reds and roans. Several heifers at prices that will save you money. Also Collie pups. **L. K. WEBER,** Hawkesville P. O., Ont., Co. Waterloo, St. Jacobs Station, G. T. R. -om

J. & W. B. WATT,

SALEM, ONTARIO

(POST AND TELEGRAPH OFFICE),

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

Our herd contains such families as Matchless, English Ladys, Mildreds, Village Buds, Missies, Stamford, Clarets, and Marthas. Royal Wonder = 34682 =, junior champion of 1901, now heads the herd. A choice lot of young bulls and a few females for sale. We offer our whole flock of Leicesters for sale—thirty-five ewes and ewe lambs and fifteen rams.
Farms 2 miles from Elora Stn., G. T. R. and C. P. R., 12 miles north of Guelph.

THE REASON

You should use
THE WINNIPEG HEATER
Is because it will give you more comfortable and healthy heating at less expense. Our booklet will explain. -om
THE WINNIPEG HEATER CO. OF TORONTO, Limited.
71 Victoria St., TORONTO, CANADA.

SHORTHORNS, SHROPSHIRE, COTS WOLDS.

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 Shrop-hire and Cotswoold sheep. -om
JOSEPH BELL ESTATE, Bradford P. O. & Sta.

PLEASE MENTION THE
FARMER'S ADVOCATE

BELLEVUE SHORTHORNS.

Both sexes. IMPORTED AND HOME BRED. All ages.

Prizewinners at home and abroad.

EDWIN BATTYE,

GORE BAY P. O. AND PORT.

MANITOULIN ISLAND. -om

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. -om

John Miller & Sons, Brougham P. O.

CLAREMONT STATION, C. P. R. -om

Shorthorns

For Sale: Choice young cows and heifers in calf to imp. bull. A few choice heifer calves. Bulls of various ages. Shropshire ram lambs, out of Imp. Mansell-bred ewes. Prices moderate. -om

G. A. BRODIE, BETHESDA, ONT.

Stouffville Station, G. T. R.

Maple Lodge Stock Farm.

ESTABLISHED 1854.

SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale.

LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams, now for sale. Also Bronze turkeys. -om

A. W. SMITH,

Ailea Craig Station, Maple Lodge P. O., G. T. R., 3 1/2 miles. -om

JOHN DRYDEN,

BREEDER OF
CRUICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP.

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

To Rid Stock of Lice

AND ALL SKIN DISEASES.

Also to Keep Poultry Healthy

WEST'S FLUID

Which is also a SURE CURE OF CONTAGIOUS ABORTION. STANDARD SHEEP DIP IS CHEAP AND GOOD. Pedigree forms free to customers. Manufacturers:

The West Chemical Co'y,

om TORONTO, ONT.

Ag't. for Manitoba: **W. R. ROWAN,** 132 Princess St., Winnipeg

Does Not Disappoint.

The New Discovery for Catarrh Seems to Possess Remarkable Merit.

A new catarrh cure has recently appeared which so far as tested has been remarkably successful in curing all forms of catarrh, whether



in the head, throat, bronchial tubes, or in stomach and liver. The remedy is in tablet form, pleasant and convenient to take, and no special secrecy is maintained as to what it contains, the tablet being a scientific combination of Blood-root, Red gum and similar valuable and harmless antiseptics.

The safe and effective catarrh cure may be found at any drug store, under the name of Stuart's Catarrh Tablets.

Whether the catarrh is located in the nose, throat, bronchial tubes, or stomach, the tablets seem to act with equal success, removing the stuffy feeling in the head and nose, clearing the mucous membrane of the throat and trachea from catarrhal secretions, which cause the tickling, coughing, hawking and gagging so annoying to every catarrh sufferer.

Nasal catarrh generally leads to ulceration, in some cases to such an extent as to destroy the nose entirely and in many old cases of catarrh the bones of the head become diseased. Nasal catarrh gradually extends to the throat and bronchial tubes and very often to the stomach, causing that very obstinate trouble, catarrh of the stomach.

Catarrh is a systemic poison, inherent in the blood, and local washes, douches, salves, inhalers and sprays can have no effect on the real cause of the disease. An internal remedy which acts upon the blood is the only rational treatment, and Stuart's Catarrh Tablets is the safest of all internal remedies, as well as the most convenient and satisfactory from a medical standpoint.

Dr. Eaton recently stated that he had successfully used Stuart's Catarrh Tablets in old chronic cases, even where ulceration had extended so far as to destroy the septum of the nose. He says: "I am pleasantly surprised almost every day by the excellent results from Stuart's Catarrh Tablets. It is remarkable how effectually they remove the excessive secretion and bring about a healthy condition of the mucous membranes of the nose, throat and stomach."

All druggists sell complete treatment of the Tablets at 50 cents, and a little book giving the symptoms and causes of the various forms of catarrh will be mailed free by addressing F. A. Stuart Co., Marshall, Mich.—Adv.

Health and Happiness

POTENTIAL ELEMENTS IN NATIONAL SUCCESS.

SHREDDED WHEAT

Produces Health

Contains the whole wheat and embodies all the elements of nutrition necessary to restore the vital energy expended by the exactions of modern civilization.

Shredded Wheat for sale by all grocers.

FOR SALE:

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

GOSSIP.

O'Neil Bros., Southgate, Ont., breeders of Hereford cattle, whose advertisement appears in this paper, call attention to an error in the Gossip, re their herd, in December 20th issue, page 816, credit being there given their bull, Sunny Slope Tom, for the winning of the championship at the Trans-Mississippi Show at Omaha in 1896, instead of his sire, Wild Tom, who really had that honor, the son at the head of the Sunnyside herd of Messrs. O'Neil being unborn at that time.

The 19th annual meeting of the Holstein-Friesian Association of Canada will be held at the Palmer House, Toronto, on Tuesday, February 4th, 1902, at 10 o'clock, p. m. The Executive Committee will meet at 10 o'clock. Mr. Matt. Richardson, Caledonia, gives notice that he will move that the fee for registration of imported animals be raised. Everyone interested in Holstein-Friesian cattle is invited to attend. Buy ticket one way and ask for certificate to secure reduction for return. Members will please note that the annual fee for 1902 is due February 1st. G. A. GILROY, Pres. G. W. CLEMONS, Secy.

N. M. Hain, breeder of Tamworth hogs, St. George, Ont., writes: "Trade has been brisk all fall. The yearling boar advertised in your last issue is sold to Jno. McKellar, Belmont. Among many other sales were one No. 1 boar and two sows, one out of Thrifty Maid 1881 and one out of the silver medal sow, to W. W. Grooms, of Eberts, Ont., who is starting a herd of choice Tamworths."

Forest Stock Farm is situated in Wellington Co., Ontario, four miles west of the Village of Hillsburg, on the Elora branch of the C. P. R., and is the property of Mr. Alex. McKinnon, breeder of choice Polled Angus cattle, who has been breeding this class of cattle for a number of years. His herd, now numbering about 22 head, is made up of some especially choice animals, both imported and home bred. Mr. McKinnon recently sold eight head of females to Mr. W. J. Smith, of Michigan, who said he had seen no better herd of Polled Angus cattle in either the United States or Canada than this. The six young bulls advertised for sale in this issue are an exceptionally nice lot, of the low-down, blocky kind, smooth to a turn, with sleek, glossy skins, and bred in the purple. Parties wishing to purchase a bull of this great beef breed, which swept the championship list at leading British shows last year, will do well to look after this lot if something really good is wanted. A letter to Mr. McKinnon at Hillsburg P. O., Ont., will bring all the desired information.

BRAMPTON JERSEY HERD.

The young bulls advertised in this issue by the old firm of B. H. Bull & Son, Brampton, Ont., should attract the attention of those seeking bulls to head their herds. The Brampton herd is the only Jersey herd that is headed by two bulls that have won the sweepstakes at the Toronto Exhibition. One of these bulls was bred on the Island of Jersey and the other one is of St. Lambert breeding. They are both descended from very heavy milking strains, and their individual merit is proven by their winnings, so that by crossing either of these bulls with the celebrated females of the herd the proprietors will be able to supply their customers with stock of the best imported strains or of the old standard St. Lambert breeding.

The three St. Lambert bulls advertised in this issue are all sired by a pure St. Lambert bull, whose dam has an official record of 16 lbs. 5 1/2 ozs., and his sire's dam has a record of 16 lbs. 4 ozs. One of these bulls is out of Sweet Fairy, a very superior cow, that has given forty-five pounds of milk per day, testing over 6 per cent. Another is out of Princess Bonnie Bird, that gave 38 pounds of milk per day, on winter feed, with her second calf. The other one is out of Lily St. Lambert, a typical show cow, that gave 30 pounds of milk per day with her first calf.

Those who have followed the records of the show-rings will remember the prominence gained by the progeny of Brampton's Monarch (Imp.) at the leading Ontario Fairs in 1901. They won first on yearling heifer in milk, second on yearling heifer out of milk, second on heifer calf under one year, second and fourth on heifer calves under six months, first, second and third on bull calves under one year, first on bull calf under six months, at the Toronto Exhibition; first and second on yearling heifers, first and second on heifer calves, first, second and third on bull calves, and first on herd of calves, at London; first and second on yearling heifers, first on heifer calves under one year, first and second on heifer calves under six months, first and second on bull calves under one year, first and second on bull calves under six months, also sweepstakes as best female any age, on yearling heifer, and male sweepstakes on bull calf, at Ottawa. This is a record unequalled by the get of any sire, and his get are being sought after by leading Canadian breeders.

A QUICK, SHARP CUT hurts much less than a bruise, crush or tear. Done with the **DEHORNING KEYSTONE KNIFE** is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning a horn. Took highest award World's Fair. Write for free circulars before buying. Owned and Manufactured by B. H. MCKENNA, V. S., Pictou, Ont.

Gulline collars wear like Iron. Leather bodies, plated steel rims. Open or closed throats. Straw-stuffed or pneumatic in all styles and all sizes. Progressive dealers sell them, if yours doesn't, we'll ship to you direct and prepay the railroad freight to any part of Canada.

Best Farm Collars ever made.

Our 40 page illustrated Catalogue gives prices and tells all about them; we mail it free.

WANT ONE?

THE GULLINE HORSE COLLAR CO. GRANBY, P. Q. CANADA.



We beg to call your attention to a new and indispensable article in

Barclay's Patent Attachment

FOR THE CURE OF BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.

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.

LESS LABOR AND MORE MONEY ON THE FARM.

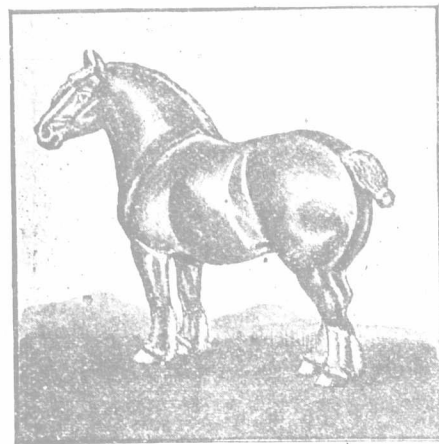
BUY A LOW-DOWN, THICK-FLESHED

Hillhurst Shorthorn Bull,

Scotch-topped, from Cumberland, Gloucestershire, or Canadian dairy strain, and raise DEEP-MILKING, BIG-FRAMED COWS AND BABY BEEF in nature's way. Many cows that do not pay board at the pail will give a handsome return in growing beef. Four handsome young bulls, seven to nine months old, reds and roans, by the celebrated imported sires, "Joy of Morning" and "Scottish Hero," for sale at moderate prices. Low freights.

M. H. COCHRANE, COMPTON CO., P. Q.,

G. T. R., 117 MILES EAST OF MONTREAL. om HILLHURST STATION.



LATELY IMPORTED A FRESH LOT OF

Glydesdale Stallions,

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

ROBERT GRAHAM, Ringwood P. O., Ont.

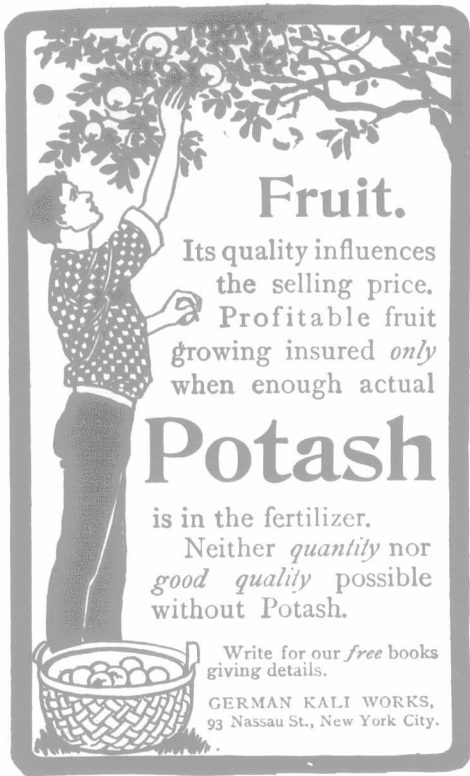
Stouffville Station, G. T. R., and telegraph office.

FOR SALE:

SHORTHORNS: 7 young bulls, from 8 to 14 mos. old, sired by Leta's Lad and out of deep-milking cows. H. E. HIND, Hagersville P. O., and Station, G. T. R. and M. C. R.

NOTICE.

IT IS CORRECTLY ESTIMATED that there are fully one million teapots called into requisition to infuse "Salada" Ceylon tea every day of our lives. If you drink Japan tea you should try "Salada" Ceylon green tea.



Fruit.
Its quality influences the selling price. Profitable fruit growing insured *only* when enough actual **Potash** is in the fertilizer. Neither quantity nor good quality possible without Potash.

Write for our free books giving details.
GERMAN KALI WORKS,
93 Nassau St., New York City.

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

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

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

SHORTHORNS (IMPORTED).
Five choice young bulls, from 6 to 10 months old, by Imp. Capt. Mayfly, out of Indian Chief dams.
JAMES A. CRERAR, om Shakespeare P. O. and Station, G. T. R.

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., Owen Sound, Ont.

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

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

"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.

LAKE VIEW STOCK FARM.
SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.
Meaford Station, G. T. R. North. om JAMES BOWES, Strathclairn P. O.

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.
om H. B. Webster, Box 66, FERGUS, ONT.

SHORTHORN BULLS.
Scotch-bred and rare good ones. Also females all ages. Write for particulars, or, better, come and see them. DAVID MILNE & SON, om Huron Co., Ont. Ethel, P. O. Ethel Station, G. T. R., half mile from farm.

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

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

GOSSIP.

John Miller & Sons, Brougham, Ont., write: "We have just sold to F. Martindale & Son, York, Ont., the young Shorthorn bull, Bandoleer. This bull is out of Imp. Red Bessie 2nd, and got by the imported Dutch bull, Sirius, the sire of so many good ones. Red Bessie 2nd is out of same cow as Lord Banff, sold at Mr. Platt's Chicago sale for \$5,100. With this breeding, Bandoleer should be a valuable sire. Mr. Martindale takes with this bull a good yearling heifer in Victoria 5th. Mr. W. R. Elliott, of Guelph, gets an extra good calf in Royal Hero, out of Lydia 7th, and sired by Royal Prince (7149). We are getting some nice calves from some of our best cows, all heifers so far. We still have an extra good red bull calf out of Imp. Red Bessie 2nd. Also a good red calf out of Imp. Rosa Hope 15th. We are getting lots of enquiries for young bulls, and have no trouble selling when buyers come to see them."

From December 17th to December 23rd inclusive, seven days, the Holstein-Friesian cow, Mercedes Julip's Pietertje 39480, produced 584 lbs. milk, containing 23.4857 lbs. butter-fat, equivalent to 29 lbs. 5.7 ozs. butter 80 per cent. fat, or 27 lbs. 6.4 ozs. 85.7 per cent. fat. This record was made by Minnesota Experiment Station, under the direction of Prof. T. L. Haecker. The last three days of the test this cow was under the supervision, day and night, of two representatives of that station. The product during these three days was 10,562 lbs. fat. The largest product for one day was 3,763 lbs., and was made when under constant watch, on the sixth day of the test. The average per cent. of fat during week was 4.02 per cent.; during the three days under constant watch-care it was 4.21 per cent.

Lawnridge Stock Farm is situated in the County of Peel, one mile from Norval station and seven miles from Brampton, G. T. R. The owner, Mr. J. L. Clark, whose post office is Norval, Ont., is extensively engaged in the breeding of pure-bred Jersey cattle. This herd, which now numbers 100 head, was founded over 30 years ago, and is probably the oldest Jersey herd in Canada, being founded on pure-bred animals imported from the United States by Mr. Hugh Clark, and none but the choicest of animals, both in breeding and individuality, have been used. As might be expected from such a rational and common-sense policy, the herd today stands in the very first rank among the Jersey herds of the Dominion, containing as it does representatives from the herds of Mr. H. Babcock, of Friendship, N. Y., and Miller & Sibley, of Franklin, Pa., besides a number of choice animals bred in the various leading herds in Canada. A glance at a few of the sires that have been used in this herd will show the great care that has been exercised to use only the very best: The great show bull, Nabob's John Bull 17866, winner of first at Toronto, sired by Canada's John Bull; Mighty Dollar 24051 (sired by the great 100 Per Cent), three times the Toronto champion, winner of the sweepstakes medal at London, and of numerous first prizes at county shows; St. Lambert of Primside 32694, sired by Canada's John Bull 5th; and Bim of Dentonia 52011, a Toronto champion, son of Prince Frank, three times a champion at London. The present stock bull, Pride of Alton 45404 (sired by Yogi 37702, dam New Trilby 103318), was bred by C. H. Babcock, N. Y., and is a grandson of the great Stoke Post 7th, and traces to Sweet Briar of St. Lambert, whose record is 22 lbs. 10 ozs. of butter in 7 days. As a show bull, besides his numerous local winnings, he won second prize at the Western Fair, London, in 1897. His lieutenant in service is Highfield's Prospect 59872, bred by Miller & Sibley, of Pa., sired by Ida's Rioter of Prospect 45285, dam Olivia Albertine 3rd 83438. The dam of Ida's Rioter has a record of 29 lbs. 10 ozs. in a week, and Ida's Rioter is considered by Messrs. Miller & Sibley their best stock bull. There are in the herd a number of heifers in calf to this bull; also a number in calf to Bim of Dentonia 52011, the bull that captured the medal and sweepstakes in Mr. Massey's herd at Toronto Exhibition in 1900.

Prominent among the dams in the herd is the cow, Lily of Avondale 75064, with a butter record of 17 lbs. 12 ozs. in 7 days, on ordinary winter feed. Another extra good one is John's May 75368, sired by Nabob's John Bull. This cow gave 60 lbs. of milk a day, and is an exceptionally sweet model of dairy-cow perfection. Irene Sibley 2nd 118286 is another good one sired by Sweetness Per Cent 30706. Still another is Princess Bonnie Bird 142824, sired by Lord Harry 3rd 27984. Among the younger females is a full sister to Duchess of Berlin, who gave five pails of milk a day, and sold for \$245 at Mr. Reid's sale at Berlin. Thus we might go on, for there are dozens of others nearly or quite as good, showing the desirable conformation and smoothness essential in the heavy-milking cow. Mr. Clark is offering a number for sale of both sexes and all ages, that for breeding and individuality are hard indeed to duplicate. Notwithstanding the time and care necessary in looking after his large herd of cattle, Mr. Clark finds time to pay considerable attention to his useful herd of Berkshire hogs, which contains some excellent animals. The foundation of the present herd was founded 20 years ago on animals purchased from the noted Snell herd, and high-class sires have been continuously used, keeping the character of the herd up to date in type.

Following is a summary of a list of public sales of pedigreed cattle, held in the United States in 1901:

| Breed. | No. sold. | Total. | Averages. |
|---------------------|-----------|----------------|-----------|
| Shorthorns..... | 4,045 | \$1,136,290 95 | \$280 91 |
| Angus..... | 894 | 248,025 00 | 277 43 |
| Herefords..... | 1,885 | 458,305 00 | 243 80 |
| Red Polls..... | 79 | 18,210 00 | 230 50 |
| Polled Durhams..... | 243 | 52,625 00 | 216 58 |
| Galloways..... | 68 | 14,115 00 | 207 57 |

Grand total..... 7,214 \$1,927,570 00 \$267 20
Highest prices.—Shorthorns—Bull (Imp. Lord Banff), \$5,100; cow (Imp. Missie 153rd), \$6,000; Herefords—Bull (Beau Donald 33rd), \$2,000; cow (Dolly 2nd), \$5,000. Angus—Bull (Orrin of Longbranch), \$1,300; cow (Imp. Krivinia), \$1,700. Polled Durhams—Bull (Lambard Ciged 3rd), \$1,000; cow (Bracelet of Stillwater), \$1,005. Galloways—Bull (Imp. McDougall 4th of Tarbreoch), \$2,000; cow (Imp. Lady Harden 4th), \$500. Red Polls—Bull (Gratwicke), \$565; cow (Prairie Blossom), \$1,005.

"Popularity Is a Proof of Excellence."

THE UNRIVALLED POPULARITY OF

Bibby's Cream Equivalent

As a Substitute for Milk or for Enriching Separated or Skimmed Milk for Calf-Rearing is explained by the fact of its being the best article on the market for this purpose.

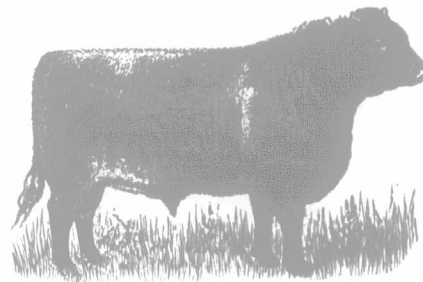
IT IS AN EASY MATTER TO TRY IT.

Price: 50-lb. bag, \$2.25; 100-lb. bag, \$4.00, f. o. b. Brandon. FOR SALE AT ALL CREAMERIES.

A. E. McKenzie & Co., Brandon, MANITOBA.

Spring Grove Stock Farm.

Shorthorn Cattle AND Lincoln Sheep.



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

T. E. Robson, ILBERTON, ONT.

ARTHUR JOHNSTON, GREENWOOD, ONTARIO.

BRANDER OF POST OFFICE AND TELEGRAPH OFFICE. IMPORTER OF SHORTHORNS ONLY.

FOR SALE: 9 imported bulls and bull calves. 11 home-bred bulls and bull calves, from imported cows and by imported bulls. 17 home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

RAILWAY STATIONS: PICKERING, G. T. R., 22 MILES EAST OF TORONTO. CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

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.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Come and see or write for prices.

Robert Hunter, Manager

for W. Watson Ogilvie, Lachine Rapids, Quebec.

Please Mention Farmer's Advocate.

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

SHORTHORNS (imported)
One bull, 2 years old, and 1 imported cow, and 7 home-bred heifers.
THOS. RUSSELL, EXETER, ONT.

SHORTHORNS.
One bull, 1 year old; two bulls, 7 months old; a few heifers of choice breeding and superior quality.
AMOS SMITH,
Listowel station, Trowbridge P. O., Ont.

EIGHT SHORTHORN BULLS FOR SALE—6 to 23 months old, two of them prizewinners. Write for breeding and prices. Terms easy.
F. MARTINDALE & SON,
YORK, ONT.

SHORTHORNS: We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir.
ROBT. GLEN, Owen Sound, Ontario.

SCOTCH SHORTHORNS.
We are now offering a few young bulls, from 6 to 11 months; also a few heifers, from 6 months to 2 years; all showing No. 1 quality.
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Two bull calves and two heifer calves, 6 to 9 mos. old. Twenty Tamworth boars and sows, soon fit to wean. Sows safe in pig and boars fit for service. All from Toronto prize stock. Prices right, quality considered.
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Scotch Shorthorns and Shropshire Sheep,
Are offering 10 Imp. bulls from 10 months to 2 years old; 10 home-bred bulls from Imp. stock, 10 to 15 months old; 40 Imp. cows and heifers, all ages. Home-bred cows and heifers all ages. Also a grand lot of ram and ewe lambs and yearling ewes for sale.

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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.
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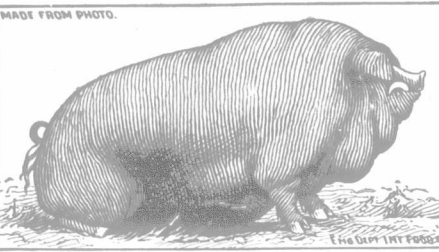
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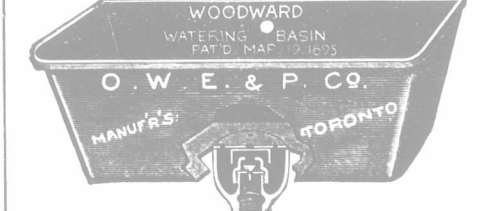
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SIX MILES FROM OSHTAWA STATION, G. T. R.

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Flock composed of selections from the best English flocks and their progeny. None but the best imp. rams used. Stock for sale.

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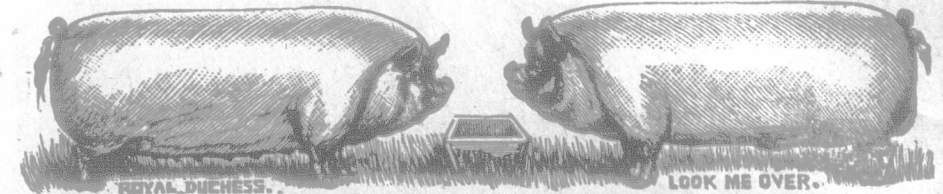
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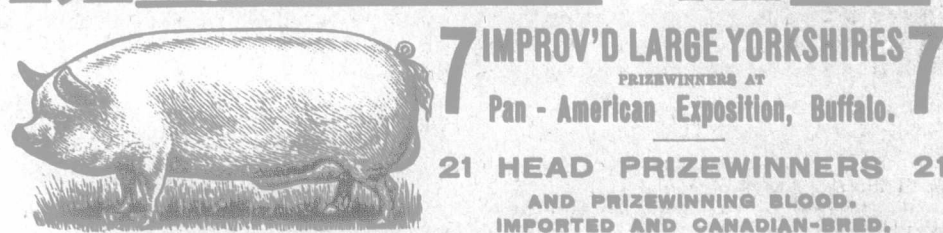
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My herd consists of sows imported from England; three of them (including a show sow) were selected from the herd of Geo. Green and were bred to his show boars. Young stock for sale (not akin). **JNO. LAHMER, VINE, ONT.**

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 Yours respectfully,
 M. G. RICH.
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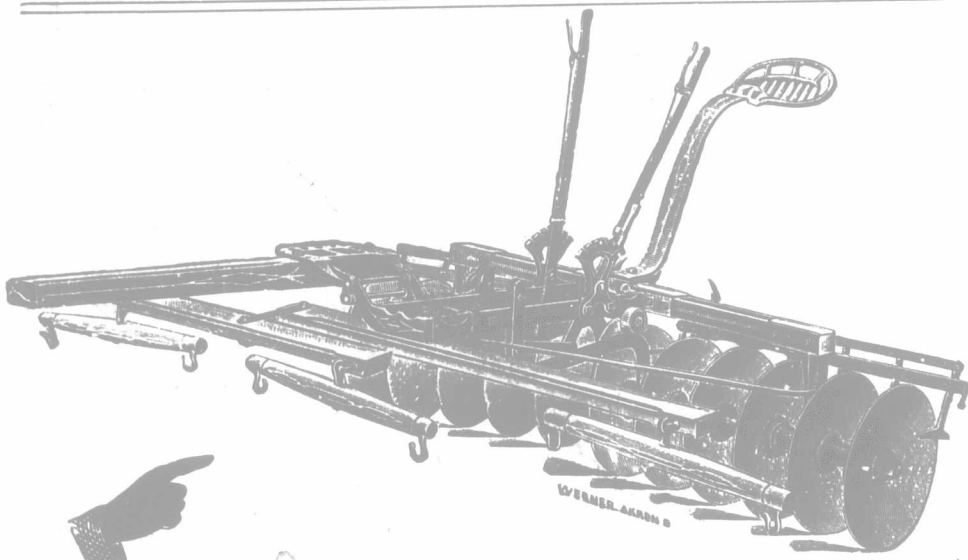
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GOSSIP.

The "Advocate" has recently received a set of the American Clydesdale Studbooks, from the ex-secretary, Alex. Galbraith, of Janesville, Wis. The new volume, now on the press, contains a history of this popular breed of draft horses.

W. A. McKinnon, chief of the Fruit Inspection Department, called at this office recently while in Winnipeg, where he installed J. J. Philp as Fruit Inspector for Manitoba. The new inspector's duties will be to see that Ontario does not unload any more worm-eaten wind-fallen apples on the West, and to encourage interprovincial trade in fruit.

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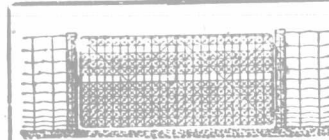


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