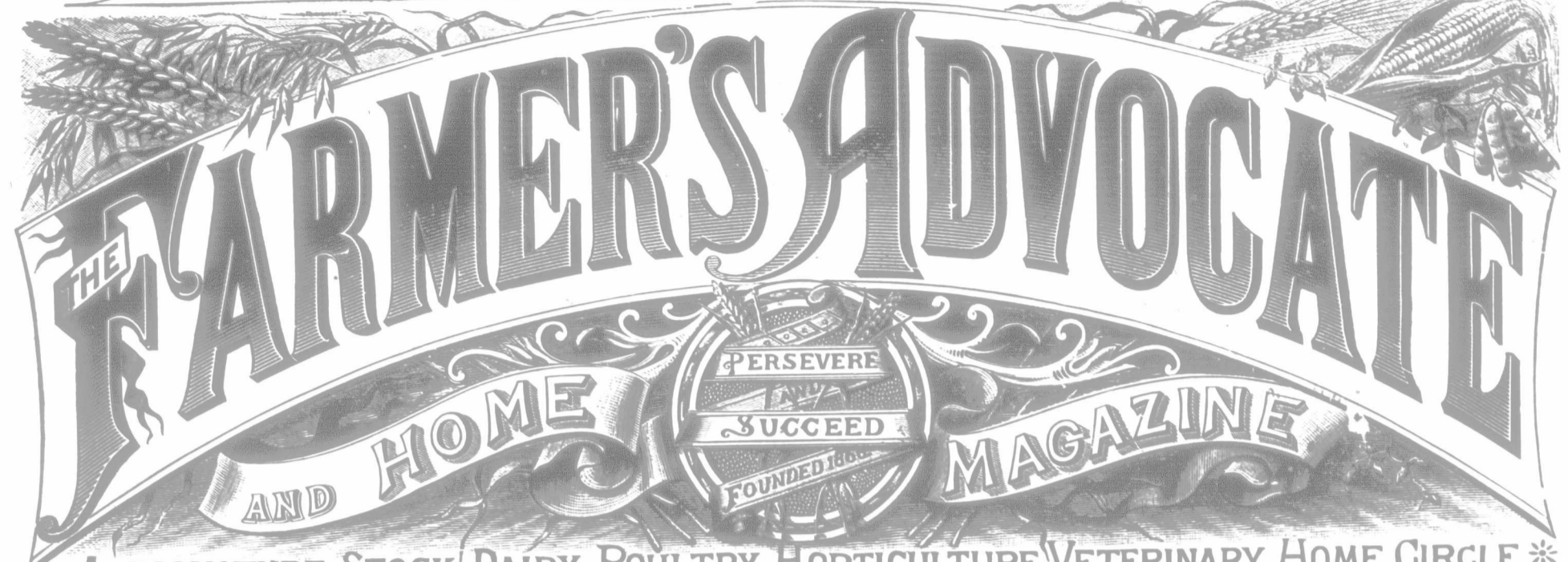


J.H. Orndale, 21st Feb. 20, 1901
Exp. Farm, Ottawa

MANITOBA AND WESTERN EDITION



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Vol. XXXV. WINNIPEG. DECEMBER 5, 1900. MANITOBA. No. 515

A Battle of Giants.

MR. A. HUGHES, druggist, Medicine Hat, reports a battle between two stallions on the Shannon ranch near that town. A heavy Clyde stallion got loose in the stable one night, and fiercely attacked a valuable blood stallion. When discovered in the morning, the poor brute was one mass of ugly bites from the withers to the ears, the mane being deeply bitten into the flesh. Every one who saw the horse the next day or two strongly advised shooting him—all but Mr. Hughes, who recommended Dr. Warnock's Ulcerkure, and persuaded Mr. Shannon to try it. The result was that in a couple of weeks all the wounds were completely healed. Mr. Shannon now believes that Ulcerkure will heal any kind of a wound, no matter how bad. Sold in large bottles at \$1.
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CONTENTS OF THIS NUMBER.

	PAGE.
ANNUAL MEETINGS OF AGRICULTURAL SOCIETIES	655
A MANITOBA DELEGATE TO THE MINNESOTA HORTICULTURAL SOCIETY'S MEETING	655
SUGAR BEET EXPERIMENTS	655
THE DAIRY INDUSTRY IN MANITOBA	655
NO MORE GRASS SEED	655
AN IRISHMAN ON BACON PIG FEEDING	656
CANADA'S COMING COMPETITOR	656
POINTERS IN FATTENING LAMBS	657
GROUP OF ARGENTINE REPUBLIC STUDENTS ATTENDING THE ONTARIO AGRICULTURAL COLLEGE (ILLUSTRATION)	657
ALBERTA OATS	657
BACON PIGS FROM BIRTH TO BLOCK	657
MR. JOHN L. HOBSON'S DEATH	657
GASOLINE FOR STOMACH WORMS	657
DELIGHTED WITH THE FOUNTAIN PEN	657
A WELL-PLANNED FARMHOUSE (ILLUSTRATED)	658
LIVE STOCK AUCTION SALES AT THE WINNIPEG INDUSTRIAL	658
MANITOBA WHEAT IN NEW ZEALAND	658
CREAM GATHERING SUPERSEDING WHOLE MILK SYSTEM	658
BOILED WEED SEEDS AND BRAN MAKE GOOD FEED	658
PLUMS FROM SEED	659
A FINE DISTRICT NORTH AND WEST OF WINNIPEG	659
LANGTON'S DANEGELT (ILLUSTRATION)	659
QUANTITIES OF SILAGE TO FEED	659
A REQUEST REGARDING RENEWALS	659
LOVELY VICTOR 2170 (ILLUSTRATION)	659
THE FAITHFUL SHEPHERD	660
JOHN MILLER (ILLUSTRATION)	660
PRESIDENT MCKINLEY AS A FARMER	660
LIQUID AIR REFRIGERATION	660
EXPANSION OF THE CANADIAN CHEESE AND BUTTER TRADE	661
GIPSY OF SPRUCE GROVE 6241 (ILLUSTRATION)	661
THE VALUE OF A GOOD UDDER	661
HOLDING BACK MILK	661
A PREVENTIVE FOR MILK FEVER	661
LADY OTTAWA AND HOVER-A-BLINK (ILLUSTRATION)	662
HOW TO HOUSE AND FEED YOUR POULTRY FOR PROFIT	662
MR. MEYER'S POULTRY HOUSE (ILLUSTRATION)	662
DISEASES OF POULTRY	662
RAISING BROILERS FOR PROFIT	662
PRIZEWINNING LINDCOLNS (ILLUSTRATION)	663
PRACTICAL POULTRY MEETING—MR. A. G. GILBERT IN MANITOBA	663
OUR POULTRY IN BRITISH MARKETS	663
THE FRAME	663
CATTLE BARN FOR 200-ACRE FARM (ILLUSTRATED)	664
THE ONTARIO WINTER SHOW	664
THE LATE JOHN L. HOBSON (ILLUSTRATION)	664
QUESTIONS AND ANSWERS:—VETERINARY: LUMP ON COW'S JAW; LUMP JAW IN COW; MAMMITS; OPHTHALMIA IN SHEEP; PERIOSTITIS IN MARE; LUMP ON STIFLE; STOCKING OR FILLING OF THE LEGS IN HORSES	665
MISCELLANEOUS: SICK CHICKENS AND TURKEYS; CATTLE REFUSING CORN FODDER; FEEDING RUSTY STRAW; FEEDING STRAW; PARIS AWARDS; SCURS ON A. A. CATTLE—DUCKS HATCHING; WARTS ON HEIFERS—WATERING STEERS—FEEDING DAIRY CATTLE—BROOD SOW	665-666
NOTES ON THE FRUIT CROP OF 1900	666
PRESERVING U. S. TIMBER AREAS	666
TEN TONS OF CANADIAN CHICKENS	666
LIVE STOCK EXPORTS FROM MONTREAL	666
HORSES FOR SOUTH AFRICA	666
A NEW MARKET PAPER	666
TORONTO MARKETS	666
HOME MAGAZINE	
THE FAMILY CIRCLE	667
THE CHILDREN'S CORNER	667
"WAIT TILL THE CLOUDS ROLL BY" (ILLUSTRATION)	667
THE ROYAL PALMS, HONOLULU, H. I. (ILLUSTRATION)	668
THE QUIET HOUR	669
GOSSIP	670, 672, 673, 674, 678, 679
NOTICES	672, 674, 676
ADVERTISEMENTS	633 and 634, 670 to 680

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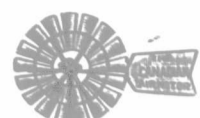
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VOL. XXXV.

WINNIPEG, MAN., AND LONDON, ONT., DECEMBER 5, 1900.

No. 515

Annual Meetings of Agricultural Societies.

The annual meetings of the Agricultural Societies of Manitoba are being held on December 10th. Many of them are announcing interesting Institute meetings in conjunction with the annual business gathering, and as the series of Farmers' Institute meetings held in November, under the auspices of the Department of Agriculture, were generally poorly attended, owing to the backwardness of the fall work, and the setting in of winter weather, the time of the annual meeting should form an excellent opportunity for inaugurating a successful series of winter meetings.

A Manitoba Delegate to the Minnesota Horticultural Society's Meeting.

At a recent meeting of the Executive of the Manitoba Horticultural Society, it was decided to send a representative to the annual meeting of the Minnesota Horticultural Society, which is to be held in Minneapolis the first week of December. Mr. A. P. Stevenson, of Nelson, who has done so much for horticultural advancement in this Province, was selected as representative. It was also decided to request the Government to publish the proceedings of the annual convention along with the report of Farmers' Institutes and Breeders' Associations.

Sugar Beet Experiments.

A series of experiments has been conducted by the local Department of Agriculture during the past summer, to ascertain whether the soil and climate of Manitoba are suitable for the profitable cultivation of the sugar beet. A number of plots were planted by gardeners in the vicinity of Winnipeg and at the Experimental Farm at Brandon. These have now been harvested, and samples are to be tested by the Dominion Government Chemist, Mr. F. T. Shutt.

From what is known of the sugar beet and of the climates in which it reaches its best development, one cannot fail to conclude that this Province is outside the "Sugar Belt." In the United States, the localities where sugar factories are in the most successful operation are California, Nebraska, Utah, and southern New York. All these climates are in strong contrast to that of Manitoba. The sugar beet requires a rich, deep, porous soil; a temperature averaging 70° F. for the months of June, July and August; an average rainfall of not less than twenty inches; security from frosts between the 1st of May and 31st of October; and the largest possible proportion of sunlight. At Winnipeg, the average temperature for the three months named is about 65° F.; the rainfall is 16.58 inches; the soil is decidedly not of the character quoted, although proper cultivation might counteract this; and October frosts are the rule, not the exception. On the other hand, we have a proportion of sunlight that is equalled by few places on the globe, and as this is an important factor, the question as to whether we can raise beets with sufficient sugar content for profitable manufacture may possibly prove upon experiment to be answerable in the affirmative. But such experiments must necessarily cover a number of years and be conducted simultaneously in various localities. There is a wide range of soil, temperature, and rainfall in this Province, all of which will affect such tests as these. Finally, the figured results of these tests must be viewed in the light of the undoubted fact that the general conditions are unfavorable for manufacture.

It should be understood that the question to be decided is not whether the beet will grow here, but whether the beets we grow will contain a sufficient percentage of sugar and be sufficiently free from impurities for profitable manufacture. For this purpose, it is claimed that they should contain at least 12% of sugar and be at least 80% pure. In

favorable localities, 18% of sugar content and 90% purity test are frequently secured.

The sugar beet requires thorough culture, a large part of which must be done by hand labor. The cost of preparing land, planting and harvesting, varies from \$33 to \$59 per acre, by actual experience. This yields a profit under favorable conditions of from \$8 to \$19 per acre. Of this cost, about \$2.50 is for seed, the balance for labor, and it is questionable whether the same amount of labor invested in more certain crops does not give our farmers equal or better returns. The cost of cultivation necessitates small acreage or large capital.

Manufacture is an industry quite apart from cultivation. No machinery has been produced which will enable the grower to manufacture on a small scale. A factory large enough to insure profitable operation costs in the United States about \$315,000. Duty on machinery would bring the cost here up to \$385,000. The capital necessary to operate such a factory is \$30,000.

The fact that one million acres of beets would produce sufficient sugar to meet the requirements of the whole United States illustrates the inadvisability of any but highly favorable localities engaging in the industry, and until experiment has proven otherwise, Manitoba cannot be included in that category.

The Dairy Industry in Manitoba.

During the past few months there has been considerable agitation among the dairymen and those who take an interest in the dairy industry in and around Winnipeg. As an industry, dairying has not as yet taken that prominent position in this Province that had been hoped for it. A few years ago, during a period of depression caused by poor crops and low prices, the dairy industry was boomed by a great many as a panacea for all ills, and aided by money grants from the Provincial Government, creameries and cheese factories were started all over the country. Many of these were started at points entirely unprepared or altogether unsuitable, simply because a Government bonus was available. Failure was inevitable, and came as a matter of course upon the return of good wheat crops and fair prices. For no one denies that money can be made faster, and with much less drudgery, out of wheat than out of dairying, in a good wheat district, if season and markets are reasonably favorable. There are sections of the Province, however, that are particularly well situated for dairying, but even in these districts the industry has not progressed as it should have. A number of causes that have had a bearing upon this want of progress could be mentioned—some of them natural, some artificial but probably what has done more to retrograde the whole industry, particularly the cheese industry, is that there has been too strong a demand for dairy products. This may seem a strange statement to make, but it has effected the business in this way: In a new, rapidly-growing business center, like Winnipeg, there have been a number of produce commission firms endeavoring to establish themselves in the business. The handling of all the dairy products produced in the Province divided among these half dozen firms would, perhaps, not warrant any one of them in employing a first-class butter and cheese buyer. Each firm has been so anxious to handle the goods that there has been no discrimination in buying, and as good a price is given for poor flavored, soft, half-cured cheese, made in old shacks totally unfit for the purpose, out of dirty, bad milk, by unskilled makers, as for the product of choice milk, well made and cured by intelligent, painstaking, trained cheesemakers. The effect of this want of discrimination has been to discourage all effort toward the production of high quality in our product: cheap, unskilled labor has been employed in

the factory, no pains taken in any detail: any kind of milk, no matter how dirty, is taken, and in consequence, the quality of much of the product has deteriorated, so that Ontario goods, even with the longer freight haul, are capturing what should be our market in British Columbia. A little foresight and discretion on the part of the commission men would have averted what looks like a serious Provincial loss: but as they have acted with a view to immediate gains rather than the upbuilding of a large and permanent trade, it looks as if the situation would have to right itself, and discrimination in prices will come when the market where the goods are disposed of insists on better quality. Some argue in favor of more instruction by Government inspectors, etc.: but until the buyer puts a premium on quality, the maker does not look for instruction. To make instruction welcome in the case of factory owner, maker, or patron, first touch his pocket.

As we have said, the creamery business underwent a boom a few years ago: that boom burst, and only those creameries that are likely to be permanent have been able to weather the storm. A mushroom growth of cheese factories and home dairy cheesemakers sprung up during the past two seasons, and with the co-operation of the commission merchants have succeeded in giving Manitoba cheese a black eye, and the effect of their own work will result in the weeding out of the cheesemaking business, and only those that are well equipped and properly conducted are likely to survive. It would therefore appear that the dairy industry in Manitoba is now about ready to assume a new lease of life and to build up on a permanent and substantial basis. But on account of past failures, would anyone say there is no further need of dairy instruction? Surely not, for it is needed as much as ever, and will be down to the end of time. The farmer must give more intelligent care to every detail, from the breeding, feeding and care of the cow to the delivering of the cream at the factory, and the maker to every detail from the cream vat to the finished product. There is abundant work for the dairy school, the dairy instructor, the travelling dairy, the Farmers' Institute worker, and the Dairy and Breeders' Associations. But all these agencies should work in unity for the building up of the industry and of the Province.

Dissatisfaction in certain quarters with the efforts of the old Dairy Association has resulted in the formation of a new association, to be a close corporation composed only of those directly connected with the dairy industry. The dairy industry in this Province is too small to maintain two associations. There is no room, nor is there any need, for this division of energy, and discord will become those whose livelihood depends upon the "gentle cow."

It may be that the old Provincial Association has been suffering from a species of dry rot; but far more can be accomplished by instilling new blood into it, by the leaders in each party getting together and forming one strong united body, working for one common object—the advance of dairying in all its branches—than by attempting to carry along two small antagonistic associations. If the leaders of the two associations would get together before the annual meetings in February and arrange a plan for union and concerted action for the good of the common cause, great and lasting benefit will result from the present little agitation.

No More Grass Seed.

I doubt if there will be any Brome grass seed saved from this year's crop. I have not seen an acre of Brome or timothy cut for seed this past season, and I do not think there will be any grass seed saved in Southern Manitoba.

Manitou, Man.

JOHN S. ROBSON.

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WINNIPEG, MANITOBA.

An Irishman on Bacon Pig Feeding.

The pig feeders of Ireland have in recent years been producing, on the whole, pigs of very excellent quality—well suited to the manufacture of high-class bacon. This excellence, we need scarcely say, is largely due to the judicious choice of feeding stuffs. Among these, the potato, when sound, is undoubtedly suitable. But when a bad season occurs like the present, it ceases to be a reliable food, both as regards quality and supply, and the farmer is compelled to look for some proper substitute on which to feed his pigs. If he wishes to maintain the quality of his pigs and the reputation of Ireland for producing the finest bacon in the world, it is absolutely necessary that he should be most careful in this respect.

Roots, such as turnips and mangels, which are temptingly abundant this year, will not do; they produce the worst class of pigs for bacon, besides being most disappointing to feeders in putting weight on pigs. Beyond all question, the very best food with which to raise pigs for the bacon trade is barley used as meal with fresh skimmed milk or separated milk. It need not be cooked, but can be wetted with water and the milk added.

In other countries, and particularly Denmark, which in a very few years has won for its bacon a high reputation, barley is the principal feeding stuff employed. So necessary do the farmers there consider it for this purpose that enormous quantities of it are imported every year, and it pays them well to buy barley and feed their pigs on it. If Irish farmers only knew the value of barley as a food for pigs, and how profitably it can be used in that way, they would soon grow much more of that grain than they now do, and they would not have to be anxious about its color as they must be for the distilleries. But even as an imported article they will certainly find it profitable if they use it properly. What farmers in other countries are doing, they also can do, and they need not pay the high price for the bacon trade of the country, or suffer from the temporary loss of their pigs, which is almost as bad, by feeding them on unprofitable foods.

—W. Shaw, *Farmer and Editor, Farmers' Gazette.*

Canada's Coming Competitor.

Never before, perhaps, was a higher tribute paid the Canadian farmer than when the Government of the Argentine Republic decided to send to the Dominion several of its brightest young men to study the agricultural methods of the country from the vantage point of the Ontario Agricultural College at Guelph. It was a tribute as well to the wisdom of those far-seeing Ontariostatesmen who conceived and carried into effect the plan of a great school of agriculture, to be presided over by men who had made a life study of scientific farming. When one pauses to consider that the Argentine Republic is at the opposite end of the hemisphere, and that between it and Canada are numberless excellent agricultural schools scattered throughout the United States, the compliment becomes the more gratifying.

The circumstances under which Senores George Peltzer, Julio Pano, Alberto C. Fernandez, Cesarea Avila, Eduardo Ibaine, Saile Echegaray, Juan Rivara and Ricardo S. Bustamante came to Canada are interesting. The young men, who began their course at Guelph on Oct. 1st, are all graduates of the oldest and best Spanish stock. Senor Peltzer alone is of German extraction, but a native of the Republic. Two years ago the Government of the Republic offered a scholarship, as we should call it, in agriculture to twenty young men. This scholarship included free tuition and expenses in a Canadian or American agricultural college. A national examination was set, and the man passing highest in each province received the trip abroad; while the six passing highest in the national capital, Buenos Aires, were elected to accompany them. The Republic is divided into fourteen provinces and nine territories, the latter not having representation at the national capital, the administrative head of each being a Governor appointed by the Federal Government, in which the provinces are each represented by a Senator and a Deputy Senator. Thus the party consisted of fourteen from the different provinces and six from the capital, making twenty. Senor Juan Rivara, who subsequently joined the other twenty, was not sent by the Government, but came on his own account, upon their recommendation.

The twenty students left Buenos Aires last March. They were then entire strangers to one another. They crossed the ocean to Southampton, visited the British Isles, and then came to New York, going from there to Washington, where they were received by the representative of the Argentine Government. They were there furnished with a prospectus of each principal agricultural college in the United States, as well as that of the Ontario college. After careful consideration, it was arranged that seven of the party should go to Guelph, and the remainder to United States colleges. When Senor Rivara decided to accompany the Canadian party, the number was brought up to eight. The proportion of eight out of twenty-one in favor of Ontario is flattering, to say the least. It should be borne in mind that no one of the American colleges will be visited by more than two of the remaining thirteen.

There are but two agricultural colleges in the Argentine Republic, one situated in the national capital and the other in the southernmost part of the country. When these young Argentinos have completed their course at Guelph and at the United States schools, they will return and remain in the Government employ for three years. At the expiration of this term, several colleges will be established throughout the provinces, in which the advanced science of agriculture, as demonstrated in the Canadian colleges, will be taught to native students.

With the exception of Mexico and Japan, probably no other country in the world has made more rapid and substantial progress during the past two decades than the Argentine Republic, and this despite revolution and long periods of political unrest. This development is most noticeable in agricultural and stock-raising pursuits; and if the productive resources of the country continue to be developed during the next twenty years at the same rate as they have during the past twenty, Canada may well look to her laurels. According to the census of 1885, the Republic had a population of 4,022,000, distributed over an area of 1,190,000 square miles. Of the vast area of land available for agriculture, but 15,000,000 acres, or six per cent., are actually under cultivation. The possibilities of this great undeveloped country, under a Government that is stable enough to defy revolution and progressive enough to send out students into the four corners of the world, are enormous. This resolve to learn the methods of more advanced nations made Japan the England of the East, and will eventually make the Argentine Republic the Canada of South America.

Although the analogy does not extend to its people and their customs, there are many curious points of similarity between the growing young Republic, whose southernmost territory nearly reaches the antarctic circle, and the young Dominion, whose northern shores extend into the arctic twilight. The one first settled by Spaniards, the other by French, both have witnessed the decay and overthrow of an old civilization and the growth of a new. Both are rich in forests, in vast tracts of unbroken land, and in minerals; both possess a boundless expanse of seaboard and great inland waters. While, however, the growth of Canada has been steady, that of the Republic has been spasmodic,

though not less rapid. Prior to 1880 the country was in a comparatively wild and chaotic condition. According to the returns of this year, it now has 9,193 miles of railway in operation and 25,000 miles of telegraph lines. The Canadian Northwest has been frequently termed the granary of the world, but the term may be applied with equal propriety to Patagonia, the great fertile and almost wholly undeveloped territory of the Argentine, which but a few years ago was an unknown land. A year or two prior to 1880, General Julio J. Roco, who succeeded President Nicolas Avellaneda as the administrative head of the Republic, led an expedition into Patagonia and freed the entire country from Indian domination, opening it for pastoral and agricultural uses up to the Rio Negro river. The possibilities of this immense tract, with its temperate climate, its vast grass-covered plains so admirably adapted to stock-raising, and its fertile soil, are almost beyond the bounds of conception. The country has, however, been under the disadvantage of having been developed almost entirely by Europeans. There was no healthy influx of intelligent, hardy settlers from the older provinces, as was the case in the Canadian Northwest.

The stock-raising industry of Argentina, which has already reached great dimensions, promises, with the success of the sterilized-air method for shipping dressed meat, to assume still greater proportions. The country is essentially one of grazing lands, but it is doubtful if it possesses, as such, any advantages over the Canadian Northwest Territories. To follow up the parallel between the two countries, it is interesting to note that the best foreign horses used by the British army in Africa came from Canada and Argentina.

For purposes of comparison, some statistics of the development of the Republic's export trade, as obtained from the Customs House and Statistical Department at Buenos Aires, may prove interesting. The quantities in these calculations are expressed in tons of 1,000 kilograms, say 2,200 English pounds. The values are expressed in dollars worth about 95 cents in gold.

The total exports of wheat in 1880 amounted to 1,713,420 tons, or 62,825,730 bushels, valued at \$88,078,343, a total which was only exceeded in the years 1883 and 1894. The exports of wheat during the first three months of the year were nearly double those of the corresponding period of 1880. During January, February and March, 1900, they amounted to 674,717 tons, or 24,739,623 bushels, valued at \$15,451,010; as against 364,372 tons, or 13,300,306 bushels, valued at \$9,182,107 for the same period in 1880.

The exports of maize increased from 62,160 tons during the first quarter of 1880, to 90,048 tons for the corresponding quarter this year.

During the first three months of 1880, 90,005 tons of linseed, valued at \$3,060,777, were exported. The figures for the same period of this year were 148,411 tons, valued at \$6,530,063.

Wool, the most important of the Republic's exports, showed a falling off in the export returns for the first quarter of the present year, but there has nevertheless been a steady increase in the export trade since 1883. In that year 123,000 tons, valued at \$25,000,000, were exported; and in 1880 the trade had grown to 237,111 tons, valued at \$71,283,619.

The export trade in sheepskins has steadily increased since 1883, when it amounted to 25,600 tons, valued at \$1,200,000. In 1880 it had reached 42,230 tons, of the value of \$6,195,000.

Of dry cowhides, there were shipped in 1880 23,956 tons, valued at \$8,001,132.

In 1883, 71,000 live sheep, valued at \$363,000, were exported. The trade has increased rapidly, and last year's returns show that 578,000 live sheep, valued at \$1,734,000, were shipped out of the Republic. There was a slight falling off in the number of animals shipped during the first quarter of this year, but the value of the shipments had, nevertheless, increased from \$152,178 to \$175,289.

The law prohibiting the landing of Argentine live stock in Great Britain has probably had something to do with the falling off of shipments of live steers this year. During the first quarter of the year, 58,752 animals were exported, as against 67,299 during the corresponding period of 1880; but the value of the shipments increased from \$1,700,000 to \$1,846,920. The total for 1880 was 300,000 animals, valued at \$7,700,000.

In the first quarter of the present year, 13,115 tons of wethers, valued at \$721,311, were exported, as against 13,688 tons, valued at \$347,510, in the same period of 1880. The total for 1880 was 56,627 tons, valued at \$2,265,063.

What the next quarter of a century will show in the way of development of the Argentine Republic as a great food-producing country can scarcely be conjectured; but that it is bound to become the greatest of Canada's rivals cannot be doubted. It is a country of vast expanse and wonderful fertility, and its people are only now awakening from that Rip Van Winkle sleep in which all South America has been wrapped for so long a period. The English language is daily becoming more popular in the Argentine, as it is the world over; and it is the expressed belief of the young Argentinos now in Guelph that its more general use as the language of commerce will be attended by a quickening of the national pulse. However, proximity to the British markets, the variety and richness of Canada's natural resources, and the general advancement of her people in agriculture, give the Dominion a great vantage ground. The distinguished

young visitors are hard-working students, and are making excellent progress in their work at Guelph. They were in residence in the college during the summer, but as the regulations give Ontario students the preference, they were compelled to take quarters in the city when college opened.

The college opened in September, with 150 registered students, 83 of whom are in the first year. The dairy courses for 1900 and 1901, the first session of which begins Dec. 3rd, will, it is expected, be attended by at least 165 students.

Pointers in Fattening Lambs.

[FROM OUR ONTARIO AND EASTERN EDITION.]

Self-feeders.—For several seasons considerable money has been made in fattening lambs until mid-winter or spring, and doubtless many will be fed this coming winter. In the "West," where grain is cheap, labor dear, and flocks and herds larger, the self-feeder is very generally used for cattle, hogs and sheep, but its use in this country is of doubtful advantage. A self-feeder is a box so arranged as to hold quantities of grain sufficient to last a week or more. The box is so constructed that the grain passes down into the feed trough as rapidly as the sheep consume the supply below. Trials with self-feeders, with lambs, were made both at Michigan and Minnesota Stations. At the Michigan Station, 20 lambs were used in the test, 10 being fed with the self-feeder and 10 fed in the regular way. The grains used were corn and bran. The lambs fed with the self-feeder required 776 pounds of grain and 400 pounds of hay for 100 pounds of gain, whereas the other lot consumed 639 pounds of grain and 421 pounds of hay for 100 pounds of gain. At Minnesota Station, 8 lambs were used in either lot, and wheat screenings were fed. Those fed with the self-feeder consumed 908 pounds of screenings and 130 pounds of hay for 100 pounds gain, and the others, fed in the regular way, ate 742 pounds of screenings and 251 pounds of hay for every 100 pounds of gain made. The conclusions are therefore arrived at, that fattening lambs by means of a self-feeder is an expensive practice, and that economy of production requires more attention to the variation in the appetites of the animals than can be given to the self-feed method.

Fattening Shorn Lambs has some advocates, and in order to test the efficacy of this treatment, the Michigan Station divided a bunch of 20 lambs into two lots of 10 each. One lot was shorn and the other lot was left unshorn, both receiving similar treatment as to care and feeding. The grain consisted of corn and wheat, equal parts by weight, fed with good clean hay. The trial lasted 13 weeks, beginning in November. Both lots were kept in a barn, the shorn lot being more closely housed—that is, the windows and doors were kept closed in order to keep the place warm. The result of the test was the shorn lambs ate more food, drank less water, and made 30 per cent. less gain than the unshorn lambs.

At the Wisconsin Station, Prof. Craig studied the subject during four years, and in each case the results were unfavorable to shearing in the fall for winter fattening. It was found, however, that lambs six months old in October are better shorn in that month when they are to be fattened for the early winter market. When done under such circumstances, the removal of the fleece hastens the fattening, and the gain is made at a slightly cheaper rate.

Outdoor versus Confinement.—Prof. Shaw fed four lots of sheep at the Minnesota Station. Lot I. was kept out of doors continuously, in a yard sheltered from the wind by a low building on one side. Lots II. and III. were confined in yards, with an open shed for shelter. Lot IV. was kept in a compartment of the barn, having one large window facing the east for light and ventilation. The feed for all lots was the same. Lot I., out of doors, consumed for each 100 pounds of gain, 804 pounds of wheat screenings, 90 pounds of oil meal, and 316 pounds of hay. Lot II., in lot with shed, consumed for 100 pounds of gain, 817 pounds of screenings, 91 pounds of oil meal, and 127 pounds of hay. Lot III., in lot with shed, ate 698 pounds of screenings, 71 pounds of oil meal, and 251 pounds of hay; and lot IV., in stable, consumed 722 pounds of screenings, 80 pounds of oil meal, and 283 pounds of hay for each 100 pounds of gain put on. Lot I. made an

average daily gain per head of .28 pound; lot II., .36; lot III., .32, and lot IV., .28 pound. It will be seen that lots II. and III. made the greatest gain, and lot IV. the cheapest, but the difference between outdoor and indoor feeding is far less than would be supposed by many. The results of the trial show that indoor confinement may be as damaging as outdoor exposure.

Alberta Oats.

T. Daly, of Clover Bar, has received notice from Paris that it was his oats in the Canadian exhibit at the great Exposition which were awarded the grand prize. They were shown with other products forwarded by the South Edmonton Agricultural Society, of Strathcona. Mr. Daly informs us that these oats were of the "Banner" variety. He sowed a twenty-acre field last spring with the same oats—or rather from the same bin—and has just threshed out ninety bushels per acre of as fine oats as one could wish to look upon. What's the matter with Alberta as an oat country? Mr. Daly is to be congratulated upon his enterprise and success in bringing Northern Alberta's grain before the world in so marked a manner. He has been untiring in his efforts to secure seed grain that will produce the best results on a well-worked farm in this district, and those efforts have been amply rewarded. We always knew that Alberta's oats could not be beat, but now the world knows it, and a foreign market for "choice Alberta seed oats" should soon

giving me good results, but I find it best to have them pure-bred on both sides.

My walls are stone, floors cement, sleeping-places elevated about 3 feet above floor; my pens are 12x15 feet. I have had no trouble with rheumatism. I let pigs run in yards every day.

I feed plenty of ashes, some sulphur, and believe them to be good. WM. J. WHALEY, Oxford Co., Ont.

Mr. John I. Hobson's Death.

One familiar face and figure will be missed from the approaching Ontario Provincial Winter Fair and its gatherings at Guelph—one well-remembered voice will be silent, a commanding personality will no more be seen. In the death on Nov. 23rd, after but a few days' illness, of Mr. John I. Hobson, of that city, the Province of Ontario loses a man long and prominently identified with her agricultural and live-stock interests, and well-known also in the other Provinces of Canada, where as a judge at exhibitions and in other public capacities he often travelled. Mr. Hobson had reached the age of 65 years, being a native of Wellington County, born in what is known as "the Paisley Block," in 1835, and a son of the late Joseph Hobson, who came to Canada from England in 1833 and took up land. For many, many years he was more familiarly known as "Mr. Hobson of Mosboro," where he so long and successfully carried on his operations as a farmer and breeder. As an agriculturist he was progressive and thorough-going, his knowledge, judgment and standing in the community having resulted in his being chosen as judge of prize farms under the old Provincial Agriculture and Arts Association, acting in that capacity for some ten years. He also did exceedingly useful work as a speaker at Farmers' Institutes, both in Ontario and other provinces. He was also for a long period Chairman of the Advisory Board of the Ontario Agricultural College, was a director of the Toronto Industrial Exhibition, and took an active part in organizing and promoting the Dominion Cattle, Sheep and Swine Breeders' Associations, and was President of the Provincial Winter Fair Association. He was one of the directors of the Dominion Shorthorn Breeders' Association, and at the annual meeting last winter was honored with the presidency. He took an active part in municipal affairs, retiring after filling the Warden's chair, and interested himself in promoting Guelph business enterprises. A constant reader of the FARMER'S ADVOCATE, he advised its reading in every farm home in the country, and frequently contributed practical articles to our columns prior to his leaving the farm. The latter event was hastened by the early death, five years ago, of his only son, a young man of great promise who was just beginning life, following his father's footsteps as a farmer and breeder. He was a brother of Mr. Joseph Hobson, of Montreal, Chief Engineer of the Grand Trunk Railway, and leaves a widow and one daughter, Mrs. A. F. H. Jones, of Guelph. He was a life-long Presbyterian, and for years a member of the Board of Managers of Knox Church, Guelph.

Gasoline for Stomach Worms.

The dose of gasoline for a lamb is half a tablespoonful, administered in four ounces of sweet milk; for a sheep, use one tablespoonful of gasoline. Let the sheep fast for sixteen hours before dosing. Be very careful that they do not strangle and get the medicine into the lungs. Do not guess at the dose; measure it. Repeat the dose three times, at intervals of twenty four hours. When stomach worms are found in a flock, dose every sheep on the farm, sick or well, three times, at intervals of twenty four hours. Change the sheep to pasture where no sheep have grazed, if possible, or put them in the barn. This remedy will not remove other kinds of worms. Use a good worm powder in addition.

Delighted with the Fountain Pen.

DEAR SIR,—The fountain pen came to hand recently, and it is all you claim for it. I have used two other styles of fountain pens, but this one, for cleanliness, ease of filling, appearance and value, surpasses them both.

I am delighted with it, and thank you for the "premium." A. B. ARMSTRONG, Northumberland Co., Ont.



GROUP OF ARGENTINE REPUBLIC STUDENTS ATTENDING THE ONTARIO AGRICULTURAL COLLEGE.

be open to us. It would be a good stroke of business for the Agricultural Society to communicate with the Department of Agriculture at Ottawa, and ask them to boom these oats in the world's markets as they have Canada's dairy products and fruits. *Edmonton Plaindealer.*

Bacon Pigs from Birth to Block.

To the Editor FARMER'S ADVOCATE:

I winter my sows on mangels, with a little corn, and swill made of pulp mangels and shorts, cooked and fed warm if weather is very cold. After farrowing, I feed light feed, such as bran or oat chop; after a few days, increase food, and use shorts, with mangels for noon feed, giving plenty of exercise before farrowing; after farrowing, keep very warm and dry.

Wean at seven or eight weeks. Feed shorts, not too much at a time, with a few pulped mangels once a day. It is very important to keep clean and dry.

I have had no experience with clover hay, ensilage or potatoes, but find mangels or sugar beets excellent food for winter. I have no use for turnips for pigs.

I feed principally shorts. I like peas or barley, but they are too expensive to feed with profit, but have found it good mixed with shorts for a change. For finishing pigs, I like a little corn at least once a day. I prefer it twice.

Tamworths make the best hog to satisfy the packer, and I believe feed with nearly as much profit.

I never buy any pigs except for breeding purposes. Have had good success with Berkshire cross; have some now nearly ready for shipping; cross, Tamworth sow, Yorkshire boar, and they are

A Well-Planned Farmhouse.

To the Editor FARMER'S ADVOCATE:

I enclose a plan of my house, together with a photograph. The correct size of the rooms is given. Notice that the bay windows run from the bottom of cellar to the roof, which adds a good deal of space to the front rooms. The cost of house is just about \$2,000, including furnace and cistern, and



HOUSE OF J. B. GOVENLOCK, NEEPAWA, MAN.

my own labor. It is 32 feet long by 22 feet wide, with stone foundation. J. B. GOVENLOCK. Neepawa, Man.

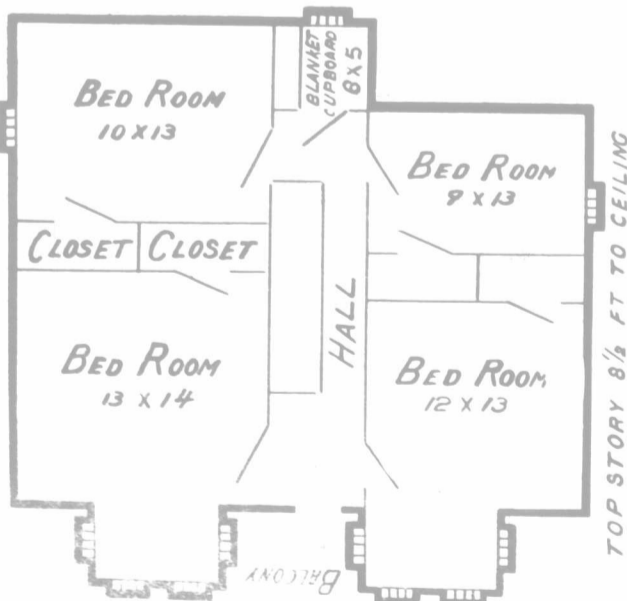
Live Stock Auction Sales at the Winnipeg Industrial.

The establishment of auction sales for live stock, which is engaging the attention of farmers in eastern Canada and the States, does not seem as yet to have aroused the interest of the farmers of Manitoba and the Territories.

It is little more than twenty years since this method of disposing of live stock was introduced in England and Scotland. Prior to that, with the exception of annual ram sales at a few points, and sales of pure-bred stock on breeders' own farms, live stock was either sold privately at the farm to dealers and butchers, or at the local markets, which were held periodically in many of the towns and villages; or consigned to salesmen in the large centers of population, such as London, Newcastle, Edinburgh, and Glasgow, to be sold on commission.

About the period mentioned, several enterprising and far-seeing auctioneers, such as Macdonald & Fraser, of Perth; Oliver & Sons, of Howick, and others, started the plan of selling live stock by public auction, in their respective towns. The convenience and advantage to the farmer were such that the system caught hold and increased to such an extent all over the country that it is safe to say that 90% of the live stock sold is disposed of in this way. This applies not only to pure-bred stock, but to fat and store stock, and also in a less degree to horses.

In a new and somewhat thinly populated country such as this, circumstances are different; but a convenient and satisfactory plan for bringing buyer and seller together is none the less necessary. In Manitoba we have during Exhibition week in Winnipeg a unique opportunity for inaugurating a



system of live stock auction sales. We would then have the consideration of a successful auction sale, and the gathering of intending purchasers and of the masses of stock they wish to buy.

To the satisfaction of all, the Exposition is a great and growing success. Not only is it visited by the people of Manitoba and the Territories in thousands, but from the States to the south of us

the farmers are coming in increasing numbers every year. In these States, the live-stock and dairy interests are growing in importance; but they have as yet no such herds and flocks of pure-bred stock as we have in this Province. The breeders here should make an effort to capture this market, and a great annual auction sale during Exhibition week of all classes of pure-bred stock would be a powerful means to this end.

There is some difference of opinion as to the propriety of the side-show element at agricultural exhibitions. There could be none as to an auction sale of live stock. There could be no better nor a more legitimate "attraction" for the farmer and lover of live stock than such a sale. It would have a great educational value, and would draw many to the show who would not otherwise attend. It would afford an opportunity for the breeder to dispose of his surplus stock at fair current value, and for the farmer to procure that pure-bred bull or ram or boar which is so much required to grade up the common stock of the farm.

The sale should be under the joint auspices of the Exhibition Board and the Live Stock Associations of the Province, and it would be well if these representative bodies would take the matter into consideration and initiate a movement which would promote the live-stock interests of the Province and benefit the community at large.

Niverville, Man. WM. WALLACE.

Manitoba Wheat in New Zealand.

From the report of a meeting of an agricultural society in New Zealand, we clip the following extracts from the *Farmer*, published in Auckland:

"The President, Mr. Jas. Barugh, read some correspondence with the manager of the Northern Roller Mills on the subject of oats suitable for making oatmeal, a branch which is now carried on at the mills. In reply, Mr. Virtue wrote: "We have pleasure in acknowledging your valued favor of the 3rd July. The only class of oats that will suit us for milling purposes are those known as the Canadian and Garton, and samples go forward this mail. If you can manage to grow them successfully, they are worth quite 2d. per bushel more than the kinds you mention. The samples are from Oamaru." Mr. Virtue also sent a sample of Manitoba wheat, with the following letter: "We have pleasure in forwarding you a sample of the famous Manitoba wheat, which is noted for its strength and quality. We only imported a small line for seed purposes to try and spur our farmers on, because it is a well-known fact that wheat can be grown in the Auckland Province equal to any Southern. The farmers can have it at exact cost."

Cream Gathering Superseding Whole Milk System.

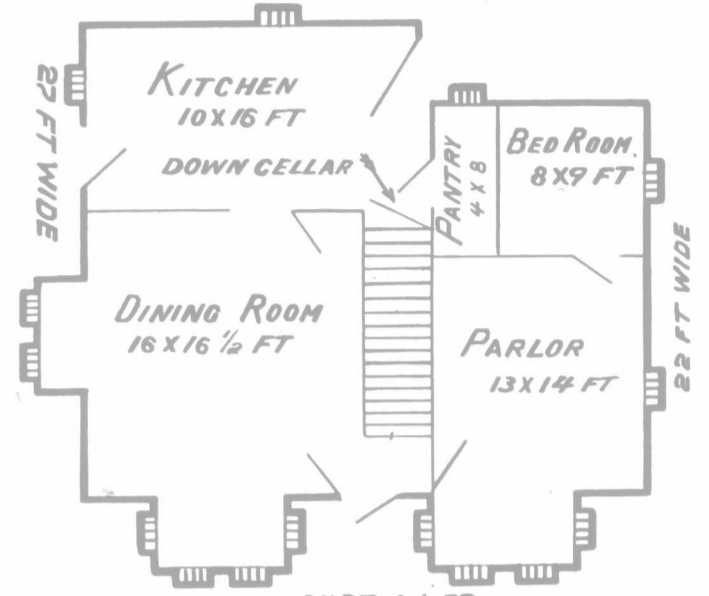
Although the cream-gathering as against the whole-milk gathering system is the only one possible under existing conditions in Manitoba and the Territories, owing to sparse settlement and long distances, it has been considered by most of our dairymen as by no means the best system for the production of high-quality butter. Makers who have been accustomed to the whole-milk gathering plan are frequently inclined to apologize for any lack of quality in their goods as due to the fact that under the system of cream gathering they have not full control of all the factors that go toward the production of gilt-edged goods. We notice that in some dairy centers in the States where the whole-milk system has always been employed, the factory owners are changing to the cream-gathering plan, with, of course, the farm separator as an important adjunct. J. H. Rushton, proprietor of a large Nebraska creamery business, thus expresses on this question:

"I am an advocate of the farm-separator system. To my mind it's the best we know anything of. Something over two years ago I refused to buy cream from hand separators—did not want anything to do with them, and did not care to encourage their use at all. I looked at them as no friend of the creameryman. We had thousands of dollars invested in machinery and equipment, and could see no reason for giving up our system.

"Something over a year ago I had occasion to make some investigations along the line of the farm-separator system, and examined into the quality of goods made under that system. The result is that to-day we are doing everything in our power to encourage the use of farm separators in our territory; patrons who are using them are better pleased than they were with the whole-milk delivery, and, being co-partners in the business to the extent of this investment in the separator, are more determined to make dairying a success. Cream comes in good condition—saving us fuel and labor required when hauling and skimming milk. We have routes when we gather a load of cream that will churn 350 lbs.; it would require over 8,000 lbs. of milk to do that, and we would have to have four teams and four drivers to haul what one driver now gathers. Under this system we are able to reduce expenses considerably, and I think that as we double the number of separators in use in our territory we can make further reductions in expense of operation. We have maintained the quality of our goods, demand beyond supply, and just now we are two months behind on orders. The fact of the matter was, I saw this movement coming straight down my track like a huge engine, and I either had to blind

myself to its advantage and continue to hold old ideas sacred and await the collision, or just climb aboard and accept the results. Well, it's all right. I hope we can have 5,000 separators in our territory in the next twelve months. We can't get too many of them. Let the good work go on."

Ground Floor 9 1/2 Ft. to Ceiling.



Boiled Weed Seeds and Bran Make Good Feed.

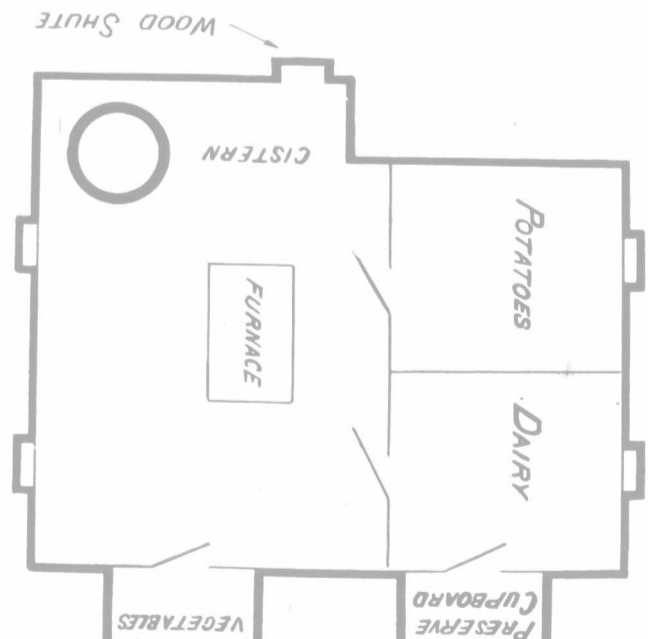
There is more in your leader in last issue than you may possibly be aware of. Let NOTHING BE LOST. If I could get a supply of 100 pounds of bran per day for the winter, I would use very little grain. Boiled weed seeds and bran is hard to beat for breeding stock, and even horses. My neighbors are generous. I am getting more than half my supply of straw, and have got over four tons of seeds from them, and also about twenty tons of weedy wheat, which I got for the cutting.

Wallace Municipality, Man. K. McIVER.

Plums from Seed.

In our native plums there is so great variety no two trees appear to bear fruit alike, and the fruit ranges all the way from really excellent plums to almost worthless. Over and over again have the pits of choice plums been planted, with the confident expectation of reaping fruit of equal excellence. But the fruit when it appears is as likely to resemble the meanest of its kind as it is the parent fruit. A Mr. Hopkins, of South Dakota, who claims long experience with the native plum, has this to say on the subject in *Farm, Stock and Home*:

"You say that in raising plums from seed one cannot know what their quality will be. This is correct, as a rule, but there are exceptions. Twenty plums taken from one tree grown in a plum thicket are liable to produce as many varieties of plums as there were in the original thicket, or they may produce twenty varieties and none exactly like



any of the original varieties. Female blossoms on one tree fertilized by pollen from male blossoms on another will produce a new variety, and you never can tell what you will get. But plums grown on a lone tree where all the female blossoms must be fertilized from male blossoms from the same tree will, in my opinion, produce the same variety of plums as the original tree, and I have had forty years' experience in raising plums."

A Fine District North and West of Winnipeg.

One does not hear so much through the medium of the local press regarding the settlement of the older districts of the Province as of the newer districts, to the settlement of which the great railway

Quantities of Silage to Feed.

[From Prof. Thos. Shaw's new book on Soiling Crops and the Silo.]

Much difference of opinion exists as to the quantities of silage that may be fed with advantage. Some authorities claim that it may be made the sole food of animals for weeks and months in succession. That is not the view of the author. Much, of course, will depend upon the character of the silage. When it has been well preserved, the silage is not markedly acid, but it is acid in some degree. Now, that is not the condition in which nature provides green food for live stock, hence it does not seem wise to confine animals to a diet of acid. To test this question the author fed steers that were being fattened on silage and meal for a period averaging about 140 days and during three successive experiments.

These experiments were conducted at the Government Experiment Station at Guelph, Ontario. The first experiment began in the autumn of 1889. Two steers were thus fed each winter. They were pitted against an equal number of steers that were fed meal, an average of thirty-three pounds of corn silage per day, and all the cut hay they would eat in addition. A third lot of two steers were fed meal, cut hay and field roots. The amount of meal fed was practically the same in each instance. Of the six steers that were fed all the silage they would consume in addition to the meal, two died before the experiment was completed. The veterinarian of the

Station reported that death resulted from serious derangement of the digestive organs caused by the acid in the silage. More or less trouble was also experienced with all the steers confined to the ration of meal and silage. They occasionally got "off their feed." The steers fed on the ration of meal, hay and roots were uniformly healthy and hearty throughout the experiment. With silage less acid, the fatal results chronicled might not have occurred. But since the silage fed was quite as well preserved as corn silage usually is, the inference would seem fair that there is an element of danger in feeding silage in unlimited quantities to farm animals for months in succession.

While it is impossible to state definitely how much silage may be fed for a prolonged period to cattle without crossing the danger line, in the judgment of the author it is questionable if the amount fed daily to a mature breeding animal of the bovine species should exceed thirty or forty pounds per day. Of course, for a limited period it may be safe to feed larger quantities, and it is possible that larger quantities than those named have been fed to breeding animals for a period somewhat prolonged without any apparent harm. Nevertheless, the conclusion would seem fair that there is an element of danger in feeding silage in unlimited quantities to animals for months in succession. The most intelligent feeders concur in this view, and it finds further countenance in the craving which domestic animals manifest for a certain proportion of dry fodder while silage is being fed to them in large quantities.

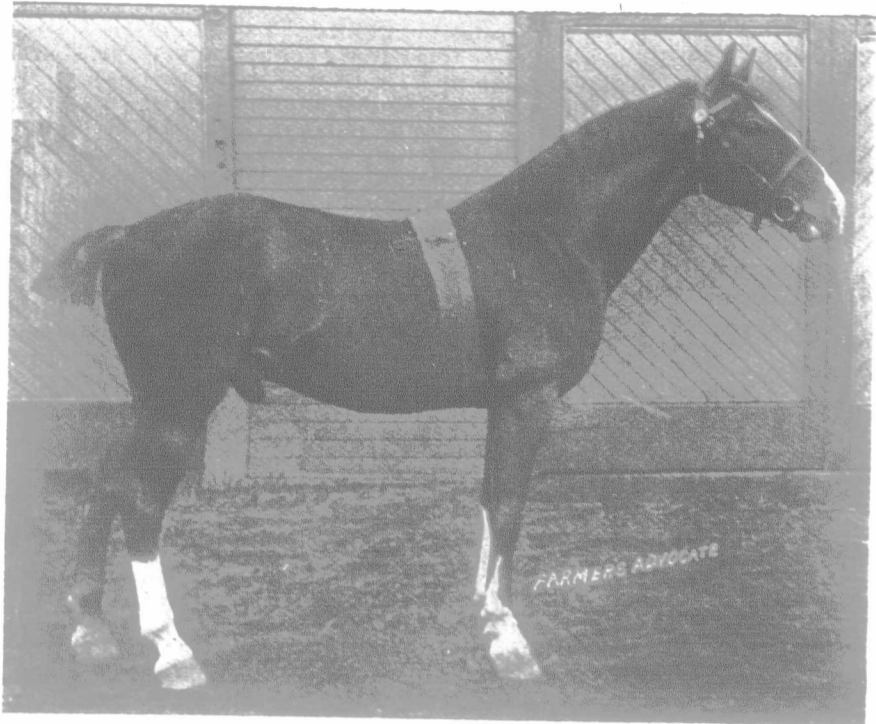
Four to five pounds per day may be named as the maximum amounts to be fed to breeding ewes for months in succession, but it is possible, and, indeed, it may be commendable, to feed larger quantities for a limited period.

Any kind of fodder that is palatable and well preserved may be fed along with silage. But when practicable the fodder thus given should be made as far as possible to give the entire ration the desired balance or equilibrium as to food nutrients. For instance, when corn silage is being fed, clover in any of its forms will make a ration more nearly balanced than would be obtained from feeding dry fodder, the product of corn, sorghum or any of the non-saccharine sorghums.

A Request Regarding Renewals.

We have a request to make to the reader. Our past relations with our subscribers assure us that it will be promptly complied with. During the year soon to close we have aimed to give an agricultural paper not only of the highest class as regards quality, but the most helpful in a practical way, and it has been by far the largest volume we have ever issued, containing over 700 pages of matter prepared by specialists who have made a success in their different branches of agriculture. In no other periodical do the farmers of Canada or the adjoining States obtain anything like the amount of valuable reading matter for so modest an outlay, and never in our 35 years' experience have the assurances of satisfaction on the part of our readers been so many and so encouraging as at the present time. The first year of the new century will see a further advance on our part. The Christmas number, to be issued this month, will be an assurance of this. Few have any idea of the vast amount of extra labor, on the part of both business and editorial departments, involved in such an undertaking. To facilitate the office work especially, we therefore make the simple request that every subscriber will at once examine his label on this paper, which shows the date up to which the subscription is paid, and then promptly remit amount to cover subscription up to end of 1901, by express or postal order, postal note or registered letter. Each individual's subscription is really a very small matter, particularly when the large return received is considered, but in the aggregate, and in facilitating our work in an extremely busy season, is of very great importance to us. Prompt renewals will therefore be a very great favor. When remitting your own subscription, can you not favor us with the names of one or more new subscribers, each of whom will be entitled to our beautiful Christmas number? By the way, what better Christmas present could you give a friend who is not already a reader of the paper than a year's subscription to the FARMER'S ADVOCATE? Two new subscriptions entitles you to have your own advanced gratis to the end of 1901. Or on new subscriptions you may select some premium to which you may be entitled, as per our lists announced elsewhere. But give the matter of renewal your very earliest attention.

More and more, as the years go by, the importance to Canadian farmers of giving increased attention to the breeding and quality of the live stock on their farms is emphasized by the record



LANGTON'S DANEGELT.

Three-year-old Hackney stallion. Sired by Langton Performer. First prize at London Exhibition, 1900.

OWNED BY EDWARD C. ATTRELL, GODERICH, ONT.

and land corporations are continually giving so much attention. The district around the City of Winnipeg is, nevertheless, rapidly filling up, and those splendid mixed-farming districts, generally spoken of as Rosser, Stonewall, and Balmoral, have within recent years made marked progress, as evidenced by the number of comfortable farm-houses and substantial stock barns and stables erected within the past couple of years. The district is well sheltered with abundant bluffs of native poplar, to the west and north of Stonewall, and through the Balmoral and Teulon districts much of the land is timbered. Everywhere considerable areas are being cleared of bush and brought under cultivation. In some places there is considerable surface stone, and here and there can be seen stone dykes along the roadsides. The large lime kilns and stone quarries in the vicinity of Stonewall bring these materials within easy reach of everyone, and boulder stone suitable for foundation purposes can be had almost anywhere. Excellent water can be obtained throughout the whole region, although in places a considerable depth has to be gone for it. Pasturage for stock is always abundant and of the best quality. What, unfortunately, cannot be said of all the country around Winnipeg, the roads in this district are, generally speaking, good. The main roads in some cases are gravelled for miles. Here and there throughout the district are herds of pure-bred cattle and hogs, thus placing the improvement of stock within easy reach of all. The writer recently drove through this district, and from the end of the Stonewall branch at Teulon, south-east to Selkirk, via the big ditch which drains the St. Andrews marsh, across what a few years ago was an almost bottomless bog. The trail passes through the settlement of Clandeboye to the town of Selkirk, situated on the Red River. In this marsh are miles of hay land, which will doubtless be some day put to good account. Through Clandeboye, and the district lying west and north of Selkirk, the country is much wooded, generally with small poplar. This section is also settling up, the farmers going in largely for cattle in conjunction with grain farming. From Selkirk the drive to Winnipeg along the bank of the Red River is a most interesting one, but, agriculturally speaking, has not made the advances that its situation and soil would warrant, the farms being cut up into long, narrow river lots, and, having become polluted with noxious weeds, are most difficult to work. Some of the old-fashioned, whitewashed log houses, with thatched roofs, which are common along the river front, are most picturesque. The old stone fort of the Hudson's Bay Co. at Lower Fort Garry, which at one time was one of the most important of the Company's posts, and adjoining which they carried on extensive farming operations, is still kept in excellent repair, and as a relic of old times is a most interesting spot. Work has been begun on the locks which are to overcome the rapids in the Red River and make navigable the waters of the Red River, which will doubtless be of great commercial benefit to the City of Winnipeg as well as to all Eastern Manitoba.



LOVELY VICTOR =22170=.

Five year old Shorthorn bull. (See Gossip columns.)

AT HEAD OF HERD OF MR. THOS. MERGER, MARKDALE, ONT.

of the markets. Animals of good breeding and quality feed more kindly, giving better returns for the food they eat, and selling readily at the best prices, while the inferior class is hard to sell at the lower prices. The need for a forward movement for improvement all along the line is urgent, and the advance should be general.

The Faithful Shepherd.

The fame of many a flockmaster has depended more than most people are aware upon the watchful care and attention of the shepherd, and the success which has marked the career of the owners of noted flocks has in many instances been largely owing to the advice and counsel of the shepherd in the selection of sires and the mating of the matrons. Only those who have seen them and moved among them in the Old Country, where the calling of a shepherd is, with many, a life profession, and has witnessed their devotion to their flocks and their untiring vigilance in working for the best interests of the sheep and their owners, can fully appreciate their faithfulness. Late and early, day and night if need be, and in the most inclement weather, uncomplainingly, these men are found at the post of duty, the comfort and safety of their charges being their first thought and care.

In America, as a rule, the flockmaster or his son is the shepherd, and in many instances right well performs the duty, his work comparing well with that of the best of Old Country shepherds. There are, too, a considerable number, though fewer than we could wish, of native Canadian shepherds, who, having been entrusted with the care of valuable flocks, have shown most commendable faithfulness as well as skill and judgment in the breeding, development and preparation of stock for the showing, winning a large proportion of prizes with home-bred and fitted sheep, in competition with imported British prizewinners. These men are worthy of the highest consideration and encouragement, and we gladly record our meed of praise for their well-done work.

British-born shepherds as a rule cling to their native heath, many of them spending their whole life on the farm on which they served their apprenticeship. A few have found their way across the sea, and have done excellent service in the care of high-class flocks on this side of the water, their methods of feeding and the preparation of show stock having been seen and copied by others, to their acknowledged advantage. Among these is the subject of this sketch. John Miller, widely and well known as "the old shepherd," first saw the light of day some sixty-five years ago, in the village of Cayton, Yorkshire, England, but as he carries no ear-marks and has no record of dates earlier than those of his recollection, little can be learned of his pedigree, but his fidelity to duty and his life-work as a stock feeder is a happy confirmation of Burns' declaration that "the rank is but the guinea's stamp, the man's the gold for a' that."

Under the training of experienced men to the manor born, Miller early became an expert, and as a young man served as head shepherd to such well-known Yorkshire breeders of Leicester sheep as Goffton, of Thirtleby, and Ray and Foster, of Luton; Squire Hill, Capt. Boynton; Crowe, and Robinson, of Carnaby. During these years the young shepherd lived near by Sledmere Hall, the estate of Sir Tatton Sykes, and tells many interesting anecdotes of the old Baronet, of his great retinue of servants, horses and hounds, and of gala-day entertainments at the Hall.

Coming to Canada in 1872, his first engagement in the care of pure-bred stock was with the Russells, of Richmond Hill; afterwards with the late Mr. Stone, of Guelph, and as he himself likes to put it, "for 23 years hon and hoff with the Snells, of Snelgrove," which we believe is literally correct, though he was away for a year or two at a time with such well-known Western breeders as T. L. Miller, of Beecher, Ill., and Geo. Harding & Son, Waukesha, Wis.; but on returning to the Snell farms, "Ise coomed 'ome again," was always among his first greetings. It was back in the '70's that his reputation as a feeder and fitter of show stock in America was made, when at the Dominion Exhibition at Ottawa, with the Snell contingent of Cotswolds, he won the gold medal for the best flock of long-wooled sheep, showing among others a 2-year-old ram of his own feeding, weighing 431 lbs., and a yearling of 345 lbs., and when, at the first Fat Stock Show at Chicago, with a pen of ewes and lambs of the same exhibit, he swept the boards in the long-wool class, showing a Canadian-bred ewe weighing 366 lbs., and others around 350 lbs. each. These sheep created a sensation in the show in the old Exposition building down by the lake, and were a center of admiration and a big advertisement for Canada, but the record was later practically repeated several times at Chicago, St. Louis, and other Western State fairs, as well as at leading Provincial shows in Canada, and the shepherd became a well-known figure at such functions, his quaint sayings in the Yorkshire dialect causing many a hearty laugh among the sheep-men. A good story is told by a well-known Wisconsin breeder and exhibitor, who met him at one of the State fairs in charge of Harding's Cotswolds. Frank Harding and the shepherd failed to agree on the mating of two pairs of ewes, and on the call for inspection there was a little contention as to how they should be paired; but the master, knowing the preferences of the judges, claimed authority, and, according to his own mind, much to the disgust of the shepherd, who, after the judging was over, with a friendly expression, greeted our mutual acquaintance with the words: "Did you see that? Ise been with 'em as a flock and Snells, but Ise never used 'em but that day." On another occasion, the same gentleman brought

slapped him on the shoulder and remarked, "Here's a Southdown," to which he indignantly replied, "Ise na Soothdoon, Ise a longwool." The face of the shepherd was a study when asked to give his judgment of a sheep. As he looked him over, with a wise cock of the other eye, he would say: "E's good of 'is ead, and good of 'is scragg, and good of 'is fiddle brig, but I dis na like the way he stands of 'is pins."

It is a source of real pleasure to the writer to testify to the faithful devotion of the shepherd to his duty in the care of the flock or of other stock, for he made a success of feeding cattle as well, turning out many a stable full of well-finished bullocks for the British market, but it was among the "auld yowes" and the "lattle lammies" that he was most at home, and wedded only to his flock, he literally lived with the sheep during the lambing season, sleeping for weeks in his clothes on a couch, and visiting the fold to welcome the newcomers at all hours of the night, talking to his charges as if they were "humans," and calling them by their pet names. It was truly a case where the sheep knew the voice of the shepherd, and where there was mutual affection.

On his last return to Snelgrove, it was virtually understood that he had come home to stay till the end of the chapter of his life, and he had settled down to what promised to be a serene old age, but owing to the lamentable accident which brought to an untimely end the earthly career of him whom his host of friends familiarly called "Joe Snell," a change came over the scene, and among the many expressions of sorrow by grief-stricken friends and neighbors at the funeral, the wail of the shepherd was the most pathetic as he realized the loss at once of a true friend and a good home. In the half year occupied in the disposal of the estate, he fed to a finish another carload of export steers, that were admired by all who saw them, and at the winding-up sale he was engaged to take charge of the Berkshire herd of Mr. T. A. Cox, of Brantford, where as usual he has done good work, and though it is work probably less congenial to him than the care of sheep, yet the same fidelity to duty that has marked



JOHN MILLER.

(The Shepherd.)

his useful life is still observed, and being blessed with a strong constitution and a good conscience, he finds not a little in life to be thankful for, and maintains a cheerful courage in view of the future, for which he has the best wishes of a long list of friends.

President McKinley as a Farmer.

It is not generally known that President Wm. McKinley, recently re-elected for a second term as chief officer of the United States, has a large farm near Canton, Ohio. A dispatch from that place to the Philadelphia *Ledger* says that this farm produced 2,800 bushels of potatoes this year. An enterprising commission merchant bought the entire crop at an advance of five cents a bushel over the regular market price. The next day he was offered ten cents a bushel advance for his bargain, but declined. This means that the "McKinley farm" potatoes are to be sold at a gilt-edge price for seed. People out that way have great faith in "McKinley luck," and farmers who want a big potato crop next year will be glad to get McKinley tubers for their supposed luck. A correspondent of the Cleveland *Leader* gives some details of the McKinley farm. It is 20 miles from Canton and one mile from Bayard, and contains 162½ acres, with well-kept barns, wagon sheds, and corn-cribs. The Cleveland & Pittsburg Railroad and Big Sandy Canal cross portions of it. The soil is very productive, yielding large crops of corn, potatoes, oats, and hay. There is a large orchard, which has produced in a good year nearly 3,500 bushels of apples, chiefly Baldwins. There are 25 cattle, 10 horses and 100 sheep kept, with numerous hogs and fowls. The land and buildings are raised. One season 175 acres of seed. The farm has been managed for 20 years by W. J. Adams, originally from Pennsylvania.

Liquid Air Refrigeration.

The Standard Butter Co. of Oswego, N. Y., has bought of Prof. Trippler the right to use liquid air for refrigerating purposes in connection with the dairy business. The right embraces the United States and its dependencies. Within recent months this product has been made in such manner that it can be transported in packages that need withstand only 10 pounds pressure, instead of 350 pounds, as heretofore, and brought within a price that makes it a commercial possibility. The Standard Butter Co. owns and operates about 30 creameries, and utilizes the skim milk in making paper sizing. It has for years used the ammonia refrigerating process in its cold-storage department; now to be displaced by liquid air, of which 25 pounds are said to equal one ton of ice, at about the same cost. It can be carried in common milk cans if enveloped in some non-conducting substance.

Prof. John Craig, formerly Horticulturist at the Ottawa Central Experimental Farm, and subsequently Professor of Horticulture at the Iowa Agricultural College, has now entered upon his duties as head of the newly-created Agricultural Extension Bureau in connection with Cornell University, at Ithaca, N. Y. The *Country Gentleman*, referring to this appointment, says:—"The change which recently occurred at Cornell, in the addition of Prof. John Craig to the working force, is of more than incidental interest. Prof. Craig is a man of unusual experience, as well as of conspicuous ability, and will put a lot of ginger into the horticultural and agricultural extension work. Prof. Craig is a Canadian by birth, having come from Lakefield, P. Q., where he began his horticultural studies under the late Charles Gibbs, through whose influence he went to the Iowa Agricultural College to study with Prof. Budd."

Expansion of the Canadian Cheese and Butter Trade.

BY J. A. RUDDICK, DOMINION DEPARTMENT OF AGRICULTURE.
Taking a general view of the situation, it seems to the writer that the outlook is a very hopeful one. I believe that our present position in the British market may not only be maintained, but that it may be improved to a very great extent, providing we make such efforts as we are capable of in that direction.

There is some danger that while we are congratulating ourselves upon having attained such a prominent position in the Old Country markets with our cheese, we may forget that other countries are looking in the same direction, and would drive us out if possible. That essentially British sentence, "What we have we'll hold," expresses a sentiment which finds a ready response in the minds of Canadians; still, we must not lose sight of the fact that some of our competitors have natural advantages equal if not superior to ours, so that they only have to do their work as well as we do to excel us in the matter of quality. In New Zealand, the comparatively cool climate enables the cheesemakers to turn out an article always free from the peculiar defects of our summer-made cheese, and to do it without any special provision for controlling temperature. At the present time New Zealand cheese is not as well made as Canadian, but earnest and systematic efforts are being put forth to improve the methods of manufacture. It would not be a good thing for the Canadian cheese trade if it came about that New Zealand, or any other country, for that matter, was able to furnish a better article than Canada. The redeeming feature of the New Zealand competition is that its volume is not large, nor is it likely to expand very much. The total export of cheese from New Zealand in 1885 was 79,650 cwt., while in 1890-1900 it reached 95,746 cwt., an increase of only 16,096 cwt., or about 25,000 boxes of cheese.

The United States have always competed with us for a share of the Old Country trade, and the story of that competition has been told too often to need repetition here. I think it may safely be assumed, however, that with our reputation for honest goods, our wise legislation and helpful efforts of the Governments, the uniformity in methods of manufacture, the cohesiveness of the different units which make up the dairymen of Canada, coupled with a more suitable climate and superior shipping facilities, to say nothing of our present lead, gives us an advantage which should enable us to hold our own without much difficulty.

These two countries which have been quoted are practically our only competitors in supplying Great Britain with the Cheddar cheese which she gets from outside her own borders. Other imports consist of various kinds of continental cheese. The competition from New Zealand and United States is, however, keen enough to make it necessary for Canadians to adopt every possible means of improving the quality of the cheese, if the present position is to be maintained or any headway is to be made.

The most encouraging feature of the outlook, it seems to me, lies in the fact that there is still so much room for improvement. The responsibility for this improvement does not rest on any one section of the trade, but is fairly well distributed. Thus the milk producer, by more careful observance of the proper methods of handling milk, may do much towards securing a better flavored article; the cheesemaker has much to learn and to practice regarding the process of manufacture before the cheese are all even passable in the matter of body or texture and finish; the factory owners, whether

of private or co-operative concerns, can do a great deal through the medium of better curing-rooms and more sanitary conditions surrounding the factories; while the transportation companies have their share of responsibility in providing safer carriage and better handling, so as to insure less damage to quality and packages in transit. The best thing about it is that all this improvement can be effected without adding to the cost of production



GIPSY OF SPRUCE GROVE 69241.

First-prize Jersey cow and sweepstakes female, Provincial Fair, Halifax, N. S., 1900.

PROPERTY OF J. RUFUS STARR, STARR'S POINT, N. S.

in the slightest degree. Indeed, the experiments which have been conducted under the direction of the Commissioner of Agriculture during the past two years show that it is a matter of economy to control the temperature of a curing-room so that it does not go higher than 65 deg. In a series of experiments conducted by the writer at Kingston, in 1897 and 1898, it was found that the shrinkage was 1.34 per cent. less in three weeks when the temperature was partially controlled, as compared with no control of temperature.

Improvement in quality will surely result in greater consumption, which admits of increased production at remunerative prices.

Canadian cheesemakers should not rest content with having beaten all competitors in the import trade of Great Britain, but keep in mind the fact that the best English and Scotch Cheddar still sells 3 cts. to 4 cts. higher than Canadian does.

BUTTER.

The United Kingdom imported during the year ending August 25th, 1900, the enormous quantity of 386,020,554 lbs. of butter. Our share of that immense trade, for the same period, amounted only to 21,681,440 lbs. Denmark, Australia, France, and Holland, in the order named, all furnished more than we did. Sweden, Russia and New Zealand follow with large amounts. While our exports are small, compared with the total imports of Great Britain, it is very satisfactory to note that they are five times as great as they were when our excellent system of cold storage was inaugurated. Our exports to Japan and the British West Indies are increasing, but we still have to take a second place to the United States in these markets. Although the shipments of Canadian butter to the West Indies have been trebled in as many years, the total amount shipped in 1899 was about 200,000 lbs., while the United States sent over 2,000,000 lbs.

There is no reason why our exports of butter should not continue to increase rapidly, as long as we make a good article and find the production of it profitable. The forces which have helped us so far, viz., the spread of knowledge concerning the science and art of buttermaking, better control of temperature at the creameries, and safer transportation by rail and sea, are still with us, and capable of being strengthened at many points.

Another element in our favor is the deepening of the Imperial feeling which has lately manifested itself throughout the Empire. When trading with the motherland, in competition with foreign countries, it means more to be able to use the word Canadian than it formerly did. This would not be a good foundation on which to build all our hopes for the future of the butter trade, for quality will always be of prime consideration, but it is of decided advantage to have the preference when the quality of the goods are equal.

The three great points in favor of the cream separator are: (1) that it enables more butter-fat to be abstracted from the milk; (2) that it enables a great saving to be effected in space; (3) that it enables the skim milk to be used for calf-feeding and other purposes while quite fresh.

The Value of a Good Udder.

Just as there are cows and cows, so also there are udders and udders. Some very good-looking cows are furnished with but poor udders, and, as an old dairyman of our acquaintance is in the habit of putting it, "It is better to have a scraggy-looking cow any day with a good udder than a grand-looking beast with a miserable bag." No matter how

good-looking a dairy cow may be, except she has a well-developed udder, with its accompanying network of mammary glands wherewith to secrete the milk which she is to produce, she cannot be expected to excel as a pail-filler. As a rule, heavy milkers are seldom the best looking cows, because, though good-looking animals capable of creditably acquitting themselves at the pail are sometimes met with, it is the general invariable rule to find cows which are good at the pail thin in the flesh, narrow across the shoulders, slack over the loins, and in other ways deficient in shape from a butcher's point of view. The ideal udder is the one which goes well developed both fore and aft—one that is carried high up towards the escutcheon and at the same time goes a long way up under the belly. In addition to this, the udder must be deep and broad—the deeper and squarer the better. Its four teats should be placed as nearly as possible at equal distances apart. Cows possessing udders of this description may generally be counted on to prove good milkers, just as other cows possessing small, round-shaped udders, with teats so close together that they almost touch one another at the points, may invariably be put down as poor pail-fillers, no matter how fine their appearance may be, or how good-looking in other respects.

Holding Back Milk.

COWS ARE NERVOUS AND MUST BE CAREFULLY HANDLED.

According to Professor Stewart, the following is the explanation why cows sometimes hold up or keep back their milk. The production of milk is due to a nervous action by which the glandular substance of the udder is broken down into milk whenever the cow is influenced by sufficient excitement of the right kind. It depends upon the structure and function of the udder just as much as the sections of other glands do, which we know are wholly subject to a set of nerves controlling this distinct function. The udder is not a mere vessel for holding milk that is supposed to be secreted continually and gathers in the udder, as one may suppose a constant dripping of any fluid would fill any other receptacle. On the contrary, it is a gland, made up of cellular substance, which grows by separation (from the blood) of the matter required. When it has attained maturity, or when the necessary nervous action occurs, it breaks down into a special product—milk.

Several experiments have been made with the udders of cows in milking condition that have been slaughtered, and an examination is recorded of the udder of a cow accidentally killed on the railroad when going home to be milked, when she would have given the usual ten quarts. The microscope showed the minute lobules of the tissue swollen and distended, but the udder contained practically no milk, except a very small quantity that drained from the divided tissue when cut across. Let us consider what happens when we sit down to milk a cow. The milker gently rubs the udder and gently handles the teats, and this excites the maternal instinct. There is what is called an erectile action of the muscles of the milk organs. The previously soft and loose condition of the teats change to rigidity, and in a very short time the milk flows and continues until the glandular tissue is exhausted, when the udder, previously hard and tense, becomes soft and loose.

We perceive that this function of the cow is

wholly nervous in its action, as indeed every other function of the animal is, and if the due nervous excitement is absent there is no functional action. It is wholly due to the right influence on the nerves that the milk is produced and flows from every ultimate lobule of the udder down through all the ducts, small and great, to the teat. Then, if all goes well, and the cow is in her natural, easily excited, nervous condition, as soon as the milker begins to touch the teats the cow lets down the milk—that is, she does not exert herself to oppose the action of the nerves of the mammary glands. But let the milker be rough or ill-use the cow, or let the cow from any cause be stupid and willful, and this necessary motherly influence on the nerves be prevented in any way, and there is no milk. The udder may remain as tense and full apparently as usual, but not a drop of milk can be drawn until the current of the cow's mind is turned successfully to maternal desire.

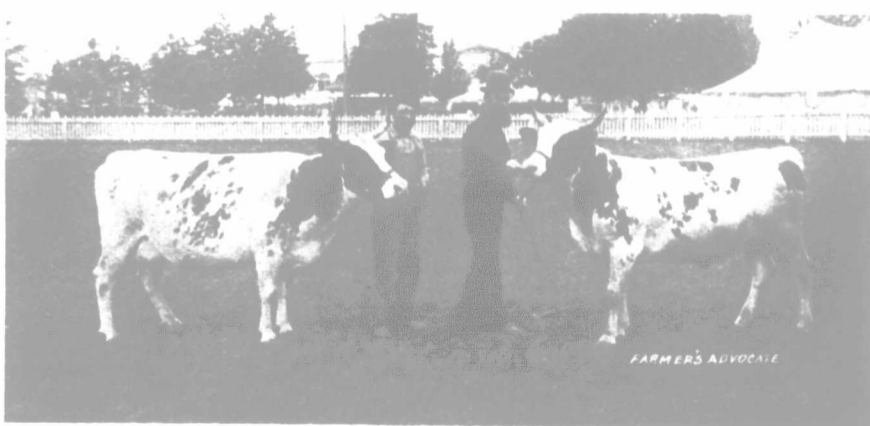
A Preventive for Milk Fever.

Milk fever is a source of heavy loss in good dairy herds; in fact, it may be taken as a rule that it is only the good cows that take this disease. It is not surprising, then, that our most enthusiastic dairy-men pronounce milk fever the greatest scourge to dairying. Mr. Geo. Rice, of Oxford Co., Ont., whose herd has become famous from the high public records made by his Holsteins, has had several cows "down" with it, some of which recovered and others were lost. Mr. Rice, being a student and keen observer, made a study of the trouble, and after having found carbolic acid good to prevent abortion, and also to hasten the complete delivery of a retained afterbirth, gave it a trial for the prevention of milk fever, and found it to be a real success. Mr. Rice agrees with many scientists in attributing milk fever to a germ, and his treatment is to destroy the germ and thus prevent its possibility of damage. He gives the following description of his treatment:

"All my cows are heavy milkers, and all are treated about as follows: I aim to have them dry six to seven weeks before calving, fed well at all times and in good condition, and feed fairly liberally up to a week of calving, in order to have the cow in good 'heart.' About a week before calving (as indicated by her udder and other signs), I give 1½ lbs. salts, 1 oz. saltpetre, 1 oz. ginger (large spoonful), and 1 cup of black molasses, and I give about the same dose day before the cow calves, but if I strike her right and have given a dose soon before calving, I give no salts after calving. I used to, but have quit it.

"I have treated the cows this way hitherto, still it did not prevent milk fever. Now, in addition, if in summer, the cow is kept in a shady and short pasture; if in winter, fed some ensilage, straw or similar light feed; and, in addition, no dry meal or bran is fed a week before calving, but two or three quarts of bran scalded, to which I add 25 drops of carbolic acid put in a cup of water and thoroughly mixed in the bran mash, adding a little salt. Give the carbolic acid for three days (twice a day), then drop it until very near calving, and give same dose same way with more salt, also spoonful of saltpetre in bran mash, continuing for a couple of days after calving.

"If a cow's bowels move 12 hours after calving, and continue to do so, then you may know the cow is all right. If the cow calves inside, it is well to sprinkle a disinfectant, carbolic acid, creolin, or any similar preparation, 1 to 50 or 100 of water, around the pen. Most of the troubles that dairy-men have are caused by 'germs,' and where cows are kept year after year, these 'germs' multiply, and successful dairymen of the future must use more disinfectants. I think if we work on this tack, we shall be more successful in preventing milk fever, abortion, etc."



LADY OTTAWA AND HOVER-A-BLINK.

Third-prize Ayrshire cow at Toronto and second at Ottawa, and first-prize yearling bull at Toronto and Ottawa, 1900.

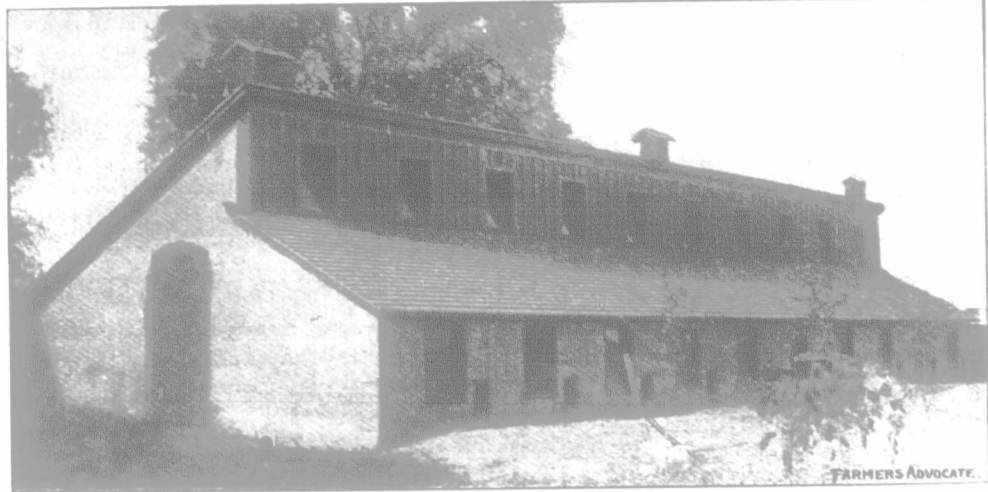
OWNED BY WM. STEWART & SON, MENIE, ONT.

A press dispatch from Milwaukee states that a movement is on foot to consolidate all the creameries in the North-western States, for which Chicago is the market, for the reason that the past season has not been a paying one.

How to House and Feed Your Poultry for Profit.

BY J. E. MEYER.

The house in which you are going to keep your poultry during the winter must be made as warm as possible, and be so arranged that there will be no drafts on the fowls. A low building, not



MR. MEYER'S POULTRY HOUSE.

over seven feet high inside, will, in this climate, prove best and warmest. It should face the south and be provided with plenty of light. One-fourth to one-third of the south side window is a very good proportion, and will give about the desired amount of sunlight.

Place the perches over a platform that is about twenty inches above the floor of the pen. Place them about eight inches above the platform, and arrange them so that they can be removed to clean. A round pole from two to three inches in diameter, or square pine of same size with upper edges cut off, will make suitable perches. Perches placed in this way are easily kept free from vermin by putting coal oil over them once each week in winter, and twice each week in hottest weather. Then, too, the droppings can be easily and quickly removed from the platform, so as to leave no breeding place for lice.

Arrange the nest boxes so that they can be removed to be cleaned. Paint them occasionally with coal oil and put in new litter, and with proper attention to roosts, you need never fear lice.

We are often asked how many hens can be kept in different sized pens, and we have invariably found that the tendency is to place too many hens together to obtain the greatest profit. It is claimed by all who have made poultry-raising for profit a study, that when kept in large flocks or crowded together during the winter, when they must, in this country, be denied free range, poultry will not return a profit for the food they consume. The largest flock of hens that can be kept together during winter and prove profitable, we have found to be fifty, and they should be allowed a pen of at least 300 square feet, or a pen 15x20 feet, or 6 square feet per bird. This is the smallest pen that we would put 50 hens into, and we have found that with the same feed and attention will do better in a larger pen, and that they will do best if the flock is divided into two flocks of 25 each, and the pen made into two of 10x15 feet each. It is useless to expect 100 hens to pay a profit when kept in this pen of 15x20 feet. They are sure to eat about twice the food, but experience has taught that they will lay even less eggs than the 50. This accounts for so many finding it difficult to make their hens lay in paying quantities in winter.

A DUST BATH

of fine dry sand or road dust should be provided for winter use; place it in a corner of the pen where the sun will shine. We have found the best material for a floor to be cement. We would not use boards on any consideration, because rats are sure to harbor underneath, and, besides, we find that the boards become foul in time. Next to a cement floor we would use 5 or 6 inches of sand and fine gravel over the clay. Whatever kind of floor we used, we would put over it about 6 inches of straw, cut coarse, or chaff.

Before putting your hens into their winter quarters, besides being careful that you put none but those that promise by their age and health to prove profitable, give them a careful dusting with insect powder. The next and most important thing for you to do is to give them

THE PROPER FOOD

to make them lay. Poultry, like other stock, requires a variety of food. It is also necessary to feed them in such a way as to make them take exercise. The different feeds that can be used are wheat, oats, barley, buckwheat, corn, middlings, bran, sugar beets, mangels, turnips, potatoes, clover hay, ground corn, and table scraps.

As soon as daylight in the morning, scatter grain in the pens, covering them with a net or fence. Put only a comparatively small quantity, say a small handful for each hen. This will start

them to work, warm them up, and should keep them working till nearly noon, when you should give them some soft food composed of steamed clover hay or boiled potatoes mixed with middlings, bran, ground oats or some other grain in which is a little salt. Put this mixture, varied from day to day, in a trough and give what they will eat up readily, still keeping them hungry enough to look for more. Before leaving them, put up the troughs and see that there is a little grain still in the litter for them to scratch for. About 4 o'clock give them a good feed of corn, wheat or buckwheat in their troughs. This time you may give a little more than they can eat up clean, so that they are sure to have a full crop when they go to roost. After they have gone to roost, go through, emptying what may be left in the troughs and scattering it amongst the litter for them to hunt for as soon as they can see next morning. Keep a mangel, a sugar beet or cabbage hung up

where they can always get at them, and a box of grit of some sort always before them. To this must be added, as being, perhaps, the most important food, as well as the cheapest food for the production of winter egg, viz., green cut bones. You can safely give your hens all this food that you can get them to eat, and you will be amply repaid. We believe that there is no food known to the modern poultry-raiser that we can so ill afford to do without as green cut bones. It has undoubtedly filled a long-felt want in this connection, and there is no reason why all who keep even a small flock cannot supply their hens with green cut bones, as there are many good and cheap green-bone cutters on the market that can be bought at a price within the reach of all.

We trust that these few hints may enable you to so feed and care for your poultry during the coming winter that they may prove a profit to you.

Diseases of Poultry.

The best way to combat disease in poultry is to prevent it by taking proper care of the flock. If the fowls are kept warm and have a dry house and are fed on wholesome food, disease very rarely attacks them.

The best poultry-keepers have the least trouble with diseases of any kind, and there are many extensive poultry yards where none of the infectious diseases ever make their appearance.

Lice.—There are more deaths among fowls from lice than from all other infections put together, and it is impossible to get the best results from hens that are lousy, and the poultry-keeper should use every effort to keep his flock clear of them. Where lice are, the roost and the whole inside of the house should be painted with kerosene liberally. The perches and their supports should be thoroughly scalded with boiling water. If this is thoroughly done, no lice will ever be found about the fowls.

Cholera.—There is no known cure for chicken cholera. Its symptoms are greenish color in the droppings and intense thirst in the fowls, and when this is noticed, every sick fowl should be taken from the flock and kept confined in a separate place. Give them water which has carbolic acid in, a teaspoonful to a gallon of water. Shut them up and force them to drink this water by not allowing them any other. Burn all fowls that die of cholera.

Canker comes from a cold originally, and if left to run its course will develop a blood poison that is fatal. It is known by yellowish-white blisters in the throat and mouth, and these will spread to the side of the face and get into the eyes. The cure is a strong solution of sulphate of copper (blue vitriol) in water, which should be applied to the canker with a swab. The sulphate of copper is poison, and none of it should be forced down the fowls' throats, if possible to prevent it, though a small quantity would not be fatal.

Gapes.—When gapes appear on a place they will infect it for years often. Many remedies are given by the authors, but the best one I ever tried is to put the chicks affected in a basket and swing it up and forth through the fumes of burning sulphur until the chicks cough and strangle. Care must be taken not to overdo this, or the chicks will be scorched.

The above are the principal diseases that afflict domestic poultry. With good care, none of them need ever be the source of great loss to the poultry-keeper.

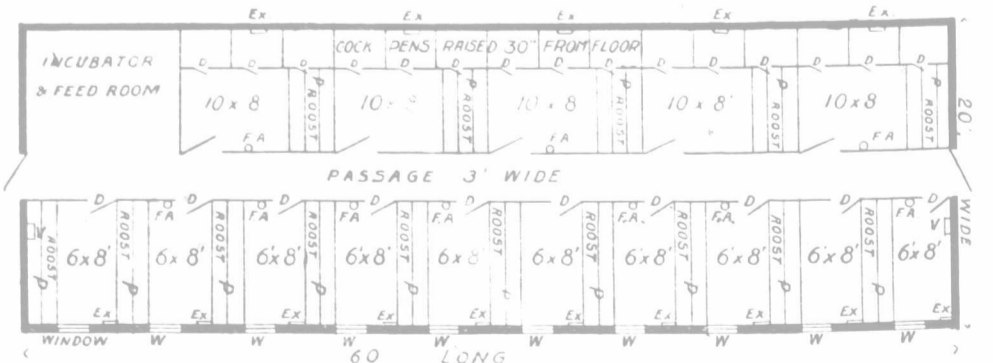
domestic poultry. With good care, none of them need ever be the source of great loss to the poultry-keeper.

Raising Broilers for Profit.

There are different methods of raising broilers for market, and any one of these methods may produce good birds, and no doubt they have already been pretty well explained, yet there is always room for one more word on the subject. Many people have commenced raising broilers, and many have failed, yet these failures have come through improper equipment with which to work, and a general misunderstanding of the best means to the end, which in this case is the plump, yellow, juicy chicken which weighs from two and a half to three and a half pounds when dressed. Birds of this weight sell more readily, which means at the best prices, than birds of a heavier weight. The question is, how are we to get these plump, yellow chickens? We will not commence with the eggs which are to produce these chicks, but we will go back to the hen which is to lay the eggs, and find the health and strength of her ancestors. If we find that the hen which is to lay our eggs is the offspring of a generation of strong, healthy birds, then we may safely depend upon her supplying us with the proper material to produce these strong, healthy chicks. A broiler business will never succeed unless built up on eggs laid by birds in good health and of strong vitality. We must force the growth of our chicks from the time they are hatched in order to get the quick-grown, juicy carcass, and the chicks must be strong and healthy, which alone comes through inheritance, to enable them to stand the hardest feeding. Chickens from poorly-developed parent stock of hit-or-miss breeding cannot fill the bill. We also want fowls of good shape and color as well as strength and vigor, for in order to lay on flesh in the right place and in the proper proportion, we must have fowls of the proper shape. And the breed that fills the bill best is the Barred Plymouth Rock or the Silver-laced or White Wyandotte. I prefer the Barred Plymouth Rock. They grow quickly, are hardy and strong, and are also good feeders. They are fine-boned, yet have the plumpest breast of any of the suitable breeds, and have stout, wide-apart, yellow legs.

We will now leave the question of breed and eggs, and go to the method of hatching. Where a large number is to be hatched, it must be done by incubators. The chicks must be hatched in February or March, in order to get the best of prices, and at this time of the year hens will not sit in sufficient numbers to hatch as many chicks as are needed. And even if they would do so, we could not afford to use their valuable time in sitting, for we need them to produce the eggs. The incubator should be run as instructed, with a little bit of common sense, guided by the operator's own experience. Extended directions on this point are unnecessary here. As the incubating is artificial, the brooding must also be artificial. In the first place, avoid overcrowding and overheating. From 50 to 100 chicks is enough in one lot; in fact, a smaller number will do better. At the time the chicks are put under the hover, 95 degrees of heat is sufficient, and this should be reduced gradually and as quickly as possible without having the chicks huddling together and crowding, until 70 degrees is reached. Give them an abundance of pure air and exercise, with sunlight in moderation.

There are many good ways of feeding, but we will settle down to the simplest and easiest, which is a soft food composed of two-thirds bran and one-third corn meal, moistened with sweet milk into a crumbly consistency. Start the chicks with this mixture, to which add 10% of fine grit. Feed this in small troughs for the first 48 hours, after which omit the grit, keeping, however, a constant supply before them in a separate vessel. One thing to be avoided in feeding this soft feed is sloppiness. Only moisten it, and do not feed it wet and pasty. Feed five or six times a day at regular hours, only what they will eat up clean at a feed. Encourage exercise, and provide, if possible, an open-air run.



GROUND PLAN OF MR. MEYER'S POULTRY HOUSE.

D, doors; Ex, exit doors for fowls to enter yards; F A, fresh air pipes; V, ventilation; Roosts or P, perches on platform to catch droppings.

Keep clean water before them at all times, and after three days add to the feed 5% of meat scraps. Increase the proportion of meat scraps gradually with their age. At three weeks, feed them the soft mash only once a day, and fill the rest of the bill with cracked corn, rolled oats, or wheatlets. Vege-

tables cooked or raw may be fed. Cleanliness is absolutely necessary. Give them some chaff from the barn to scratch in. Anything is good which will keep them lively and healthy. Abundant quantities of common foods, intelligently fed, and a supply of clean, pure water, is all that is really necessary. As the chicks grow, substitute ground oats for the bran, as the bran gives a less attractive color to the skin. When nearly ready for market,



PRIZEWINNING LINCOLNS

At Winnipeg Industrial Exhibition, 1900.

OWNED BY W. T. LITTLE, BEACONSFIELD, MAN.

the bulk of the food should be corn meal and scraps, with cracked corn as a hard grain. When the chickens have acquired the preferred weight, they are then ready for market, and should be given no food within 12 hours of the time of killing. Bleed them from the mouth, and pick dry before the animal heat has gone out of the body. Pick the body and neck clean; but pick the wings only to the second joint. Leave the head on, and the entrails undrawn. Cool them in cold water, and hang up by the legs until dry. Pack closely in boxes, using nothing between the bodies, unless clean brown paper. If the above has been carried out, the returns in nearly every case will prove profitable.

Perth Co.

PERRY F. DOUPE.

Practical Poultry Meetings---Mr. A. G. Gilbert in Manitoba.

Mr. A. G. Gilbert, Poultry Expert at the Experimental Farm, Ottawa, has been addressing a series of Institute meetings throughout the Province of Manitoba. As these meetings were held at a time when the farmers were busily engaged in getting the stock into winter quarters, the attendance was not as large as it otherwise would have been. One of the best meetings of the series was held in Winnipeg on the 17th of November, under the auspices of the Winnipeg Poultry Association, at which some twenty local poultry fanciers were in attendance. The president, Geo. Wood, occupied the chair. A deep interest was taken in the subject of Mr. Gilbert's address, and he was plied with questions. During the discussion many important points were threshed out. Mr. Gilbert advocated the poultry industry from the farmer's standpoint. Addressing fanciers, he urged them never to sacrifice those qualities that are required by the farmer and the farmer's market. The fancier, by careful attention, could breed birds possessing all of the essential fancy points and capable of winning prizes in the best company, and yet combining with these fancy points the qualities required by the poultry breeder on the farm.

Brief reference was made to the work of poultry specialists, showing what was being accomplished on the large poultry farms in Ontario and the Eastern States. He considered that every farmer should keep from 100 to 150 hens, and showed that a profit of at least \$1.00 per hen per year should be made. The speaker then went fully into the question of egg production, treating the subject principally from the farmer's standpoint. He recommended the use of all kitchen waste, which should be cooked and then mixed with sufficient crushed grain, shorts or whatever was handy to bring the whole to the consistency of a crumbly mash; a pinch of salt and a little black pepper might be added. No salt meat should be used. This mash to be fed in long, shallow troughs for the morning meal. Great care should be taken not to overfeed, as that would make the fowls lazy, and they would not take sufficient exercise during the day. While no set rule can be given, one quart of this mixture to fifteen hens, and one quart to ten pullets, was about right. He would occasionally, on alternate days, give the mixture in the afternoon instead of the morning, as there is not as much danger of overfeeding in the afternoon just previous to the long night fast. He strongly recommended the use of cut green bone, which made an almost perfect food, but should not be used every day, as it is too stimulating. About a pound for sixteen hens, given three or four times per week, is a fair allowance, and by actual test will add considerably to the number of eggs received. At Ottawa, green bones could be purchased at half a cent per pound, but he considered them cheap poultry feed even if 2 cents a pound had to be paid. Beef heads are good. He also recommended horse flesh and bones if they could be got cheaper and more easily than beef

bones. Ground bone is better than meat, as it contains phosphate of lime, which is of value in shell-making, etc. On the Ottawa Farm, the "Standard," a horizontal bone-cutter, is used, and he considers it the best. The noon ration should consist of sound whole grain, scattered about so that the fowls would have to scratch to get it, thus enforcing exercise. Whole wheat could be advantageously fed to the Plymouth Rocks and the Asiatics; whole corn may be given to the Mediterranean breeds, but is too fattening for such breeds as the Plymouth Rocks. It is well always to send the birds to roost at night with a full crop. He deprecated the use of raw meat, as having a tendency to teach hens to eat eggs. Overfeeding was undoubtedly the cause of half the diseases among poultry. He also referred to the desirability of supplying green feed during winter, than which there is nothing better than

mangolds. Cabbages are good, but expensive and hard to keep. One fancier present recommended kohlrabi, as being as cheaply grown and easily stored as turnips, and most suitable for poultry green feed. Mr. Gilbert had obtained good satisfaction from "lawn clippings," carefully dried and put away for winter, and when steamed he considered them better than clover, but it was necessary to give small quantities, as fowls were liable to become "crop-bound" if fed too much at a time.

The speaker referred briefly to the construction of the poultry house, pointing out the importance of affording proper ventilation, and cautioning against top ventilation in poultry houses.

Speaking of the egg trade, he said it was most difficult to get really sound, good-flavored eggs in the month of July, a time when eggs were most plentiful. It had been proven, he said, that eight hours' warmth under a hen would cause sufficient change to take place in a fertilized egg to cause it to spoil when that warmth was removed, and he said in crowded poultry houses eggs are frequently under a succession of laying hens, or "cluckers," for that length of time before being gathered. Greater care should be exercised in collecting all eggs promptly once or twice a day, and keeping them in a cool place, not in a cupboard alongside of the cook stove, and in keeping no males in the laying flock. It was always best to make up breeding pens with a few carefully-selected hens, mated with the best procurable male birds. He advised farmers to buy breeding stock—even a trio—rather than depend upon buying eggs for setting. He then demonstrated the importance of feeding and preparing the chickens intended for market so as to obtain the best market prices.

The discussion following the address brought out many interesting points in reference to the care of eggs in incubators, feeding rations, the winter care and management, and lack of vitality of winter eggs, etc.

Our Poultry and British Markets.

Our system of cold storage, both as regards the cold-storage firms themselves and the cold-storage cars for transportation, is making rapid strides toward perfection, and it will not be long before we have in Canada a cold-storage system equal to anything in the world. Undoubtedly, of all the comparatively undeveloped sources of agricultural wealth, none will more surely fill the bill than poultry. The demand for the superior quality on the English market is unlimited. The home market is rapidly increasing. A help to this development is the cold-storage system of the Department of Agriculture and the furnishing of instructions as to poultry culture from the Experimental Farm system and the Commissioner of Agriculture. But the most direct aid is in the shape of such large firms as the Canadian Produce Co., of Toronto, who buy the chickens from the farmers and do the fattening, packing and shipping of the birds.

It may be that when the superior quality of our product is known and appreciated on the British market, and the prices established so that we will know what it is possible to get, the time will be opportune for the individual farmer or association of farmers to fatten and ship for themselves. By that time our farmers should be well acquainted with methods of shipment to an already established market with guaranteed prices.

This year the poultry trade with Great Britain has developed as it never has before. As early as the middle of last month one firm had sent to England a shipment of Canadian chickens which was five times larger than all shipments sent before from this country in any previous entire year. Next year there will be a demand for chickens unheard of before. The farmer, for the present year, and probably for the next, should not try any direct shipment, but find out and send his chickens to the

most reliable firms in this country. It may not pay the farmers to do the fattening, but it will certainly pay them to raise chickens to sell to the large firms, who will do the fattening and shipping.

A. G. GILBERT,
Ottawa, 1900. Manager Poultry Dept.

The Frame.

BY MORLEY PETTIT.

Hive-making has made rapid strides in the last century, and many valuable improvements have been effected on the old straw skep and box hive. Not the least important of these is the movable frame, which enables the apiarist to easily remove any comb or combs, or perform any other of the countless manipulations and exchanges of combs which are necessary in modern bee culture.

Leading up to this invention were movable bars, used in Greece and Candia in the eighteenth century? Della Rocca mentions them in his work, published in 1790, as bars placed across the top of the hive, to which the bees attached their combs. Dzierzon used these bars in 1838, but each comb had to be cut loose from the sides of the hive before it could be lifted out. About the same time Huber invented the leaf hive, which consisted of twelve frames, hinged together so that they formed a hive which could be opened or shut like a book. Here we have the nuclei, as it were, of the two great classes of frames, viz., standing closed-end frames and suspended frames.

Several attempts were made to invent a practical hanging-frame hive, but none were successful until Mr. Langstroth in 1851 discovered the principle on which the modern suspended-frame hive is based (it may be mentioned that Baron Von Berlepsch, of Germany, also invented a hanging-frame hive about the same time). In this hive each comb is built in a frame which is suspended by projections from each end of its top-bar, resting in rabbets cut in the top of the hive. For best results, the top-bars are flush inch in width, and the frames are spaced 1½ inches from center to center. The spacing requires to be very accurate, as, if it is a little too wide, the bees, wishing to economize space, build in burr-combs, and if it is too narrow, they seem to fear the collapse of their hive, and brace the narrow space very firmly with brace-combs, which are readily distinguishable from burr-combs.

In a well-built hive, with nicely-spaced frames, these burr-combs and brace-combs rarely appear, and the frames when the hive is opened have a clean, neat appearance, pleasant to the experienced eye. But often the top-bars are too thin, and the weight of the comb causes them to bend in the middle and leave the space above too large, or the careless or inexperienced beekeeper does not space the frames nicely, and the top-bars present a mass of burrs and braces.

Despite these difficulties, loose frames are very commonly used, for, by employing a thick top-bar, the sagging can be prevented, and long experience of using the end of the thumb or finger as a gauge enables the operator to space the frames quite rapidly and accurately. To facilitate spacing, some have the top of each hive body "spaced" with marks, which show exactly how each end of each frame must come.

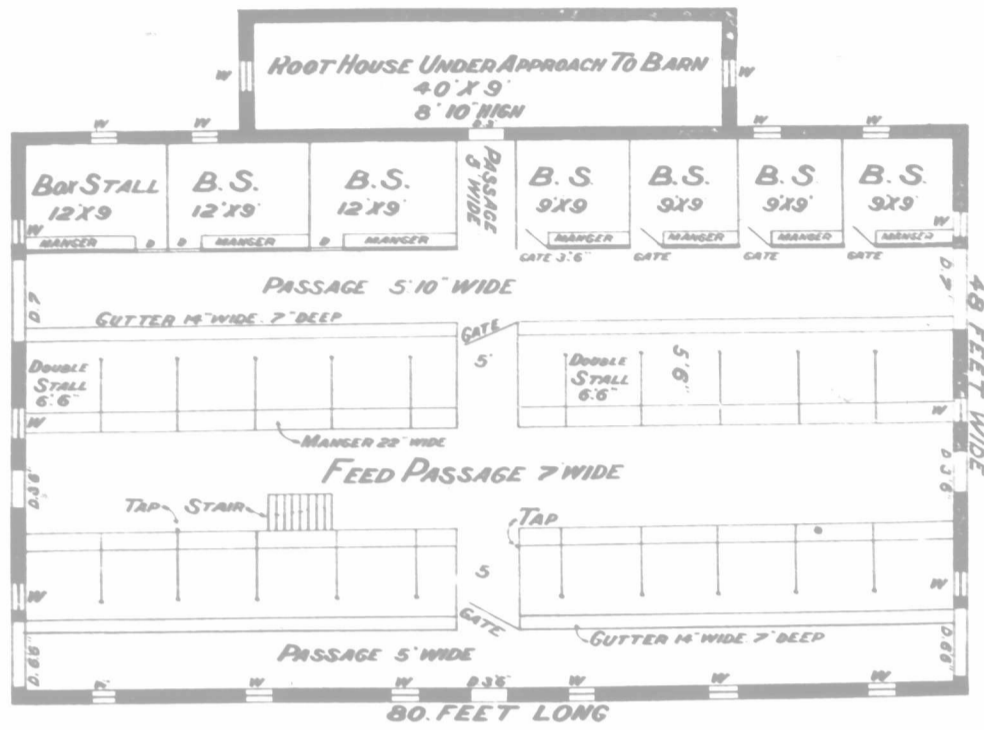
Many, however, have frames with some mechanical device which cause them to space themselves automatically. These are called fixed frames. Ordinary loose frames having thick top-bars are made self-spacing by driving a staple in each side of the top-bar, near the ends, and diagonally opposite. The staples project so that no matter which way the frames are turned they are spaced by simply pushing them together. Another style of fixed frame, the Hoffman, has the end-bars wide at top and touching about 2½ inches down. One side is brought to a blunt V edge, and the other left square so that a V edge comes against a square edge, to reduce propolis sticking and danger of crushing bees. It is said that in localities where there is not much propolis, the Hoffman frames may be handled more rapidly than staple-spaced frames; then, they are held more securely in position in moving bees. Other suspended frames have the end-bar wide all the way down, forming a closed-end frame.

This brings us to the standing closed-end frames, of which the chief are the Quinby and Heddon. The closed-end Quinby has end bars 1½ inches wide their entire length, which fit tight together. They are held in an upright position by a strap-iron hook on one corner of each, fitting into a groove in the bottom board. "With a panel on each side, a cover and a bottom board, the Quinby-Hetherington hive is complete, the ends of the frames forming the ends of the hive, though for additional protection in spring, Mr. Ellwood and Mr. Hetherington both use the outside case to set down over the whole."—A B C of Bee Culture. The main distinguishing feature of the Heddon frame is that it is only 5½ inches deep, but the idea is to use two sets of such frames for one brood chamber.

With regard to dimensions, frames may be classified as square and oblong, but the latter are given the preference, the standard frame for America, the Langstroth, being 9½x17½ inches. In the matter of frames, we are largely creatures of circumstance, but the writer would recommend to beginners a fixed frame of standard dimensions.

Cattle Barn for 200-Acre Farm.

The stock barn of which the ground plan and an external view are presented herewith is that of Mr. John D. Ferguson, near St. Thomas, Ont. It was built in 1888, and has proved to be very satisfactory to the proprietor. It is 80 feet long and 48 feet wide, has stone wall 8½ feet high enclosing a basement for cattle, and a capacious superstructure, which has 19-foot corner posts and abundance of room above the plates, as is shown in the photographing. It may be stated just here that the peak of the roof is 52 feet up from the ground.



BASEMENT PLAN OF JOHN D. FERGUSON'S BARN.

The basement plan (fig. 1.) shows clearly the internal disposition of the space. It has in all twenty double and four single stalls for tied-up cattle, and seven box stalls, three of which are 12 by 9 feet, and four 9 by 9 feet, each having a suitable manger. The three larger boxes have strong doors suitable for enclosing a bull, and the four smaller ones slatted gates each 3½ feet wide. The balance of the basement is taken up with two rows of stalls and three passages. The dimensions of these are shown in the plan. The passages behind the cattle are wide enough and have large enough doors at either end to allow a horse and boat to pass through for cleaning out. The feed passage is roomy, and supplied with three water taps, stairway to enter the barn above, and chutes down from barn for feed. The gutters behind the cattle are 14 inches wide, 7 inches deep, and constructed, like the entire floor, of Queenston and Thorold cement. The mangers are 22 inches wide inside, the bottom of which is of cement raised 2 inches from the floor level of the stalls. The front board of the manger, that is next the feed passage, is 22 inches high, over which the feed is dumped. Three feet and a half up from the floor is a 2-inch plank 8 inches wide, immediately over the center of the manger. This does not interfere with putting in the feed; it is not in the way of the animals feeding, and it prevents them from standing too far forward while not feeding, thus preventing much of the droppings from falling on the platform where the cattle lie down.

The basement inside is 8 feet high, and well lighted and ventilated. The windows, of which there are 16, each have four panes 12 by 14 inches. Each sash swings on a pivot inwards at the top. In addition to this, there are three 6-inch tiles passing through the wall near the top at each end, eight on the east side and five on the west. These can be closed when desired.

The root house, underneath the driveway to barn floor, is perhaps the most unique feature of the whole structure. It consists of an arch of brick built on a stone foundation. One similar to it was described in our May 1st, 1900, issue by Mr. R. A. Penhale, who, by the way, is a neighbor of Mr. Ferguson. The arch is 9 feet wide and nearly 9 feet high in the center. It is constructed similar to an arch over a stream beneath a railroad or other like situation. When commencing to construct the arch, a ledge of masonry 6 or 8 inches wide is built outside the wall of the basement as high as where the arch commences, on which one side of the arch rests. The other side and ends are built up in similar manner, but of heavier wall. An arch 9 feet wide should be commenced 5 feet 6 inches below the barn floor. This allows for a rise of 1½ feet for the arch—being half its width—and 1 foot for soil above. When the wall is built up to where the arch commences, 2-foot wooden arches are put up and covered with lumber, and the arch built over this with bricks trimmed wedge shape and set on end. When the mortar is solid, the wooden arch is taken out. Mr. Ferguson's arch is 10 feet long, and has a capacity for about 1,500 bushels of roots.

At each end there are two 6-inch tiles passing through the wall near the top for ventilation, also a window near the top and an opening in the center of the top for roots. The structure is water-

proof, handy to get roots in and out, and occupies a space that would require to be filled with soil were it not there to engage the space.

The upper barn plan is very simple, having two threshing floors, each 14 feet wide, side by side in the center, across the barn. This leaves two large mows, one at either end. The granary occupies the east third of the south mow. The stairway runs down off the threshing floor in the corner of the granary. The barn doors run on rollers. The west ones, through which the crop is drawn, are each 13 feet, and the east ones 8 feet. The windmill shown on the top of the barn is a Brantford

"Ideal," having a 15-foot wind wheel. It is set up on a 62-foot mast of rock elm, 10½ by 11 inches. It is used for pumping, grinding, cutting feed and pulping roots. The position of the pumps is shown to the right of the illustration (fig. 11.). The pump is worked by a jerk rod, shown running from the barn over the water tank. The tank is connected with the well by a pipe running underground, up through the bottom of the tank. The tank is connected with the taps in the stable in a similar manner. Mr. Ferguson has decided to build a milk house to occupy the space beneath the water tank, for use the year around.

Mr. Ferguson, after a fair trial with the barn, considers it satisfactory in all

most every way. The only change he would make in building another barn would be to raise the basement walls one foot higher, and raise the floor of the stable just that much, which would provide for more fall away from all sides, so as to easily get rid of all surface water. This is a very important point in building any class of farm structures.

The Ontario Winter Fair.

FROM OUR ONTARIO AND EASTERN EDITION.

The Ontario Provincial Winter Fair, including the Provincial Fat Stock and Dairy Show and the Ontario Poultry Show, to be held at Guelph, on

December 11th to 14th, will be an event of more than usual interest this year, because of its being held in the new building erected for the purposes of the show, now nearing completion, and which will be its permanent home. The interest will also be augmented by the fact of the Ontario Poultry Show being held at the same time and in the same building. The business of poultry-raising is becoming one of great importance to Canadian farmers, and is proving one of the most profitable branches of their work, as our home market and export returns amply show. The display of poultry at Guelph will undoubtedly be the greatest ever seen in this country, while the opportunities for gaining information upon the merits of breeds and methods of raising, feeding and marketing poultry will be such as have never before been offered in connection with any public exhibition. The same may be said in regard to the hog industry, which has so rapidly grown in importance to our farmers in the last few years, bringing millions of dollars into the country, and promising to be a permanent feature in profitable farming. One of the most interesting and instructive branches of the show will be the judging of swine in bacon classes, and the comparison of the dressed carcasses with the living animals. This feature will be seen for the first time in cattle and sheep, as well as in swine, liberal

prizes being offered for the best carcasses in each department. The dairy industry, which has made Canada famous in the best markets of the world, and is a permanent source of profitable returns to a very large proportion of the farmers of the Dominion, is recognized by the granting of generous prizes for cows of the various breeds, by actual test, in milking competitions, and will be of unusual interest this year, owing to the fact that the food consumed will be valued and taken into account in making the awards. Dairy appliances of all sorts will also be on exhibition, and addresses by experts are promised on various subjects connected with the breeding, feeding, management and marketing of beef and dairy cattle, sheep, swine and poultry and their products.

This is pre-eminently a farmers' fair, under the management of farmers, and free from all distracting side shows. It is an institution designed to encourage farmers to improve their stock on profitable lines, to impart sound, practical and helpful information, and to emphasize the fact, which statistics abundantly show, that live stock and its products, in the form of beef, mutton, wool, bacon, cheese, butter, poultry, and eggs, constitute the financial salvation of the farmers of this country. To farmers' sons especially, the Winter Fair offers an educational opportunity they can ill afford to miss, and as reduced rates have been arranged for on all the railroads, and Guelph is a convenient center for the greater part of the Province, the exhibition ought to be largely attended. Farmers' Institute excursions are, we understand, being arranged for in many counties, and it is hoped that many will avail themselves of these. The Ontario Experimental Union will hold its annual meeting at the Agricultural College during the week of the show, and all its meetings are open to visiting farmers. A public meeting will also be held on Wednesday evening, in the city, at which addresses by prominent men will be delivered. There is every reason to hope and believe that the Winter Fair this year will mark the commencement of a new era in its history, which will grow into splendid proportions in the coming century.

Agricultural text-books in common schools are a crying necessity, but by them are not meant learned and technical treatises. At present the children's minds are stored with information regarding "the lion and the unicorn," and such like animals, which they have never seen, and need not be sorry although they never see; but the natural history of the domestic animals would be much more useful and help them greatly in the battle of life. Such like information would foster a taste for agricultural and rural pursuits, and prevent the minds of ingenuous youth being filled with dreams of other lands than their own. Similarly, text-books giving elementary information regarding native seeds and roots should be of value, while the succession of the seasons, and the work peculiar to



EXTERIOR VIEW OF JOHN D. FERGUSON'S BARN, YARMOUTH TOWNSHIP, ONTARIO.

each on a farm, would form a most valuable addition to the information imparted in an elementary curriculum.—*Scottish Farmer.*

About 3,000,000 pounds of meat per day is the average which London (Eng.) handles of the foreign product. To this must be added the provision and the English fresh-meat trade to get the total daily meat transactions of Britain's great metropolis.

QUESTIONS AND ANSWERS

Veterinary.

LUMP ON COW'S JAW.

F. E., Grey Co., Ont.:—"Would you oblige me with a remedy for a lump on cow's jaw. It is pretty well back on the throat, and about size of small hen's egg? The same cow has white scum over right eye. Can it be taken off?"

[1. See reply to lump jaw in cow in this issue.

2. The white scum referred to is a provision of nature to protect the eye from light and exposure while ailing, and the treatment should be in the direction of dealing with the cause of the scum, and not the scum itself. Keep the cow in a comfortable stable and bathe the eye with warm water, with a little milk added, twice a day before applying the following lotion: sulphate of zinc, 12 grains; fluid extract of belladonna, 15 drops; boiled water to make two ounces.]

LUMP JAW IN COW.

J. N. F., Ohio, U. S. A.:—"I have a cow with a swelling started under the jaw; it is now quite large, and hard on the side of the jaw. Let me hear right away if anything can be done for it. I tried to blister it, but did not see much difference."

[Since the lump did not break, discharge and show signs of healing after blistering, the trouble appears very much like genuine actinomycosis, a contagious disease that is now believed to spread among cattle. It is caused by a germ that settles in the jaw, or sometimes the tongue. When the disease attacks the tongue, that member becomes swollen and hard, producing the condition known as wooden tongue. When it attacks the jaw, a hard, bony lump forms opposite the roots of the teeth. In time, if it continues, the teeth will drop out, the animal fails in condition and finally dies. With the best known treatment some cases prove incurable, but others respond to treatment. First of all, separate the affected animals from the well ones. Give repeated dram doses of iodide of potassium twice daily, in bran mash, for several days, then miss a few days and repeat the iodide as before. Apply to the surface Fleming's Lump-jaw Cure, advertised in our business columns, according to directions obtained with the remedy.]

MAMMITIS.

J. C. H. S., Lanark Co., Ont.:—"We have a cow that calved on Wednesday at noon, but did not give any milk after calving; udder very much swollen. On Thursday at noon she lost her appetite and did not eat or drink for 24 hours. Gave her a pound and a half of Epsom salts. On Friday afternoon commenced to eat a little and drank one-half pail of warm water. Rubbed udder well with marsh-mallow ointment, and now, on the seventh day, milk is just beginning to come in small quantities. Cow is in good condition, and was only a few days off pasture, but had not been fed dry food. 1. What was the trouble with cow? 2. What is the remedy?"

[The trouble with this cow was mammitis (inflammation of the udder), often occurring after calving, caused by the change taking place in the lacteal apparatus. In this case there was also a partial agalactia (absence of milk), and you should be pleased to be able to say that she is commencing to milk well, as in many cases such is not the case. Treatment consists in giving a purgative, as you did, bathing the udder long and often with warm water, or keeping warm poultices on and drawing off what milk or fluid there is three or four times daily. I do not think your marsh-mallow ointment has any special action in such cases. Heat to the udder, light food and attention to the bowels, and milking as stated, is the treatment that has been found most successful.

J. H. REED.]

OPHTHALMIA IN SHEEP.

W. O., Jr., Middlesex Co., Ont.:—"About five weeks ago some of my sheep became blind, one after another, until most of them are having a hard time to get around. They are much inflamed, and some of them have a white scum over the sight. They are in a healthy condition otherwise."

[In this disease the eye is partly closed, the eyelids are swollen, and there is a copious secretion of tears which flow down over the cheek. It frequently appears in successive attacks, each being more severe than the former, the result being blindness in many cases. The cause of the affection so far has not been determined, but that it is infectious in character is extremely doubtful. The treatment of sheep with this disease should consist in commencing with a mild physic, such as four ounces of Epsom salts; then bathe the eyes with cold water, and use the following lotion: "Sulphate of zinc, 2 grains; sulphate of morphia, 2 grains; distilled water, 1 ounce. Drop a few drops into the eye two or three times daily, and keep the animals in pen where there is only subdued light.]

PERIOSTITIS IN MARE.

J. E. PATTMAN, Bruce Co., Ont.:—"I have a valuable mare, seven years old, which ran away last March and hurt her right hind leg between hock and fetlock joints, on outside of the leg. The leg swelled and she was lame for a few days. I took her to the veterinary surgeon, and he gave me some liniment to apply to it. I attended to it well and the lameness disappeared. But ever since, the leg will swell from standing in the stable, and as soon as exercised or running in pasture, it will all go down, with the exception of a small ridge, about as large around as a lead pencil, and hard. The veterinary surgeon tells me to bandage it when standing in the stable. This I have done, but does not seem to help it any. She does not go lame at all, just the swelling. Would you kindly advise me what to do."

[The periosteum (the fibrous covering of the bone) received an injury during a runaway, and the inflammation is not yet entirely allayed, and causes swelling when the mare is at rest. Cases of this kind are usually very tedious, and in many cases an immovable enlargement remains after all irritation ceases. Try the following iniment: Tincture of iodine, 1½ ozs.; iodide of ammonium, 1½ ozs.; alcohol, 12 ozs.; water sufficient to make 1 pint. Rub a little of this on, with smart friction, twice daily, and have patience. If necessary, get the second bottle of liniment, and you will eventually allay the inflammation and probably cause absorption of the enlargement. Bandaging is good practice, but do not apply the bandage in less than an hour after applying the liniment. If the liniment should blister, stop its use for a few days. J. H. REED.]



THE LATE JOHN I. HOBSON.

LUMP ON STIFLE.

N. B.:—"I have a colt, one year old, which has a lump on the stifle joint the size of a hen's egg, which causes it to be very weak on the joint. I had a veterinary see it in June, and he pronounced it excessive joint water. He has been treating it ever since, but without any improvement. His method of treatment is blistering. Do you think there is any hope for its recovery, and if so, what steps should I take?"

[You do not state the nature of the lump, whether it is soft and fluctuating or hard and unyielding, or whether it is tender to pressure, etc. From the meager symptoms given, I am of the opinion that it is a soft, fluctuating tumor, just below the stifle joint, and that it is not sore to pressure; but the colt shows defective action—not exactly lameness, but a weakness in the part, especially if going through soft ground, snow or the like. If so, it is what is known as a porcelaneous deposit, the result of partial dislocation of the patella. The treatment adopted is all that can be done—that is, repeated blistering. Keep in a box stall, and do not allow free exercise in the yard or field until spring. Keep on blistering, and you will probably have a useful animal, but not all right.

J. H. REED, V. S.]

STOCKING OR FILLING OF THE LEGS IN HORSES.

READER, Middlesex Co., Ont.:—"A year ago I had a pair of mares, graded Clydesdales, that worked hard, and were well fed all season up to freezing-up time. Soon after idleness commenced

they began to stock up, look hard and feel cranky. I slackened off their feed, but it took several weeks before they became all right. I wish to know how to prevent a recurrence this year, and would appreciate instructions from you, both as to the cause and treatment of this trouble, which I believe is a general one at this season."

[There is a predisposition in many horses (especially those with what are known as round, fat or beefy legs) to stocking during idleness, following a season of steady work, and good feeding. The cause is a plethoric condition of the system and want of sufficient regular exercise. The animal is plethoric, or in high condition (though not necessarily fat). During idleness the circulation becomes sluggish, and there is a congestion of the capillaries (the very small blood vessels), especially of the extremities, and a consequent swelling or filling of the parts. Exercise increases the circulation, stimulates the capillaries and forces the blood outwards, and we have a consequent decrease of the swellings, only to reappear when the horse again stands, even over night. The general appearance and spirit of the animal become affected. Her hair looks dry and stands, and in many cases the heels, and sometimes higher up the legs, become inflamed, sore, and crack. Horses with clean, flat bone, with an absence of beefiness, seldom or never are affected in this manner. The best way to prevent the trouble in horses predisposed to it, without medical treatment, is to gradually decrease both the amount of work done and the qualities of grain fed to the animals, and when no work can be done, decrease still further the grain, and give regular exercise. Treatment for existing cases should be as follows: Feed nothing but a little bran from 12 to 15 hours, then administer a purgative, from 6 to 10 drams Barbadoes aloes (according to the size of the animal) and 2 drams of ginger; mixed with soap or treacle, and made into a ball. Allow nothing to eat but a little bran, and give water in small quantities until purgation commences (generally about 24 hours), then feed hay and bran, and it is good practice to give a little roots, as a couple of carrots or a turnip once daily. When purgation ceases, give one of the following powders every night in damp food: Soda bicarbonate, 6 ozs.; powdered nitrate of potassium, 3 ozs.; powdered resin, 3 ozs.; arsenious acid, 4 drs. Mix, and make into 24 powders. We sometimes get stocking in horses that are lean and in poor condition. In such cases, good food and regular exercise and tonics will usually effect a cure. In these cases much the same symptoms are produced by entirely different causes. J. H. REED.]

Miscellaneous.

SICK CHICKENS AND TURKEYS.

L. E. J., Elgin Co., Ont.:—"We have been losing our chickens for nearly a year. They get diarrhoea, and get lame; combs get dark, and the chickens get very dumpy. Some die in a few days; others lie around for a month, and then crawl off some place and die. The disease is now among our turkeys. We have tried a number of remedies, with no good effect. Can you diagnose the disease and advise a remedy?"

[From the description given, I cannot say what disease you have among your flock. If they were troubled with cholera, the symptoms would be much the same, but, in addition, the birds would have intense thirst, drinking almost constantly, and further, the droppings would be of a greenish cast. Death usually results in the course of three or four days. If you could send a sick bird to the Bacteriological Department of the College, they would be only too glad to examine the bird for you and diagnose the disease. The following treatment I have found very useful in cases of diarrhoea: Sweet tincture rhubarb, 2 ozs.; paregoric, 4 ozs.; bicarbonate of soda, ½ oz.; essence of peppermint, 1 dr.; water, 2 ozs. Mix well, and give one tablespoonful of mixture to one quart of drinking water, giving them no other drink until cured. We have also found common salts a good remedy, giving about a teaspoonful to four birds.

W. R. GRAHAM, Manager.

Poultry Dept., O. A. C. Guelph.]

CATTLE REFUSING CORN FODDER.

W. J., Virden:—"Having noticed for the past few years that you recommend the growing of corn for fodder purposes, I planted an acre and a quarter of large horse-tooth corn last spring. This grew very tall, but did not form ears. Wishing to let it stand as long as possible, it was slightly touched by frost and my cattle would not eat it, although only the outside leaves were injured. Please let me know why it is that our cattle refuse to eat the corn, as I understood from your experience that the cattle were very fond of it?"

[I judge from your letter that you have been sowing a coarse, late variety. We find that such varieties are unfit for this climate. They produce a rank growth, but the quality of the fodder is very inferior, and cattle often refuse to eat it. In future, I would advise you to sow such varieties as Pearce's Prolific or North Dakota Flint. They will produce ears before the fall frosts, and the fodder is sweet, and relished by all classes of stock.

Brandon.

S. A. BEDFORD.]

FEEDING RUSTY STRAW.

J. D., Minnedosa:—"A large proportion of our straw is very rusty. Do you consider the rusty straw injurious for feed? I remember hearing that rust produces abortion in cattle. Can you give me any information on this point?"

[We have fed considerable rusted straw to our cattle in former years without any injurious results. Of course, I would prefer the bright, clean straw when it can be obtained. While smut may be liable to produce abortion in cattle, I know of no case where rust has had this effect.]

Brandon. S. A. BEDFORD.]

FEEDING STRAW.

J. R., Gladstone:—"Our hay in this part of the Province is limited in quantity and, in most cases, severely injured by the wet weather. We are anxious to make our oat straw and hay go as far as possible. Can you suggest any plan by which we can utilize this fodder to the best advantage?"

[We find on the Experimental Farm that to obtain the best results from a given quantity of feed it is necessary that a cutting-box should be used. The chaff should be slightly dampened and a small quantity of chop spread over it. The cattle then eat it up with a relish: whereas, if the fodder is given in the manger uncut, the best is often picked out and the balance trodden underfoot.]

Brandon. S. A. BEDFORD.]

PARIS AWARDS.

J. M., Morris, Manitoba:—"Please inform me how it is that the Massey-Harris Machinery Company claim to have the highest award for binders at the Paris Exposition? Also, how it is the Deering Machinery Company claims to have the highest award for binders at the Paris Exposition? I would think only one company could have the highest award."

"I would also like you to describe a dum-dum bullet, and why it is so named?"

[1. The various exhibits at the Paris Exposition were classified under exhibits made from sections of different countries, and doubtless the Massey-Harris Company received highest award for binders in the Ontario or Canadian section of the exhibit, while the Deering Company might receive the highest award in a collective exhibit from the State of Illinois or from the United States.]

2. A dum-dum bullet is provided with a steel jacket, except the end, which is of soft lead, that spreads out like a mushroom when it strikes, and consequently makes a much larger and more deadly wound than an ordinary bullet. Why named?]

SOURS ON A. A. CATTLE-DUCKS HATCHING.

JOHN BELL, Simcoe Co., Ont.:—"As a reader of your valuable paper, I would like to ask a few questions."

"1st. What causes scurs on pure-bred Polled Angus cattle. Does it reduce the price. As breeders, would you advise breeding pure-bred cows to a sire with scurs?"

"2nd. Would you recommend farmers to use incubator for hatching water fowl, as I intend hatching three or four hundred ducks?"

"3rd. What kind of ducks would you advise, as we have plenty of running water. At what age is a duck best for laying?"

[1st. The scurs that occasionally appear on Aberdeen-Angus bulls probably denote contact with some horned breed in the past, but do not necessarily indicate any impurity of blood. They are said to appear only in some families, and careful breeders consider them quite objectionable in breeding.]

2nd. We have no hesitation in recommending the use of an incubator for hatching ducks, as they have been proved to be the only satisfactory method of hatching ducks on a large scale for the spring and early summer market.]

3rd. Pekin ducks are probably most popular, but Aylesburys and Rouens are first-rate breeds. Ducks lay about equally well as yearlings and two-year-olds: after that the number of eggs decreases.]

WARTS ON HEIFERS-WATERING STEERS-FEEDING DAIRY CATTLE BROOD SOWS.

F. A. N., Grenville Co., Ont.:—"1. What will take warts off heifers?"

"2. Should beef cattle have just a limited portion of water? If so, how often should they get water?"

"3. Should dairy cattle be fed their coarse feed, such as silage or hay, more than twice a day during their dry season in winter?"

"4. In selecting a brood sow, what should be the qualities?"

[1. If the warts are on the heifer's teats, they should be removed with a pair of scissors not very sharp. Then treat the spots with tincture of the chlorate of iron, to arrest bleeding. In 24 hours touch the spots with caustic potash. Treat the spots with carbolic oil until healed.]

2. When a feeding beast, two years old or over, gets a liberal quantity of roots, from 1 to 2 bushels per day, many feeders consider water needless, but with a less quantity, or no roots at all, in our opinion, the animal should be allowed to judge for itself how much water is required. Some prefer water before their cattle all the time, and others give it only when they are thirsty and drinking.]

3. A brood sow should be of good parentage, be long, deep, smooth, and vigorous, and have a good disposition. She should have at least twelve teats. A brood sow should not be selected from a litter before being weaned, as often the plump, best looking pigs turn out disappointing. A sow two months old or more should well indicate her future form.]

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Notes on the Fruit Crop of 1900.

The spring of 1900 opened with every promise. To the average horticulturist there was some lurking fears on account of the lack of snow during the preceding winter, at least in this part of the Province. As the season advanced doubt gave place to certainty.

Of the red raspberry crop, at least nine-tenths of the canes were dead, due no doubt to the want of a good covering of snow, the varieties that suffered most being the Turner and Philadelphia, while the Kenyon, Sarah and Loudon suffered least, although all had the same advantages as to location.

Strawberry beds that were well mulched showed fine healthy plants, better than for many years. Where no covering was given, plants were nearly all killed out. The canes of the black caps, on being uncovered, appeared to be in fairly good condition, although hardly up to former years, but gave promise of an average crop. But the long and extended drought in the early part of the summer blasted all prospects of a crop of strawberries and black raspberries. We picked a few quarts, realizing they were but fleeting mercies that must be seized as presented.

Gooseberries and currants were also a failure on account of dry weather. Ruby Castle, a red currant, appeared to resist the drought better than some of the others.

Nelson, Man. A. P. STEVENSON.

Preserving U. S. Timber Areas.

A new professional field for young men is being developed in the United States, which promises employment to many bright, active students, at remunerative wages, in connection with the preservation and improvement of forests. There is a growing demand throughout the country for foresters, and a man versed in this profession can almost command his rate of pay. The Department of Agriculture has opened what may be termed a school for foresters. During the summer season, the Department gives employment to students who have decided to take up forestry, paying them at the rate of \$25 a month while in the field, and defraying their expenses. Owners of vast tracts of timber land are awakening to the necessity of adopting means of preserving their forests so that more than one crop can be cut, and are looking for men who can take charge of their property and produce lumber in abundance without exhausting the trees. A well-trained forester can not only go into a forest and give an accurate estimate of the number of feet of lumber it will yield, but can map out a plan of cutting which will give a regular crop of lumber without lessening the permanent supply. The starting of young trees, the thinning out of old ones, and the selection of trees according to the character of the soil are subjects for scientific study. Several years ago the Department decided to take charge of timber lands for such owners as wished to turn them over temporarily to the Government, and to prepare working plans for the yearly cuttings. Advice was also to be given regarding the laying out of new trees, cultivation, etc. Under this plan, the Department now has control of more than 50,000,000 acres of forest land, scattered throughout States all over the country. Much of these timberlands are in the Adirondacks, some of the most prominent New York owners of tracts there having asked the Government to handle their timber property for them.

"At Ardee I made the acquaintance of a beekeeper who had taken 112 lbs. of splendid honey from a stock simply hived in a box. At Dundalk I found a beekeeper, who accompanied me on my rounds, who had taken honey that season which had brought him the nice sum of £20 16s. 8d., £20 of which was, he said, clear profit. Then at Carlingford I met a lady beekeeper whose monetary returns for three successive years were £5, £20, £27."—Correspondence Farmers' Gazette.

Ten Tons of Canadian Chickens.

To the Editor FARMER'S ADVOCATE: SIR. It may be of interest to your readers to learn that today we received an order from Great Britain for ten tons of Canadian chickens. This order was obtained upon a sample of a few hundred pounds sent six weeks ago. This is the largest order for Canadian chickens ever received, and is a good start for a new Canadian industry. THE CANADIAN PRODUCE CO., Toronto, Nov. 22nd, 1900.

Live Stock Exports from Montreal.

During the past season, from the port of Montreal, 92,172 cattle (including 3,677 American cattle in bond) were exported, an increase of 19,388, compared with 1899. Gordon & Ironside shipped 10,000 more head of cattle than last year. Average cost for this country, 80¢ per head; total value, \$5,530,300; ocean freight, \$510,000; railway, \$325,000. SHEEP—Total exports, 238,878, an increase of 23,439, compared with 1899, but prices were 25 per cent. better. Value, \$5 per head; ocean freight, \$1.25 per head; insurance, 25 cents. Including expenses, the grand total of 1900 season's trade was \$7,879,119, or an increase of \$1,116,167, compared with a year ago.

Horses for South Africa.

A New York despatch, on the authority of John S. Britton, of St. Louis, who has been supplying the British army with many horses, announces that 50,000 more are needed during the next six months for Kitchener's forces in policing the Transvaal and Orange Colony.

A New Market Paper.

A new live-stock market paper has made its bow to the reading public interested in meat markets, in the form of The Chicago Live Stock Herald, a daily paper for the farmer and stockman. The editors and proprietors of this publication are Messrs. Halliwell, Baum & Co.—A. C. Halliwell, for years editor of Drover's Journal, and W. F. Baum, who has been about the Chicago Stock Yards for the last ten years. The paper has made a modest but substantial commencement, which its proprietors intend to develop into the recognized Chicago Stock-yard authority on market reports. It will be a good one.

Toronto Markets.

Trade at the Western Cattle Market slow. Prices easier on all classes except hogs, which advanced 25c. per cwt. Sheep and lambs were slow of sale; prices easier, and lowest point this season.

Export Cattle.—The quality of export cattle somewhat improved. Prices steady, at a slight advance over former quotations. Choice export cattle sold at from \$4.40 to \$4.60 per cwt. Light export are worth from \$4.00 to \$4.25 per cwt. The season is practically over, so far as the grass-fed cattle are concerned. Mr. Joseph Gould shipped about 30 loads. These cattle go to Boston, U. S., for export to the Old Country; average weight, 1,375 lbs. He has now cleaned up all his stock from Strathroy, Kerrwood, Ailsa Craig, Chatham, Lucan, and the London district, and will be his last shipment for the year.

Butchers' Cattle.—Prime ripe butchers' cattle, weighing 1,000 to 1,100 lbs., in good demand, in many cases selling as high as export. Choice picked loads sold up to \$4.40. The general run sold at \$4.00 to \$4.25 per cwt. Cattle weighing 950 to 1,050 lbs. average sold at \$3.30 to \$4.25 per cwt. Medium butchers' cattle, mixed cows and heifers, sold at \$3.25 to \$3.50; for small steers, well-fleshed two-year-olds, \$3.50 was paid. Common and inferior rough cows sold down to \$2.40 per cwt. Mr. Wm. McLelland bought 40 butchers' steers, average 1,142 lbs. each, at \$4.00 per cwt.; 21 choice heifers, 1,050 lbs. average, at \$4.25 per cwt. Messrs. Beall and Stone sold seven choice butchers' cattle, 1,000 lbs. average, at \$4.37 1/2 per cwt.

Bulls.—Heavy export bulls sold to a good demand, at from \$4.00 to \$5.00 per cwt. Many light bulls sold down to \$3.12 1/2 to \$3.75 per cwt. Stock bulls, 600 to 900 lbs., yearlings and over, sold readily at \$2.00 to \$2.25 per cwt.

Feeders.—Heavy steers met ready sale. Those weighing 1,000 to 1,500 lbs., choice quality, good breeding, sold at \$3.60 to \$3.90 per cwt. Poor quality, same weights, sold at from \$3.40 to \$3.60 per cwt. Short-keep feeders, those weighing 1,100 to 1,200 lbs., bought for immediate export, sold readily at \$4.00 to \$4.25 per cwt. Feeding bulls, 1,100 to 1,500 lbs. average, for the same purpose at the byres, met ready sale, at from \$3.00 to \$3.25 per cwt. Many farmers were on the market for this class of cattle. Messrs. Dunn Bros. bought one load of heavy feeders, 1,200 lbs. each, at \$3.50 per cwt. Mr. Jos. Featherstone bought 40 feeders, 1,000 lbs. average, at \$3.00 per cwt.

Stockers.—Buffalo stockers, yearlings weighing 500 lbs. to 700 lbs. average, sold at from \$2.25 to \$3.00 per cwt. Black and white off-colors sold at \$1.75 to \$2.00 per cwt. Drovers report a large number of young stock throughout the country awaiting a favorable market.

Sheep.—Deliveries heavy; 2,586 on offer; all sold, at prices ranging from \$3.25 to \$3.55 for ewes, and at from \$2.50 to \$3.00 for bucks. Mr. J. H. Arkright sold one load of export sheep at \$3.00 per cwt.—very choice animals; two carloads of sheep for the district of Fort William, Ont.

Spring Lambs.—Spring lambs sold at from \$2.50 to \$3.50 per head, and at from \$3.75 to \$4.00 per cwt.

Milk Cows.—Demand still unsatisfied. Good milkers and springers are wanted, at from \$30.00 to \$50.00 per head. Mr. S. H. Reynolds sold one choice cow, with calf, at \$51.00. Mr. J. Armstrong bought five milk cows. The Locust Hill Creamery is making good progress, he reports.

Calfes.—Fifteen on offer, at prices from \$3.00 to \$10.00 per head.

Hogs.—Light deliveries met ready sale, at firm or slightly advanced prices. Best select bacon hogs, off cars, not less than 160 lbs., not more than 200 lbs., live weight, about six months old, choice singers, sold at \$3.50 per cwt. Light and thick fat are quoted at \$3.00, but if of good quality, not over 220 lbs. weight, are graded to \$3.25. Unculled car lots are quoted at \$3.50 per cwt.

Table with 4 columns: Item, Comparative prices-to-day, 2 weeks ago, Same date last year. Rows include Export cattle, Butchers' cattle, Bulls, Stockers, Feeders, Sheep, Hogs, Lambs, Milk cows.

Dressed Hogs.—Deliveries large; prices firm or advancing. Mr. Wm. Harris, Jr., purchased 250, at \$6.75 to \$7.50 per cwt. The complaint is that they are too fat for butchers, who require a small lean hog, not more than 100 lbs. dressed.

Hides.—The hide market was a little firmer on good demand. No. 1 green, steers, 8c. per lb.; hides, cured, 37c. per lb.; calf-skins, 3c. per lb.; lambskins and pelts, 8c. each. Wool, fleeces, 15c. per lb.; wool, unwashed, 10c. per lb.; wool, pulled, extra, 2c. to 2 1/2c. per lb. Beerskins, 10c., and dry, 2c. per lb.

Poultry.—Messrs. Gunn Bros., at the Western Cattle Abattoir, commenced operation by purchasing four carloads of turkeys, paying 7c. per lb.; 8c. per lb. for choice birds. Here comes a very difficult question for solution in the near future: Young birds have been sent forward; in fact, 75 per cent. of the birds are not fat. There has been no care taken in preparing them for market. Over 100 birds in a deck of 400 were culled out, unfit for plucking, too small, too light, some with large frames and no meat. Mr. Sim, who is in charge, informs our representative that he prefers to pay 8c. per lb. for birds weighing 12 lbs. They put the weight at 9 lbs. as the lowest limit, and almost every farmer has put that as meaning the weight required. There is no lack of quantity, but quality is most looked for in turkeys for the Christmas export trade to the Old Country. Prices for best pen-fed turkeys, weighing 15 lbs. and upwards, 8c. per lb. Must be choice, plump hen birds. Discolored, yellow, large-frame, thin turkeys, 6c. per lb. Chickens, per pair, 40c. to 50c.; spring chickens, per pair, 50c.; turkeys, per lb., 8c. to 9c.; ducks, per pair, 5c. to 9c.; geese, per lb., 5c. to 7c. The Canadian Produce Co., Toronto, are making good progress in the export chicken trade. They have just made arrangements to ship to Manchester, England, 2,000 lbs. of dressed poultry per week. They request all farmers to ship live poultry by the Express Co., and ask for shipping crates. Prices this week, 7c. per lb.

Deer.—A large number of deer on sale at St. Lawrence Market. Mr. Tom Davey, proprietor of the Temple Cafe, Bay street, purchased the large moose-shot at Orillia, weighing over 800 lbs. It is reported that he paid somewhat near \$80.00 for this animal. A gentleman, passing at the time the deal was just completed, asked if the head was for sale. Unthinkingly, Mr. Davey replied, "Yes, \$80.00." The gentleman very quietly said, "It is mine." It appears the Toronto Albany Club privately offered \$50.00 for the same head.

Nov. 23rd, 1900.



What the Farmers' Daughters Have to Say About the Problem of Domestic Service.

With reference to an article in a previous issue upon the subject of the Problem of Domestic Service, the ADVOCATE willingly makes room for some remarks from the point of view of the farmers' daughters. That their mothers should say, "Do not tempt our girls away from us into the city—we want them at home," is not only the expression of their natural affection for their children, but it is also the outcome of the exigencies of their own position. How can the toil-worn mother who has had the strong young arms to help her in her weary round of heavy daily duties contemplate with equanimity the moment when she may be deprived of them. She probably has tried to spare them in every way possible; she has taken up the heaviest end of the load herself; she has given them what little relaxation she could; but to part with their services altogether is too much to ask of her; and so she cries, with piteous persistence, "Don't take my girls from me." Well, what is to be done about it? Is there not some way by which the natural instincts of young girlhood for freedom, for expansion, for an occasional sight of the larger world outside the limits of the apple orchard and the farm-yard, and the claims of the mother can at least in some measure be reconciled?

One daughter says: "Why could not father recognize how much of the year's profit depends upon mother's work and ours? He does not seem to see that if mother drops in harness, as sometimes we girls think she will surely do before long, that he must then get paid assistance—too late to save her. She has often done women's work and men's work too. She has slaved morning, noon, and night; made the children's clothes as best she could by lamplight, when our men folk were comfortably tucked up in their beds; cooked meals for the hired men (for men have to be hired and paid); got up early to churn the butter (no patent churn and separator for her); has risen before daylight to wash for a family of ten (no washing machine and wringer for her); and this she has done for years, with only, latterly, such help as we children were able to give her, neither father nor even the bigger boys realizing how heavily the burden was pressing upon her. It is for mother's sake we girls are stopping on the farm: it is for mother's sake we do not go, as we would dearly like to go, into the city and be able to earn a little money for ourselves. We know we should not have to work so hard there, and we know that we should have many opportunities for self culture which we could not possibly have in the country; but we do not go, though we are sorely tempted to do so, for mother's sake."

And this is what another daughter says: "I don't know that I have such a hankering after improving my mind by going into the cities, where I can have lectures and libraries and all that kind of thing, and I don't particularly want to leave home: indeed, it would be pretty difficult for me to do that anyway, because I am the eldest girl, and mother could not get along without me: but I cannot see why a girl who bakes, cooks, washes and irons, and looks after chores generally inside and often outside the house, and who, if she worked half as hard in any family in the city, would get good wages, be able to buy all her own clothes, and perhaps put a little by in a savings bank for a rainy day, I cannot see why, I say, she should not have a certain sum given her every month regularly, so that she may feel a little more like other girls who are free to earn an independence for themselves. If father had to hire a girl, as he would have to do if I went away, he would have to pay her, and pay her pretty well, too, with not half such willing service as I give for mother's sake. So, why could he not find some way, perhaps by means of a share in the profits which we make in butter, cheese, eggs and poultry, to give us a regular monthly allowance? By us, I mean mother and I, for, after all, farming is a partnership, and though the man may hold the purse-strings, it does seem hard that the women folk should have to beg and almost cringe for every copper of spending money, which they have themselves helped to earn."

And lastly, a mother from a farm says: "Perhaps, if our work could be made easier for us within the home by improved appliances, as the outside farm work is lessened by the purchase of the latest inventions in machinery, we could manage to get along alone for a while, and give our daughters their chance of earning a little for themselves. We mothers do not want to be selfish, but it looks like it when we say 'No' to the natural desire of our girls to better themselves." The remedy lies, we venture to think, largely in the hands of the head of the household himself. If he would keep his daughters at home, he should recognize the justice of the claim of every young girl, as she grows into womanhood, to a certain measure of independence.

The farmer's daughter will repay in increased love and respect, as well as in willing service, this kindly concession to her very natural aspiration, and she would also be the less likely to desert her own home for one in the city. H. A. B.

THE CHILDREN'S CORNER.

"Wait Till the Clouds Roll By."

Neddie and Jennie were two little puppies. The jolliest doggies that ever were seen. They went for an outing one day in November. Sent out by their mother so trim and so clean. But the rain began to fall, So they crouched beside a wall. Little Jennie started to cry, Said Neddie, "Oh, this won't do; Your crying won't help us through; We must wait till the clouds roll by."

An old green umbrella just then he discovered. Though tattered and torn, 'twas some shelter, you see. "What fun we are having," said Neddie, undaunted. "Now cuddle up closer; it's warm beside me." Though the rain came down like hail, His brave heart did not quail. Soon appeared a bit of blue sky. Said Neddie, "I told you so, We'll soon be able to go; Let us wait till the clouds roll by." C. D.

Between Ourselves.

I promised you a nice, easy competition, didn't I? Well, you had better look over all your favorite story-books, for I will give three prizes for the three best stories sent in before the end of the year. They must be short children's stories, and you may either copy them out or send clippings. Stories that have already appeared in the ADVOCATE or are in the school readers will not be accepted. This competition is open to all boys and girls under sixteen. Write your name, age and address on the back of the story, and send to "Cousin Dorothy," Box 92, Newcastle, Ont.



"WAIT TILL THE CLOUDS ROLL BY."

I hope the winners in the last competition will let me know whether the prizes reached them safely.

You are probably much interested in the home-coming of our soldiers from South Africa. Do you know, a little Canadian girl, aged eleven, wrote a letter to the Queen a few months ago. In it she said: "If I were a man, I would go to South Africa and fight for you. If I were a big girl, I would be a Red Cross nurse. I should dearly love to see you, but I suppose I never shall, as I live so far away. But I can tell you that we love you, and all the Canadians do too. We would rather be British than anything. I hope none of your great officers will prevent my letter reaching you. Papa said that perhaps they might not think it worth while. But if you knew it was coming, I know you would not let them disappoint me." You will be glad to hear that the letter did reach the Queen, who, with her usual gracious kindness, sent a very nice message in return.

Are you at your wits' end to know what to make for Christmas presents? I saw something the other day that would make a splendid present for your mother or big sister. It was a contrivance to hang dress waists on, and was made of a piece of barrel hoop covered with strips of cotton. It was just long enough to reach from shoulder to shoulder, and had a loop in the middle to hang it by. When the waist was on, it looked exactly like the frames on which waists and jackets are hung in the stores. Such a present would be very useful, as it would keep a nice waist from being crushed when hung up in the closet. It costs nothing, which is an important consideration when money is very scarce. Don't make it too long in the arms.

Aren't those little dogs, under the umbrella, dear little chaps? Perhaps you think that animals never know enough to make an umbrella of their own. Birds make very neat little nests, but a roof would sometimes be an advantage. There is at least one bird, however, that understands roof-making. It is called the "oven" bird, because its house looks like an old-fashioned oven with a rounded top. There is a story about it which is a very good lesson in manners:

"It was a hermit, some believe, That taught the birds their nests to weave, Long, long ago in days of yore, When none had ever built before. But ere the hermit's words were said Each silly bird would toss his head And cry: "Oh, pshaw! We know the way, And flap his wings and fly away. The only one that stayed behind Was the "oven" bird, polite and kind, So when the summer days were come And each would make a little home, Just half a nest built every bird, For only half the way they'd heard. But only one was weather-proof— The "oven" bird could make a roof."

Although this bird lives in an oven, it is not wise enough to build a chimney. I hope your chimneys are nice and clean and ready for Santa Claus. How busy the poor old fellow must be these days, like all the rest of the world! May he fill your stockings up to the top and running over! Is it too soon to wish you a very happy Christmas? Perhaps there will be no room in our Christmas number, so I will do it now, to make sure.

A merry, merry Christmas To all my children dear! Oh, don't you love December?— Best month in all the year. Christmas is coming, coming! It's very hard to wait. Dear Santa, hurry, hurry! Oh, please don't be too late!

COUSIN DOROTHY.

PRIZE ESSAY—CLASS I.

BY "CHRYSALIS."

Canada--Why Do We Love Her?

On the northern part of America's continent, bounded on the east and the west by the Atlantic and Pacific Oceans, her northern extremities reaching far into the regions of perpetual ice, and her southern ones terminating where flourish the peach and the plum on the shores of the Great Lakes, there lies the Dominion of Canada—our Canada, land of the maple—the fairest of Britain's daughters. Her acres are broad and rich; her sons are hardy; her future is bright with promise; and we, in our loyal Canadian hearts, are justly proud of this heritage that is ours.

Our Dominion is a land of beauty. The variety of aspects in which she presents herself are legion, for from the ice fields of the far north to the rolling hills and lake shores of southern Ontario there is constant variation of landscape and climate. Mountain and valley, forest and plain, lake and streamlet—they mingle in the delightful separation, yet union, of nature; while over them, in the midnight winter sky, there climb the weird lights of the Aurora borealis, and, on summer afternoons, the sunshine ripens the corn and wheat upon the hillsides. What special vistas and wonders there are, too!—the Rocky Mountains, Muskoka, Niagara, the Thousand Islands, Saguenay River, and a hundred others we could enumerate. The passing seasons, too, add their charms. Spring, summer, autumn, winter—each has its especial delights; but the fairest time of all the year, perhaps, are those hazy, uncertain days of Indian Summer. Then the smoke from the Manitou's pipe of peace lies purply over all the landscape, and the woods are tinted by hidden artist hand. Through the still air comes the call of birds, and in the twilight, it may be, the whip-poor-will—

"A wandering spirit, breathing yet For parted joys a vain regret; So plaintive thine untiring trill, Oh, whip-poor-will! oh, whip-poor-will!"

Canada contributes liberally also to our daily wants and necessities, and is a country rich in resources. In many parts, the land yields great crops of grain and other farm products annually. Our orchards bear luscious fruits in abundance. Our lakes and rivers abound in fish. It is long since our forests began to help to supply the needs of the nations, and yet, "still stands the forest primeval." Minerals are among the most important of Canada's resources, but, as yet, mining is in its infancy, compared with what we hope it will eventually be as our country increases in wealth and civilization.

True beauty is a thing of the soul; and when coupled with outward loveliness, how potent is its power to inspire love and reverence! So it is with our country. Her soul, her inner life, as it were, render her doubly dear to us. Her laws are strong and just and pure over all her subjects alike—Protestant and Catholic, Gentile and Jew. We have representative government. We have freedom of thought and will, freedom to worship as our conscience dictates and for this, let us bear in mind, our forefathers suffered and died in the dark ages of England's history. We have an excellent educational system; and by it (for, as Wordsworth says, "The child is father of the man") Canada is, in a great measure, shaping her future.

We love our country because of her lineage and her history. Her sons are the descendants of good old stock, and it is the Anglo-Saxon blood flowing in their veins that gives them those sterling qualities by which they are characterized as a nation. Canada, although "the youngest of the nations," has had her martyrs, her heroes, and her clever men of all callings. Among those martyrs the Jesuit Fathers Jogues, Salement and Brébeuf were the principal; but the redmen, although treacherous savages, had also their examples of noble manhood. Chief of these was the great

Shawnee warrior, Tecumseh, who fell, among his braves, in the battle of Moraviantown, under the British flag. Our heroes of war lie quietly in many spots. Wolfe, Montcalm, Brock—these are some of the best known, but what myriads of others there are whose names will never adorn the page of history, but whose precious blood has helped to lay its foundations!

"But the future spreads before us,
Glorious in that sunset land—
Nerving every heart and hand,
Comes a brightness none can shed
But the dead, the glorious dead!"

And our boys who have recently so distinguished themselves in the Transvaal—they have shown and are showing what sort of material Young Canada is made of. There were other great men, too, in the past, who fought their political battles and helped to make us what we are. And we must not forget our pioneers, the first settlers, who tramped the forest path that we have derived the blessing from, who endured hardships and privations, who were healthy and happy, and thanked God for their blessings, and handed down to their descendants a rich inheritance of hardiness and noble character.

And, lastly, we love our country because she is our home land. Perhaps that is the greatest reason of all. "In all the world over there's no place like home," and if, in this dear land, in our childhood days, we made "snow men" in winter, picked violets in spring, caught "minnies" in

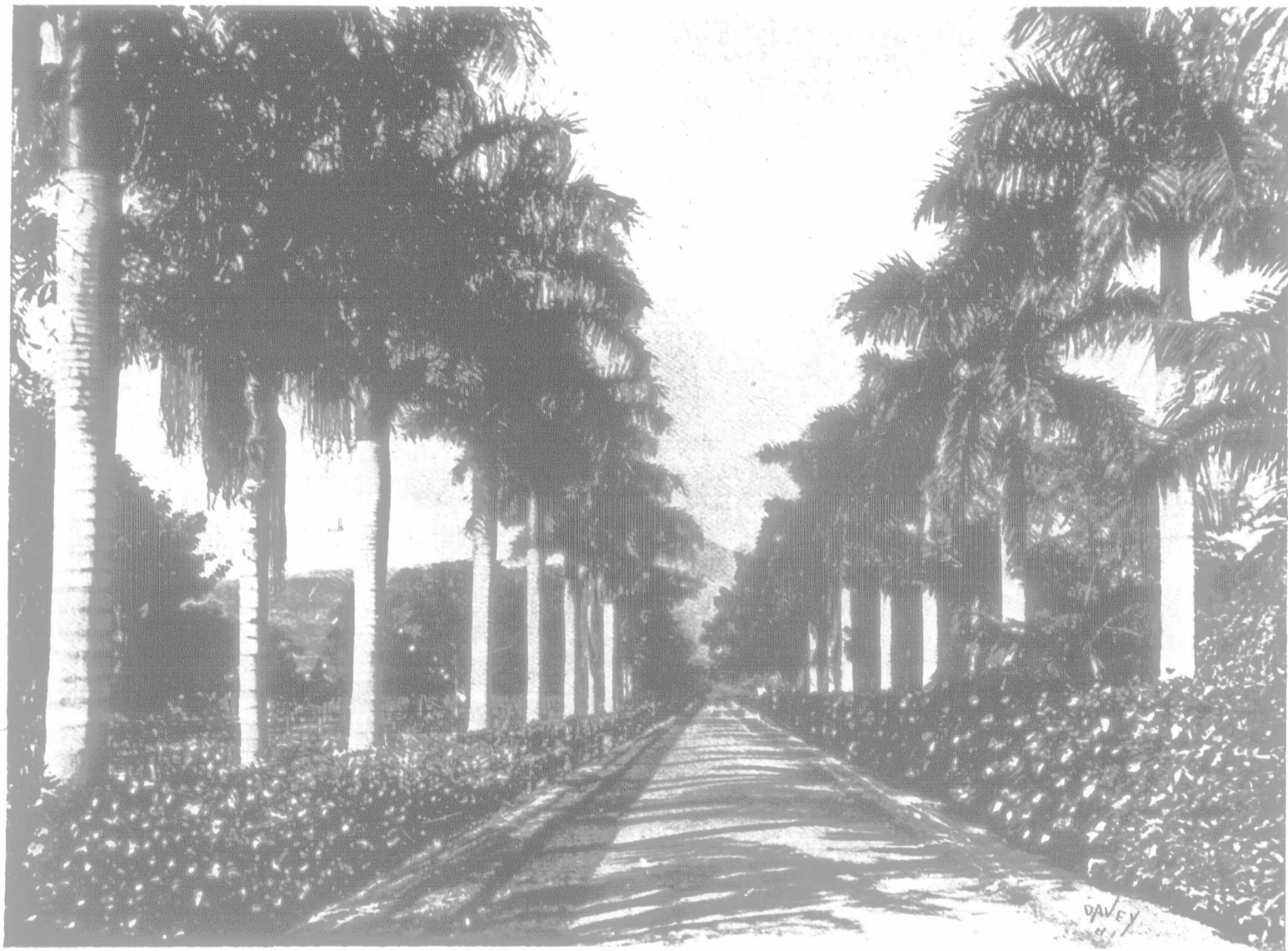
carpet the ground about them, without depriving them of the free air and sunshine, upon which they depend for life and beauty, and without which they would, even in Hawaii, droop and die. These lordly palms stand as giant sentinels along the walks and avenues, through which the patients can walk or rest at leisure. Surely amidst such lovely surroundings, no patient could long be sick, sad, or sorry; and so, perchance, to beauteous flower and shrub, as well as to kingly palm, may alike be committed its own especial message of health and healing.

H. A. B.

Good Health.

"The last quart of the milking, or the 'strippings,' taken immediately after milking, before it has parted with any of the animal heat, is," writes Dr. B. J. Kendall in *American Agriculturist*, "the most valuable thing known to build up a person who is thin and emaciated from any disease. I directed my patients to begin with a half pint and gradually increase the quantity until at the end of a week they are taking a quart at a time, or as much as they can possibly drink without causing too much discomfort. This should be followed up regularly twice every day. In consumption, it is no uncommon thing for my patients who have followed my instructions to gain five pounds a week in weight. No other plan I have heard of has proved so successful. It should be remembered that it is very important to select a cow that is healthy, and

Nourishment is also very important. Eat liberally of all nutritious and easily-digested foods. Forced feeding, or "stuffing," as it is commonly called, will produce marvellous results in conjunction with fresh air. It is better not to drink tea, coffee, or any stimulant, but take as much milk as possible. A large glassful should be taken every two hours during the day, and with meals, and one or two also during the night, if possible. Always make a point of taking a glass or two every night and morning, warm, just after it has been taken from the cow. Strippings are, of course, the best, as they are the richest; but to take as much as a quart at a time, as recommended by Dr. Kendall, might not agree with everyone. Some people say that they cannot take milk, and especially three quarts a day, but this is a mistake. When the machinery of the stomach becomes accustomed to taking the quantity mentioned, at intervals of every two hours, it will dispose of it without discomfort to the patient. Raw, fresh-laid eggs are also most valuable, and half a dozen and upwards should be taken each day. The very best indication of an improved condition is a gain in weight. Do not be disappointed if you do not gain much at first. Half a pound a week is doing very well, but if you persistently follow this treatment, you may gain five pounds a week and more. Some of my friends did not expect me to live, I was so much reduced in flesh and had such a bad cough. Four months and a half ago I weighed 138 pounds; I now weigh within a pound or two of 180, and am



THE ROYAL PALMS, HONOLULU, H. I.

summer, and made nutting raids in autumn—if these are some of our memories, what other land could inspire in us the same feelings! Never was there a time in Canada's history when she was brought so prominently before the world as at the present time, and we believe that one day she will be a great and powerful nation. By our aid, be it small or great, let us help to make her so.

"True to her high traditions, to Britain's ancient glory
Of patient saint and martyr, alive in deathless story,
Strong, in their liberty and truth, to shed from shore to shore
A light among the nations, till nations are no more."

The Royal Palms, Honolulu, H. I.

In a former issue, our picture of that wonderful field of luscious-looking pineapples served to show with what bounty generous nature rewards a comparatively small amount of toil in a tropical clime, giving to the laborer the varied fruits of the earth, each in its season. So, our picture to-day serves to mark the regal magnificence with which she crowns the wealth of floral splendor, covering almost without stint the favored islands of the Hawaiian group. The Royal Palms of Honolulu are more especially remarkable in the beautiful grounds of its grounds. It was first planted by the efforts of King Kamehameha I. and his son, Kamehameha II. Those in our picture are marked by the white lines which mark their growth at regularity, and are forty feet high. Planted at a distance of fifteen feet apart, they rear their stately heads above the many-tinted flowers and shrubs which

one that gives very rich milk. Then it is also of very great importance that the very last of the milking, or 'strippings,' should be taken, and of equal importance that it should be taken immediately after milking, while it contains all the animal heat. No other food is so natural, and none has ever proved so successful."

The cure of consumption is so little known that the writer feels himself compelled to add to the above article a few words on a subject in which he has had personal experience, for the encouragement, benefit and guidance of those who are afflicted with this terribly stubborn disease.

The sheet anchor of treatment and cure is complete rest, fresh air and abundance of nourishment. The patient should never exert himself, and take but little exercise. A drive for an hour or two each day would be sufficient until he feels that he is better and stronger. He should sleep ten or twelve hours out of every twenty-four, if possible, and live out of doors (in a tent would be the best). In the summer, he should sit or lie out of doors all day long (in the sun, if possible), and during the winter, in cold climates, at least six hours every day, warmly wrapped up, of course, in furs and rugs. Keep warm, but live in the fresh air. Then at night the window should be kept open at all seasons. The writer of this article made a frame and covered it with cotton, which he fastened in the open window to prevent the wind and storm from beating into the room, and yet would permit a free circulation of fresh air.

well. It is a slow process, and may take six, nine or twelve months. This depends upon your constitution, condition, and yourself.

This is practically the treatment prescribed by the highest medical authorities—those who have made a profound study of pulmonary tuberculosis throughout the whole world.

A great deal might also be said regarding climates. A dry, invigorating climate, in a fairly high altitude, say about 4,000 feet above sea level, is the best, and Alberta, in our own Northwest Territories, offers, I believe, as good a climate for the cure of consumption as can be found in the world.

A Novel Pincushion.

The principal article needed is a small, jointed doll, not more than seven inches high. One can be bought for 15 cents. Almost any scraps of silk may be used as a dress. After attending to the undergarments, make the dress skirt double, like a child's old-fashioned creeper. Before sewing it to the doll, stuff (not too full) with lamb's wool. A few stitches to the underskirt will hold it in place. Make the puff sleeves of the bodice very full, stuffing them also. One sleeve may hold common pins, the other black pins, while the skirt can be used for the fancy stickpins so much worn.—Elizabeth.

THE QUIET HOUR.

Worshipping the Bible.

God spake, and gave us the Word to keep :
Bade never fold the hands, nor sleep
Mid a faithless world ; at watch and ward,
Till Christ at the end relieve our guard.—
By his servant Moses the watch was set :
Though near upon cock-crow, we keep it yet."

The other day I saw an article on the recent English Church Congress, in which the critic rather ridiculed a statement made by one clergyman, to the effect that he did not deny the possibility of there being some mistakes and inaccuracies in the Holy Bible as we possess it. The writer seemed to think that the clergyman in question was very careful in admitting what he—the critic—considered to be a simple matter of common sense. On the other hand, many good Christians would be horrified by the admission, and fancy—that the learned clergyman was almost an atheist. Which critic would be the most reasonable? Let us look this matter squarely in the face. To say we believe in the truth of the Bible, yet fear to examine its claims in the light of modern science, is to admit that we don't believe it can stand the test. That is a weak, cowardly kind of confidence, isn't it? Shall I startle you, my dear fellow-Christians, if I say that we have no more right to worship the Bible than the Israelites had to worship the brazen serpent. From the way some people talk, one might fancy that the Book had fallen down from heaven, printed in the English language,—as directly a gift from God as the Ten Commandments which he wrote on the tables of stone—although, even if it had, to give it divine honors would be nothing less than idolatry.

There is no doubt whatever about the inspiration of the Bible. I have not the time to go into that subject now, but no one can study it or its claims without owning that it has a perfect right to its title of the Bible—i. e., *the Book*—no other book can attempt to be its rival. Over and over again its writers assert that God is speaking through them. Our Lord declares that the prophecies concerning himself, written in the Old Testament, must be fulfilled. The marvelous way in which thirty or forty people, writing in different countries and different ages—through about sixteen centuries—described *One Man* in prophecies, direct and indirect, in types and figures innumerable, is a proof that they were guided and inspired by one Mind. The Bible is a miracle in itself, both in its prophecies, which have been exactly fulfilled; in the living power of its words, which were written so many thousands of years ago, and in many other ways. It is never out of date, although some ignorant people may fancy it is. Out of date! Is there any other book of which millions of copies are sold every year? Why, one Bible Society alone has distributed more than a hundred million copies, and still sends out a million or two every year. This one Society has also translated it into several hundred languages, many of which had never been reduced to a written form before.

After this long digression, I come back to the question of worshipping the Bible. The writers of the numerous books contained in this volume "spake as they were moved by the Holy Ghost." Their words were truth itself; but has God promised that not one of the thousands of people who have copied and recopied their words should ever make a mistake? Not one word actually written down by prophet or apostle has come down to our day; we have only copies of copies. Even if we had the original manuscripts of these inspired men, written in Hebrew or Greek, what good would they be to us unless they were translated? Translating a dead language into a living one is not the easiest thing, especially when the MSS. are written without punctuation marks, or even divisions between words. It would be hard to read even our own language if all the words ran into one another, as the ancient manuscripts do. The translators had also to use their own judgment in selecting what seemed to them the most correct among a large number of manuscripts, probably no two exactly alike, and they had to supply a great many words to make sense, which they printed in italics. It would have been a continuous miracle, extending through thousands of years, if all the copies of the sacred books—made by hand, remember—had been without flaw. The Holy Scriptures have indeed been treasured up and copied far more carefully than any other book. We cannot fail to see that God has most wonderfully preserved them and kept them from any serious error; but the possibility of a few mistakes having crept into the text does not undermine our Christianity, as some nervous people fancy. There were plenty of loyal Christians, ready to lay down their lives for their Master, before the New Testament was written; many of them hardly knew anything of the Old. The Bible does not give God to us; it is quite the other way—God gives us the Bible. To lose our hold on Him because His great gift to the world may have been slightly defaced by much handling, would be disloyalty of the worst kind. On the other hand, if anyone is troubled by doubts, let him study

this book, and the doubts will surely fade away. As Pierson says: "If there is one candid doubter living, who has faithfully studied the Bible and the evidences of Christianity, he has not yet been found." Two clever men once agreed to make an attack on our religion. They began by searching the Scriptures, not to see "whether these things were so," but to prove that they were not so. What was the result? They both became zealous defenders of the faith they intended to attack. It has been said that this is a "book which has been refuted, demolished, overthrown and exploded more times than any other book you ever heard of. Every little while somebody starts and upsets this book, and it is like upsetting a solid cube of granite. It is just as big one way as the other, and when you have upset it, it is right side up; and when you overturn it again, it is right side up still."

We need not be alarmed when storms of criticism assail this Book. It is just as safe as the little fishing-boat was, on the sea of Galilee, and for the same reason—the Lord is in it. Now, as then, He rebukes our fears as showing want of faith. The Bible is unlike any other book, for its Author really speaks to us through it. It lives as no other book ever lived, for it not only contains the words once spoken by God, but it is still the Word of God.

"The word were but a blank, a hollow sound,
If He that spake it were not speaking still."

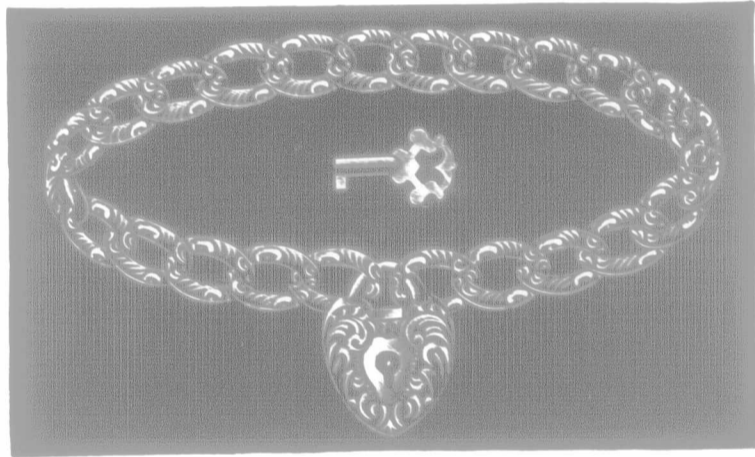
HOPE.

The Very Thing!

You're puzzling your brains every day to discover
A nice Christmas present for Maggie or Jean—
A dainty, bright something that's not too expensive—
To gladden the maiden of sweet seventeen.

But scarce are your quarters, it's very perplexing;
You hunt through your pockets, but cannot find one,
Then pick up the ADVOCATE, glance through its pages—
Why, here's what you're seeking! Now isn't that fun!

This handsome link bracelet for two new subscribers,
A bracelet of silver, with padlock and key;
Another subscriber adds two silver pendants,
A token of friendship—two hearts, do you see!



The paper you drop, make a rush for the stable,
Hitch up the old mare without any delay,
Pitch a bunch of old ADVOCATES into the buggy—
Get two new subscribers that very same day!

C. D.

Some Simple Hints for Keeping Healthy.

Flannel should be worn next the skin all the year 'round.

House drains must be carefully seen to, and kept in perfect order.

Sitting with the back close to the fire for any length of time is weakening.

Beware of cold or damp feet, or standing about in damp clothes or on wet ground.

Don't sit or lean against a cold substance, particularly if the body is overheated.

On going outside from a heated room, be well wrapped up; don't stand; and keep the mouth shut.

Sleep on a hair, straw, or spring mattress; abjure feather beds. The bedclothes should be well aired daily.

A warm bath ought to be taken occasionally, and a cold sponging of the whole body quickly done in the morning is well worth the trouble.

Most people, even the hard worker, are the better of some dumb-bell or other manual exercise to develop the capacity of the chest.

Excess of every kind is incompatible with health. Worry, quarreling, or ill-temper are inadmissible. A hearty laugh is worth much.

A Cure for Rheumatism.

Three ozs. cod-liver oil, 1 oz. aromatic spirits of ammonia, 1/2 dram oil of lavender, 5 grains of powdered opium; mix, and rub well at bedtime, before the fire, into the parts affected. Readers of the FARMER'S ADVOCATE afflicted with rheumatism should give this a trial, as it is an excellent remedy.

A doctor was attending an old lady who had caught a severe cold. "Did your teeth chatter when you felt the chill coming over you?" asked the doctor. "I dinna ken, doctor, they were lying on the table," was the reply.

The "Turkey Queen."

"I made \$2,500 last year raising turkeys," said Miss Arilla Martin, a young woman who is known in Texas, her native State, as the turkey queen.

"Because I live in Texas, however, you must not call my place a turkey ranch. It is simply a well-conducted farm, and other things are raised beside turkeys. Indeed, until five years ago we didn't raise our own turkeys even for Thanksgiving and Christmas."

"I began with five hens and a gobbler. You know, I suppose, that a turkey hen almost invariably lays thirteen eggs before she begins to sit, and also that she lays two 'litters of eggs' a year. Well, that first year, of the 125 eggs set in the spring, all hatched except five, and I raised 117 birds."

"In the autumn when my hens laid again, I followed my original plan of buying extra eggs, but was neither so successful in the hatching nor the raising, bringing up only 79. Yet 79 and 117 make 196, so when I tell you that I sold those turkeys at an average of 97 cents, you will see that I had a snug little sum for my trouble. As that was my first year, the food had cost me personally nothing, my father having told me at the beginning to go ahead and raise all the turkeys I wished to."

"However, when the second year began, although I started out with the same six birds, I determined to put myself on a business basis with the rest of my family, so I used a large part of my earnings of the year before in buying food, as well as building fowl houses and yards. Then I followed the plan of the previous season in every particular, excepting that I added five Brahma hens to my flock. These I set on turkey eggs, about the same time that I did my turkeys, and when they hatched out I gave all the little ones to the chicken hens to mother, and turned the turkey hens out into the pasture to lay another litter of eggs. This they will generally do in the spring when not allowed to raise the first brood. That spring I raised 200 turkeys, and in the autumn 231 more. This time I did not sell all. Instead, I increased my stock to fifty."

"From that flock of fifty I sold 1,400, after increasing my stock to 100, and furnished the table with as many turkeys as the family cared to eat."

"Of course my methods have changed very much since the flock has increased from five to a hundred stock birds. I no longer used hens to hatch the eggs, but incubators. I buy the food by the quantity, and plant acres and acres of small grain to give them for green food. I plant whole fields of shallots and peppers, as well as corn, and I employ two women and several boys to attend to them; yet, in spite of all these expenses, last year I cleared more than \$2,500."

"The greatest trouble about raising turkeys is with dew and rains, when they are young. Young turkeys should be housed at night in a house or covered yard, and not allowed to run into wet grass. As food for the birds, I use bread or unsifted, unsalted corn meal, into which a good quantity of red pepper is mixed. As green food for them until they are old enough to look out for themselves, I feed them the tender tops of shallots, chopped fine. After they pass their fourth month I treat them pretty much like sheep, feeding them twice a day, morning and night."

"My birds meet with ready sale, and always fetch good prices. I take orders for birds fattened on fancy foods, such as nuts, etc., which are supposed to flavor the flesh, and, of course, these turkeys bring high prices. I see no reason why other women should not succeed in the work, and would be only too glad to give them all the assistance in my power."—*Woman's Journal.*

Cousinly Chat.

The prizes in Contest I. are awarded as follows:

Class I (we are giving two prizes instead of one)—To Miss Agnes Laing ("Chrysalis"), Ancaster, Ont., and to Miss Lily Leveridge ("Lilian"), Skaholt, Man. In this class there were many excellent essays, and I am sorry we could not give each a prize.

Class II.—To Howard G. Miller, Alameda, California. The competition in this class was not so keen.

Class III.—To Verne Rowell, Bryanston, Ont., as announced last issue.

Owing to our limited space in the Home Department, we can only publish the first-prize essay in Class I. in this number. Perhaps in some future number we may be able to give another one.

The following little poem is by our old puzzle cousin, "Essex." Don't you feel proud of your clever coz? I do. I take his permission for granted and let you all have the benefit of "Essex's" nice verses:

Mingle Wine with Tears.

When the bells their joy are pealing;
When the air is rent with cheers;
When the burst of martial feeling
Welcomes home the volunteers;
When the minute-guns, replying,
Echo, million-voiced, command:
When the glory-rag is flying,
And the colors drape the land;
When the rockets, skywards ringing,
Vein the blue of Heaven's dome;
And the martial music, changing,
Beats the time of "Home, Sweet Home";
When is heard the thrilling story,
Tale of valor, past belief;
How they kept, undimmed, the glory
Of the dear old Maple Leaf;
When the thoughtless throng is making
Loud rejoicing, with one mind;
Think of those whose hearts are breaking
For the loved ones left behind.

Cumberland, Ont. —Chas. S. Edwards.
ADA ARMAND.

Wallop Him Well.

The head master of a denominational school in a certain English village recently sent out to parents of the scholars in his school, asking permission to administer, as he thought desirable, "corporal punishment or otherwise." The following would clearly show that in some instances it met with unqualified approval:

"Mr. Rattan: Dear Sir,—Your floggen cirklar is duly received, and I hopes as regarding my sun Jon, you will flog him just as often as yew ken. Heas a bad boi, is Jon. Although I've been in the abit of teaching him miself, it seems to be he'll nevaair larn anything, his spelling is spesilly otrragusly defisient. Wallup him well, sur, and you will receive my heartfelt thanks.—Yours truly, Mosas Spanker. P. S.—What accounts for Jon bein sich a bad scollar is, that he's me sun by mi ol woman's first husband."

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COMMENCING November 1st, 1900, arrangements have been made to present, every two weeks, to every subscriber to the Weekly Free Press, Winnipeg, a fine reproduction printed on art paper, suitable for framing. The pictures will be specially-made half-tones of the highest quality, well worthy of preservation, and calculated to adorn the home. They will include late portraits, specially taken for this series, of the leading men in the public life of Canada, beginning with Sir Wilfrid Laurier and Sir Charles Tupper.

With these portraits, which will constitute a valuable gallery of the most eminent Canadians of the times, there will be interspersed half-tone reproductions from Art Works, showing Manitoban and Western views, pictures depicting typical scenes in Canadian life, military pictures and general views, the whole forming a most desirable collection of the highest interest and value.

Whether used for framing or kept as a portfolio of 30 attractive Art Works—for that will be the number received in the course of about a year—these pictures will be well worth having. The presentation every fortnight, of these pictures, will be but one respect in which the Free Press will commend itself during the coming year as better than ever before.

With new presses, new machinery, new type and improved facilities, it will continue to strive to deserve the reputation it has earned, of being "the paper of the West for the people of the West."

By ordering at once, new subscribers will obtain the Weekly Free Press to 1st January, 1902, and all the pictures, for \$1.00 only.

GOSSIP.

W. G. Styles, Rosser, Man., who laid the foundation of a Shorthorn herd a year or two ago, has some excellent things now for sale. His calves, sired by Knight Templar, a bull bred by J. G. Washington, of Ninga, are a low-set, smooth, good-backed lot of calves, all of choice colors. There are half a dozen bull calves that will stand careful inspection, and are in fine trim. The young bull, Pomeroy Favorite, recently purchased from A. Graham, and winner of second prize in the yearling class at the Winnipeg Industrial, is coming on well. He is deep and thick, with a good, well-covered top, nice head and neck, and promises to be a right good one. Yorkshire and Tamworth pigs are also bred, and a few choice young things are now ready for shipping.

Messrs. A. & G. Mutch, Craigie Mains Stock Farm, Lumsden, Assa, advise us, under recent date, of sales made: To Brown Bros., of Boggy Creek, the Clydesdale mare, Lady Lumsden 2419, sired by Pure Clink, out of the prizewinning mare, Miss Cameron I. 650; John A. Turner, of Millarville, Alta., the Clydesdale colts, Cairnbrogie 2183, and Glasgow Geordie 2358, a pair of grand good colts of excellent breeding, that should improve the stock of any neighborhood; Chase, Weis, Cottonwood, one heavy team of Clydesdale geldings; James Fluker, Rose Plain, seven head of high-grade Clyde geldings, and one team of nice, smooth Hackney drivers; Mr. Williams, Wascana, a Clyde-bred team, mare and gelding; Richard House, a yearling gelding of Clyde breeding; Thos. Ewen, of Lumsden, a matched team, mare and gelding; J. C. Pope, of Regina, a heavy team of Clyde geldings; Fred. Noble, a team; Louis Eide, one extra smooth, heavy gelding; Jos. Brooks, one Clydesdale mare eligible for registration, by Pure Clink, out of Minnie A. 1100.

The Veterinary Association of Manitoba.

Under the authority of Secs. 18, 19, 20, 22 and 26 of the Veterinary Association Act, 1890 (53 Vic., Chap. 60), the following persons only are entitled to practice as Veterinary Surgeons in the Province of Manitoba, or to collect fees for the service rendered as such:—

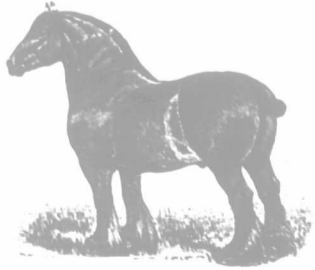
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|--------------------|---------------------|
| Alton, A. L. | Sydney. |
| Baker, G. P. | Russell. |
| Braund, F. J. | Wawanesa. |
| Brocken, G. K. | Cian William. |
| Clark, J. L. | Russell. |
| Cook, W. S. | Virden, Man. |
| Coote, H. L. | Minnedosa. |
| Cope, S. A. | Brandon. |
| Cruikshank, J. G. | Deloraine. |
| Dunn, J. | Deloraine. |
| Dunbar, W. A. | Winnipeg. |
| Elliott, H. James | Brandon. |
| Fisher, J. F. | Brandon. |
| Fowler, J. | Souris. |
| Golley, J. S. | Treherne. |
| Graham, N. | Dauphin. |
| Hatton, J. | Alexander. |
| Harrison, W. | Glenboro. |
| Henderson, W. S. | Casberry. |
| Hilliard, W. A. | Minnedosa. |
| Hilton, G. | Portage la Prairie. |
| Hilman, W. J. | Winnipeg. |
| Hodgins, J. E. | Newdale. |
| Hurt, W. N. J. | Belmont. |
| Irwin, J. J. | Stonewall. |
| Johnston, H. H. | McGregor. |
| Lake, W. H. | Miami. |
| Lawson, R. | Shoal Lake. |
| Leslie, W. F. | Melita. |
| Lipsett, R. C. | Brandon, Man. |
| Little, C. | Winnipeg. |
| Little, M. | Pilot Mound. |
| Little, W. S. | Bolesman. |
| Livingstone, A. M. | Melita. |
| McFadden, D. H. | Emerson. |
| McGillivray, J. | Manitowish. |
| McKay, D. H. | Brandon. |
| McKenzie, G. A. | Neepawa. |
| McLoighry, R. A. | M. osomin. |
| Martin, W. E. | Winnipeg. |
| Monteith, R. A. | Killarney. |
| Marshall, R. G. | Griswold. |
| Murray, P. | Winnipeg. |
| Robinson, P. E. | Emerson. |
| Roe, J. S. | Neepawa. |
| Rombough, M. B. | Morden. |
| Roveroff, S. A. | Birdie. |
| Rutherford, J. G. | Portage la Prairie. |
| Rutledge, J. W. | McGregor. |
| Shoults, W. A. | Gladstone. |
| Smith, W. H. | Carman. |
| Smith, H. D. | Winnipeg. |
| Snider, J. H. | Emerson. |
| Stevenson, C. A. | Reston. |
| Stevenson, J. A. | Carman. |
| Sweeney, W. | Carberry. |
| Taylor, W. R. | Portage la Prairie. |
| Thompson, S. J. | Carberry. |
| Torrance, F. | Winnipeg. |
| Waldon, T. | Killarney. |
| Walker, J. St. C. | Minto. |
| Welch, J. | Roland. |
| Williamson, A. K. | Winnipeg. |
| Whaley, H. F. | Portage la Prairie. |
| Whimster, M. | Hamiota. |
| Young, J. M. | Rapid City. |
| Young, M. | Manitou. |

The practice of the veterinary profession in Manitoba by any other person is in direct contravention of the statute, and renders him liable for prosecution.

F. TORRANCE, REGISTRAR,
WINNIPEG.

J. E. SMITH

Has received from Ontario a shipment of twelve Shorthorn bulls, which are for sale. Also for sale a number of home-bred heifers, sired by Lord Stanley II. = 2220 =, and supposed to be in calf to Golden Measure (imp.) (72615) = 26057 =.



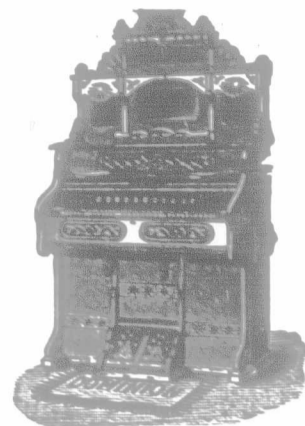
For sale, a number of Clydesdale mares and fillies, all registered; will be served by Prince Charles (imp.). All animals for sale, except the stock bulls, Lord Stanley II. = 2220 = and Golden Measure (imp.) (72615) = 26057 = and the Clydesdale stallion, Prince Charles (imp.). These, being the best that money and experience could buy, are required to maintain the high reputation of the stock of the Lumsden and Smithfield Farms. Come and see the stock, or write for what you want, to

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Young stallions, bulls, and heifers. Herd headed by Best Yet—14371—and Minhorn—24684—, bulls bred by Hon. John Dryden and H. Cargill & Son. PRICES ON APPLICATION. D. McBeth, Oak Lake, Manitoba.

SHORTHORNS & GOWSDOLDS. The proper kind bred and kept on our farm. Good stock for sale at easy prices. Rams for sale, and fine yearling bull still here. Also bull calves. D. HYSOP & SON, Box 492, Killarney, Man.

Prize Herefords

For sale—that grand 4-year-old SWEEPSTAKES BULL "SPOTLESS OF INGLISIDE," gentle and sure, and getter of numerous prizewinners. Also a dozen sturdy YOUNG BULLS, 6 to 14 mos. old. Cows and heifers also for sale, 90 head to select from. A few choice Light Brahma cockerels for sale cheap. J. E. MARPLES, Deleau, Manitoba.

SHORTHORNS, YORKSHIRES AND TAMWORTHS.

Stock of all ages and both sexes, at prices according to quality. Auction sales of farm stock undertaken. Improved farm and wild lands for sale in the Winnipeg district. Correspondence solicited.

W. G. STYLES,
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WILD AND IMPROVED LANDS FOR SALE. Several good farms at present for sale, or rent, in the celebrated Edmonton district. All improved. Terms reasonable. Apply for information to O. C. PEDERSON, Box 185, Strathcona, Alta.

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IV yearling SHORTHORN BULLS, by a son of Indian Warrior. Also a few choice heifers. Lord Stanley 25 = 2927 = at head of herd.

BARRED PLYMOUTH ROCK COCKERELS from prizewinning strains.

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2 young bulls—one by Imported Knuckle Duster, one by Lord Loosie 22nd.

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10 choice bears ready for service. Also some young sows. All from prizewinning stock.

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Institute, Muncey, Ont., July 25th '99. Gents.—Send another bottle of Lump Jaw Cure. The last was a success in a far advanced state of the disease. REV. W. W. SHEPHERD, per Secretary.

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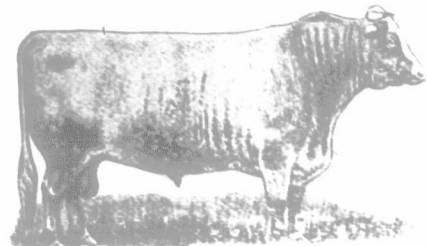
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Bulls at head of herd: Judge = 23419 = and Imp. Jubilee = 28858 =



Yorkshire and Berkshire Swine, Clydesdale Stallions and Shropshire Sheep, Shorthorn and Ayrshire Cattle.

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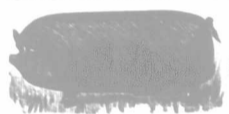
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BREEDING AND QUALITY RIGHT. Write or call for prices. 3 nice young bulls for sale now.

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24 BULLS, under one year, and about 100 FEMALES, of all ages, to choose from.

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Won the gold medal at the last Winnipeg Industrial Exhibition; also first for bull and two of his get, first for cow and two of her progeny, and numerous prizes for individuals. They were bred right here, and I can usually show a few generations of their ancestors, and am always pleased to show them.

WALTER LYNCH, Westbourne, Man. P. O., Railway and Telegraph.

LAKE VIEW RANCH

Herefords and Galloways

Young bulls for sale. For prices write

J. P. D. Van Veen, FILE HILLS P. O., N.-W. T.

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The managers of these institutions invite applications from farmers and others for boys and youths, who are being sent out periodically, after careful training in English 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 Resident Superintendent, 115 Pacific Avenue, Winnipeg, or P. O. Box 970; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Barnardo, Man.

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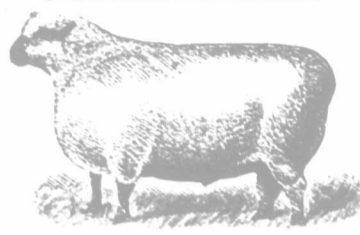
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Fit for service, the best I ever offered, for sale. Also some fine two-year-old and year-old heifers.

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The De Laval Cream Separators

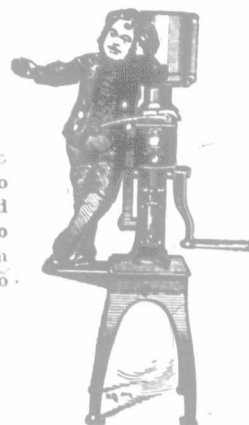
STARBUCK P. O., Man., Oct. 29th, 1900.

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GENTLEMEN,—When our agent, Mr. Alex. Hay, first proposed to me to buy one of your Alpha Baby Separators, I did not think it would pay to invest; but after ten days' trial, however, I convinced myself that I could not afford to be without one. I have had it about a year, and I am glad to say it has proved to be the best investment I ever made. It will skim warm or cold milk equally well; it is easy to clean, and, in fact, in my opinion, no farmer milking cows can afford to be without an Alpha Baby Separator.

Yours truly,

J. S. CAWSTON.



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As I have decided to go into the breeding of Plymouth Rocks exclusively, I will sell at reasonable prices my entire stock of prizewinning Brahmas, Langshans, Partridge Cochins and Bantams. My birds are too well known as prizewinners to require any further reference. Fox Terriers and pedigreed Collie pups for sale.

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Will exchange my birds above mentioned for first-class Plymouth Rocks, but only for high-class birds, as the birds I offer are all good ones.

FORT ROUGE POULTRY YARDS

HAS FOR SALE Golden Wyandottes, Indian Games, Langshans, Pekin ducks, Belgian hares. Seven varieties of pigeons. Also, White Wyandottes, Barred Rocks. Two breeding pens of Black Minorcas for sale, very cheap. FOR PRICE AND PARTICULARS WRITE—

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BLACK MINORCAS.

Young stock for sale—some beauties. Satisfaction guaranteed.

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Norwood Bridge Poultry Yards.

Houdans, White Plymouth Rocks, White Wyandottes, Bronze Turkeys, and Pekin Ducks.

Stock from my prizewinning birds for sale. First-class stock. Fair dealing. Reasonable prices.

JOSEPH WILDING, Proprietor, Norwood Bridge, Winnipeg, Man.

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Used by all Live Stock Record Associations.

Sheep size, per 100..... \$1.50

Hog size, per 100..... 1.50

Cattle size, per 100..... 2.00

Punch and Pliers for attaching labels to ear, each \$1.00.

Name on one side and any numbers wanted on reverse side. F. S. BURCH & CO., 178 Michigan St., CHICAGO, ILL.



The Health Habit

Just as Easy to Form as Any Other.

We do not deliberately form our pet habits, but they are unconsciously acquired and grow as we grow, and by the time we learn they are hurting us, we find them too strong to be easily broken.

Then, why not form a good habit, a habit which will counteract the many bad ones; in other words, contract the unfashionable habit of being always well.

The best health habit to get into is to have and keep a vigorous stomach; if you have a healthy digestion you can drink your beloved coffee, smoke your favorite brand of tobacco, with little or no harm; the mischief begins when these things are forced upon the faithful stomach without any assistance.

Form the habit of taking after meals some harmless but efficient digestive which will relieve the stomach of so much extra work.

Nature furnishes us with such digestives, and when they are combined in such a pleasant preparation as Stuart's Dyspepsia Tablets, they give the overworked stomach just the necessary assistance to secure perfect digestion without any of the harmful effects of cathartics and similar drugs.

The habit of taking Stuart's Dyspepsia Tablets after meals is as necessary to the weak stomach as food itself, and indeed to get the benefit from food eaten, nothing better and certainly nothing safer can be used.

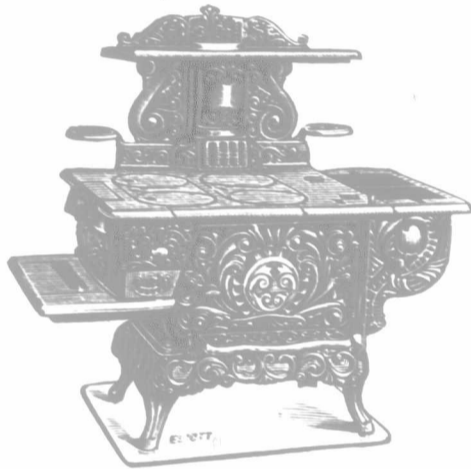
Many families consider Stuart's Tablets as essential in the house as knives and forks.

They consist entirely of natural digestive principle without the effect or characteristics of drugs; they have no cathartic action, but simply go to work on the food eaten and digest it.

Take into account your bad habits and the expense they entail and then invest fifty cents in a box of Stuart's Dyspepsia Tablets and see if your digestion for the next month is not vastly improved.

Ask the clerk in any drug store the name of the most successful and popular stomach remedy and he will say Stuart's.—Adv.

GONE UP In Smoke



THE money you burn in that old stove, trying to get the oven in condition, and then only half succeeding, is wasted.

OXFORD REGENT

is the housewife's pride. All up-to-date dealers have them. The price will surprise you. Look at that 22-inch oven! No extra fire required to bake. Large copper reservoir. Burns hard and soft and Souris coal and wood perfectly.

MANUFACTURED BY THE

Gurney Foundry Co.,

LOMBARD ST.,

WINNIPEG, - MANITOBA.

9 CORDS IN 10 HOURS



BY ONE MAN with the FOLDING SAWING MACHINE. It saws down trees. Saws any kind of timber on any ground. One man can saw more with it than with any other saw. Made at Forest Center, Ontario. See how it works. Write to the office for illustration, catalogue showing latest IMPROVEMENTS. Price from \$10 upwards. First order \$15.00. Address: FOLDING SAWING MACHINE CO., 48-57 St. John St., LONDON, ENGLAND.

Young Man Wanted

To learn the business of a young man, please apply to J. Sullivan, Emerson, Man.

J. SULLIVAN, EMERSON, MAN.

NOTICES.


Through the kindness of Mr. J. A. Kinsella, who is now Dairy Commissioner of New Zealand, we are in receipt of the report of the New Zealand Department of Agriculture for 1900, an elaborate volume of over 400 pages, and many beautiful full-page engravings.

Kansas City Show.—The special prizes of \$50.00 each, offered by the Pasteur Vaccine Company for the best Hereford calf and for the best Shorthorn calf in the show, were won by Mr. T. F. B. Sotham, of Chillicothe, Mo., with his Hereford calf, Thickflesh, and by Mr. Geo. Bothwell, of Nettleton, Mo., with his Shorthorn calf, Nonpareil of Clover Blossom. The Pasteur Vaccine Company is very well known among cattle-raisers throughout the country on account of its celebrated Blackleg Vaccine. The company introduced blackleg vaccination in 1895, and they claim that since that time over 2,000,000 calves have been successfully treated in the United States and Canada with their "Pasteur Vaccine." The company is just issuing some fresh literature, which will be mailed upon application, which will be in Chicago, or to any of its branch offices or agencies.

Look Out for Ringworm.—Robert Wrightman, Owen Sound, writes: "I notice in your FARMER'S ADVOCATE of Nov. 3th a leading article headed 'Look Out for Ringworm,' in which the writer recommends soft soap, carbolic acid, and iodine ointment. Now, 'Little's Sheep and Cattle Wash' is the best and surest preparation on the market for killing ringworm in animals, better than a great many others, as it is non-poisonous. It is also at the same time one of the most powerful disinfectants and germicides known to modern science, as proved by the experiments made with it by the highest authorities." The above claim made for Little's Sheep Dip by Robt. Wrightman, Owen Sound, Canadian agent for it, is quite in keeping with our knowledge of the dip from our own experience. Mixed with an equal bulk of water, one or two applications will cure ringworm very quickly.

Carruthers & Co., Tanners, Brandon, Man.—"Some information about what we do and what we charge for doing it," is the preamble to a neat little booklet of information published by the above firm, who carry on a very extensive business in hides, wool, sheepskins, furs, tallow, etc. A visit to their establishment will repay the visitor. There can be inspected the excellent work that is done in manufacturing horse and cattle hides into robes, elk and moose hides for mits or lace leather, sheepskins for mats (dyed any color), pelts of the sheep or shearlings for overcoat linings, etc. To any who cannot pay a visit, samples of the work and booklet of information will be furnished on application.

A. D. Rankin & Co.'s Brandon Store.—The above firm have one of the largest departmental stores in Western Canada, situated on Rosser Avenue. Mr. A. D. Rankin, the head of the firm, is well acquainted with the requirements of the people of the West, and his advanced knowledge of the departmental store business is clearly demonstrated by a visit to his large store. Every department is fully equipped, and customers can feel confident they are dealing with a reliable firm and getting full value for their investments. A handsome forty-page catalogue, fully describing the dry goods, clothing, furnishings, furs, caps, millinery, mantles, furniture, carpets, curtains, oilcloths, linoleums, dressmaking, etc., handled by this company, will be sent to anyone sending their name and address on a post card. Send for one.



Elgin Watches
possess every desirable modern improvement—are acknowledged to be **The World's Standard** in accurate time-telling and endurance. Jewelers everywhere sell and warrant the **Genuine Ruby Jeweled Elgin**
An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.
Booklet Free.
ELGIN NATIONAL WATCH CO.
ELGIN, ILL.

GOSSIP.

Mr. C. C. Castle, Elevator Commissioner, who has for a number of years farmed extensively near Teulon, the terminus of the Stone wall branch, has added Shorthorns to his herd, purchasing foundation female stock from the Prairie Home herd of the Hon. Thomas Greenway, placing the Village Hero bull, What-Fors, bred by Walter Lynch, of Westbourne, at the head of the herd. Village Flower and Richness, two grand, thick cows, have each received handsome prizes at the recent shows, and the young stock that give promise of similar average ability. Moss Rose of Stone Wall is a purchased pair, thick, good looking, and of the Prairie Home stock.

PLEASE MENTION FARMER'S ADVOCATE.

DISPERSION BY AUCTION

OF A HIGH-CLASS HERD OF

SCOTCH SHORTHORNS

AT MARKHAM, ONTARIO,
TUESDAY, DEC. 18TH.

Being the entire Kinellar Lodge herd of MR. JOHN ISAAC, who is retiring from farming, and will sell without reserve.

This offering of 53 head includes:

- | | |
|-----------------------|-------------------|
| 16 Cows | 6 Imported bulls |
| 15 2-year-old heifers | 2 Home-bred bulls |
| 11 Yearling heifers | 3 Heifer calves. |

FORTY-FOUR are imported animals, selected from first-class Scotch herds, and strong in breeding and individual merit, and are representatives of the Ury, Claret, Golden Drop, Lavender, Wimple, Rosebud, Broadbooks, Rosemary, Mima, Jill, and Lady Dorothy tribes.

The farm is 1½ miles from Markham Station, G. T. R.; 2¼ miles from Lovest Hill, C. P. R., and 20 miles from Toronto.

Catalogues will be mailed on application to—

JOHN ISAAC,
MARKHAM, ONT.

AUCTIONEERS:

COL. CAREY M. JONES, JOHN SMITH, M. L. A., CAPT. T. E. ROBSON, M. L. A.,
Davenport, Iowa. Brampton, Ont. Ilderton, Ont.

Reduced Rates on Canadian Railroads.

Northern Pacific Ry.

WILL, DEC. 3RD TO 31ST, SELL

Round Trip Excursion Tickets to

MONTREAL

AND ALL POINTS WEST THEREOF AT A RATE OF

\$40

To points East of Montreal, in Quebec and the Maritime Provinces, at correspondingly low rates.

Excursion Rates to

California, Mexico and all Southern Winter Resorts

The finest train out of the city—plush upholstered, high-back seats, wide vestibule cars.
For information re rates, time, etc., apply at Depot Office, Water Street.

Condensed Time Table from Winnipeg.

MAIN LINE.

Morris, Emerson, St. Paul, Chicago, Toronto, Montreal, Spokane, Tacoma, Victoria, San Francisco

Lv. Daily..... 1.45 p.m.

Ar. Daily..... 1.30 p.m.

PORTAGE BRANCH.

Portage la Prairie and intermediate points.

Lv. Daily, ex. Sunday..... 4.30 p.m.

Ar. Mon., Wed., Fri..... 10.35 a.m.

Ar. Tues., Thur., Sat..... 11.59 a.m.

MORRIS-BRANDON BRANCH.

Morris, Roland, Miami, Baldur, Belmont, Wawanesa, Brandon. Also Souris River Branch, Belmont to Elgin.

Lv. Mon., Wed. & Fri..... 10.45 a.m.

Ar. Tues., Thurs. & Sat..... 4.30 p.m.

H. SWINFORD, Gen. Agent, Winnipeg.
J. T. McKENNEY, City Passenger Agent, Winnipeg.
CHAS. S. FEE, G. P. & T. A., St. Paul.

STAY AT HOTEL LELAND

The Leading Hotel of the West.

ALL MODERN CONVENIENCES. RATES, \$2 TO \$4 PER DAY, BREAKFAST MEETS ALL TRAINS.

W. D. DOUGLAS, Prop., Winnipeg, Man.

CANADIAN PACIFIC RY.

EXCURSIONS

—TO—

Ontario, Quebec, the Maritime Provinces and the Old Country.

\$40

Montreal and Toronto and points west thereof.

Tickets on sale December 3rd to 31st. Good for Three Months.

Tourist Cars to Halifax, St. John, Montreal, Ottawa, Toronto.

For particulars apply at City Office (opp. Post Office) or Depot.

WM. STITT, C. E. McPHERSON,
Gen. Asst. Pass. Agt. Gen. Pass. Agt.
Winnipeg.

GOSSIP.

H. O. Ayeart, Middlechurch, paid a visit recently to Prairie Home Stock Farm, and reports the Shorthorns there all in fine trim, and he says Manager Yule reports numerous sales. Mr. Ayeart went to Crystal City to look for a young bull suitable to head his herd of Shorthorns. After careful inspection he bought what he thinks is the makings of something extra, a smooth, strong-backed son of Judge, Scottish Beau, out of the grand old cow, Scottish Belle 1817½, by imp. Patrick, out of imp. Northern Belle.

A short visit was made to the Roselea Farm, Virren, recently. Mr. Kenneth McIvor's nice herd of Shorthorns are in good shape. It is his intention to sell out all his grades and go in stronger than ever for the breeding of pure-bred Shorthorns. The young bull calf recently purchased from the Hon. Tho. Greenway's herd is doing well since reaching his new home. He is a fine handler, and should be a splendid stock bull for this herd. The young things got by Sir Victor are particularly choice ones.

Mr. McIvor says he expects from inquiries thus far that the demand for native rye grass (Agropyrum tenerum) will be in excess of other years, and he is now booking orders for what seed he has on hand.

Never Too Late

To Try a Good Thing.

I am fifty-two years old and for forty years of that time I have been a chronic catarrh sufferer, says Mr. James Gieshing, of Allegheny City; with every change of weather my head and throat would be stuffed up with catarrhal mucus.

I could not breathe naturally through the nostrils for months together, and much of the time I suffered from catarrh of the stomach. Finally my hearing began to fail and I realized something must be done.

I tried inhalers and sprays and salves which gave me temporary relief, and my physician advised me to spray or douche with Peroxide of Hydrogen. But the catarrh would speedily return in a few days and I became thoroughly discouraged.

I had always been prejudiced against patent medicines, but as everything else had failed, I felt justified in at least making a trial.

Our good old family physician, Dr. Ramsdell, laughed at me a little, but said if I was determined to try patent medicines he would advise me to begin with Stuart's Catarrh Tablets, because he knew what they contained and he had heard of several remarkable cures resulting from their use; furthermore, that they were perfectly safe, containing no cocaine or opiates.

The next day I bought a fifty-cent box at a drug store, carried it in my pocket and four or five times a day I would take a tablet; in less than a week I felt a marked improvement, which continued until at this time I am entirely free from any trace of catarrh.

My head is clear, my throat free from irritation, my hearing is as good as it ever was, and I feel that I cannot say enough in praise of Stuart's Catarrh Tablets.

These tablets contain extract of Eucalyptus bark, Guaiacal, bloodroot and other valuable antiseptics combined in pleasant tablet form, and it is safe to say that Stuart's Catarrh Tablets are far superior in convenience, safety and effectiveness to the antiquated treatment by inhalers, sprays and douches.

They are sold by druggists everywhere in the United States and Canada.—Adv't.

GOSSIP.

LAST CALL FOR THE KINELLAR LODGE SHORTHORN SALE.

Continuing our review of Mr. John Isaac's great herd of imported Scotch-bred Shorthorns, to be dispersed by auction at Kinellar Lodge Farm, Markham, on Dec. 18th, we would call special attention to the grand group of 15 2-year-old heifers, nearly all of which were included in the importation recently received from Scotland, and most of which are well forward in calf to high-class bulls in Britain, while others have young calves at foot which will go with them. Among these is found perhaps the plum of the sale, the rich roan, *Daisy 3rd*, a Kinellar Claret, by the Duthie-bred bull, *Sittytan Style*, a Cruickshank Secret, and her dam, by Royal James, bred at Sittytan and got by Cumberland. She is a show heifer of grand quality, full in her crops, thickly fleshed, and carrying a capital coat of hair. The twin sisters, *Claret Jug* and *Claret Cup*, mossy-coated roans, are full of good quality, the former a big, smooth, sappy heifer; her sister, considered by some the better of the two before calving, is milked down some and looking not so fresh, but showing the right sort of flesh and hair, and a bonny calf to boot. *Betinda 3th*, a red heifer by Lucrative, of the Cruickshank Luster family, and her dam by the Marr-bred British Leader, of the Blythe-ome tribe, is a straight, strong-backed, smoothly-turned heifer that has a handsome cowy head and well-sprung ribs, and looks like making a good breeder. *Hawthorn Blossom 19th*, a sweet red, by the Duthie bull, *Violet Prince*, a son of the great *William of Orange* and of *Violet Maid*, of the Sittytan Violet family, from which came the great show cow, *Violet's Forth*, is low, level and wide, a typical Aberdeenshire Shorthorn. A long, level, breezy-looking roan is *Martha 3th*, a Matilda, by the Marr-bred Ruler, of the Uppermill Rosemary tribe, sired by Craibstone, a son of *William of Orange*, and her dam by the Lancaester bull, *Red Prince*; by the Marr Missie bull, *Watch Him*. *Winnin' Witch*, one of the best of the batch, a red heifer close to three years old, and due to calve before the sale, is of fine cowy character and looks like making a milker. She was sired by the Marr-bred *Marshfield*, a well-bred Missie by *William of Orange*, and her dam was by *Mediator* of the Miss Hamden tribe, which has produced many of the best of the breed. *Elsie 2nd*, of the Kibblean Beauty tribe, is a daughter of the great sire, *Star of Morning*, sire of Mr. Duthie's favorite stock bull, *Pride of Morning*, and of the dam of the Highland Society champion, *Cornerstone*, while the dam of *Elsie 2nd* was by *Touchstone*, the sire of *Cornerstone*, and himself a Sittytan Secret, and the sire of many winners. *Columbus*, a roan Claret of fine form, has for sire *Marshfield*, and for grand-sire *Mediator*, while on her dam's side are the names of many of the most noted of the old Kinellars. *Clymestra* is another roan of fine proportions and quality, a daughter of the Sittytan Clipper sire, *Zeodone*, out of a daughter of *Star of Morning*, and her dam by the Bruce-bred *Cassia*, by *Clear the Way*.

Most of the yearling heifers are in thinner condition than they should be to bring their value to the seller, but that will be to the advantage of the buyers, as they are straight, smooth heifers, of the best of breeding, and most of them will be bred to imported bulls before the sale. Prominent among the best of these, and among the best in the sale, is the red Lavender heifer, *Lavender 1st*, by the Duthie-bred *Missie* bull, *Golden Measure*, with three Sittytan-bred sires next below in her pedigree. She is every inch a show heifer, and hard to fault in a single point. With a handsome head, a proud carriage, level back and quarters, well-sprung ribs and full crops, she is a nearly right as they are made, and should stand a lot of bidding on. The winsome roan, *Hawthorn*, by *Marshfield*, a Marr Missie, by *William of Orange*, is of similar stamp as the Lavender heifer, and should go with her. No. 21 is a red Maid of Primrose, one of the best of the Kinellars families, with four Cruickshank sires in her pedigree, and herself a strong, showy, useful heifer.

The bulls are headed by *Nonpareil*, a red 3-year-old son of *Emancipator*, a prize bull at Perth, and sire of *Golden Fame* and many other

Christmas Farmer's Advocate

A SOUVENIR OF THE PASSING CENTURY AND A FORECAST OF THE NEW.

THE last FARMER'S ADVOCATE for the 19th century will be the Christmas Number for 1900. In prose and poetry, and its wealth of beautiful engravings, it will record the achievements of the past and foreshadow the coming time. Some of the brightest minds and cleverest pens of two continents will contribute to its pages articles unique and varied in their character and of fascinating interest to all classes of readers.

The Colored Frontispiece

will be a beautiful reproduction in colors of a Canadian farm landscape, specially photographed for this number, and entitled, "Breaking the 20th Century Sod."

"No. 1 Hard."

By MR. ANGUS MacKAY, Supt. Indian Head Experimental Farm.

"Farming Before the Advent of the Railway."

By MR. S. A. BEDFORD, Supt. Brandon Experimental Farm.

"Manitoba 100 Years Ago."

Old times vividly recalled by MR. J. J. GUNN.

"My First Buffalo Hunt."

The famous Western pioneer of the Methodist Church, REV. JOHN McDUGALL, and author of many thrilling books on prairie life, recalls his first thrilling day with the old monarchs of the plains.

J. W. Bengough,

Canada's foremost cartoonist, will give the country a laugh by turning the X Rays on THE 20TH CENTURY FARMER.

"A Century in Horse Breeding."

By ARCHIBALD McNEILAGE, Editor of the Scottish Farmer.

"Sir Tatton Sykes and His Times"

will be a fascinating chapter of old English days, by the ever-reminiscent pen of RICHARD GIBSON.

"Moose Hunting in Nova Scotia."

F. S. PEER tells of a day's sport after big game.

"The Field for 20th Century Improvement in Farm Crops"

affords a fertile topic for that enthusiastic investigator, PROF. THOS. SHAW, now of the Minnesota Experiment Station.

"Veterinary Progress in the 19th Century"

will be ably handled by A. G. HOPKINS, B. Agr., D. V. M., University of Wisconsin.

"The Wonderful Chicago Stock Yards"

will be rarely described by MR. D. E. SMITH, formerly well known in the ranks of Canadian breeders, who for four years has been a buyer for Swift's great dressed-meat establishment.

Splendid articles are being prepared on:

"The 19th Century Achievements in Horticulture."

"The Romance of Dairying."

"The Successes of Canadian Fruit Growing"

"Ups and Downs in Breeding."

Each will be treated by competent specialists.

A Symposium on the greatest achievements of Agriculture in the past 100 years, and a forecast of the pathway to future success, by some of the brightest thinkers on the continent, will be read with intense interest.

"Canadians Who Have Added Luster to 19th Century Literature"

will be an article of unique and patriotic interest, by MR. FRANK LAWSON.

"Science and Art of Homemaking."

By MRS. H. A. BOOMER, of the National Council of Women.

Many other features just as entertaining.

This beautiful and valuable number, to be issued on December 20th, goes free to every new subscriber for 1901. To non-subscribers the price is 50 cents. Subscribers paid up for 1901 may obtain extra copies at 25 cents each. Any present subscriber sending us the name of one new subscriber will receive one extra copy of the Christmas number as a premium. Nothing more appropriate to send as a Christmas greeting to a friend or relative.

Every issue for 1901 of the FARMER'S ADVOCATE will be full of helpful, practical and timely matter. It is the best Agricultural paper on earth for the farmer, and only \$1.00 per year. Send for a free sample copy.

THE WILLIAM WELD CO., LIMITED, WINNIPEG, MAN.

good ones. He is royally bred, having a long list of noted sires in his breeding, and is individually smooth, straight, level and full of quality, a bull one would feel safe in using in any herd. The balance of the imported bulls are young and in very moderate condition, and will probably not sell for their value, but are richly bred, smooth, well formed, and full of quality, and only need time and fair treatment to develop into good useful stock bulls. The red 3-year-old *Gloster* bull, *Sittytan Hero 3rd*, is a big, massive, deep-ribbed, fleshy bull, and is grandly bred, while the home-bred bulls are a very useful lot, and bred from favorite families.

This sale offers a rare opportunity to secure good cattle of the most approved breeding, at your own price, and which ought to go into the hands of young Canadian farmers and breeders. They are all needed here in our own country as heaven to raise the standard of quality of our cattle, and we hope to see them scattered through all the Provinces of the Dominion. There should be a large gathering at Markham on the 18th to witness the disposal of this excellent herd.

GOSSIP.

Messrs. A. & D. Brown, Iona, Ont., in sending us a change of advertisement, write: "Our sales this summer were: Two heifers to John McCallum, Iona Station; two heifers to John Trester & Son, Strathburn; a bull and heifer to Mr. W. Scott, Highgate; a bull and heifer to Mr. Burdon, of Middlemiss; a bull to Mr. George Leak, Wood-lee; and eight heifers to Mr. W. G. Pettit & Son, Freeman, Ont. We have had lots of grass, and our cattle are going in for the winter in good shape. We wish your journal success."

Mr. W. A. Wiancko paid our office a hurried call on his way eastward from Churchbridge, where he had been in charge of the creamery during the past season. This creamery had doubled its output during the past year, 63,320 pounds of butter having been manufactured from the first of May until the 6th of November, when the creamery closed. The output is all shipped to British Columbia markets. Mr. Wiancko returns to Guelph, where he resumes charge of the home dairy department of the Guelph Agricultural College.

KENDALL'S...

SPAVIN CURE



The old reliable remedy for Spavins, Rheumatisms, Sprains, Cuts and all forms of Lameness. It cures without a blister because it does not blister.

North P. atagetet, Ont., Feb. 10, '98.
Dr. R. J. Kendall Co.
Dear sir—Will you please give me a remedy for lameness. I have a mare that is afflicted. I take pleasure in stating that I have cured a cur of four years' standing with your Kendall's Blisters, by using it only once and then applying your Spavin Cure. As long as I have horses, I will not be without Kendall's Spavin Cure and Kendall's Blisters in my stable.

Very truly yours,
ADOLPHUS GAUTHIER.

Price 50c per box. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address

DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

MICA AXLE GREASE
Makes short roads.
And light loads.
Good for everything that runs on wheels.
Sold Everywhere.
Made by IMPERIAL OIL CO.

Our New No. 4
Is especially recommended to farmers and fanners who want a good mill at a LOW PRICE.
It will do all kinds of farm grinding. It does not disintegrate. Rapid, strong and durable. We put it against any mill used for grinding and save money.
AURORA FEED GRINDER CO., Aurora, Ill.

GOSSIP.
The cheese factory owned by Messrs. S. M. Barry & Mignault, at St. Agathe, was recently destroyed by fire. Loss said to be \$2,000.
Mr. J. Stonehouse, the well-known dairy expert from Ontario, who has been in charge of the Yorkton creamery during the past season, called at our office recently on his return from British Columbia, where he had been addressing a series of Farmers' Institute meetings, delivering addresses on dairy subjects. Mr. Stonehouse had a very interesting trip, and was much impressed with the possibilities of the Pacific Province for dairying and poultry development. His intention is to visit a number of the prominent dairy centers in the United States on his way back to Guelph, where he resumes his position as instructor in the Dairy School during the winter months.
The red 3-year-old Shorthorn bull, *Lovely Victor*, 2279, owned by Mr. Thos. Mercer, Markdale, Ont., and illustrated in this issue of the Advocate, is a massive, thick-fleshed representative of the Kinellar Golden Drop bull, *Albert Victor*, by the Sittytan-bred *Gravessend*. The dam of *Lovely Victor* was by imp. *Baron Camperdown*, also bred by Mr. Cruickshank, and his granddam was the fine old imported Sittytan-bred cow, *Lovely 19th*—396—, mother of a long list of high-class animals, breeding her last calf when in her 20th year. *Lovely Victor* has typical Scotch Shorthorn character, and a mossy coat of hair. He weighs 2,470 lbs., and has carried off the highest honors in the showing in the County of Grey this fall, and was bid for by prominent breeders throughout the summer, to be shown at Toronto, but has recently been sold to Mr. Geo. B. Bristow, of Rob Roy, Ont., to head his fine herd of Cruickshank Village Girls. He has left his mark on Mr. Mercer's herd in a thrifty, vigorous and shapely lot of young bulls and heifers which do credit to their sire and their breeding.
IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Mr. W. S. Hawkshaw, Glanworth, Ont., long famous as an importer and breeder of Shrops., announces a fresh importation—nice lot. See his advt. below.

The cut of Mr. John C. Nichol's Tamworth boar, in our issue of November 20th, represents his boar over one and under two years, and not the one under a year, he having been sold in October to Prof. C. F. Curtis, of the Iowa Agricultural College farm.

Southdown sheep and Dexter-Kerry cattle are advertised in this issue by Wm. H. Gibson, manager of Hon. G. A. Drummond's Huntleywood farm, at Pointe Claire, Beaconsfield Station, G. T. R. and C. P. R., 15 miles west of Montreal. Mr. Drummond has the largest flock of imported Southdowns in America, and has used only first-class imported rams. A very useful lot of 1-, 2- and 3-year-old rams and 30 ram lambs or more are now for sale, and can be bought worth the money. Write Mr. Gibson for prices, etc.

Mr. Walter James, Maple Grove Stock Farm, Rosser, whose advertisement appears in this issue, has long maintained a small herd of Shorthorns. His present stock bull is Lord Stanley 25th, of John E. Smith's breeding, sired by Lord Stanley 2nd, out of Lady Greenway, by Imp. Lord Lansdowne. Previous to the introduction of this bull, Rosser had a son of Indian Warrior, was in service for a couple of years, and his stock are smooth, growthy animals, all of good color. There are at present a number of very promising calves coming on, and four one-year-old bulls sired by Rosser Lad. The females of this herd are almost without exception deep-milking cows, with a good deal of Bates blood in them, and parties wanting Shorthorn bulls that will not injure the milking qualities of their herds could not do better than visit Maple Grove Stock Farm. A specialty is also made of Plymouth Rock fowls, the foundation stock of which have been purchased from some of the best prizewinning flocks, and a fine lot of well-marked cockerels are now on hand, and will be sold at reasonable prices for immediate delivery.

IMPORTED SHROPSHIRE SHEEP.

I HAVE just arrived from England with a very choice bunch of yearling ewes. These ewes have been bred to noted rams in England, and would be a capital lot for starting a first-class flock.

W. S. HAWKSHAW & SON,
GLANWORTH P. O.
Seven miles south of London, Ontario.

Build your own Coiled Spring Fence at cost of wire only.

LONDON Fence Machine

Beats them all
For speed, ease of operation and adjustment, quality of work, and durability.

It stands without a rival
As the best up-to-date machine on the market.

We lead in Coiled Steel Spring and Soft Galvanized Fence Wire. Write for prices.

London Fence Machine Co.

151 YORK STREET,
LONDON, ONT.
Responsible agents wanted.
Mention the ADVOCATE.

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Progressive Cheese and Butter makers use WINDSOR SALT, because they know it produces a better article, which brings the highest price.

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

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An experienced shepherd, single. Apply, with references, to W. H. Gibson, Beaconsfield, Pointe Claire, P. Q.

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CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1829), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD,

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BREEDERS AND IMPORTERS OF Clydesdale Horses & Ayrshire Cattle Also the leading breeds of fowls for the farmers.

NEW IMPORTATION

Just arrived. Personally selected from the best studs in England and Scotland.

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By the champion winners, Baron's Pride, McGregor, Flashwood, Prince Alexander, Prince of Carruchan, etc.

Shires, Suffolks, Percherons and Hackneys

By the leading sires of the day, all combining size, color, quality and action.

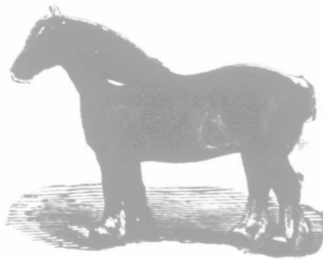
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The largest stud of Clydesdales in Canada, headed by the Champion Stallion of all ages,

"LYON MACGREGOR."



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From the best blood in Scotland and Canada. Ayrshire bulls and heifers from imported stock. Jersey heifers and bull calves, sired by the prize-winning bull, Distinction's Golden. Best milking strains, with good teats.

Terms reasonable. A visit to Thorncliffe will well repay you. **ROBT. DAVIES,** Thorncliffe Stock Farm, TORONTO.

West's Fluid. When cows fail to get in calf, and return to the bull irregularly, the probability is contagious abortion is responsible for the trouble, and should as it is not dealt with by something that destroys the disease germ, the trouble is likely to continue. West's Disinfecting Fluid is a preparation, when properly used according to directions, that cures existing cases and prevents the disease spreading in the herd. It is also reliable in cases of hog cholera, and all other similar germ diseases. It is efficient and safe. Write West Chemical Co., Toronto, Ont.

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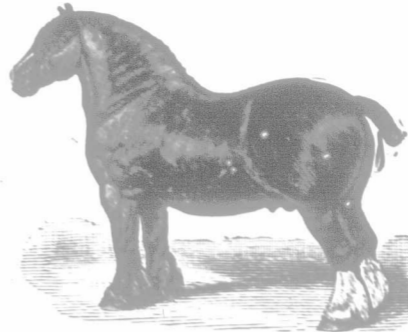
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Second consignment just landed, per SS. Marina, from Glasgow.

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

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

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SOMETHING THAT EVERY MAN, WOMAN, BOY AND GIRL NEEDS.

It is a wonderful tribute

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

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

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

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



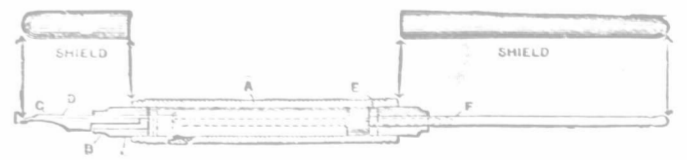
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge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

Lew Wallace.

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



The only self-filling and self-cleaning pen, manufactured in the world. To fill the pen, put the nib in ink and draw the piston rod up. To clean, put the nib in water and draw the piston rod backwards and forwards a few times.



A, Barrel; B, Nozzle; C, Pen; D, Feed; E, Plunger; F, Rod.



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Mr. Sankey sends the following characteristic letter: "I have used the Post pen for some time, and have had great satisfaction with its use. It never fails or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

Frank Sankey.

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THE Wm. Weld Co., LTD.,

WINNIPEG, MAN.

Our Farmer's Library

A RECENT bulletin prepared by Prof. J. B. Reynolds, of the Ontario Agricultural College, gives a list of meritorious books on Agriculture, Live Stock, Dairying, and Fruit Growing, from which we have made a selection and added a few others. How to obtain, see below:

SOIL AND CROP.

- THE FERTILITY OF THE LAND.—Roberts. 372 pages. \$1.25.
- A BOOK ON SILAGE.—Woll. 185 pages. \$1.00.
- SOILS AND CROPS.—Morrow & Hunt. \$1.00.
- FORAGE CROPS.—Thos. Shaw. \$1.00.
- SOILING, ENSILAGE, AND BARN CONSTRUCTION.—F. S. Peer. 247 pages. \$1.00.

LIVE STOCK.

- THE STUDY OF BREEDS (CATTLE, SHEEP, AND SWINE).—Prof. Shaw. 400 pages; 60 engravings. \$1.50.
- HORSE BREEDING.—Sanders. 422 pages. \$1.50.
- LIGHT HORSES—BREEDS AND MANAGEMENT. 226 pages. \$1.00.
- HEAVY HORSES—BREEDS AND MANAGEMENT. 219 pages. \$1.00.
- CATTLE—BREEDS AND MANAGEMENT. 270 pages. \$1.00.
- SHEEP—BREEDS AND MANAGEMENT. 232 pages. \$1.00.
- CATTLE BREEDING.—Warfield. 386 pages. \$2.00.
- THE DOMESTIC SHEEP.—Stewart. 371 pages. \$1.75.
- THE SHEEP.—Rushworth. 496 pages. \$1.50.
- PIGS—BREEDS AND MANAGEMENT.—Sanders Spencer. 175 pages. \$1.00.
- FEEDS AND FEEDING.—Henry. 600 pages. \$2.00.

GENERAL AGRICULTURE.

- AGRICULTURE.—C. C. James. 200 pages. 30 cents.
- FIRST PRINCIPLES OF AGRICULTURE.—Voorhees. 207 pages. \$1.00.
- AGRICULTURE.—Storer. 1,875 pages, in three volumes. \$5.00.
- CHEMISTRY OF THE FARM.—Warrington. 183 pages. 90 cents.
- FARMYARD MANURE.—Aikman. 65 pages. 50 cents.
- BARN BUILDING.—Sanders. 280 pages. \$2.00.
- IRRIGATION AND DRAINAGE.—King. 502 pages. \$1.50.
- IRRIGATION FOR THE FARM GARDEN AND ORCHARD.—Henry Stewart. \$1.00.
- SUCCESSFUL FARMING.—Rennie. 300 pages. \$1.50, postpaid.

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- AMERICAN DAIRYING.—H. B. Gurler. 252 pages. \$1.00.
- THE BOOK OF THE DAIRY.—Fleischmann. 330 pages. \$2.75.
- MILK AND ITS PRODUCTS.—Wing. 230 pages. \$1.00.
- TESTING MILK AND ITS PRODUCTS.—Farrington & Woll. 255 pages. \$1.00.
- DAIRYING FOR PROFIT.—Mrs. E. M. Jones. 50 cents.

POULTRY.

- ARTIFICIAL INCUBATING AND BROODING.—Cypher. 146 pages. 50 cents.
- PRACTICAL POULTRY-KEEPER.—Wright. \$2.00.

APIARY.

- THE HONEYBEE.—Langstroth. 521 pages. \$1.40.

FRUIT, FLOWERS, AND VEGETABLES.

- VEGETABLE GARDENING.—Green. 224 pages. \$1.25.
- FLOWERS AND HOW TO GROW THEM.—Rexford. 175 pages. 50 cents.
- THE PRINCIPLES OF FRUIT-GROWING.—Bailey. 514 pages. \$1.25.
- BUSH FRUITS.—Card. 537 pages. \$1.50.
- HORTICULTURIST'S RULE BOOK.—Bailey. 312 pages. 75 cents.
- SPRAYING OF PLANTS.—Lodeman. 389 pages. \$1.00.
- THE NURSERY BOOK.—Bailey. 365 pages; 152 illustrations. \$1.00.
- AMATEUR FRUIT-GROWING.—Samuel B. Green. 5x7 inches; 134 pages, with numerous fly leaves for notes; bound in cloth, and illustrated. 50 cents.

PLANT AND ANIMAL LIFE.

- THE STORY OF THE PLANTS.—Grant Allen. 213 pages. 40 cents.
- THE STUDY OF ANIMAL LIFE.—J. A. Thomson. 375 pages. \$1.75.
- INSECTS INJURIOUS TO FRUITS.—Saunders. 436 pages. \$2.00.

HOW TO OBTAIN THESE BOOKS:

We will furnish present subscribers any of the above books as premiums for obtaining new yearly subscribers to the FARMER'S ADVOCATE, at \$1.00 each, according to the following scale:

Books valued at from \$0.30 to \$0.65, for 1 new subscriber.	
.. .. .90 to 1.25, for 2
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We can furnish any of the above books at the regular retail price, which is given opposite the title of the book. By a careful study of the above list, any farmer can choose a select list of books suited to his needs, and for a small outlay in cash, or effort in obtaining new subscribers for the ADVOCATE, secure the nucleus of a useful library.

Cash to accompany names in every case. \$1.00 pays each new subscription from now to end of 1901.

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WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means the same class of goods as are hawked around fair grounds, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

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No.	Description	New Subscribers.
No. 1.	Yankee Nickel Watch	2
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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.

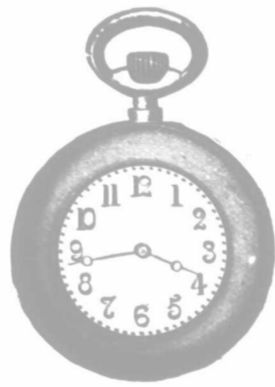
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. 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 WILLIAM WELD CO., LTD., WINNIPEG, MAN.



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International Stock Food.—The International Food Company, of Minneapolis, Minn., have such demand for their preparations that they have found their present factory, occupying fifteen floors 100 by 22 feet, inadequate for their needs, and have commenced to build an addition of a five-story brick block, which they expect to occupy before March 1st, 1901. The increasing consumption of this food is credited to repeated and larger orders from old patrons, as well as the ever-increasing new consumers who hear of the merits of this preparation. Read the advertisement of this firm elsewhere in this issue, and note their liberality in furnishing free a large, useful and expensively illustrated stock book.

Folding Sawing Machine is designed to take the place of the old back-breaking cross-cut saw. It does this and more. It saves the time of the extra man; it will saw more wood, cross-cut more logs, saw down more trees than two men can with an ordinary saw; it adjusts itself to all kinds of land, hillside, uneven places, etc.; it folds up neatly, and is easily conveyed from place to place, and it is well and substantially built from best seasoned white ash, malleable iron castings, and the best steel saw blade that money can buy. It will therefore continue long in service, and with reasonable care will last a long time. Men have seen as much as nine cords of wood in ten hours with it. Write the Folding Sawing Machine Co., 55-7-9 Jefferson St., Chicago, Ill., for illustrated catalogue. This machine will save its users time, labor, and money.

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

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

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Hamilton, Ont., Can.,
IMPORTER AND BREEDER OF

Shorthorn Cattle.

MY herd is one of the largest in America, both imported and Canadian-bred. A very choice importation of 27 head now in quarantine and due out Oct. 11. New catalogue of the herd ready for distribution Oct. 1. Address all communications to

James Smith, Mgr.,

MILLGROVE, ONT.
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HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.
We are offering 8 young bulls for sale, of first-class quality, and AI breeding.
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Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topman = 17847 =, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prize-winning Lincolns. Apply
T. E. ROBSON, Ilderton, Ont.

Mammoth Bronze Turkeys
S. G. Dorkings, B. P. Rocks, S. C. Br Leghorns, Black Minorcas. Over 300 grand young birds from winning strains. Pairs and trios mated not akin.
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Pure Scotch Shorthorns for Sale. Two bulls and fifteen months old, and three two-year-old and two one-year-old heifers. All right, good ones. Meadowvale station, G. T. R. S. J. PEARSON & SON, Meadowvale.

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The herd is largely of Cruickshank and other Scotch sorts, and is headed by the best Scotch-bred bull, bred by the late Mr. J. W. B. Watt, of Glasgow. Herd has furnished the best Scotch-bred bulls and cows in this country for many years.

Choice young Shorthorn bulls, cows, and heifers.

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Exeter Station on G. T. R., half a mile from farm.

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

YOUNG SHORTHORNS FOR SALE
Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.
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Shorthorns FOR SALE:
12 young bulls.
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16 2-year-old heifers and young cows,
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OFFERS SIX YOUNG SHORTHORN BULLS, ready for service, at reasonable prices. Strong, active, masculine.

GOOD QUALITY AND CHOICE BREEDING.

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Scotch Shorthorns, imp. and home-bred. The Imp. Clipper bull, Chief of Stars, heads the herd. Nine bull calves for sale, 8 to 10 mos. old (extra good ones), sired by Royal Standard. Inspection invited.

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Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.
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SCOTCH SHORTHORNS.
100 head to select from.
Imp. Diamond Jubilee = 28861 = at the head of the herd. 25 grand young bulls, and cows and heifers of all ages, of the most approved breeding.
T. DOUGLAS & SONS,
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Shorthorns and Leicesters.
Herd Established 1855.

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

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Maple Lodge Stock Farm
ESTABLISHED 1854.

SHORTHORNS—An excellent lot of young bulls, and a special value in young cows and heifers in calf to our imported Knuckle Duster.

LEICESTERS—Imported and home bred—the best.
ALEX. W. SMITH,
MAPLE LODGE P. O., ONT.

SHORTHORNS FOR SALE

Cows and heifers, also a few young bulls. I have employed sons of Lord Lovel, Royal Member, Perfection, Indian Chief, and Clan Campbell, on Lord Lovel and Abbotsburn farms.

WM. HAY, TARA, ONT.

SHORTHORNS

Cows, heifers and bulls ready for service, by Scottish Chief = 2244 =, by Scottish Pride (imp.) = Dam Eagle's Gem, by Guardsman (imp.).

BERKSHIRES.

Choice young, well bred bears and sows, all ages.
ALEXANDER LOVE,
EAGLE, ELGIN CO., ONT.

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The Breed THAT FIRST MADE Hillhurst Famous SHORTHORN FEMALES
THE HIGHEST-PRICED

Ever sold in Great Britain and the sire and dam of the 4,500-guinea Duke of Connaught were bred at Hillhurst. To-day "Joy of Morning," the highest-priced Scotch-bred bull ever imported to Canada, and "Scottish Hero," brother in blood to the Royal champion, "Marengo," are in service in a herd of 65 Scotch and Scotch-topped Shorthorns in a hilly limestone district, where cool summers, green pastures and winter food more closely approach Aberdeenshire conditions than any other part of the continent. HAMPSHIRE DOWN and SHROPSHIRE SHEEP.

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HILLHURST STATION, COMPTON CO., P. Q.

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FREEMAN, ONT.
IMPORTERS AND BREEDERS OF
Scotch Shorthorns and Shropshire Sheep

OFFER FOR SALE:
20 Imp. bulls.
40 Imp. cows and heifers.
6 Home-bred bulls.
30 Choice Home-bred heifers—1, 2 and 3 years old.
25 Ewe lambs.
Our importation of this year arrived home August 17th, and is one of the largest made this year. Selected by ourselves from the leading herds in Scotland.
Our new catalogue, with full information, is now ready to mail.
Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.

H. CARGILL & SON,
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WE have the largest herd of Cruickshank and Scotch-bred imported cattle in Canada. Herd headed by the Duthie-bred Golden Drop bull, imp. "Golden Drop Victor," assisted by the Marr-bred Princess Royal bull, imp. "Prince Bosquet." The herd was augmented in August last by a fresh importation of fifty-two head, personally selected by Sylvester Campbell, of Kinellar, an expert judge both as to individuality and pedigree. The cattle in this lot will compare very favorably with any lot yet imported. All females of suitable age are bred to the very best bulls obtainable. Correspondence or personal inspection invited. Catalogue and service list upon application.

Cargill Station is on the Farm, Half a Mile from Barns, and 70 Miles North-west of Guelph. See Catalogue for Map.

Ayrshires, Guernseys, Shropshires, Yorkshires for immediate sale.



SOME fine Ayrshire bull calves. A few Shropshire ram lambs. A few choice Yorkshire pigs.

Kindly note that Mr. T. D. McCallum has no further connection with this farm, either directly or indirectly. All correspondence should be addressed to



ISALEIGH GRANGE FARM, Danville, Quebec.
J. N. GREENSHIELDS, PROP.

Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at

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Come and see or write for prices. Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

SHORTHORN BULLS FOR SALE.

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



90 HEAD
High-quality, Early-maturing
Herefords
Prizewinners.
Young bulls, cows, heifers.

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

H. D. SMITH, COMPTON, QUE.

Shorthorns, Cotswolds, & Berkshires



Our Shorthorn herd was founded on Bates and Cruickshank blood, upon which we have employed only Scotch-bred bulls. 60 to select from. We are now offering an extra choice lot of young bulls and heifers from Duchess of Gloster and Miss Ramsden sires, on Cwelia and Anchoy dams. Also Cotswolds, shearlings and lambs, and Berkshire pigs.

F. BONNYCASTLE & SON, Campbellford, Ont.

HEREFORDS FOR SALE.

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

A. S. HUNTER,
DURHAM, ONT.

GLEN ROUGE JERSEYS.

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

FOR SALE.



6 YEARLING JERSEY BULLS, sired by Brampton's Monarch (imp.), and from tested cows; also registered and high-grade springer.

R. H. BULL & SON, BRAMPTON, ONT.

Maple City Jerseys.

One Jersey bull two years old. Some very choice bull calves from 2 to 5 months old, and a few high-grade heifers and heifer calves. All of the choicest breeding. Write for prices.

Box 552. W. W. EVERITT, Chatham, Ont.

Butter Jerseys

FOR SALE:

A granddaughter of Louise of H, the great cow whose yield and cost of feed is reported in this issue, 8 months old; a son of Bella of H, full sister in blood to Louise, 7 months old; a great-granddaughter of the famous cow, Massena (900 lbs. butter in one year), 19 months old, and in calf.

MRS. E. M. JONES, Box 324, Brockville, Ont.

Maple Glen Stock Farm.

The home of officially tested, Advanced Registry, dairy test and showing-win HOLSTEINS. A grandson of Sylvia now for sale. Price is in keeping with breeding and performances.

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

WE WANT TO SELL A FEW

Holstein Heifers, coming 2 years old

or a few young Cows. THEY are of the richest and largest producing strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale.

HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y.

Maple Hill Holstein-Friesians

SPECIAL OFFERING:

Two yearling bulls (prizewinners), sired by DeKol 2nd's Paul 1-ekol Duke. Five bull calves, sons of Count Mink Mercedes and Daisy Teake's King. Also several yearling heifers in calf. Will make special prices to reduce stock before winter.

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

MUST SELL,

for lack of room, nine thoroughbred Holstein-Friesian bull calves of rich breeding, two to twelve months old, some from high testing dams in Advanced Registry. Bargain prices. Also a few fine females. Also Shropshire ram lambs, and Large Improved Yorkshire pigs.

SOUTH SIDE FARM, St. Paul, Minn.

BROOKBANK

Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.

GEO. RICE, Currie's Crossing, Ont. Oxford Co.

Choice Ayrshires, and Barred Rocks.

A number of cows and heifers in calf to Glenore Sultan. Several choice young bulls.

Plymouth Rocks of both sexes from prizewinning birds.



JAS. McCORMACK & SONS, ROCKTON, ONTARIO.

Maple Cliff Dairy and Stock Farm.

FOR SALE:

Ayrshires 6 yearling bulls, females any age. Tamworths 10 hogs and sows of different ages. Berkshires 3 bears, a number of sows.

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

For Sale:

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

WM. STEWART & SON, MENIE, ONT.

Water Basins

SUPERIORITY OVER ALL OTHERS.



Point 7.—Note the little rubber valve (patent) in the lower part of basin. This prevents any return of water from basin. Other basins allow water to flow from the basins, which does not prevent contagion in case of disease. OURS DOES.

Point 8. (See next issue.)

Ontario Wind Engine & Pump Co. LIMITED. TORONTO.

Ayrshire Bulls:

Write to J. YULL & SONS, Carleton Place, for special prices on Ayrshire bulls from 1 1/2 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks.

AYRSHIRES AND YORKSHIRES.

We now offer Toronto prizewinning Ayrshires of either sex for sale; also choice young Yorkshires of either sex. All at reasonable prices. Correspondence solicited. ALEX. HUME & CO., Hoard's Station, G. T. R. Menie P. O.

W. W. Chapman,

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

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

Address: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London.

FAMOUS ALL OVER THE WORLD.

ALFRED MANSELL & CO., LIVESTOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MANSELL & CO., Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

Present Offering:

Dorset lambs (either sex). Shropshire lambs (either sex). Chester White pigs (June and Sept. litters) of the bacon type.

For particulars, write to R. H. HARDING, THORNDALE, ONT.

HUNTLYWOOD FARM

SOUTHDOWN SHEEP (IMPORTED AND HOME-BRED), ALSO DEXTER-FERRY CATTLE. A USEFUL LOT OF SOUTHDOWN RAMS NOW FOR SALE. APPLY TO

W. H. GIBSON, MANAGER.

Hon. G. A. Drummond, Proprietor.

Beaconsfield, G.T.R. & C.P.R. Pointe Claire P. O. P. Q.

Shropshire Rams and Ewes

Newly imported from the greatest English breeders. Home-bred rams and ewes of best quality. Scotch Shorthorns and Clydesdale horses for sale at moderate prices, and in large numbers, by

ROBERT MILLER, STOUFFVILLE, ONT.

Fairview Shropshires.

A few good rams still on hand. A splendid lot of ewes

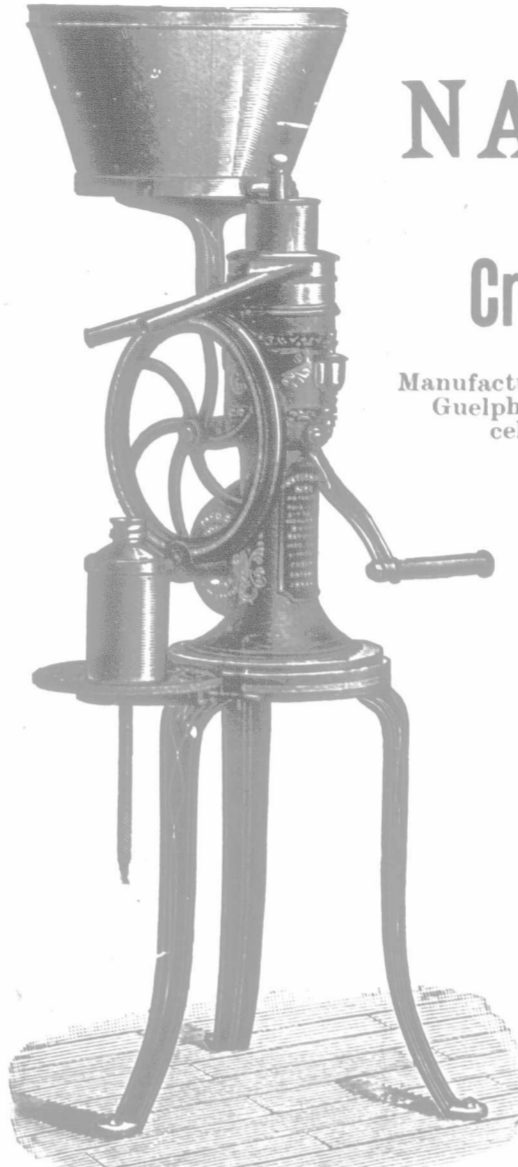
(imported and home-bred), bred to my best stock rams, are now offered at good values. They are the producers of winners.

JOHN CAMPBELL, Woodville, Ont., Can.

PLEASE MENTION FARMER'S ADVOCATE.

THE NATIONAL FARM Cream Separator

Manufactured by the Raymond Mfg. Co. of Guelph, Limited, manufacturers of the celebrated Raymond Sewing Machines.



THE National is an up-to-date machine, leading all others in separating cream by centrifugal force. It is the farmers' choice, because it runs easy, skims fast and clean, and makes a perfect cream, containing any per cent. of butter-fat desired. It is also easier to clean than any other. The National is built of the very best material suitable for the construction of a high-speed machine, and with proper care should last a lifetime. The bearings are interchangeable and easily adjusted. Every machine is guaranteed to do good work, and a trial of the "National" is solicited before purchasing any other. The already large sale of the "National," and the growing demand for it, shows how much the Canadian farmers appreciate a Canadian-made machine that does its work so easily and well, and at the same time returns such a large profit on the small investment. Ask for the "National"; try it and buy it.

THE CREAMERY SUPPLY CO., GUELPH, ONT., General agents for Ontario.

W. G. GLENN, 469 ONTARIO ST., LONDON, ONT., Agent for the Counties of Middlesex and West.

"NATIONAL" NO. 1 HAND POWER. Capacity, 330 to 350 lbs. per hour.

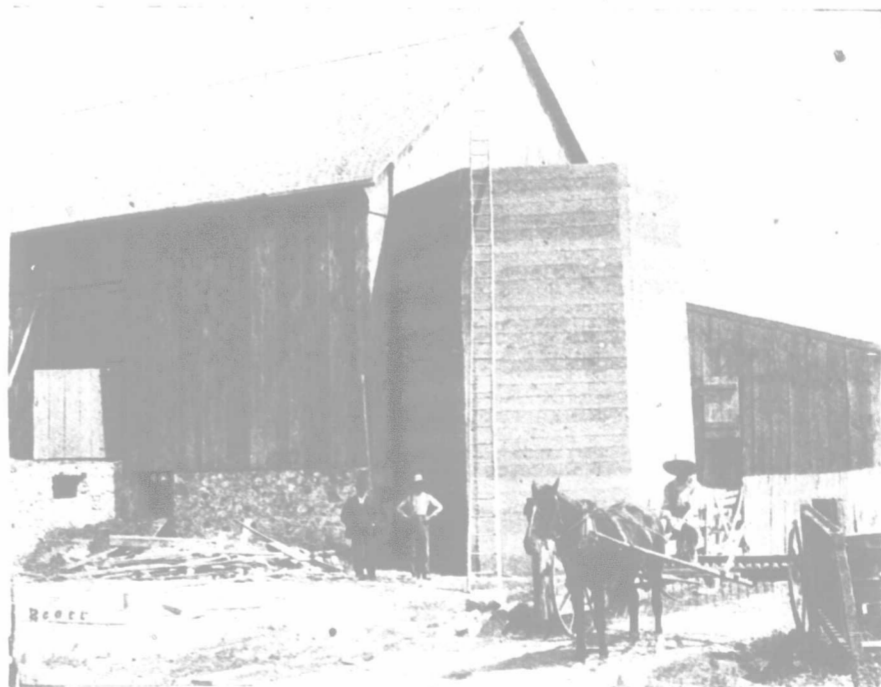
The Raymond Mfg. Co'y of Guelph, Ltd. GUELPH, ONT.

MR. JAMES BEGG'S CEMENT SILO, ST. THOMAS, ONT.

BATTLE'S THOROLD CEMENT

By our H. W. HAGAR, July, 1900.

Total cost, \$142.00.



CEMENT SILO OF MR. JAMES BEGG, ST. THOMAS.

Size: 14 feet inside diameter; 25 feet in height. Hexagon shape (6 sides).

Built with BATTLE'S THOROLD CEMENT.

Material and Labor: Cement, 67 barrels (in paper sacks); gravel, 15 cubic yards; stone, 12 cubic yards; labor, 4 days of men. Walls 16 inches thick at bottom, 10 inches at top. The labor was divided as follows: 2 men 1 day putting in footings and one-half of the stanchions; 3 men 1 day building 4 men 1 day building walls; 6 men 7 days building; 3 men 1 day to plaster inside and put in floor.

Estate of JOHN BATTLE, Thorold, Ont.

GOSSIP.

THE INTERNATIONAL LIVE STOCK EXPOSITION AT CHICAGO.

The management of the Union Stock Yards at Chicago is erecting a building 600 feet long and 100 feet wide, to be used as additional space for the International Live Stock Exposition, to be held December 1st to 8th. This building will be built alongside of Dexter Park Amphitheatre, which, as has been often stated, is 600 feet long and 200 feet wide, constructed of brick and steel, and containing stall room for about 3,000 animals. The new building is being built for Exposition purposes only, and its erection is a strong evidence of what the Exposition will be. Some idea of the magnitude of the International Live Stock Exposition can be found in the fact that there are 2,230 premiums to be awarded. Only brief breeds of cattle, fat stock, the mutton breeds of sheep, swine and draft horses are recognized in the arrangements for this show, and no less a sum than \$75,000 is offered in prizes.

The live-stock interests, the railroad managements, and a lot of the best and most progressive business men of Chicago have combined in the interest of the breeders, feeders and farmers of the country to make the show a huge success.

The International Live Stock Exposition will be the Magna Charta of everything pertaining to edible meat as raised and fed on the range and farm, or as manufactured by the packers, who will display every branch and product of their work. An additional attraction will be the auction sales of thoroughbred cattle, which are planned on a very large scale, and the annual meetings of Breeders' Associations will be held during the week of the show, so that probably the largest gathering of stockmen ever assembled in America will visit Chicago for these events.

A "MODEL DAIRY" AT THE PAN-AMERICAN EXPOSITION.

The Superintendent of Live Stock at the Pan-American Exposition, to be held at Buffalo next year, has issued the following announcement: Aside and distinct from the regular cattle exhibit at the Pan-American Exhibition, it has been decided to conduct a model dairy throughout the entire six months of the Exposition. This dairy is to be composed of four or five representatives of the breeds of milk cows laying any claim to merit along dairy lines. Plans are being made to have eight or nine breeds represented in this model dairy, and nearly all of the live-stock associations have given assurance of their fullest co-operation in this matter, and have generously offered to place at the disposal of the Exposition the animals that shall form this model dairy. The stable in which the cattle will be kept will be one that is equipped with the most up-to-date appliances, particularly with regard to hygienic and sanitary conditions. It is not the plan to force these cows unduly to see how much can be produced during this time, but to see what they will do under absolutely uniform conditions, as nearly normal as it may be possible to make them on the Exposition grounds. The work will be conducted by men of much experience in feeding and handling dairy animals, under rules which will be formulated for the government of this dairy. Only such changes shall be made during the six months as shall be especially calculated to prove the superiority of some particular breed, and when these changes are made with a view to establishing some characteristic of some breed, all other animals in the dairy will be placed under exactly the same conditions, and careful record kept as to their performance under these conditions. Accurate data will be kept as to the amount of food consumed, its cost, its nutritive value, and also the milk product as to the amount and quality. Those particularly interested in this matter can obtain the details of the management of the dairy by addressing F. A. Converse, Superintendent of Live Stock, Pan-American Exposition, Buffalo, N. Y.

MERCER'S SHORTHORNS.

Few young men in the business have gone more thoroughly into the breeding of pure bred stock than has Mr. T. Mercer of Markdale, Ont. With Shorthorn cattle Mr. Mercer realized that it required no more time to breed and develop the most popular and approved sort than those less sought after by discriminating buyers. At the head of the herd is found the dark red bull, Lovely Victor 22170, by Albert Victor (imp.) 6315, and out of Lovely Lena 19022, by Baron Camperdown (imp.) 1218, tracing direct to imported Lovely 19th, one of Mr. Cruickshank's most favored tribes. Those most familiar with Shorthorn pedigrees and favorite types will at once recognize the immense value in a sire in these days of Cruickshank breeding, and this bull is about as richly endowed in this respect as any to be found. In Lovely Victor (see cut, page 639) Mr. Mercer has a right good bull, whose conformation is strictly in keeping with the high character of his pedigree, combining size and quality, with the best of Shorthorn character, and the finest disposition, his dark red skin yielding to the touch as a piece of velvet. Among the females we found many tracing direct to Cruickshank foundations, Fashion's Fancy 18825, by Premier Earl (imp.) 1281, and out of Fashion 7th 9091, and Red Lilly 12857, by the same sire, and out of Lady Waterloo 2nd 2539, by Prince Inglewood (imp.) 1283, are a pair of cows that any breeder might justly feel proud of, having proven sure and good breeders, and are safely in calf to Lovely Victor. In Dolly Stamford, by Royal Sailor (imp.), and out of Miss Stamford 9912, by young Abbottshurn, champion at the World's Fair, the reader will at once recognize a matron of superior value, whose strength of breeding and the showy popularity of her tribe have won fame for them and the breed, having won herself in Toronto as a yearling. She is a cow of good proportions, has proven herself a safe breeder, and is again in calf to Lovely Victor, while her red daughter by Aberdeen is among the attractive features of the herd. Much might be said in commendation of this herd if space permitted, and we cannot pass without noticing a lot of useful young bulls which Mr. Mercer offers for sale in his advertisement elsewhere in this issue, and which are in keeping with those we have specified, among them being a pair of Royal Sailor and out of 1901 Flower 21779, a young bull whose standing we can find a place at the head of some good herd, where from his breeding and quality he could hardly fail to make his mark for good. Parties needing good cattle will do well to note Mr. Mercer's offerings, and write him for prices, etc.

A GOOD START IN LIFE

A farmer's boy or girl can get an education in a few months at home that will fit them to take positions in town or city, where they can earn good salaries from the start, continue their studies and earn more as they learn more. By our method of Education by Mail we have prepared farmer's boys for positions in machine or electrical works, or with architects.



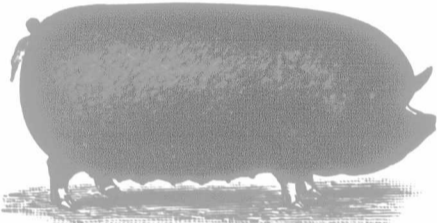
By our Method

FARMERS' BOYS Have Become Draftsmen, Electricians, Surveyors.
FARMERS' GIRLS Have Become Stenographers, Book-keepers, Designers.

Write, stating subject in which interested.
The International Correspondence Schools, Box 1517, Scranton, Pa.

SHEEP BREEDERS' ASSOCIATIONS

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.



Berkshires—Large, lengthy, English type. Five first prize boars in service. Spring pigs ready for shipment. Boars fit for service. Sows ready to breed. **GEORGE GREEN, Fairview, Ont.**

Berkshires.

We are offering a fine lot of Young Pigs of the Highclere and Sallie families. Can supply pairs not akin. Two good stock boars for sale, one of them imp. in dam. **JOHN RACEY, Jr., Lennaxville, Que.**

FRESH BERKSHIRE BLOOD.

Have secured the first choice of the champion gold-medal herd of America (which won over 400 prizes, cups and medals), including the \$400 show sow, Elphick's Matchless (never beaten), and other sweepstakes sows in the United States. Also 15 April, May and June boars and 15 sows of the same age, and 3 fall litters, selected to meet the best Canadian demand, being long, low, and extra good through the heart. Farm within 10 minutes' walk of electric R. R. terminus on Kingston road. **DURHAM & CAVAN, East Toronto, Ont.**

SNELGROVE BERKSHIRES

We have for sale some promising young boars and sows of different ages. Boars fit for service, sows large enough to breed. Young pigs from 4 to 8 weeks old. These pigs are got by the prizewinning boars, Colonel Brant 5850, Court Master 7710, and Gallant Prince 7691. Our herd is bred from the best strains of Large English Berkshires. Write for prices. **SNELL & LYONS, Snelgrove, Ont.**

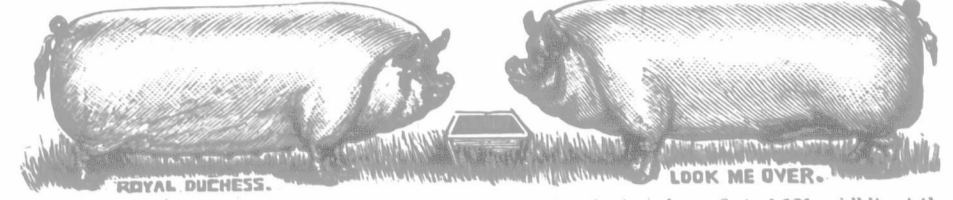
OAK LODGE Type of Yorkshires



We have now on hand a large herd of pigs of different ages, and they are as good as we have ever offered. The winnings of this herd have been greater than all other herds combined at the largest Canadian exhibitions. All stock shipped to order, fully guaranteed. **Brethour & Saunders, Burford, Ont., Can.**

PLEASE MENTION FARMER'S ADVOCATE.

Summer Hill Herd HEADQUARTERS FOR THE IDEAL BACON HOG AND EASY FEEDERS.

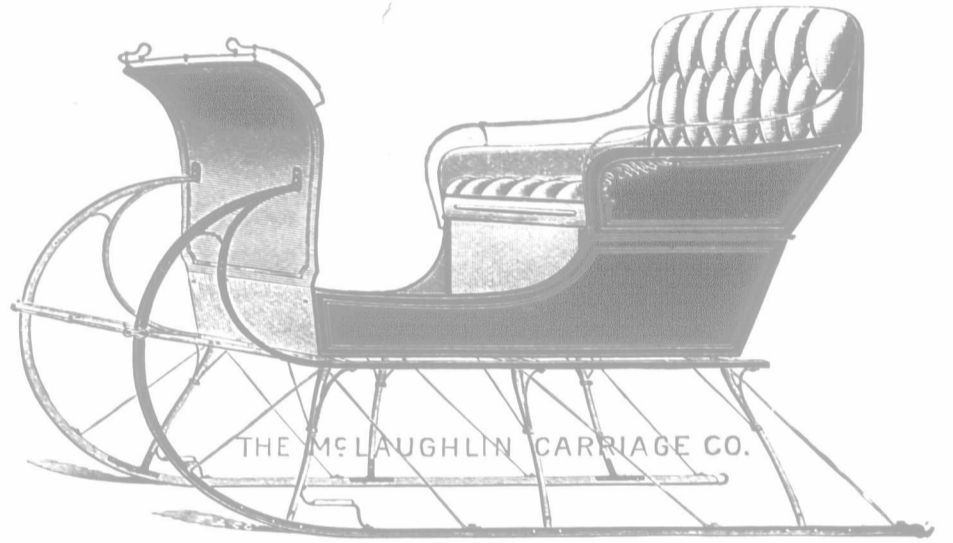


The largest herd of imported and Canadian-bred Yorkshires in America. Out of 121 exhibits at the leading shows in '99 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Won most of the best prizes offered, including first prize for best pen of pure-bred bacon hogs, also grand sweepstakes over all breeds in a class of 13 entries. The foundation of our herd was laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont. **D. C. Flatt & Son, Millgrove, Ont.**

\$50.00

invested in a good, sound, well-conducted Mining Company offers bigger returns, with less risk, than anything else you can name just now. \$50 or \$100 invested in Le Roi (B.C.) shares when they were first offered means wealth to-day. The shares could then be bought for a very few cents. To-day they are worth over \$40 each! So with "ROB ROY" shares. They are 15 cents NOW—but what of the future? Why not try a \$50 or \$100 investment; it may prove another Le Roi! Of course, it may NOT, but the Company is earnestly endeavoring to make a success of it. This is not a gamble; it's an investment, and our shareholders are largely clergymen, merchants, teachers, farmers, etc. Better look into this.

A. E. WELCH, LONDON, CANADA.



THE McLAUGHLIN CARRIAGE CO.

OUR NO. 202.

McLaughlin Cutters

McLaughlin Carriages

are always the same grade.

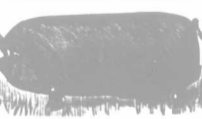
THERE IS NO 1st, 2nd or 3rd QUALITY.

FROM COAST TO COAST IT IS

"One grade only, and that the best."

ASK YOUR NEAREST AGENT FOR THE "OLD RELIABLE," AND TAKE NO OTHER.

McLaughlin Carriage Co., Oshawa, Ont.



BERKSHIRES FOR SALE.

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star (imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 1307 heading the herd. **S. DYMENT, BARRIE, ONT.**

Large White Yorkshires.

Am offering during this month a grand lot of boars and sows ready for breeding; pairs supplied, not akin, from show stock; also several sows in pig to imported boar. Young pigs from 2 to 3 months old, all of the most improved bacon type. Registers furnished. Express prepaid. Address: **H. J. DAVIS, BOX 290, WOODSTOCK, ONT.**

TAPE BROS., importers and breeders of Ridgetown, Duroc- Jersey Swine. **TAPE BROS.,** Ridgetown, Ont. ADDRESS: **Tape Bros., Ridgetown, Ont.**

Family Knitter

Cheapest, Simplest, Best. Price, **\$8.00.** Write for circular.

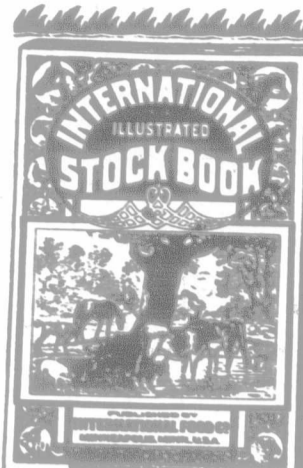
Dundas Knitting Machine Company, DUNDAS, ONTARIO.

326 FIRST PREMIUMS SEND FOR FREE CATALOGUE. **Prairie State Incubator Co., Homer City, Pa.**

GOSSIP.

Mr. W. D. Flatt, Hamilton, Ont., has recently landed a new importation of 39 Shorthorns in quarantine at Quebec, which he considers the most valuable consignment he has yet brought over, particulars of which will be given in a future issue.

Alfred Mansell & Co., live stock exporters, Shrewsbury, England, write: "It will doubtless interest breeders of Shropshire sheep in all parts of the world to learn that at the recent public sales held in various parts of Great Britain and Ireland, no less than nine rams have realized 100 guineas and upwards, and have made the splendid average of £136 10s., whilst several others have made between 40 and 90 guineas, and that several ewes have realized between 20 and 30 guineas each. North America, as usual, has largely helped the general run of prices, but Australasian breeders have done the most to enhance values, and have been spirited bidders at several of the sales, giving in one case 240 guineas for a ram, and in others 140, 120 and 90 guineas. The Australian demand has been greatly fostered by the wonderful results obtained by the Shropshire ram on cross-bred Merino ewes to produce fat lambs for export."



A \$3000.00 STOCK BOOK FREE.

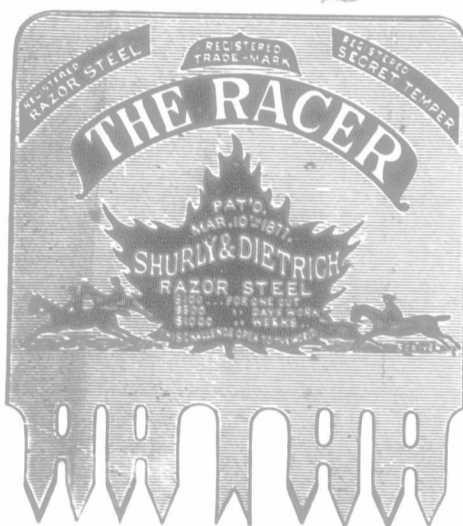
We will mail you a copy free. POSTAGE PREPAID, if you write us and answer 4 questions: 1st—Did you ever use "International Stock Food" for Horses, Cattle, Sheep or Hogs? 2nd—Is it for sale in your town in 25-lb. pails? 3rd—How many head of stock do you own? 4th—Name this paper. Our book is 94 by 64, and covers in 6 colors. It contains 133 large colored engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., with a description of the different breeds. It also contains a very finely illustrated and valuable Veterinary Department. The engravings in this book cost us \$3000.00.

WE WILL GIVE YOU \$14. WORTH OF "INTERNATIONAL STOCK FOOD" IF BOOK IS NOT AS STATED. "International Stock Food" is a safe vegetable stimulating tonic and blood purifier. It fattens Cattle, Hogs or Sheep in 30 days less time and saves grain by aiding digestion and assimilation. Is extra good for breeding animals. 500,000 farmers endorse it. Many use 3000 lbs. per year. It makes Colts, Calves, Lambs and Pigs grow very rapidly and only costs 17 3/4 CENTS for One Cent. Guaranteed to make Hogs weigh 300 lbs. at 6 months. It will Save your Hogs from Cholera, because it stimulates and permanently strengthens the entire system. It won highest award and medal at Paris 1900. Your money will be refunded in any case of failure. OUR 20,000 DEALERS GIVE THIS BOOK FREE WITH "INTERNATIONAL STOCK FOOD" IN 25 LB. PAILS.

Largest Stock Food Factory in the World. MINNEAPOLIS, MINN., U. S. A. We occupy 15 acres, also 100x25 feet each, and our new addition, 6 floors 60x25 each. Capital Paid in \$200,000.00.

Our Stallions Buttonwood 2:17 by Nutwood (8:00) and International Stock Food by Hartford (3:57) eat "I. S. F." every day. We own the Big Horse that is 19 hands and weighs 2500 at 4 years. We own the Big Cow that is 6 feet tall, 10 feet long and weighed 2700 at 6 years. Our Big Short-Horn Steer weighed 3100 at 5 years. We have fed "International Stock Food" for years to our stallions, brood mares, colts, cats and hogs. Beware of cheap imitations.

The Razor Steel, Secret Temper, Cross-cut Saw.



WE take pleasure in offering to the public a saw manufactured of the finest quality of steel, and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A saw to cut fast "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These Saws are elliptic ground thin back, requiring less set than any Saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a saw for one dollar less, and lose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work.

Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.

MANUFACTURED ONLY BY SHURLY & DIETRICH, Galt, Ontario.

LIGHT YOUR HOME WITH Sunlight Gas



The best light in the world. No more expensive than coal-oil.

WRITE FOR PARTICULARS TO

The Sunlight Gas Co., Ltd.,

1, LITTLE ST. ANTOINE ST., MONTREAL

SEE TESTIMONIAL BELOW.

Valleyfield, Que., July 17th, 1900.

THE SUNLIGHT GAS CO., Ltd., Montreal, P. Q. :

GENTLEMEN.—After having used Calcium Carbide Gas by means of one of your Sunlight Gas Generators, since September, 1898, I am pleased to say that I have found this system of lighting entirely safe, satisfactory, as well as economical. My friends from the city, who visit me, prefer it to gas, even the Auer light or electric.

For country residences it particularly commends itself.

I remain, gentlemen, Yours respectfully, G. M. Lov.

OUT THEY GO

Four young people sent into business offices on the 15th inst., in this city.

IN THEY COME.

From Napanee, Picton, Harriston, Regina, and other outside places, as well as from our city, came bright young people last week, to enjoy a practical training in our school. YOU may enter at any time. With TEN teachers, and first-class equipment, we can produce good results.

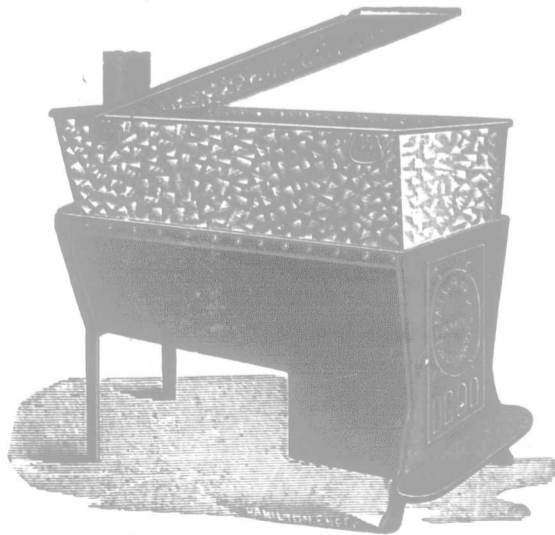
CENTRAL BUSINESS COLLEGE,

CIRCULARS FREE.

TORONTO.

W. H. SHAW, Principal.

THE MOST SUCCESSFUL FEED COOKER made in CANADA.



Burns wood 40 in. long.

THE McCLARY MFG. CO., LONDON, TORONTO, MONTREAL,

Famous Evaporator or Feed Boiler.

The tight-removable, galvanized steel boiler is easily cleaned. Cast iron fire-box, grates and linings are extra durable. Sheet steel body heats quickly, and is properly protected against warping or burning out. Being light to move, it can be easily carried into the bush and used for boiling sap.

Does the QUICKEST WORK the MOST CHEAPLY.

WINNIPEG, VANCOUVER.



Won't Injure the Polish

The only drawback with some cleaners is that you can't trust them for fine work.

"Sobrite" will not scratch anything. It cleans and polishes, but cannot scratch.

Whether it's polished woodwork, a silver teapot, or the kitchen sink, it cleanses, purifies and sweetens.

It is the best cleaner, because it does its work best. At all grocers.

SOBRITE 10 CENTS Rapid action cleaner, will not scratch

GOSSIP.

Mr. C. A. Archibald, Truro, N.S., has recently made a good sale of a nice lot of Ayrshire cattle to the superintendent of Mount Hope, Dartmouth, including a daughter of his grand show cow, Ayrshire, four times sweepstake-winner at the Provincial Exhibition. Mr. Archibald sold over 50 registered Shorthorns and Ayrshires last year.

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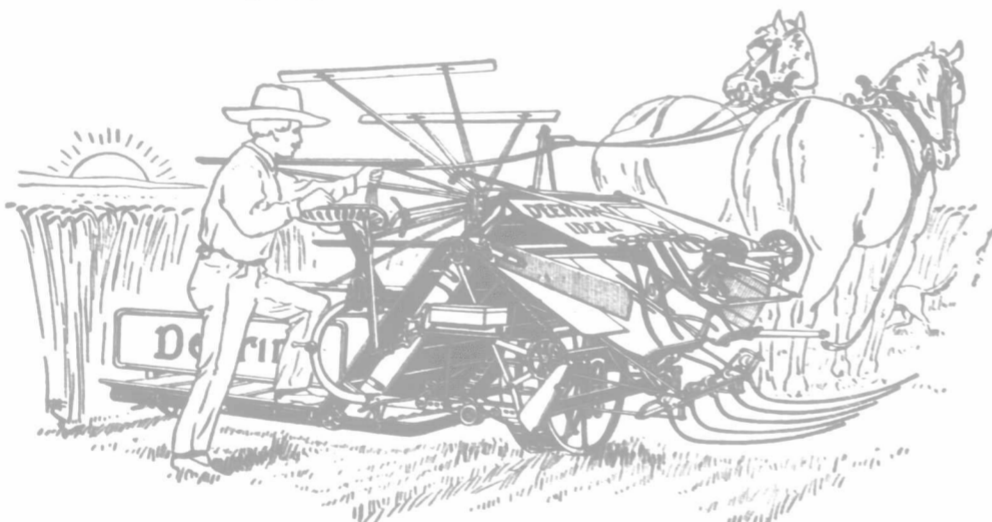
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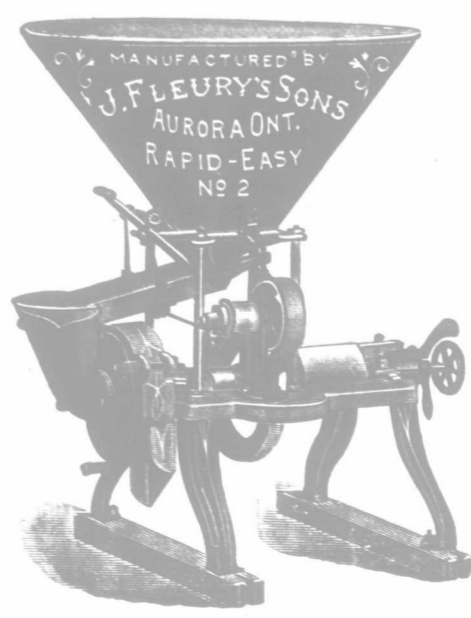
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