

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

PUBLISHED AT LONDON, ONTARIO, JULY 1, 1902. WINNIPEG, MANITOBA. No. 553

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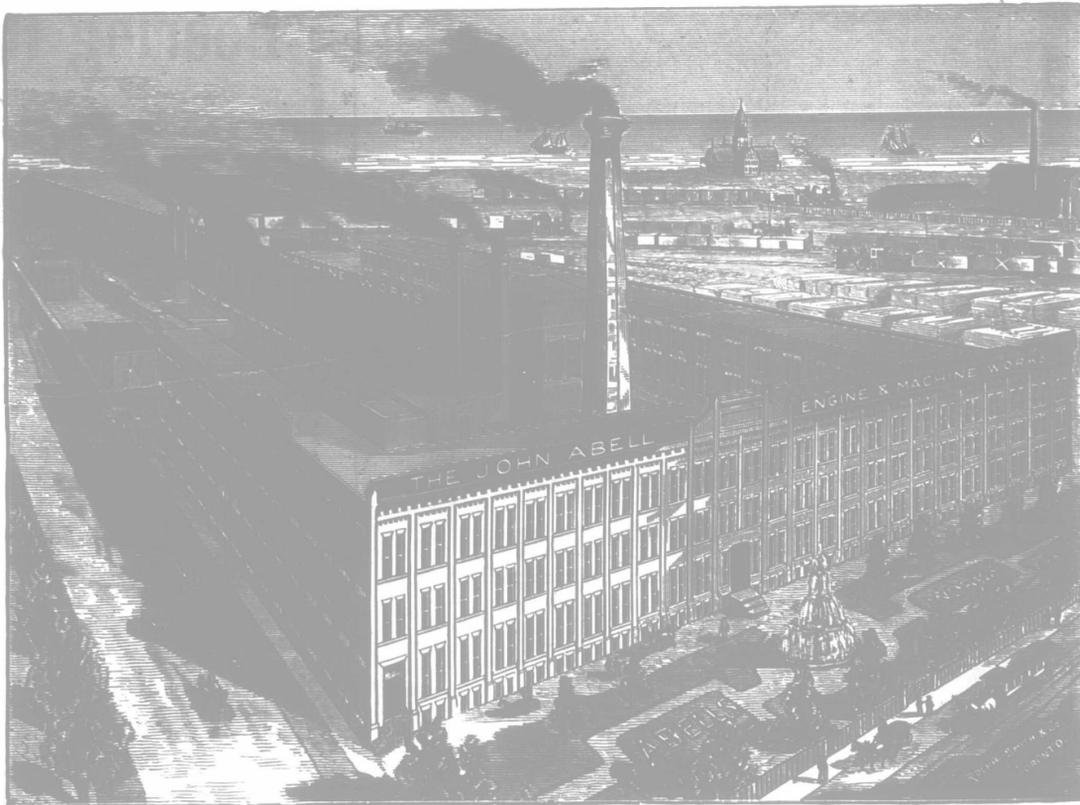
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GOSSIP.

W. S. Carpenter, Simcoe, Ont., importer and breeder of Shropshire sheep, in ordering a change of advertisement, writes: "My Shropshires are in the pink of condition and produced an ex-

cellent return in lambs, giving 140 per cent. My stock ram, Ruddington Knight (imp.), has proved a grand sire, the lambs being low-down, blocky fellows and woolled to perfection. The Mills and Mansell ewes imported last summer have proved excellent breeders,

and their lambs will make a grand acquisition to the flock, which now numbers 160 head. The shearling rams I am offering for the fall trade are a choice lot; plenty of wool and character and sired by imported ram, Chancellor, of Harding breeding."

The Farmer's Advocate

"PERSEVERE AND SUCCEED." and Home Magazine. ESTABLISHED 1866.

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VOL. XXXVII.

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

No. 553

EDITORIAL.

Show Your Stock.

Visitors to the fairs judge of the popularity and comparative usefulness of the breeds of live stock, in all classes, by the number and quality of each on exhibition. A large display of animals of high-class excellence at these events is one of the best advertisements of a breed that can possibly be made, and every breeder is, therefore, interested in a creditable exhibit of his favorites. The idea evidently entertained by many breeders, that unless they can make a large display and figure prominently in the competition for herd and flock prizes it is better not to show at all, is a grave mistake. Such a course leaves the field to a few and often results in a meager representation of a breed, leaving the impression on the public mind that the breed is losing ground or is at least lacking in enthusiastic admirers, and such impression detracts from the demand and affects trade adversely, especially in so far as the smaller breeders are concerned.

A perusal of the catalogues of leading British exhibitors shows that even wealthy and prominent breeders not infrequently enter a single animal, or at most a half dozen, in the class for the breed in which they are interested, and consider it an honor and an advertisement worth all it costs to win even a second or third prize or a commendation. It is certainly more satisfactory and more sensible and creditable to show one really good animal, or a few in the best of condition, than to bring out a large number in a half-prepared state, for then, if one fails to get into the prize list, he may not be ashamed of his exhibit and will learn from the experience in what points of excellence or of preparation he is lacking, and will be in a position to more skillfully prepare and successfully compete the next time he comes out. Indeed, this is the only way in which a man of moderate means can measure the quality of his stock with that of others, for however high an opinion he may have of his own at home, he is liable to be surprised by their shortcomings when seen in first-class company in the show-ring, but if wisely used the experience may prove a profitable education to him.

As a rule, and in most classes of stock, it is a mistake to limit the period of preparation to a few weeks or even to a few months. The best time to begin to prepare for the next year's show season is at the close of the last. Not that it is wise to feed heavily the whole year, but the selection of the animals intended for exhibition should be made early and their preparation be gradual, proper training and exercise being given to keep them improving in every respect, and if they are found to fail of responding satisfactorily to the necessary treatment, others may be substituted before it is too late to give them the benefit of the needed preparation. There are, however, some classes, such as the dairy breeds of cattle, which even at this date may be successfully prepared for the early shows, as in their case a high condition of flesh is not necessary, and would, indeed, handicap them in the competition; but they must be housed during hot days and receive the feeding, sheeting and grooming necessary to give them the gloss and the handling quality of skin and hair which counts for so much in a close comparison. Much also depends upon their training to walk gracefully and to stand properly in order to show

to the best possible advantage. These may appear to be trifling points, but in a close competition they may turn the scale and mean all the difference between the first and a lower place in the rating. The showman should study the attitudes of the animal he handles and show it for all it is worth, remembering that in this as in everything in connection with fitting for exhibition, what is worth doing is worth doing well.

Another point which is worthy of being emphasized is that the interest and success of our exhibitions and the prestige of our country as the breeding-ground for high-class stock depends largely on the character of the live stock displayed at the leading shows, and for this reason, if for no other, the men who have the stock should take a broad and patriotic view of the question and be prepared to make some sacrifices, if need be, for the general good, and should see that the products of the country are adequately represented.

Changes During Ripening.

As plants approach maturity and seeds are being formed, great changes take place in the distribution of those constituents which afterward serve a valuable purpose in the nutrition of animals. Chemically speaking, the principal elements that go to make plants are oxygen, nitrogen, hydrogen, carbon, sulphur, phosphorus and potash. The three latter, although essential, are not found in great quantity. Nearly half the dry combustible matter of plants consists of carbon, and with oxygen and hydrogen it forms the starches, sugars, and fats. Nitrogen, which is obtained principally from the air, is only found in the combustible portion of plant bodies to the extent of about four per cent. Hydrogen and oxygen alone form water.

After germination a tiny plumule comes forth, and as rapidly as climatic conditions will admit, the plant aims to produce root, stem and leaf, with, finally, a flower and seed. That period known as the grand period of growth is the time when plant tissue is being constructed most rapidly and when the greatest drafts are being made upon the fertility of the soil. At that time the plant is storing up in various combinations the different elements mentioned. When cereal crops reach full bloom they contain as much nitrogen and potash as is to be found in the mature crop. The assimilation of phosphoric acid, however, continues much later. As the seed begins to form, starch albuminoids (nitrogenous matter), phosphoric acid and potash are carried from the root, leaf and stem to be stored up in the seed. So it is that in seasons favorable to the maturing of seed the straw at harvest will be found quite exhausted. Likewise, during rainy harvests, the translocation of these materials does not go on so readily, and as a result the straw possesses a higher and the grain a lower feeding value than if desirable conditions had existed.

In the light of these facts, it may be readily seen why variations in the composition of our feeding stuffs are met with. A table showing the percentage composition of oats, for example, cannot be taken as a sure guide in all cases. In fully-matured grain the variation will not be found considerable. Any which may exist will be traceable to differences in soil or the season of ripening. The effect of season is best seen in the case of barley. Immature ripening, caused by cold, wet, or extremely dry periods, produces a

grain high in nitrogenous substances, poorer in starch, and, consequently, low in value for malting purposes. For use as a stock food, a grain high in nitrogen is often desirable, but when a relatively high percentage is obtained only at the expense of other substances, almost or equally as valuable, no gain can be said to result.

In the case of such immature crops as corn fodder or meadow grass, the composition depends upon the stage of maturity at which the plant was cut and to some extent upon the character of the manuring. As a general law in this connection, chemists have stated that as the plant matures the proportion of water, nitrogenous matter, potash and phosphoric acid diminishes, while the proportion of starchy substances largely increases.

In drawing conclusions, farmers should be assisted by these considerations in determining the proper time to cut their crops. It is well known that many weeds if pulled while in bloom ripen seeds with sufficient vitality to again reproduce. A plant of any of our grains, too, if cut while in flower and kept with the stem in water will ripen seed, though the quality will be inferior. The statement is sometimes made that grain cut a few days before being completely ripe gives a brighter sample than if left until complete ripeness is attained. While this may to some extent be true, it can only be had at the expense of plumpness. When the weather is dry, grain withers up quickly in the shock, and as the water within the plant body is evaporated, the translocation of materials from stem and leaf to head must soon be checked.

Government Road Grant.

Through reports received from different parts of the Province of Ontario, we learn that a few counties are not likely to accept their share of the million-dollar grant made by the Provincial Government for road improvement. The chief objection appears to be because in accepting it they are required to add a supplementary grant of two dollars for every one supplied from the provincial funds. It is, indeed, regrettable that county councils should so stand in their own light in this matter. One thing that the average farmer greatly needs is better facilities for placing his products upon the market. Thoughtful, unselfish men are alive to this need. A wave of road-making reform is sweeping over the country. The grant has been made; and it is within the power of the taxpayers to say whether they are to participate in the benefits of a fund, their share of which they are compelled to pay whether they decide to construct permanent roadways or not.

The Argentine Cattle Question.

Speaking at the luncheon in connection with the show of the Suffolk (Eng.) Agricultural Association, recently, Hon. Mr. Hanbury, Chairman of the British Board of Agriculture, said he had, at the present moment, rather a difficult question to decide in regard to the importing of Argentine cattle. He intended to take such precautions in regard to Argentine cattle as were necessary in the interests of the British farmer and consumer. The supply of cattle from America was falling off, and he looked forward to the day when Argentina would be a great source of England's meat supply. Therefore, every precaution must be taken to prevent disease being imported either into Great Britain or the Argentine Republic.

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Camera Competition.

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

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

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

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

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

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

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

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

STOCK.

Beet Pulp as a Stock Food.

BY J. J. FERGUSON, MICHIGAN AGRICULTURAL COLLEGE.

A year ago the writer, upon request of the "Farmer's Advocate," reported upon the condition of the sugar-beet industry in this State. The results of last season's campaign were even more gratifying than those of years previous. At the present time the grim determination of President Roosevelt to smooth the road of Cuba's independence is a very serious menace to the vast interests already involved in this and other States. Not only are our farmers directly interested from the standpoint of being producers of the raw material, but also from the fact that they are to a large extent the customers for the finished product. In the manufacture of sugar from beets, there are three products: First, and chief, commercial sugar; second, crude molasses, as a by-product; and third, beet pulp, as a residue.

For every ton of beets entering the factory there is approximately half a ton of pulp remaining after the sugar is removed. With a 500-ton factory, this means 250 tons of pulp every day of the run, usually three months. This would mean the enormous amount of 22,500 tons in a season. It is quite probable that Ontario will soon have not one but several factories in operation, since she will not be directly affected by Cuban tariff modifications. It will thus be seen that it is a matter of great interest to Canadian farmers, and especially to those near the factories, to learn something of the value of this new feed.

Trials have been conducted at this station, and in different parts of the State by private individuals, to determine the feeding value of beet pulp. The pulp as it comes from the conveyor has a water content of about 90 per cent. It will be understood that in this condition it is both expensive and difficult to handle. At one factory in this State, an outfit to dry the pulp so that it may be stored indefinitely or shipped abroad is working and apparently with success. In Germany, presses are used by which the water content is greatly reduced, producing a ton of pulp containing about 400 pounds of dry matter. Ordinary corn silage contains about the same per cent. of solids—20 per cent. A sample of dried pulp, such as mentioned above, contains only about 12½ per cent. water, or almost as much dry matter as our ordinary grain feeds. The following table is of interest as showing the relative composition of pulp and some of our best-known feeds:

	Water %	Protein %	Nitrogen Free		
			Crude Fiber	Extract	Fat %
Beet pulp (fresh)	89.95	.927	2.29	6.33	.14
Beet pulp (ensiled)	38.32	1.08	2.80	6.41	.11
Beet pulp (dried)	12.58	6.54	18.37	—	1.90
Corn silage	79.10	1.70	6.00	11.00	.80
Turnips	90.50	1.10	1.20	6.20	.20
Timothy hay	15.00	6.00	29.60	41.90	3.00
Corn stover	40.50	3.80	19.70	31.50	1.10
Red clover hay	20.10	12.40	21.90	33.8	.15

The high content of water in the fresh pulp makes it both expensive and laborious handling. Further, during severe weather, it must be kept from freezing. Some experiments in preserving pulp in silos have been only moderately satisfactory. A few days since, a patron of the West Bay City factory informed the writer that he had tried storing pulp direct from the factory in a strongly-built stone silo, with the result that his silo is burst in several directions. This year he will store pulp in large pits, four or five feet deep, dug sufficiently wide to permit of a wagon being driven through.

As regards its feeding value, beet pulp has about half the feeding value of good corn silage. To feeding steers, as high as 125 pounds have been fed per day. At this station good results were secured using 70 to 80 pounds, together with the usual meal supplements. As a general thing, pulp is relished by all classes of cattle and sheep. One of our leading dairymen is fully satisfied, after the experience of two seasons, that where pulp is within easy reach it provides an excellent substitute for silage, at very moderate cost.

The sugar removed from the beet in manufacture is a cheaply-grown carbohydrate. The farmer who raises beets for the factory and returns a large amount of pulp to the land does not seriously tax the store of expensive fertilizing constituents in his soil.

Trials at this station feeding refuse factory molasses to fattening steers have shown very satisfactory results. The steers may be led up from a small allowance to take as much as three pounds per day. Sprinkled over cut hay, straw or corn fodder, it serves as a wonderful appetizer to the animal. The crude syrup contains 10 to 50 per cent. of sugar, all directly digestible. It gives a nice smooth finish to fattening steers, and is especially valuable in finishing fat stock for the show-ring. The molasses we fed cost nothing but the hauling. It is probable however, that this valuable by-product will soon be entirely used in commerce in production of alcohol, etc.

Insect Enemies of Live Stock.

The annoyance and loss caused by attacks of flies of various kinds upon farm stock during the months of July, August and September is a matter of no inconsiderable importance to stockmen. Yet it is surprising in this day, when agricultural knowledge is being so freely disseminated, that many farmers fail, either through neglect or not posting themselves, to afford proper protection to their animals.

Principal among these parasites has been the horn-fly (*Hematobia serrata*), whose blood-sucking efforts to subsist upon cattle are well known to everyone. Early in June of each year they make their appearance, and ere the dry pastures of midsummer are seen, they have become so annoying as to lessen the flow of milk on the one hand or the ability to lay on flesh on the other. So great is the harm done, that no one who puts the least thought into his business or who makes any attempt at the profitable production of farm products will fail to take some means to combat this pest. A mixture of seal oil (fish oil) and crude carbolic acid, mixed in the proportion of two tablespoonfuls of the latter to one gallon of the former, is a good homemade remedy, and various effective special preparations are on the market. The former should be applied every five or six days during the summer, rubbing well with a brush or swab every part of the body. Much can be done, also, to prevent the propagation of this fly by destroying its breeding places. The eggs are laid in the fresh cow manure, and before it has had time to dry, under ordinary conditions, the young larvae are full-grown and ready to pupate. The manure should, therefore, be spread out every two or three days and forced to dry up before the larvae have time to attain their growth.

The season has now arrived when the bot flies of different species become troublesome. The eggs of the horse bot, after being licked up by the horse, pass into the stomach, where they immediately hatch and remain for a considerable time attached to the inner coating. After full growth is attained, they pass out and enter the ground, where the pupa stage is at once entered upon. Although some horsemen claim that but little harm is done by the horse bot, the fact remains that their presence within the stomach must be the cause of considerable irritation, and hence they cannot be conducive to good health. While it is difficult to kill the larvae within the stomach, a great deal can be done to diminish their numbers by removing and destroying the eggs as they are deposited on the body. The fish-oil and carbolic-acid mixture, if applied regularly to the throat and fore legs, will prevent the deposition of eggs on these parts and in a large measure protect the animal from the annoyance of the fly.

The life-history of the ox bot is similar to the species just described, the only difference being that the young larvae, instead of entering the stomach, find their way from the oesophagus, or gullet, through the muscular tissue to a point just below the skin. There they may be seen during the last days of winter as "warbles." This fly is easily controlled. Animals which are regularly treated with the horn-fly preparation during the egg-laying season of summer rarely suffer to any extent.

Sheep bots cannot be so readily held in check. The egg, as it is about to hatch, is deposited on the nostril, and the young larva finds its way upward through the nasal opening in the mucus under the skin. All that can be done with any degree of satisfaction is to prevent the egg from being laid. Tar placed on the sheep's nose acts as a good repellent, but it should be repeated at least weekly. Fish oil and crude carbolic will answer the same purpose.

The horse-flies compose another set of troublesome creatures. Their mouth-parts are specially built for extracting the blood from man's most noble friend. Their reproduction cannot be controlled. The only successful method of defending horses is by the use of nets. Farmers should not fail to supply themselves with the necessary means to combat these and other insect pests. The results will be found on the right side in dollars and cents.

Sore Teat Ointment.

An ointment, of which all owners of dairy cows should keep a supply on hand during the spring and summer months, is made by blending—

1 drachm of oxide of zinc with
1 ounce of vaseline.

This makes an excellent dressing for cracked or sore teats in cows, and a small quantity of it should always be kept within reach for application to the teats whenever there is an occasion therefor. Another useful dressing for the same purpose consists of—

Tincture of myrrh ... 1 ounce.
Solution of alum ... 1 "
Water ... 6 "

Our Scottish Letter.

Students are now loose for a season, and the members who wanted to write M. R. C. V. S. after their names know whether they have succeeded or not. The condition of veterinary education in Scotland is peculiar. England has one veterinary college, Scotland has three. There is no reason in the nature of things why such should be the case, and certainly the superfluity of colleges is not due to the superfluity of students. This remark always applied, but it has acquired redoubled force during the past two years. Previous to that time a large proportion of the students attending the Scots colleges came from Ireland, but the new movement in Irish agricultural education included a veterinary college, which has been started in Dublin under the control of Professor Metlam, who was transferred from the Royal (Dick) College in Edinburgh. This college has, of course, diverted the stream of Irish youths, and the Glasgow and Edinburgh Colleges are to that extent the poorer. The oldest college in Scotland is the Royal (Dick), founded in Edinburgh three-quarters of a century ago by the famous Professor Dick. It is the only one of the three blessed with an endowment, but even with this and more than a third of all the students attending the Scots colleges, it is not self-supporting. The New Veterinary College in Edinburgh was founded by the late Principal Williams, between whom and the trustees of the Dick College there was some feud. The fame of the teacher attracted many of the best students to its classrooms, but now that he is gone it can hardly be expected to maintain itself. Even in Principal Williams' day the College was only kept going by the aid of a lucrative private and consulting practice. The same remark applies to all the colleges, and it can easily be seen that it is impossible to keep efficient teachers on such terms. The Glasgow College was started many years ago by Professor McCall, one of the shrewdest and most cautious of practitioners and experimenters, and at the same time as fine a lecturer as ever addressed a bench of students or an audience of farmers. The popular Professor is getting up in years and naturally desires to get rid of his burden. The partial endowment of the Irish College with public money has naturally led to a demand for similar treatment to the Scots colleges. But the Government has a very effective reply. It cannot give grants of public money to private ventures. The consequence is that there are now before the country various schemes for bringing the colleges under public control, but it may safely be concluded that the first step towards the desired goal must be a union of all the Scots colleges. This would give Scotland a splendid position in the veterinary world, as it is admitted she is easily first in respect of clinical work and meat inspection. In all that concerns the protection of public health, Scotland is far ahead of England or Ireland.

In these days of Cruickshank ascendancy, it takes a brave man to stand by Booth Shorthorns and maintain, not their superiority, but their utility. Such a man is Lord Polwarth, the famous breeder of Border Leicester sheep. His Lordship has been breeding Shorthorns for many years and has done fully more than his share of prize-winning in the national show-yards. He began with Uppermill blood, but soon drifted into the Warlaby division, and perhaps there is not now in Great Britain a more out-and-out supporter of the Booth cult than he. Lord Polwarth is not a bigot. He does not stand by Warlaby because it is Booth, but he stands by Booth cattle because in his judgment it is absolutely necessary to maintain size and length with fleshiness and good handling in Shorthorn cattle. He purposes showing visitors to the Royal at Carlisle a selection from his herd, numbering nearly 50 head, which he will offer at unreserved public sale, in a field adjoining the show-ground. This sale will be conducted by Mr. John Thornton on the Wednesday of the show, and, having this week seen the stock, I can promise visitors something of a different kind from the "little red Cruickshank bulls," about which your Mr. Gibson was some years ago slightly sarcastic. Lord Polwarth does not claim that his cattle are better than the north country Shorthorns, but he does argue, and with considerable force of reasoning, that the breed requires all kinds, and that the peculiar properties of the Booth tribes are worthy of preservation. The seventeen bulls to be offered by him on July 9th are great, lengthy, fleshy animals, full of "character," and like crossing well with the best kind of cows in the other families of Shorthorns. I sincerely hope Canadian buyers will look at Lord Polwarth's cattle. They are worth looking at and investing in, and although at present rather out of the running so far as fashion is concerned, it is just possible that in the end fashion may not be everything.

We are at present in the midst of the show season. Hardly a day passes when we have not more than two or three to look after, and their

recurrence becomes monotonous. As an illustration of the interest taken in these events, look at this list for the week closing: Tuesday—Strathcudrick, at Drymen, a lovely district in Stirlingshire; and Royal Counties, at Reading, a big affair under the immediate patronage of royalty. Wednesday—Edinburgh, a great horse show, at which we have perhaps the best show of light horses of all kinds in Scotland. Thursday—Two smaller, but very interesting events at Strathaven in Clydesdale, and Dunoon in Argyshire. Friday—A splendid general show at Stirling, at which almost all classes of stock were represented; a first-rate West of Scotland exhibition at East Kilbride, with a genuine old-world flavor about it; and, finally, a great Horse Show at Richmond, Surrey, perhaps the best light-horse show in Great Britain. Saturday—Shows at Windygates in Fifeshire, Shettleston in Lanarkshire, and Canspie in Stirlingshire. Next week the events are equally numerous. It is a fair question, Does all this expenditure in money, time and labor repay those who devote attention to the exhibition of stock and implements? Some may be disposed to answer on general grounds and say, "You may depend on that, or the Scot, who looks at both sides of a sixpence before parting with it, would not spend the time, money and labor on the shows." A more conclusive answer is found in the unquestioned supremacy of British stock for breeding purposes. Unless these shows have contributed to bring about that supremacy, it is hard to say how it has been brought about. Edinburgh Show was noted for its light horses. In all departments a high-class lot were presented. The Clydesdale championships went, as they have so often done in the past few years, to the produce of Baron's Pride 9122. For the female championship his daughters

Free-martins Breeding.

It is often held that when a cow gives birth to twins, either one or both are so deficient in vital power as to be of little value for breeding purposes, or even for the dairy. A case recently was brought into prominence in the western district which controverts this suggestion. Mr. J. W. Anderson, of Tower Hill Park, owns a thoroughbred Ayrshire cow, Rosette, bred by Mr. George Rolfe. On April 16th, 1898, she gave birth to twins (male and female). The female had her first calf in August, 1900, and the bull was placed at one of Mr. Anderson's dairy farms, to serve a herd this season, and twelve of the cows had twins. There is no history of special fecundity in Rosette's family, and it will be very interesting to watch the career of those twin calves in future.—Journal, Department of Agriculture, Victoria, Australia.

Produce of One Cow.

An interesting illustration of the progress and profit a farmer of moderate means may make in a comparatively few years from the purchase of a pure-bred cow in building up a valuable herd which will pay its way and leave its owner richer than it found him, is seen in the report, elsewhere in this issue, of the dispersion sale of the Shorthorn herd of Mr. Walter Lynch, of Westbourne, Manitoba. Mr. Lynch started thirty years ago with one pure-bred cow of miscellaneous lineage, having a good sound pedigree, but of no fashionable family, and by the use of bulls of good type, for which no fancy prices were paid, he finds himself on retiring from farming, after having sold many thousands of dollars' worth of cattle in the meantime descended from that cow, the owner of a herd of 60 head, which sells at auction for the handsome total of \$10,515, every animal in the disposal (except the stock bull, which brought \$370) having been bred by himself and descended from his original purchase of a modest little cow. It would be interesting to know just what the grand total of sales from the progeny and descendants of that one cow has amounted to, but no one, we venture to say, will doubt that she has proved a profitable investment.

We have heard the question recently asked, "What number of females may one reasonably hope to raise in ten years from one cow and her progeny?"

Figuring it out on the basis of the cow and all her female descendants producing their first calves at two years old, and breeding regularly a calf each year, and allowing for the average proportion of bull calves, it will be found practicable, all the females being retained, to have a herd of about 70 head at the end of the ten-year term without making any allowance for the possible contingency of the birth of twins or triplets. This computation should surely afford encouragement to an increasing number of farmers embarking in the breeding of pure-bred stock, since good, useful registered animals can yet be bought at prices which need not deter an average farmer from venturing into this field of pure-bred stock-raising, if he has a fancy for it.

Why Herefords are so Popular in the States.

For years the Hereford has enjoyed quite a remarkable degree of popularity in America, where its special qualities as a grazer's beast have won for it a great reputation, more especially in the Western States where the great grazing ranches abound. In the course of an article explaining "Why we like the Hereford," a well-known American stock-breeder recently gave as the reason for their partiality for the breed the special adaptability of the Whitefaces for putting on flesh on the grass, and their equally well-known capacity for coming to "maturity" at a very early age. "We like Herefords," said the authority in question, "for their great grazing and feeding qualities and for their uniformity in appearance. Shorthorns, Aberdeen-Angus and other bodies will always have their advocates, but we find that no other breed can be got ready for the market at so little expense and at as early an age as the Hereford."—Farmer's Gazette.



GLADSTONE'S CHOICE - 40280-.

First-prize yearling and sweepstakes Alberta-bred bull at Calgary Spring Fair, 1901.
BRED BY MEAD BROS., PINCHER CREEK, ALBERTA.

had the battle to themselves, and victory went to Mr. Alex. Guild's four-year-old black mare, Topsy Pride, a first-class sort, with plenty of weight, substance and quality. The male championship went to Messrs. A. & W. Montgomery's black yearling colt, Baron Stirling, an animal with the right kind of feet and legs. Amongst the Hackneys some fine home-bred stock was exhibited by Mr. Henry Liddell-Grainger, Ayton, and Mr. Wm. Scott, Thornhome, Carlisle. Hunters were a good lot and did well for their owners.

In the first week of June there was quite a plethora of shows. One of the most interesting was held at Paisley, where the Renfrewshire Agricultural Society celebrated its centenary. Mr. W. S. Park, Hutton, Bishopton; Mr. William Taylor, Parkmains, Renfrew; Mr. David Riddell, Blackhall, Paisley, and Mr. John MacKay, Barrhead, showed first-rate Clydesdale stock, the first-named taking the male championship with a beautiful colt named Royal Chattan, and the last-named the female championship with a fine mare named Miss Taylor, got by Sir Everard. An interesting feature in the day's proceedings was a speech delivered at the luncheon by your countryman, Colonel Denison. The Colonel is great on the federation of Great Britain and her colonies for trade purposes. "And so say we all of us."
"SCOTLAND YET."

Compulsory Sheep Dipping.

The County Council of Kent, England, at its last meeting passed an almost unanimous resolution in favor of making sheep-dipping compulsory. The sheep industry in the Old Country has lately been greatly endangered by the spread of that infectious disease—sheep scab. Hence the necessity for stringent measures to control it.

HORSES

Feeding and Watering Horses in Hot Weather.

While it is advisable at all times to exercise care and regularity in feeding horses that are used for either slow or fast work, it is essentially so in very warm weather. The food should be of the best quality and given in limited quantities; the quantity of bulky food should be limited in all cases when the time is limited and the horses are expected to go to work or drive shortly after eating. The stomach of the horse being a comparatively small organ, the majority of animals will, if allowed, eat until it becomes distended, then if he be put to work on a hot day he perspires freely, digestion is partially arrested, and a case of indigestion is often the result. It is good practice to allow a horse to rest an hour or longer after eating in order that digestion may be pretty well advanced before exercise be given, but this is not practicable in the majority of cases, especially on the farm. The only method, therefore, of avoiding danger of sickness, or if not an attack of illness or at least discomfort to the animal for an hour or two, is to limit the quantity of food given. The morning's feed should be from four to six quarts of oats, according to the size of the animal and the nature of the work to be performed, and a small ration of hay. At noon, the same; in the evening it is good practice to give hay first, then the grain ration, and after that more hay. As he will have a long period of idleness now, it is safe to allow him all the bulky food that he will eat, but in no case should he be given more than that. It is not only wasteful, but injurious to the animal to keep food before him all the time. In many cases farm horses are turned out to grass at night, but it is seldom that they will refuse a reasonable ration of grain in the morning, even after coming off good pasture. Where this practice is followed it is wise to allow them to stand an hour in the stable after eating their allowance of grain in the evening. By this time the juices of the stomach have performed their functions and the ingesta is in a fit state to pass into the small intestines where digestion is completed; while if the animals be turned on good grass immediately after eating grain they will eat grass so greedily as to force the grain out of the stomach before the said juices have acted properly upon it, and while it is not probable this will cause any noticeable uneasiness or harm to the animal, digestion is not as complete as it should be and the horses will not receive as much benefit as otherwise. There is no doubt that crushed oats or other grain is more beneficial, pound for pound, than whole.

It is seldom, even in hot weather, that a horse is so warm that it is unsafe to feed him grain. In cases where he has been subjected to long-continued severe exercise, and has become excessively hot, it is wise to allow him to stand a few minutes and to give him a good rubbing down before feeding, but conditions like this seldom occur. When the time that he will be allowed to stand in the stable is limited to from one to one and one-half hours, as is the case at noon, even though the weather be hot and he is perspiring freely, it is better to give him his grain and allow him a few minutes after eating, than to allow him to cool off, then feed him and take him out to work as soon as he has finished eating. Horses that are kept in the stable should get a feed of bran at least twice weekly, in addition to their grain ration. This aids digestion and tends to keep the bowels in a normal condition; but those that go to grass during the nights do not require this, as the grass is all that is required. In hot weather horses probably suffer more from an injudicious system of feeding. It would be well if a horse could have access to clear cold water at will, but of course this is impracticable; still, the popular idea that it is unsafe to allow a horse to have water if he is perspiring freely, even in hot weather, is unfounded. Of course, as in feeding grain, there may be times when it would be hurtful to allow a horse all the cold water he would drink, such as cases where he had been subjected to severe exercise after long abstinence from water. In such cases he should be allowed a few mouthfuls and after a few minutes a little more. When a horse is excessively warm the introduction into the stomach of large quantities of cold water causes such a violent reaction as to excite gastritis, indigestion or founder. It seldom occurs that a horse used for either ordinary farm or road work is so warm that it is not safe to allow him all the water he will take, unless a long period has elapsed since he last had a drink. Theoretically, it is well to allow a horse water only before meals, but in practice we find it well to allow him to drink whenever he will take it. In my barn there is always an open supply of good clear water that the horses have to pass when being taken out to be harnessed or to reach their stalls after being unharnessed, and it is seldom, either in hot or cold weather, that a horse passes this without drinking. Even in the hottest weather I always allow a horse to take all he

wants, unless he has been subjected to unusually severe exercise, and I have never observed any evil results. There are some horses so predisposed to colic that it is unsafe to allow water shortly after a meal, and such should be treated accordingly, but as a rule it is wise to allow a horse to drink as often and as much as he will. The trouble is, especially with farm horses, it is not convenient to water between meals. The teamster will have a pail or jug of water in a shady place and will drink frequently, but the team has to wait until meal time. It would be better if the horses could be given at least one drink between meals in hot weather.

"WHIP."

FARM.

Favors the Cement Silo.

To the Editor "Farmer's Advocate":

In answer to your questions about cement silo, I may say that as I have only had one year's experience with mine, I cannot perhaps give you as satisfactory a reply as those having longer experience. I have noticed in different publications articles stating that the stave silo is as good, if not better, than the concrete cement. I do not wish to contradict our instructors, but will take a common-sense view of a few facts. All will agree that a silo that is perfectly air-tight and say thirty feet high will, if silage is tramped in properly, produce feed for winter use with a loss of only two or three per cent. of feeding value. The difficulty arises how to get it perfectly air-tight. The cement silo is the only reliable one in this regard. I have seen but two or three stave silos that were air-tight. There are a dozen such structures in this neighborhood, and most all the owners complain of some silage spoiling in openings between staves, mostly caused by knots. If hemlock will not contract or expand with moisture as the free lumber does, there is often in those silos six to ten per cent. of feeding value lost. I can say this of the stave silo I had and which I have done away with.

The principal fault farmers find with cement is the cost, but when we notice that every one per cent. of a 100 tons of ensilage means \$3.00, if farmers are not very particular in having their stave silos air-tight they will soon have lost value in feeding sufficient to pay a good interest on the money invested in a perfect silo, which is a cement concrete. One of the principal reasons that it is ahead of any other is that it saves insurance, as in case of fire you are sure of your feed.

In answer to the question about foundation, which is the principal part in building, I would say it should be deep enough in the ground to be out of reach of frost. Mine is three feet in the ground and the wall to the surface 18 ins. thick. In Mr. Hooper's account (April 15th issue) of his silo he states that his ensilage froze. I had the same trouble in this respect at first, which I prevented by putting on a temporary flat roof made of boards and hay, which when the snow covered it kept the cold air from going through. This hung by four wires. I found that as long as the roof was near the ensilage the heat from it kept the space above freezing point. It is my intention this season to make a roof on the plan of a milk-can cover, as my silo is perfectly round and plumb on the inside, and I see no trouble in arranging it so it could be raised six or eight feet above the top when filling and then lowered as the corn is used by means of four wires fastened to the cover running through four pulleys placed on four upright scantling which should have been built in the cement wall, then hung down the outside and weighted to balance with the cover. As the cover will be made of galvanized iron it will be durable, tight and light.

GEORGE LAITHWAITE.

Huron Co., Ont.

Feed the Soil.

Liebig, a noted German chemist, is the author of the following four axioms regarding the law of plant food. Farmers who expect their fields to keep on producing heavy crops from year to year without giving the land anything in return, would do well to give these laws some thought.

1. A soil can be termed fertile only when it contains all the materials requisite for the nutrition of plants, in the required quantity and in the proper form.

2. With every crop a portion of these ingredients is removed. A part of this portion is again added from the inexhaustible store of the atmosphere; another part, however, is lost forever if not replaced by man.

3. The fertility of the soil remains unchanged, if all the ingredients of the crop are given back to the land. Such a restitution is effected by manure.

4. The manure (ordinarily) produced in the course of husbandry is not sufficient to maintain permanently the fertility of a farm; it lacks the constituents which are annually exported in the shape of grain, hay, milk and live stock.

Good Plowing and Good Judgment.

To the Editor "Farmer's Advocate":

Sir,—Being a constant reader of your valuable paper, I read with much interest the item in May 15th issue, on plowing, by J. M. I cannot agree with him on his manner of plowing and his idea concerning the plowing match. The old iron sod plows are fast being laid on the self, something like the old candle-moulds, for our great-grandchildren to have for a relic; and why shouldn't they be laid aside, to be replaced by something far better. I think it an absurd idea for any man to have, that the plows were better years ago than now. The plows of to-day certainly are a vast improvement on the old ones. When I plow the ground it is for the purpose of killing weeds and keeping down wild grass, and for the benefit of the crop that is to come after. A plow that sets up the furrow is not a whit better than one that turns over a sixteen-inch furrow as flat as you like, except the land be very heavy clay. In this advanced age it is proper crop rotation and under-draining that makes the land easy to work, and not the comb left on the furrow by a narrow plow, and perhaps with cut on. I emphatically state this because experience has taught me. Last fall the township match was held on my farm, in a clay loam. This spring twice as much grass grew up between the furrows where the land was plowed with sod plows as did where it was plowed with a common plow; and now when the grain is up you can pick out every ridge plowed with a sod plow, and particularly the ones where a high cut was used. Your correspondent states that he sees plowing that he would not have if it were done for nothing and the plowman board himself. If he were to come along next fall and offer me \$20 to have the same number of acres plowed again with sod plows, I certainly would refuse. The best plow a man can have is a big, wide plow with a wide share to cut all weeds and thistles, also a skimmer to completely cover everything out of sight. Where there is so much skim plowing done after harvest, rendering the soil loose and friable, I'd like to know the man that could set up a furrow with a comb on for the frost to work on. We have all kinds of soil in our country, and I never saw a harrow bounce off it in all my life, though I have seen it rattle over a very lumpy field plowed with a very narrow plow, set up to perfection with a comb pleasing to behold, but the field was plowed in the spring while it was wet. The best improved pulverizer ever made would not work such land to a fine tilth. That I call poor judgment in handling a wet field. If a man have sod to plow in the spring he should do it when the land is firm and rather dry, and if he do it with a wide plow with a skimmer on, about half the harrowing will do that will be required if any other kind of plow is used. If the land used to produce heavier crops years ago than now, it is not so in the counties of Waterloo and Perth, nor was it because better plows were used by better plowmen, but because the land was new and fertile. We cannot grow spring wheat now, nor could we, I care not what kind of plow we used, but we can grow as heavy crops of spring grain such as oats, peas and barley; also corn, clover, and fall wheat. Many a farmer grows twenty tons of corn to the acre, and the same men never use anything but a wide plow with a skimmer on, but they under-drain, save and apply manure, and plow the land when it is dry; in fact, they use good judgment at every turn, which is far ahead of a plow that sets up a furrow with a high comb.

Since the vast western country has been opened up, with its still more vast resources, many of our young men are flocking to that country, rendering hired help scarce and expensive here, and men are simply compelled to use economy and good judgment at every turn. For miles around here one may see one man driving three horses on a double-furrowed plow, doing his plowing without hired help, and I am safe in saying that he does not leave much of a comb either, and where these plows are being used the land works as easy in spring as where any other kind of plow is used, but owing to heavy draft the twin plow in time will give place to a wide, single-furrow sulky plow or twin sulky where four horses may be used.

I also read the endorsement in June 2nd issue, by an old Middlesex farmer. Well, just let the old farmers have their say. Times will change and advance in spite of old men or young men or any kind of men that wish to remain away back in the rut, striving to farm in the old style. What we want on the farm of to-day is action and good judgment, quick work done in the proper season, and no more killing time with a narrow plow turning an acre a day where two may be turned with equally as much profit and less hard labor.

In conclusion, I would say that some men are gifted with a talent for plowing, the same as for any profession; others, again, would never make good plowmen. When a man puts his hands to the plow, no matter what kind of a plow it may be, he should also put his mind to it and take pains to do good work.

E. G.

Waterloo County, Ont.

Round Wooden Silos with Elm Hoops.

By the inquiry of your Quebec correspondent, we see that there are still thoughts of constructing silos of timber, and it will be our aim in the following article to give some practical information which will show the reader how this style of silo can be constructed and also supply the necessary information to enable any practical mechanic to construct the same.

This style of silo has now been in use for a number of years, and if any of your readers were taking a trip through certain parts of Huron County they might count these silos by the dozen for one they would see built of cement.

For the construction of hoops, lay down a platform of plank sufficiently large to enable you to strike out a circle of the same size as the proposed silo. If you have a space of sufficient size on barn or bay floor it can be utilized for this purpose. Now cut a sufficient number of brackets (a b c) out of two-inch stuff so as to have



one for every 16 inches of space on circumference of circle, the distance from a to b being 10 inches and that from a to c being 4 inches, and the angle at a being a right angle. Space your circle at 16 inches or thereabouts, and draw lines through circumference towards center. Nail a bracket on inside of circle at each point where it is cut by spacing lines, having angle a even with circumference, and angle at b pointing towards center. Now take elm boards 1/2 x 4 inches, which have been provided for hoops and bend around outside of brackets. Always break joints where the boards butt so as to make hoops as strong as possible. Six ply of the 1/2-inch will thus give you a hoop of a strength equal to a cross-section of 2 1/2 x 4 inches of elm, which will be of sufficient strength to resist the lateral pressure at the bottom of a 35-foot silo, if there is a hoop placed every three feet in height. As each ply of hoop material is added, it must be nailed to that already on the form sufficiently to hold it in place. For this purpose it is well to have a supply of nails of varying lengths and use those corresponding to the thickness of hoop, so as not to have too much to turn over for clinch. When all of the courses are on to form the complete hoop, nail thoroughly, with 2 1/2-inch nails, first from outside of hoop toward center and then in the opposite direction. If a helper will hold a sledge on the opposite side of hoop as this nailing is being done it will greatly aid the work. Nail the ends of boards thoroughly in outside course. Continue to build hoops until you have one for every 3 feet of perpendicular height of silo. The thickness of hoops can be reduced towards top of silo, or if all the hoops are wanted the same thickness, a narrower board could be used in top hoops, as the lateral pressure is not nearly so great towards the top of silo. Another way of economizing material and distributing the strength equally is to increase the spacing between hoops as the top of silo is approached. Now, having a sufficient number of hoops completed, we can proceed to get frame of silo in position if the foundation has been prepared.

In case the foundation has not been prepared, it will be well to devote a short space to it before proceeding further. Foundations vary according to circumstances and conditions surrounding location of silo. Sometimes these silos are placed directly on the ground and sometimes a foundation of masonry is put down for them to rest upon. If placed upon the ground, the soil should be levelled and tamped evenly to give a firm, even bearing, and on the bottom of the first hoop a ring of plank 12 inches wide should be nailed so as to give a sufficiently large surface for the weight of the structure to rest upon. In many cases it seems to be advantageous to excavate a few feet, thus placing floor of silo below the surface of the ground. In such cases the usual practice is to build the portion under ground of cement concrete or stone wall, continuing it up above level of ground, thus giving a foundation for the structure to rest upon which is solid and which keeps it from contact with the earth. If a foundation be put in, the inside of it should be flush with the inside of wooden portion of silo, which will be 4 inches less in diameter than inside of hoops. Inside of wall should be smoothly plastered with cement. The extra thickness of foundation wall will project outside of wooden walls. When building foundation walls, from 6 to 8 3/4-inch round iron bolts 3 feet long should be built in the wall, with the nut ends up and in such position that they will pass through the first hoop and be the means of holding it securely to the foundation. There should be large washers on the head ends so as to keep bolts from drawing up through the wall.

The foundation being ready, place the first hoop in position, being careful that it is level. If on a stone wall, screw the nuts down reasonably tight, which will hold hoop firmly in its bed

of mortar. If placed on ground, the soil can be banked up and tamped around the outer edge of hoop, which will hold it firm for nailing on sheeting. Now place two hoops on top of foundation hoop. Take four narrow boards, 6 feet 2 inches long, and nail perpendicularly on outside of foundation hoop, having ends of boards and bottom edge of hoop flush, and having a space of 90° between each board. Now raise the top hoop until its top edge comes flush with top ends of boards; nail through boards into hoop. One nail in each board should be sufficient. Raise the other hoop to its proper height and nail through boards into hoop as before. Now plumb hoops, nail more securely and brace firmly in position. Having everything securely fastened, place two more hoops on top of those already in position. Select four narrow boards, 12 feet long, and mark spacing for hoops on them. Nail them on hoops already in position, placing them midway between the boards already on. Now raise hoops and nail as before. Continue this process until all the hoops are in position, when you have the framework of silo ready for the sheeting, which is nailed on the inside of hoops and put on as follows:

Strike plumb lines on inside of hoops on side of silo where door is wanted, having lines 15 1/2 inches apart, which is a convenient width for doors. Now select some nice straight-edged boards, free from curls and knots, and level one edge of them at an angle of 45°. Take one of the boards thus prepared and commence sheeting the silo, nailing the first board on left side of space lined off for door, having bevelled edge next door space and being particular to keep edge along plumb line, and keeping the narrow surface of board toward center of silo. Continue bevelled board full height of silo. Proceed with

ways fit tightly before coming in contact with hoops. Nail boards firmly to battens, cover with paper, then add an 8-inch board on top of the 12-inch and a 12-inch on top of the 6-inch and nail securely. This breaks the joints in lumber, a point which should always be kept in mind when sheeting silo. The second course of boards for doors should be so placed as to leave one inch of the one end of first boards exposed while the other ends are overlapped to the same extent, thus forming a rabbet on each end of door and providing for a good tight joint when doors are in position. Make a door for each space between hoops. As silo is being filled, place first door in position, having the end towards top, on which the outside course of boards projects an inch. As filling proceeds, place other doors in position. The weight of silage will wedge them into the jumbs, thus securing a perfect joint, and when the silage is removed the door is easily removed and there is no need of lifting silage any great height in order to get it out of silo.

Silos as above are often built of rough lumber as it comes from the saw, but the writer would recommend having all material surfaced on one side, thus bringing all material to an even or standard thickness and securing a more satisfactory job. Then if the two sawed surfaces of sheeting are placed together they will hold the paper in good shape and will give a dressed surface on outside for paint, and also a smooth, planed surface inside which will offer the least possible resistance to the silage when it is setting. Some raise serious objections to wooden silos on account of their liability to be blown over. Concrete, it seems, can stand the blast unaided. Brick smokestacks usually stand without being guyed, while it is found necessary to guy steel and iron stacks, yet the latter are more numerous than the former. Thus it is with concrete silos and wooden ones, and I consider that where a wooden silo is not securely anchored to the foundation, that its safety will be ensured by being securely guyed somewhat similar to the metallic smokestack. Even after this is done, I am of the opinion that they will in a great many cases be found more satisfactory and economical than the more costly cement-concrete silo. Roofing the silo is neglected by some, as they only place a movable covering of boards on it after filling to keep out snow during winter. A permanent watertight roof is much more satisfactory, and when this roof is so arranged as to be easily raised from 6 to 8 feet at time of filling, it is a great convenience and



SHIRE STALLION, BLAIDON CONQUEROR 15989.

First at the Shire Horse Society's London Show, 1902.

THE PROPERTY OF MR. PETER STURS, BLAIDON, NEWNHAM, GLOUCESTERSHIRE.

the sheeting, working from right to left, thus utilizing the hoops for scaffolding, as the workmen can stand upon them and nail sheeting in place. When there is a sufficient width covered from bottom to top with first course of sheeting for a width of building paper, put on a width of the same and cover with second course of sheeting, being careful to leave at least 3 inches of left-hand edge of paper exposed on which to lap the next sheet. When this is done, continue first sheeting for another width of paper, add paper, then last course of sheeting, and thus proceed until plumb line on right-hand side of door space is reached. Finish the sheeting at this line, using boards with bevelled edge same as on other side of door. Now, we have silo walls completed, with a door space 15 1/2 inches extending from bottom to top. For doors for this space, select enough boards of each of the following widths, viz., 6, 8 and 12 inches, to reach from bottom to top of silo. Now level one edge of boards at an angle of 45°, same as sheeting next door jumbs. Now cut twice the number of door battens that there are spaces between silo hoops. Cut them 15 1/2 inches long, out of 2x3-inch stuff. Cut boards for doors the proper length so that each door will fill space from center of silo hoop to center of next highest hoop. Place pair of door battens on trusses, having trusses so placed that the distance between them is 14 inches less than length of door. Now take one of the 6-inch boards and one of the 12-inch boards and place them on battens, having the narrow surface next battens and the extreme width next battens 16 inches. This will give a door 1/4 inch wider than jumbs, and it will al-

adds considerably to the capacity of silo, but as this article has already reached considerable length, I will not describe the construction of such a roof at present.

The paper to be used in silo should be a sized paper which is not easily influenced by changes of weather. Some of the common, unsized building papers will shrink worse than lumber which has been soaked with water. From my experience I would prefer using the black tarred building paper, and I would consider it true economy to place two thicknesses of paper between sheeting instead of one.

Round wooden silos with elm hoops are no experiment, but a success in actual practice, and in case any of your readers should wish to correspond with practical men who have them in use, I might state that Messrs. John Gallespie, James Martin and Wm. Homuth, of Whitechurch, Ont., are among the number who can speak with authority on this particular style of silo.

Brant, Ont.

WM. RENDALL.

Rhubarb a Heavy Feeder.

Rhubarb is one of those garden crops which it is very difficult to overdo in the matter of manure. In order to obtain the rank growth and softness of flesh which is so much esteemed in the cultivation of this crop, rhubarb must be very heavily manured and grown on a deep soil, through which it can send its roots over a wide area in search of the materials of which it is so greedy a consumer. It revels in deep, rich, well-drained clays, over which a stream of liquid manure can be turned occasionally for irrigation purposes.

Test Paris Green for Purity.

From year to year complaints are heard that much of the Paris green kept for sale by local dealers is of low grade, and, consequently, in a high degree ineffective as an insecticide. To what extent this is true it would be difficult to say. All goods branded as pure are required to be such by law. That, however, cannot be always taken as a guarantee of excellence.

The adulteration of Paris green is easily accomplished by the manufacturer. In the pure state it is made from copper acetate and arsenic trioxide; the percentage of each in the mixture varying considerably. According to chemical analyses which have been officially conducted with Paris green by the United States authorities, such adulterants as chalk, flour, gypsum and white arsenic have been found, the latter in much the largest quantities. It is a poisonous white powder, costing about five cents per pound, and when applied to plants in a pure state is quite injurious to foliage.

Any farmer or gardener can easily test the purity of Paris green. Two methods are within easy reach—i. e., the ammonia test and the glass test. With the former, a small amount of the powder is placed in a glass, into which is poured a quantity of ammonia. Since Paris green is soluble in this substance, and its impurities, save white arsenic, are not, a valuable test can be made. Where no adulteration has been used, the liquid will present a clear blue color. The glass test is even more simple and accurate. The course pursued is to place a small quantity of the substance to be examined on a piece of glass; hold in a slanting position and jar the lower side, causing the powdery mass to gently move down the incline. If the sample be pure, a bright green track will be left behind, but if impure, a pale green streak will be seen. This method will require a little practice before skill can be attained, but it furnishes a useful means of determining the purity of a substance that is so much used as Paris green.

Personal Experience with Hedge Fence.

To the Editor "Farmer's Advocate":

Sir,—My own experience has been limited to about 18 rods of this hedge, and I find that amount quite sufficient. It has made a fairly nice hedge, but it requires a good deal of trimming to keep it in order. From what I know I would caution farmers against investing in much of this fence, as some of the claims of the agents are not borne out by facts. I have seen some of it destroyed by mice, whereas they claim that mice will not touch it. I have found that it takes all the fertility out of the ground for quite a distance on each side, so it is an expensive fence in that way. On the whole, I don't think it is suitable for a farm fence more than a small amount about the house, where it will be kept in order. I am satisfied the average farmer will not attend to it properly, and if it is allowed to grow wild there is nothing more unsightly. For my own part, I would not have any more of it on my farm if they would put it in for nothing. Hoping this may prevent some people from getting imposed on, I remain,

Yours very truly,

Wentworth Co., Ont. R. S. STEVENSON.

GARDEN AND ORCHARD.

Rustic Ornaments.

A handsome, practical rustic ornament can be made out of three wide boards, planed and made smooth, painted some good substantial color; cherry color is a very fashionable color and will stand storm and rain and sun and will not fade or grow weather-beaten for a number of years. Take a couple of half-barrels and paint the same color as the boards. Construct them into a rustic table; use the two half-barrels for legs. Choose some sunny little nook in front of the residence. Have on hand boxes as near the same size as you can get them, enough to fill the table. Paint with some delicate shade, any tint or shade that suits your fancy (straw color is very pretty). Fill with good fertile soil. Pot with any outdoor flowers that pleases your imagination or fancy, as long as they do not grow too tall and thrifty; dwarf roses are very nice (variegated selections are my choice). Take a couple of half-barrels and paint them white; fill with good fertile soil. Pot with some climbing, drooping vine. The climbing maple is just lovely for a yard. It will grow and run downwards and droop and twine and wind around the barrels and the barrels will become one mantle of green with little white spots peeping through. When the flowers in the boxes become in full bloom and the half-barrels draped and covered with a rich green color, you have a picturesque bower of beauty that will feast your eyes and enhance and beautify the carpet of green that is spread over your yard. The shade trees and ornamental shrubbery almost express their exquisite delight in words.

Norfolk Co., Ont.

P. E. B.

DAIRY.

Jersey Breeders Meet.

On June 20th, by the kind invitation of Messrs. B. H. Bull & Son, Brampton, Ont., the semi-annual meeting of the Canadian Jersey Cattle Club was held at Hawthorne Lodge, the beautiful home of the Messrs. Bull and of the far-famed Brampton Jersey herd, whose prizewinning record at principal Canadian fairs in the last decade has been unsurpassed, if equalled, by any other. Between forty and fifty representative breeders of Jerseys from many sections of Ontario responded to the invitation to be present, and spent the day pleasantly and profitably in social conference, enjoying the hearty hospitality of Mr. Bull and his interesting family, and in looking over the famous herd of some seventy-five head, revelling in the luxuriant clover and blue-grass pastures, pictures of bovine quality and contentment, among which were noticed many familiar forms and faces which in former and recent years have carried bright ribbons from the show-ring in many a keenly-contested field. A striking characteristic of the herd, it was remarked, is its uniformity of type and the indications and evidences of usefulness in the dairy on the part of the females which have come into work at the pail, while the younger members, mainly the progeny of the imported Monarch, the Golden Lad bull at the head of the herd, himself a champion at Canada's greatest fair, and his dam twice the winner of this distinction at the same, are distinctly noticeable on account of their uniformity of excellence in type and quality. The late importation from the Island of Jersey of four handsome young females and a son of the \$7,500 bull, Flying Fox, selected by that fine judge, Mr. F. S. Peer, were greatly admired, the heifers showing remarkable development of udder, correct placing of teats, fine dairy conformation and rich quality. After partaking of a sumptuous repast provided by Mr. Bull and his family, a meeting, presided over by ex-Mayor R. J. Fleming, of Toronto, President of the Club, was held on the lawn, at which short addresses were delivered by a number of the guests, referring to matters of interest to Jersey breeders, prominent among whom was Mr. Hugh Clark, now living in retirement at Brampton, the pioneer importer of Jerseys to the Province of Ontario, who related reminiscences of the obloquy to which he was subjected by his neighbors when, in 1871, he made his first importation of the nucleus of a herd of the butter breed, the influence of which ultimately compelled respect and admiration, and made Peel County noted as the banner district of the Province in the production of high-class butter and the winning of principal prizes at the Toronto Industrial Exhibition for many years. Congratulations were freely showered upon the Messrs. Bull on the excellence of their herd, on the enterprise manifested by them in maintaining the reputation and character of the breed, and on the evidences of prosperity seen in the bountiful crops of the farm, in the complete outfit of farm buildings, the stables being models of convenience, healthfulness and comfort, light, bright, and well ventilated. Under the favor of a kind Providence and the good management of the owners, the herd of Jerseys has played a prominent part in making a farm once close kin to a wilderness to blossom as the rose.

Butter Test at Bath and West of England Show.

In the competition at the above show, held at Plymouth last month, the Jerseys scored a victory in the one-day butter test. Dr. H. Watney's nine-year-old Jersey cow, Marryatt's Lass, yielding, 134 days after calving, 38 lbs. milk and 2 lbs. 3½ ozs. butter, and winning the first prize for cows of any age, breed or cross under 900 lbs. live weight. Dr. Watney's six-year-old Jersey cow, Red Maple, won the first award for cows of any breed or cross, 900 lbs. weight and over, yielding, when 160 days in milk, 41 lbs. 8 ozs. milk and 2 lbs. 3¼ ozs. butter in the 24 hours. The six-year-old Guernsey cow, Hayes' Rosie, entered by Mr. G. A. Hambro, 37 days after calving, gave 53 lbs. milk and yielded 2 lbs. 10¼ ozs. butter. The Lincoln Red cow, Ruby Spot, won first prize in the milking trial for cows over 900 lbs., giving, at 46 days after calving, 67 lbs. 6 ozs. milk. The Jersey cow, Red Maple, was third in this competition.

Russia Our Competitor.

Reports from London, England, state that Russian butter continues to arrive in large quantities. The imports into the United Kingdom in one week during May were 631 tons, as compared with 284 tons for corresponding week last year. When figured in lots of sixty lbs. each, it shows an increase of nearly 13,000 tubs. Last year the increase in Russian butter was over 8,000 tons; this year it will be materially greater. Russia is already second on the list of butter-exporting countries to England.

APIARY.

Bees in Manitoba.

ABOUT SWARMING.

While beekeepers in other places exercise all their ingenuity to prevent swarming, in this province, where bees are scarce and where every swarm successfully hived and carried through the winter is worth at least twelve dollars, the question for some years yet will be not how to prevent swarming, but how to accomplish it with the least trouble and loss. In the hands of one new to the work, artificial swarming is, of course, attended with some risk. It is difficult to lay down rules to meet every point which may crop up, and so judgment must be used in following even the very best and most minute directions. Still, a little experience will, I believe, convince most people that there is not only less trouble, but less risk also, in swarming artificially than letting nature take its course in that respect.

There are several ways of making swarms. One given in the "A B C" is this: Take from the hive to be swarmed one comb of hatching brood and place it in an empty hive. Place this new hive on the old stand, removing the old hive to a position some distance away. This must be done on a day when the bees are busy in the fields so that the returning workers will enter the new hive and make up the new swarm. This swarm will, of course, be queenless. There are several ways to remedy this, of which the best and safest, for a beginner at least, would be to make the swarm only after he finds queen cells started in the hive to be divided, when, by simply seeing that the comb placed in the new hive has at least one good queen cell on it, he shall have done all that is necessary in this respect.

By way of helping this swarm along till its queen begins to lay, a comb containing eggs should be given it occasionally. When first made, the comb of brood taken from the parent hive should be replaced by an empty one. In a day or two this comb will be filled with eggs, when it should be given to the swarm, and another empty comb given to the old queen to fill. The young bees hatching in the new colony will thus have work to do nursing these eggs to maturity, which is all they can do for some time, while the old queen will be kept busy on the combs given to her from time to time, which will act as a check on any desire to swarm naturally that she and her subjects may have.

But this desire is often impossible to check, even by giving unlimited room, especially if not taken very early, and then too much swarming may result. This is one place where an ounce of prevention is worth more cure than the scales can weigh. A precaution which should always be taken is to remove all queen cells from the old hive, going carefully and thoroughly over every comb.

But a method which seems to meet this phase of the case better than the foregoing is to place the old queen in the new hive with the comb of brood, placing the new hive as before on the old stand. This is what would happen if the bees swarmed naturally. Give the queen, besides the comb of brood, one empty comb on which to begin laying, and one frame with a strip of foundation. The field bees will, as in the former case, return to the old stand, and this will so weaken the old hive that there is almost no danger of after-swarm from it when the young queens hatch out. As a further prevention, however, two combs of brood may be given to the new colony instead of one; or one may be given to some weak colony to help it along. The old hive can be helped with combs of eggs laid by the old queen, as the new hive is in the former method.

It is, of course, always better when a colony is building up to furnish it with combs or full sheets of foundation rather than with starters only. But it should be remembered that a natural swarm, or one made as last described, will build from three to five frames of beautiful worker comb before ever thinking of drone comb at all, so if combs and foundations are liable to run short this is the time to allow the bees to build and furnish their own wax. The merest ribbon of foundation is enough for a starter. J. J. GUNN.

Red River Valley.

P. S.—The old rhyme about July swarms not being worth a fly does not apply in this part of the world. Many of our swarms come in the early part of July; and I have had some in August that wintered well (as did the parent hive also) and were money-makers the next season.—J. J. G.

The Influence of Feed on Milk Fat.

The report of experiments conducted at the Agricultural College, Wye, England, to determine the influence of feed on the content of fat in milk, has lately been issued. It tends to support the view previously held that the amount of butter-fat which a cow gives is not materially dependent upon the nature of her food, but is governed by other causes, such as the period of lactation and the inherent aptitude of each cow to give rich or poor milk.

The Royal Counties Show.

Second only in importance to the Royal Show itself is the Royal Counties Show, held this year at Reading, June 10th to 13th. The great feature of this Show is always the large entries of Hampshire and Southdown sheep. The former breed had an entry of no less than eighty-six pens, and the honor of winning the champion prize for the best entry in this section fell to Mr. James Flower, who, with one of the grandest and best pens of yearling ewes we have seen for years, won this, which is probably the highest honor any breeder can win in this breed this year. His second pen won second place in their class, which was a real good one. This same breeder also won first honors in the old-ram class, with a thoroughly typical and good-fleshed ram, his yearling rams being third, and fourth, whilst his ram and ewe lambs were very near the top. Lord Rothschild won in the yearling ram class, but this award was not in accordance with the general opinion. A much more popular award would have been Mr. C. A. Scott-Murray's un-noticed ram. Mr. Carey Coles was first in the ram lamb class, with a grand-backed lamb, whose fine development was much appreciated; and he came in second with yearling rams. Mr. T. F. Buxton's flock, which had not been out before, came as a surprise to many, and the pen of ram lambs that were first in their class and winners of the champion prize of this age were very much

class, and was to the fore in the other classes of the age. A very excellent two-shear ram won first for Mr. J. Colman, whose excellent pen of yearling ewes were omitted from the award list, an error which we are at loss to account for.

The Shropshires, whose breeders made their great display at the Shropshire Show, last week, were here represented by a small entry. Mr. P. A. Muntz won for both rams and ewes, the latter a grand pen of high merit; Mr. W. F. Inge being second in this class, his exhibits having very excellent type and good flesh. Mr. Mander was first, with a capital pen, a notable success for a fresh exhibitor, Mr. R. P. Cooper being second.

The Oxford Downs were very much in evidence, their entry being a large one and of fine merit, Mr. T. F. Hobbs leading in the ram class and being second for ram and ewe lambs. Mr. A. Brassey was first in the two latter classes and second in the former, whilst Mr. R. W. Hobbs was represented in each class by entries which were of notable quality and merit. Mr. G. Adams was also strongly represented in the lamb classes.

Messrs. W. R. Flower, S. Kidner and F. J. Merson divided the honors in the Dorset classes, one out of the latter breeder's pen, which won second honors, being taken by Mr. F. W. Harding, of Wisconsin, who was present taking notes.

The Suffolk breed was also for the first time present at this show, but they had only four pens on exhibition, and though they were of nice quality, we had hoped to see a larger representation.

numbering no fewer than 48, and thoroughly indicative of the high merit and quality of the herds which have sprung up in the south of England during the past eight or ten years.

The Jersey and Guernsey cattle made large entries of the very highest merit, the former breed having no less than 182 entries present and the latter 83.

The King's Coronation Postponed.

With joy and expectancy, millions of the subjects of King Edward VII. had assembled to participate in or witness the ceremonials connected with the imposing rite, the most majestic pageant of modern times, which was to seal his sovereignty over one-third of the earth's domain and one-fourth of the world's population. He had reigned but seventeen months, when, on almost the very eve of the coronation, which was to have taken place in the historic Westminster Abbey, on Thursday, June 26th, he is smitten down with disease and undergoes a surgical operation of the gravest character. His ailment, perityphlitis, is practically appendicitis, and would be diagnosed as such in this country. English surgeons, however, diagnose it as distinct from appendicitis, the difference being that appendicitis is an inflammation of the vermiform appendix itself, while perityphlitis is an inflammation of the cæcum, the large bowel to which the appendix is attached. The appendix is almost always involved in perityphlitis. Though



KING EDWARD VII.

ALEXANDRA, QUEEN CONSORT.

admired, as were also his ewe lambs that came second and his yearling rams which were third, fourth and fifth. The Earl of Carnarvon's flock was also well to the fore. His pen of ewe lambs went clean to the head of their class, a notable pen of finely-developed lambs; whilst the single ram lamb from this flock, fourth in that class, was very much thought of.

Eighty-three pens made up a grand collection of Southdowns, a section that did full credit to the breed in respect to its fine quality of fleece and flesh. Foremost amongst the successful flocks comes that of Mr. C. Adeane, he being first and second in the yearling-ram class, and second and fourth in single ram lambs, the leading yearling ram being the one to which went the champion prize for best exhibit in this section, and also the Society's gold medal as best Southdown ram or ram lamb. Col. McCalmont, C. B., M. P., was also a leading exhibitor, winning first for pen of three ram lambs and the same for ewe lambs, while he was third in the single ram lamb class and also in the yearling ram class; indeed, so good were the ram lambs that they secured the r. n. for all the champion prizes they were available for. Col. A. F. Walters, who has recently come out as a competitor for show-yard honors, won first for yearling ewes, a pen of symmetrical conformation, that were a bit loose under hand. He was also r. n. in the ram and ewe lamb classes. Lord Ellesmere's flock produced the winning lamb in the single ram lamb

Shorthorn cattle made one of the strongest entries we have seen for several years at this show. A large increase in the interest taken in these classes arose from the fact that the Royal herd at Windsor was represented by some excellent animals, the noted bull, Royal Duke, being amongst them. He was first in his class, but in competition for the champion prize, given by H. M. the King, he was put back behind Mr. J. Deane Willis' C. I. V., a bull whose strongest admirers admit was more than lucky to secure the precedence, for at his best C. I. V. is far too puggy in front, with little or no neck, and neither is he so well carried out on the loin and rump as the old bull. Mr. Willis was first for cows, with White Heather; Mr. Dudding for three-year-old heifers, with a grand one, Hawthorne Blossom 10th, with whom he won several awards last season. H. M. the King won in the two-year-old heifers, with Ruby, a grand typical Shorthorn; Mr. Willis being first in heifers calved in 1901, with Malmaison; the King's entry, Rosanna, two months older, being a close second.

Herefords were in good numbers, and here again the Royal herd from the Flemish Farm added to the merit of those competing, H. M. the King being first for old bulls, with Earlsfield, and second for heifers calved in 1901. The other leading winners were the Earl of Coventry, Messrs. A. E. Hughes and W. T. Barnely.

One of the features of the cattle section was the notable entry of Aberdeen-Angus cattle,

for some time indisposed, on Saturday, June 21st, his condition was considered so satisfactory that it was hoped, with care, he would be able to go through the ceremony, but on Monday evening a recrudescence (or recurrence of the disease after partial recovery) became apparent and a surgical operation was necessary on Tuesday. Through that he passed successfully, though, when his age and general condition are taken into consideration, the ultimate outcome was regarded with the gravest apprehension. The King is in his 61st year. The official medical announcement was signed Lister, Thomas Smith, Laking, Thomas Barlow, and Treves. Lister is Sir Joseph Lister, sergeant-surgeon-in-ordinary to King Edward, famous for the discovery of antiseptic treatment in surgery. Thomas Smith is Sir Thomas Smith, sergeant-surgeon to the King and late vice-president of the Royal College of Surgeons. Laking is Sir Francis Henry Laking, physician-in-ordinary and surgeon-apothecary to the King. Thomas Barlow is Sir Thomas Barlow, physician to His Majesty's household and professor of clinical medicine and physician to the University College hospital. Treves, who made the incision, is Sir Frederick Treves, sergeant-surgeon to the King, and was surgeon-extraordinary to the late Queen Victoria. Queen Alexandra has borne the strain of the week's tragic and distressing events with a spirit of fortitude heroic in its character. Official announcements were issued indefinitely postponing the coronation and all its accompanying functions.

POULTRY.

Poultry Breeds and Crooked Breasts.

In the "Farmer's Advocate" for May 15th, Mr. Graham gives the time-honored answer, that crooked breathbones in fowls are caused by roosting too early. Why do turkeys, which roost as soon as they can fly high enough, and which have prominent breasts, seldom have crooked breathbones? The mongrel chicken that looks out for itself and roosts as it chooses seldom is deformed. For the last three years I have kept my chicks in low houses, and did not let them roost until well grown, and I have had a plentiful supply of crooked breasts every year. Last year a lot of late-hatched chicks sat in the dust-box all winter and did not roost till near spring, and then on a three-inch perch, but nearly every one had a crooked breastbone. Previous to that we had let the chicks look out for themselves and roost as they chose, and crooked breasts were a rare occurrence. These crooked breasts are generally among my Barred Rocks; Brahmas and Houdans don't seem to suffer at all, and Wyandottes only slightly. The reason for this is, I think, that the breastbone of the Brahma, though prominent, is firm, while that of the Rock is softer and more easily injured, and though Rocks mature much earlier than Brahmas, yet their breasts do not get plump soon enough to protect them. On the other hand, the Wyandotte and Houdan, with smaller bones to begin with, are always plump if they get half a chance, so that the breastbone is well padded with meat, which protects it. I have had five breeds so far, but find that too many, so that I am going out of Brahmas and Rocks. If the Rocks fattened as easily as the Wyandotte, I should prefer them on account of their greater size, but after the first two months they seem to grow to bone. If they are to be sold as broilers they are all right, but if they are to be kept till they weigh 3½ to 4 pounds, it is quite a job to fatten them, while the White Wyandotte of that size takes on fat without trouble. Of course, my chicks have full range, and if penned up there might be a difference, but I think even then the Wyandottes would be fit to kill quite a bit sooner than the Rocks. Besides this, the Wyandotte pullet will lay a month sooner than the Rock. I like what I have seen of the Buff Orpington. It is as large as the Rock and seems to mature earlier. Crossed with White Wyandotte they make a better market fowl than any of the pure breeds. I had cross-bred pullets last October that outweighed the best Wyandotte cockerels, while the cockerels averaged a pound heavier than Rocks of the same age.

Grenville Co., Ont.

C. W. BEAVEN.

Plan of Poultry House.

The accompanying illustrations, Figs. I. and II., represent a poultry house for a small flock of hens, but the same arrangement can be extended both in width and length. We would suggest that the house be divided into three pens, each one-third larger than those shown in the cut. These would each accommodate 33 hens, which is as large a flock as should be together. Or it may be better still to extend the pen in length and divide it into four pens, each to contain twenty-five hens. The dimensions would then be, for the whole pen, 40 ft. long by about 12



Fig. I.

ft. wide, as the passage would be better 3 ft. wide.

In Fig. I., pens B and C are for breeding stock. These could be made into one pen for general stock if desired. Pens D and E are arranged for layers, in which five to six square feet should be allowed for each hen.

Fig. II., showing cross-section, shows nest-boxes one foot square. The diagram shows door opening from nest-boxes into walk, from which the eggs could be gathered from all the pens except B. The squares marked A in Fig. I. represent dust-baths in front of windows. The build-

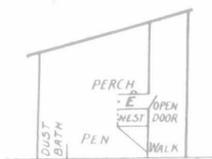


Fig. II.

ing should run east and west, so the fowls could get the sun. The floor should be double-boarded to prevent drafts. Yards can be extended south of each pen to any desired extent, and should be

not less than 50 to 75 ft., if that is all the liberty the fowls are to be allowed. The division fences could, with advantage, be planted with grapevines, and plum or other fruit trees should be planted in the yards.

A Remedy for Sick Hens.

To the Editor "Farmer's Advocate":

Sir,—In your issue of May 1st, "W. G." gives a partial description of hens dying of apoplexy. I have lost over one hundred fowls in the same manner and have tried several remedies, none of which were effective until I purchased a quantity of "Banner Poultry Tonic," which I saw advertised, after using which I have never lost a single fowl.

Oxford Co.

[Note.—If the above remedy is as good as represented, the proprietors should advertise it in the "Farmer's Advocate."—Editor.]

C. T. MIDGLEY.

QUESTIONS AND ANSWERS.

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

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

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

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

Veterinary.

FATAL HEMORRHAGE.

On June 4th I had a thirteen-months-old colt castrated by a veterinarian. The operation was performed about 2 p. m. At six I noticed that he was bleeding a stream about the size of a lead pencil; was almost constant. One side of the scrotum was considerably swollen. I plugged the wound with batting, but it only checked the blood for awhile. I then sent for the veterinarian. He arrived about midnight and cut the cord off above the clam with an ecraseur. The bleeding soon stopped, but commenced again about six next morning. I again sent for the veterinarian. At nine the colt fell down. The veterinarian arrived in a few minutes. He sewed it up and said he would not bleed any more. However, he bled a little and died next morning. I skinned him and he was as white as snow. The veterinarian cut him open and found about two pailfuls of blood in the abdominal cavity.

Norfolk Co., Ont.

C. W. C.

Ans.—The coats of the spermatic artery were diseased and weak. No person can have any reason to suspect this condition before operating. The clam applied to the cord prevented the escape of blood through the end of the vessel, but the coats of the vessel were not strong enough to resist the pressure of the blood within it, and they ruptured. The same took place after the second operation, in which the ecraseur was used. When the cavity was closed and the wound stitched up, the blood could not escape through the external opening, although it was escaping from the cord. The consequence was, when the cavity became full the blood was forced upwards through the opening through which the cord passes (called the inguinal canal) into the abdominal cavity; hence the amount of blood found there after death. Conditions of this nature are occasionally met with. Your veterinarian did all that could be done. Where there is such a delicate condition of the coats of the artery nothing can be done, as the vessel will rupture above the obstruction, whether that obstruction be a clean ligature, seared end or where the cord has been severed with an ecraseur or emasculator.

J. H. REED, V. S.

TROUBLE IN HORSES, CATTLE AND PIGS.

1. I have nineteen spring pigs. About weaning time their ears turned red. The skin is all turning that way. They have been running out since they were weaned. They root at each other and scratch against the fence, etc.

2. The sheath of a thirteen-year-old horse swells when he stands in the stable for a few days.

3. I turned a sow out when her litter was four weeks old. She became so crippled in an hour that I had to help her in. She has been down for two months.

4. Cow had her teat torn in to the milk duct. It all healed but an opening about the size of a lead pencil, through which milk escapes.

Cardwell Co., Ont.

J. A.

Ans.—1. The pigs have a skin disease. Isolate all affected. Purge them with 6 ozs. Epsom salts to each pig. Feed a little sulphur daily in their food and dress them twice daily with creolin, 1 part; water, 40 parts.

2. Give him a purgative of 8 drs. aloes and 2 drs. ginger. As soon as his bowels become normal, give 1 dr. iodide of potassium night and morning in damp food for three weeks; then stop for a week and repeat. When idle, reduce his grain ration.

3. Your sow has partial paralysis. Give her

a

a purgative of 8 ozs. raw linseed oil. If this does not purge, repeat in 22 hours. Follow with ½-dr. doses nux vomica three times daily. Feed her on easily-digested food, with a liberal supply of grass.

4. You cannot do anything for the cow until she becomes dry. Then cast and secure her. Scarify the edges of the opening until they bleed and then sew with carbolized catgut sutures. Dress daily with a two-per-cent. carbolic lotion until healed.

J. H. REED, V. S.

ABORTION IN MARE.

My mare, aged 14, lost her foal last September, about three months after conception. I know of no cause for the accident. Is there a form of infectious abortion affecting mares the same as cows? Would it be safe to breed her again?

Norfolk Co., Ont.

H. B.

Ans.—Infectious abortion seldom occurs among mares. I have never known of an outbreak in this country. Yours was doubtless accidental abortion, which may have been caused by slipping, falling, being kicked, jammed in doorway, or from a foul odor, nervous excitement, etc., etc., any of which may have occurred without your knowledge. Mares may abort at any period of pregnancy without appreciable cause. They very readily acquire the habit; that is, a mare that aborts once is liable to do so again at about the same period without cause. I would advise you to breed your mare again. At about three months, the period of former abortion, watch her closely, feed lightly on easily-digested food, avoid heavy work and excitement. If she show any nervous excitement or present any symptoms of approaching abortion, give her 2 ozs. laudanum in a half pint of water, put her in a comfortable box stall and keep as quiet as possible. If necessary, repeat the laudanum in 1½ hours, and again, if necessary. It is probable you will not need to treat her, but if so, the treatment will in all probability be successful, and if you succeed in getting her past this critical period she will carry her foal to the full period.

J. H. REED, V. S.

MANGE IN HORSES.

My horses' tails and manes are falling out badly. They seem to be very scruffy, and the ends of the fallen hairs seem to turn white. The horses are fed on oats and bran and good timothy hay. What is the cause and cure, and what will help to form a new growth of hair?

Kent Co., Ont.

A READER.

Ans.—Your animals, evidently, are infected with a contagious disease known as mange. It is caused by a minute parasite that lives under the epidermal layer. The first symptoms are usually seen in the falling of hair from the tail and mane. If a cure is to be effected great cleanliness must be observed. Wash the animals well with castile soap and warm water, to each quart of which should be added a tablespoonful of concentrated lye or washing soda. Rub well in with a stiff brush. Following the first wash sulphur one part to lard eight parts should be applied. This will stimulate a fresh growth of hair. The walls, ceilings and stalls should be well sprayed with a lime solution to which has been added a quantity of crude carbolic. Harness, too, should be regularly washed and cleaned.

BRAIN TROUBLE IN CALVES.

I have lost two calves which showed the following symptoms: First look around at their flanks, and shiver; foam at the mouth, and bellow. They are fevered, and take no notice of anything. They constantly turn around in a circle, do not lie down, and die in about an hour after the first symptoms.

G. S.

Wellington Co., Ont.

Ans.—Your calves died from pressure upon the brain. It would require a post-mortem to determine what caused the compression. It may have been tumors, and may have been congestion of the vessels from digestive derangement. It is not probable that treatment would be successful. Treatment should consist in bleeding, purging, and applying pounded ice to the head. If tumors be present, treatment would be useless. I would advise you to purge the calves that are left with raw linseed oil, 4 to 12 ozs., according to size of calf, and change the pastures, as it is possible there may be some indigestible weed in the pasture that causes the trouble.

J. H. REED, V. S.

ECZEMA.

About four weeks ago my mare's hind quarters, hips and fetlocks became covered with boils. The rest of the body is becoming affected. There is no discharge, but they are sore on pressure.

Stormont Co., Ont.

D. L. McM.

Ans.—Your mare has eczema, due to an alteration in the blood. Give her a purgative of 8 drs. aloes and 1 dr. ginger. Feed bran only for twelve hours before giving the physic and until purgation commences. After the bowels regain their normal condition give 2 ozs. Fowler's Solution of Arsenic twice daily. Dress the affected parts twice daily with corrosive sublimate, 15 grs. to a quart of water.

J. H. REED, V. S.

TONGUE LOLLER.

My horse constantly sticks his tongue out?
Queen's Co., N. B. W. B. F.
Ans.—Tongue-rolling is a habit, and the only way to prevent it is to use a bit especially constructed for the purpose. A bit of this kind can be procured at any well-equipped harness shop.
J. H. REED, V. S.

Miscellaneous.

ONION MAGGOTS — POTATO SCAB — ASPARAGUS CULTURE — BREEDING SOW — SWEENEY.

1. Is there any remedy to destroy small white grubs from eating onions sown from the black seed? 2. Will a good uniform-sized seed potato, because it is scabby, produce potatoes of the same kind? 3. What is the proper way to cultivate and grow asparagus? 4. How long after farrowing is a sow in proper condition for male service? Some say in three days; is that too soon? 5. Is there a cure for sweeny in horse? If so, how can it be done? W. B. TABER.
Leeds Co., Ont.

Ans.—1. The onion maggot may be kept in check by pulling up all affected plants and destroying insects found thereon. Where onions are grown in small lots, sand soaked with kerosene, in the proportion of one pail of the former to one cup of the latter, is very useful if placed along the rows near the base of the plants. Do not sow onions on the same plot two years in succession.

2. Potato scab is a fungous disease, and where the seed is not treated to destroy it, the infection is almost certain to be transmitted to the next crop.

3. Asparagus should be planted in well-drained soil. It can be grown from the seed, but requires about three years before a crop can be harvested. In a farm garden the best plan is to plant the roots in rows three feet apart each way and about six inches deep, covering gradually as the young shoots come up. Before any plants are put down, the soil should be well manured and thoroughly cultivated. For the first year after planting, nearly all the cultivation may be done with a horse and scuffler. Some hand-hoeing may be necessary. In autumn the tops should be about three feet high; and when dead should be cut off and the land plowed to a depth of three inches and well cultivated, as though no crop were in the ground. In spring the land should be again well worked to warm it up quickly. In after years the treatment should be much the same as that outlined, except that after the season of cutting is over in June, the land should have a shallow plowing, followed by the harrow. If manure is to be applied it should be placed in the soil at this time. Any shoots which come up after this should be allowed to grow up and seed, while at the same time the root will be storing up plant-food. These can be broken off late in the fall and cultivation continue as before described. A limited amount of cuttings may be taken the second season, but if none be removed until the third year, a fuller development of root will take place. When roots are large enough to allow constant removal of the shoots, cutting should be carried on systematically.

4. Although sows will sometimes accept male service the third day after farrowing, it is not good practice to allow them to do so. Fœtal development, if carried on for many weeks in conjunction with the production of sufficient milk to support a litter of pigs, would be too great a strain on the mother. With full-grown sows, three weeks is soon enough to breed, and with those not mature, two or three months' rest is sometimes advisable.

5. In most cases sweeny can be cured by long rest and continued blistering of the parts affected. A good blister is composed of one dram of powdered cantharides mixed with an ounce of lard. Clip the hair off and rub blister well in; in 24 hours rub well again, and in 24 hours longer wash off and apply a little lard every day until the scales come off. Blister every three weeks and rest the mare until the muscles regain their normal condition. During the early stages the swelling should be regularly bathed with warm water, and the blister, as described, should not be applied until atrophy begins.

WEIGHT OF LIME — INSURANCE AGAINST WIND.

1. What is the standard weight of stone or unslacked lime per bushel?

2. Is there any insurance company that insures against wind? If the building be destroyed by wind, would it have to be especially mentioned in the policy? L. B. E. DILLMAN.
Peterborough Co., Ont.

Ans.—1. The standard weight of unslacked lime is seventy pounds per bushel.

2. There are no insurance companies in Ontario, nor, as far as we know, elsewhere in Eastern Canada, that have license to insure against destruction by wind.

PLAN FOR HENHOUSE — NUMBER IN FLOCK — OPEN SHED.

1. What is the latest plan for henhouse, including method of construction to keep frost out?
2. What number of hens should be in a flock?
3. What do you think of the open shed?

Ans.—1. Buildings admitting of plenty of fresh air are now most popular with poultrymen. They are constructed rather cheaply. Four feet high at the back, ten feet in front and from ten to twelve feet wide, with a shed roof. The front is partly open, the birds being confined, when necessary, by wire netting, over which canvas may be drawn in stormy weather. Buildings of similar dimensions are constructed having the front closed and the sides arranged to ensure warmth. The frame may be built of 2x4 scantling, sheeted on the outside with inch boards and over that one ply of roofing felt. On the inside two ply of matched lumber, with tar paper between. The roof can be made similarly by using two ply of matched lumber, with tar paper between and shingles or roofing felt on the outside. Where perfect drainage can be had, an earth floor is all that is necessary. Five or six inches deep of gravel is sometimes added. For each lot of hens two apartments may be arranged, one of which can be used as a scratching pen. If desired, the roosting quarters may have a curtain, which may be let down on cool nights to ensure greater warmth to the birds. A plan of a more expensive building will be found elsewhere in this issue.

2. The number of hens in a flock is not so important as the amount of space they are allowed. Each bird should have from 8 to 9 square feet.

3. When the weather is not extreme, we see no reason why the open shed should not give satisfaction.

COLT WEAK IN JOINTS.

Mare carried colt about 12 months and 5 days. When foaled, colt was too weak to get up alone for several days. Is now ten or twelve days old and still very weak in joints of fore legs. Is feeling well and will try to trot and play, but fore legs are very liable to bend outward at knee joints even when walking, and joints are quite badly puffed on outside, forward. What do you consider cause, and remedy? Will it be likely to cause any lasting injury? Have a very fine yearling from the same horse and mare.
H. H. KIRKPATRICK.
Carleton Co., N. B.

Ans.—It is difficult to state exactly how your colt became so affected; probably due to imperfect nutrition during foetal life. See that it is not allowed to lie in a damp place; protect from exposure to rain and cold; encourage a large flow of milk in the dam, and in time the trouble will likely disappear, never to return.

MATERIAL FOR WALLS AND FLOORS.

Will you kindly let me know, through your paper, which is the best material to build walls with, brick, stone, or cement: (1) of a cow stable; (2) of a horse stable; (3) of a sheep pen; (4) of a pigpen; (5) of a root cellar; and the best material of the above to make floors?
York Co., Ont. H. IRVING.

Ans.—For durability, strength and economy of construction (where the requisite gravel, stone and sand are available), we know of no material equal to cement concrete for cow stable, horse stable or root cellar walls. Properly finished, they present a very substantial appearance also. A brick wall in contact with the earth is not to be recommended at all. A leading farmer and subscriber to the "Farmer's Advocate," who last winter had a thorough test of cement and brick walls, side by side, found the former decidedly drier, showing less frost inside in very cold weather. He says he would build no more brick walls under barns. For sheep or pig pens we prefer a foundation of cement concrete, extending say one foot above ground, and after that there is probably nothing equal to double boards with building or tar paper between. With regard to floors, nothing equals cement concrete for cattle. It is sanitary, durable, easily cleaned, saves manure and is also economical in construction. The manure gutter and underneath the stalls and mangers of horse stables should be laid of cement concrete, but over the latter, where the horses stand, should be placed planks, as nearly all horses, if shod, will pound holes in concrete. As the planks wear out, others can be laid down. Properly drained and kept dry, earth is the best and cheapest floor for sheep. A pigpen should be first floored throughout with cement concrete, with boards laid in one corner for a sleeping place, or an elevated sleeping berth such as has been several times described in the "Farmer's Advocate." (See March 1st issue, 1902, page 172.) If, on the score of cleanliness and protection against rats, etc., burrowing, a floor is desired in the root cellar, cement concrete is the best material to use.



CHAMPION LINCOLN EWE
At the Pan-American Exposition, and at the International Exhibition, Chicago, in 1900 and 1901, each time beating the English Royal winners.
BRED, FED AND EXHIBITED BY J. T. GIBSON, DENFIELD, ONT. (SEE GOSSIP, PAGE 507.)

MASTER AND SERVANT — IMPOUNDING CATTLE.

1. If a man hired for twelve months and left before his time was up, or if he only stayed for one month and didn't draw his money, but quit before his year was up, could his boss or his employer keep his hired man's trunk and clothes? 2. Can he, the "hired man," claim them or sue for them? 3. Can any person take another person's cattle off the road and take them to pound if they are not trespassing on that person's or any person's property? READER.
Wentworth Co., Ont.

Ans.—1. No. 2. Yes. 3. Not unless there is a by-law of the local municipality providing for it.

FENCING AGAINST CATTLE.

The west end of A's farm and the adjoining part of B's are in bush. B wishes to turn his stock into the bush, but A's clearing is not fenced. 1. Must A fence B's cattle out? 2. Must B fence them onto his own farm? 3. On page 350 of the May 1st "Advocate," E. J. T. makes a rather novel suggestion and statement about the right of cattle on highways. Is it a matter of fact and law? 4. And, if so, would a township by-law providing for fencing out be valid in the township where it was enacted?
Grey Co., Ont. F. W. WRENSHALL.

Ans.—1. No. 2. No; but if he does not so fence he must be at the risk of their trespassing on A's premises and possibly rendering him, B, liable to damages. 3 and 4. We think so.

Can you give us the addresses of some breeders of Shetland ponies in Canada? Can you give us any idea about the average weight and price of good ponies at three or four years old? Do you know whether there are many of them that turn out troublesome in handling or driving?
Hastings Co. P.

Ans.—C. W. Sydie, Orangeville, Ont., and A. Jeffrey, of Whitby, Ont. The show height in the United States is 46 inches and under; weight, about 500 or 600 pounds. Prices range from \$30 upward. One was sold at last year's Toronto Industrial Exhibition for \$500. Mr. H. M. Robinson, Toronto, secretary of the Canadian Pony Association, states that in his experience he has found them stubborn and mulish. Those we have observed appeared to average in temper about like other horses.

KILLING BINDWEED.

Please tell me, in your paper, how to kill bindweed. I have about half an acre; cultivated it at least twice a week last summer, but came up thick this spring. How can I obtain the reports of the Ontario Experimental and the Central Experimental Farms. J. M. Middlesex Co.

Ans.—Bindweed is propagated both by seeds and its numerous rootstalks. An infested field should not be sown to grain until it has been subjected to a cleaning process. Plow infested fields immediately after harvest, and cultivate or plow sufficiently thereafter to keep plants from showing above ground until the period of growth ceases. The plowing or cultivating should be shallow, but thorough. In the spring, proceed the same way as in the autumn cultivation—that is, keep the surface frequently stirred until time to plant a hoed crop, such as corn, roots or rape. Then give this crop thorough culture throughout the season. If the fall and spring have been moist, so as to make it difficult to kill the weed, it would be wise, instead of growing a hoed crop, to sow buckwheat about July 1st, which will tend to smother the bindweed remaining. The buckwheat may be harvested or plowed down, as desired.

In the destruction of this obnoxious weed, Mr. T. Baty, a prominent farmer of Middlesex Co., gives his experience as follows: "Bindweed is the hardest weed to conquer of any with which I have had experience. Last year I found a bindweed patch about 7 rods long and 3 rods wide. It was purposely left unplowed and unplanted in spring, the intention being to try surface cultivation without crop. It was cultivated with a one-horse cultivator about three inches deep whenever the weeds appeared throughout the whole growing season. In the warm weather this was once every five days; less frequently, of course, in the earlier and later parts of the season. During the first few cultivations the weed roots were so thick that they were pulled off the cultivator teeth by handfuls at the ends. This changed by and by, and as the season advanced the weeds grew thinner and weaker, although not killed. After my former experience, I did not expect a strong patch to be killed in one season. Have begun the cultivating again this spring. The patch appeared to be about one-third the size and one-fiftieth the strength that it was a year ago. Have reason, I think, for the confidence I feel that this season's attentions will finish it completely. T. BATY."

VALUE OF GLUTEN MEAL, CORN AND SHORTS FOR FEED.

Can you give me the feeding value of gluten meal as compared with shorts and corn meal? The prices per 100 we pay here are: Shorts, \$1.25; corn meal, \$1.60; and gluten meal, \$1.20. Will gluten meal take the place of corn meal as food for pigs and hens? Both seem to me it? Grenville Co., Ont. C. W. BEAVEN.

Ans.—If fed alone, it would be difficult to compare gluten meal with shorts and corn meal. These feeding stuffs differ so in composition and in their function as flesh, fat or bone formers, that a comparison on a money-value basis is impracticable. Neither have any experiments comparing these feeds been carried on. Gluten meal has a very narrow nutritive ratio—i. e., the amount of proteids is large as compared with carbohydrates and fat. Shorts comes next and corn last their ratios being 2.8, 4.7, and 10, respectively. Gluten meal is, therefore, a valuable food for balancing up a ration high in carbohydrates or fat. To feed it alone in large quantities, owing to its low content of ash or bone-forming material, would be poor economy. However, considering the price of each, as stated, a large amount, even up to fifty per cent., might be safely mixed with corn and profitable returns obtained. Neither corn nor gluten meal can be profitably fed alone to growing pigs. The former is too great a fat-former and the latter, as stated, lacks in those bone-forming materials which are so essential in a ration for growing stock. With hens the results would be somewhat different. As an egg-producer or fattening food, gluten meal might give results equal to those of corn, but, as before stated, no experiments have been reported.

POISONING CROWS.

I have had considerable trouble with my corn, so I got 30 cents' worth of strychnine from my druggist and dissolved it in warm water, enough to cover one quart corn, leaving it in the liquid 24 hours. Then I scattered it over the corn-field. Next morning I found 25 dead crows. I left some dead crows on the field. I have had no more trouble, as the crows all dispersed. In my opinion, if a few farmers would take this trouble, we would soon get rid of the crow nuisance. Is it legal?

Ans.—It is not illegal, but there would be the risk of liability from the poison not being eaten exclusively by crows, hawks, blackbirds and English sparrows—all of which may be so destroyed. It is, however, not legal to expose poison in any place or locality where dogs or cattle may usually have access to it.

NERVOUS HORSE—PLOWING AFTER HARVEST.

1. A young horse is very nervous and will not stand at all while being unhitched from buggy, but will jump when partly unhitched. Can you suggest any way to cure this horse from this bad fashion? Is there any way that he can be made to stand to unhitch in the open? 2. I see that your paper does not recommend following land to enrich it. Would it be beneficial to land to plow twice after harvest, the land being moderately clean? W. G. SCRACE. York Co., Ont.

Ans.—1. Having acquired such a bad habit, your colt will require to be broken over again. The same person should have him in charge continually. Begin by treating very kindly and do everything to increase his confidence in his trainer. Harness with an open bridle and take pains to have him become acquainted with vehicles such as those to which he will be attached. After continuing this treatment for some time he may be hitched to or unhitched from a rig, sufficient force being present at all times to prevent his moving if he would, one person holding him by the head. See that nothing is left hanging loose in rear to touch him. If care be exercised in this way for a few times, little trouble should be afterwards experienced.

2. Land, although moderately clean, is benefited by two plowings after harvest. The first should be shallow and as soon after the grain is removed as possible. Cultivation at this time germinates many weed seeds that may have found an entrance, and also hastens the decomposition of any vegetable matter such as stubble found on the surface. A later plowing leaves most land ready for the cultivator the following spring. Cultivation does not add fertility to the soil. It only changes the plant food already present into a more available form.

ANIMALS TRESPASSING.

1. Is there any Ontario law to compel me to keep my bull shut up, whether old or young, or at any season or for any length of time?

2. Is there any law regarding line fences—i. e., as to what constitutes a good fence?

3. If my bull crosses to a neighbor's cows, through or over a fence very loose or under three feet high, am I liable for the mischief done?

4. Am I compelled to make fence to keep a neighbor's pigs and sheep out, when he has none himself, though I have offered to make as much as he would, with no such stock of my own yet to keep in?

5. How might a fence of barbed wire, five strands, stretched tightly, about 50 inches high, be regarded? I have about 90 head of horses and cattle behind it, and I have never known any one to go through or over it.

6. During the last couple of years there is a decided settling of opinion among the people of our neighborhood, with the exception of one or two (my neighbor being the one who always quotes precedent), that a man should feed and pasture his own cattle. What steps would you advise me to take to hurry him along in the same line of thought?

7. In short, how can I defend myself against his stock or the mischief mine may do owing to his bad fences? Our line is divided into six stretches, each taking three alternate ones. Prescott Co., Ont. "ORDER."

Ans.—1. No. 2. There may be a by-law of the local municipality. 3. Yes. 4. No. 5. It would depend, of course, upon the by-law, if any, as to whether such fence may be regarded as a "lawful fence." 6 and 7. You should be careful to keep your own parts of the line fence in good repair and urge him to do the same as to his; then, if his stock trespass upon your premises, you might fairly impound them and recover damages; and if your stock get upon his lands, you might be able to successfully resist any proceedings on his part. But we would add that, generally speaking, it is the duty of the owner or occupant of land to keep his animals from trespassing, and this is more especially so in the case of an animal such as the bull mentioned, and for mischief caused by which his owner would probably be responsible, regardless of defects in the adjoining owner's fencing.

COLT SUCKING OVERHEATED MARE—MILKING BY HAND—TEMPERATURE OF UDDER AND VEINS.

1. Should a colt be allowed to suck while its dam is very warm? 2. Should the dam be first milked by hand? If so, why? 3. Is the milk warmer in the udder than in the veins? Simcoe Co. W. C. H.

Ans.—1. It would be unwise to allow a colt to suck any great quantity of milk from its dam while the latter is very warm. The filling of the stomach with milk several degrees warmer than the rest of the body is apt to cause serious and sometimes fatal results in young colts.

2. The only advantage in milking the dam is that less is left for the colt, and, also, while doing so the mare is being eased and her temperature falls.

3. The milk in the udder is no warmer than in the veins nor than the blood in any part of the body.

PROBLEMS IN DRAINAGE.

1. Would a drain 2½ feet deep, filled with small stones, be a proper drain for very flat land? 2. Is a well-made stone drain as good as a tile drain? 3. Is two-inch tile large enough for ordinary drainage? 4. How long will hemlock lumber last in a drain? G. H. Bruce Co., Ont.

Ans.—1. A stone drain such as you mention would be unsatisfactory on flat land. The small spaces between the stones would soon become filled with silt and hence the drain would be useless. Tile should be used under such circumstances.

2. A well-built stone drain will sometimes last for many years, but when the cost of construction and chances of usefulness are considered, it does not compare favorably with tile.

3. Two-inch tile is scarcely large enough for ordinary drainage. Three-inch is much better.

4. Hemlock lumber will not last for more than three or four years in a drain.

COMPENSATION FOR A COW.

A lady wishes me to ask you if you would set a value on her cow. She had the cow pasturing on my farm. I sold a cow to a butcher. He was to take her away in about a month. He came one day when I was away and took her cow in a mistake, although they did not look alike at all. He offers to pay her the same rate that I sold mine for, eight dollars a hundred, dressed weight, which would be \$47.50. Her cow was a nice-looking grade Jersey, four years old, due to calve in two months; would make fourteen pounds of butter a week when fresh. It is hard to replace her, as most people will not sell their best cow. She is a poor woman, and he is a rich man. She did not want to sell her cow at all, as she wanted to raise stock from her.

Ans.—We consider that she is entitled to \$60, and is in a position to recover that amount by action in Division Court, if necessary.

TENANT REMOVING MANURE.

Last fall I rented a farm from A, and moved on to it, and work one hundred and fifty acres besides. It was an agreement, but not in the writings, that I was to draw off manure for what feed I drew on to the place. But now A's father claims to own the place and has forbidden me to draw manure off the place. 1. Can I take any manure away for what I bring on the place? 2. Can I hold the place until the lease expires? Huron Co., Ont. SUBSCRIBER.

Ans.—1. Yes. 2. Yes, assuming that the father was aware of the lease at the time it was granted, or, at all events, when you took possession, and made no objection.

HELPED BY THE "ADVOCATE"—IMPLEMENTS WANTED.

Your paper has been quite invaluable to me. I am using it as a text-book in all my farming operations, and should be helpless without it. My farm comprises 170 acres of choice sandy and clay loam, and I have provided myself with nearly all modern implements for working it. My stock still requires a potato planter, potato digger, and an Acme harrow. Can you kindly let me know where these may be had? Frontenac Co., Ont. J. W. SUDDARD.

Ans.—Manufacturers of the implements inquired for should announce the fact in our advertising columns.

AGE OF BREEDING TURKEYS.

I notice, in the pages of the "Advocate," that turkey breeders are advised to use a two-year-old gobbler. Will you kindly tell me if it is advisable to keep them until they are three years old or even longer? And is a turkey hen just as good after she has passed the second year? Lambton Co. G. G. BARRD.

Ans.—1. The best returns are usually obtained from a gobbler under three years. Above that age they are apt to become fat and too heavy for service. Hens over two years also become heavy, and a larger percentage of eggs are broken than with younger birds. Most prominent turkey breeders prefer young hens and toms under three years of age.

BREEDING FILLY—SIZE OF SILO.

1. I have a fine two-year-old filly; good size; pretty well bred. Would it be profitable to breed her at that age, or would it spoil the sale of her? 2. How large a silo would it take to keep thirty cows six months? A. M. F. Elgin Co., Ont.

Ans.—1. Attention is directed to the article, Breeding from Young Fillies, found in the issue of June 16th, which we think answers the question quite fully. 2. If thirty pounds of silage per day were fed to each of thirty cows for six months, about eighty-one tons would be required. According to the estimates, a cylindrical silo 15 feet in diameter and 25 feet high will hold that amount. It would be no mistake, however, to increase that capacity by adding several feet to the height.

PEAR-LEAF BLIGHT.

I enclose a few pear leaves. The tree has been affected with the same kind of blight for a number of years, but was not bad till last year. Tree very heavily loaded and of excellent variety.
Lambton Co. JOHN W. MADDOCK.

Ans.—The leaves are affected by a fungus known as Pear-leaf Blight. Spraying with Bordeaux mixture is the only effective means of ridding an orchard of this disease. The mixture should be applied as soon as the leaves are developed, and repeated at intervals of from two to four weeks until August.

GERMAN COACH HORSE REGISTRATION

I am breeding a mare eligible for registration as a Standard-bred to a registered German Coach stallion; and also a nice general-purpose mare. Is it possible to have the progeny registered as Coach horses, and how many crosses does it require?
Elgin Co. C. F.

Ans.—There is no Coach horse registry in Canada, but we believe the progeny of such a cross would not be eligible in any record. J. Crouch, Lafayette, Indiana, U. S., is the secretary of the German Coach Horse Association.

AN UNPAID-FOR MACHINE.

A sells to B a machine, and takes two lien notes. The first note came due last January, and B leaves the country, not paying anything on the note, and C, collector of taxes, seizes the machine for taxes, and sells it to pay the taxes of B, knowing at the time of seizure of there being two lien notes on the machine. What is the law regarding the matter, and what steps will A pursue to collect pay for the machine?

Ans.—It is probable that the seizure and sale by the tax collector were illegal, and that your appropriate remedy would be by an action for damages. You should consult a solicitor personally regarding the matter.

PLOWING SOD FOR WHEAT—CATCH OF CLOVER—BUG DEATH.

1. Is it better to plow a pasture field for wheat or leave till the fall for oats? 2. Can better catches of grass seed be had on spring crop than on fall wheat?
JAS. BAXTER.
Wentworth Co., Ont.

Ans.—1. If a pasture field were plowed now and well cultivated until time for fall seeding, it should make a good seed-bed and afford prospects for a fair crop in sections where fall wheat can be successfully grown.

2. As a rule, a surer catch of grass can be obtained by sowing timothy seed in the fall and clover seed in the spring on fall wheat than by sowing with spring grain.

A CHICKEN THIEF.

I have been missing my chickens for the last two years and have failed to catch any visitor. 1. Could you suggest some plan or alarm by which I might be made aware of his visits?

2. If I should catch him in the pen and he attempt to run, might I shoot him?

3. If I cannot use my revolver, what would be best to do?
—NEW SUBSCRIBER.

Ans.—1 and 3. We would suggest the use of a good watchdog. 2. No.

GREEN CLOVER CURING.

Reader, Grey Co.—A very small quantity of timothy should not prevent the curing of clover by the plan recommended by Mr. H. Glendinning, on page 454 of our June 16th issue. The essential conditions, as stated, were to cut the clover when in full bloom in the morning after the dew is gone. Rake and cock in the afternoon and haul in the next day free from wet either in the shape of rain or dew. The idea appears to be that the clover can be so cured when it contains just the natural juices of the plant, and is stored, as described, in closely-boarded mows.

Shrinkage of Grass in Haymaking.

In the course of its conversion into hay, clover loses considerably more weight than ordinary grass. This is due to the fact that freshly-cut clover contains a higher percentage of water than the majority of the grasses met with in our meadows, and as the percentage of water in clover hay and meadow hay is practically the same, it naturally follows that the latter must shrink much more than the former in the course of its conversion into the dry fodder. Roughly speaking, 10 cwt. of green grass will give about 3½ cwt. of hay—sometimes more, sometimes less, according to the nature of the herbage, etc.—but in the case of clover it is usually reckoned that a good average yield is from 3 to 3½ cwt. hay to every 10 cwt. of green grass.

MISCELLANEOUS.

Lambing on the Range.

BY J. M'CAIG.

Lambing on the range presents considerable contrast to lambing in the pens of the eastern flock-master. In one case a man has a couple of dozen, in the other a couple of thousand, to attend to. In one case the January or March blasts may be blowing outside; in the other, unless in exceptional cases, the early May breezes are playing and the young grass springing. In one case it is the problem of moving, regulating and manipulating the bunch; in the other, it is a case of caring for the individual with too much or too little milk or, perhaps, with cold mouth and uncertain or useless legs. Though range operations, as respects the individual sheep, are simple and primitive, as respects the bunch there is just as much art as there is in the successful pursuit of any other business.

Bishop Harker, of the Mormon settlement of Magrath, Alberta, financially speaking, was a beginner six years ago. He earned his first sheep by looking after another fellow's on shares. The first year gave him two hundred and fifty lambs and a hundred and fifty dollars clear. Sheep and industry are a good combination to bring independence, but free grass and a genial climate make a good second. The combination moved on until to-day. It will probably continue to move. At present it means four thousand sheep, at lambing time worth five dollars a head, a good substantial interest in the horse and cattle round-ups, a well-tilled irrigated farm and a comfortable home. So much for the sheep, the climate, the grass, and the man, but principally for the sheep and the man.

Sheep are gregarious and so are men. But ranchmen are not so very gregarious either. Neighbors are an advantage the farther they are away. In spring, with the flock lambing, a man doesn't move them far, and it is an advantage to have a good sod to make travelling unnecessary.

Eight miles across the prairie from Magrath brought us to the bench overlooking the St. Mary's River, and right out in the sun we came upon a little knot of day-old fellows guarded by solicitous mothers. Active and quick to move they were, too, with good muscular tone, as becomes the offspring of busy, rustling range mothers. Twins were not the rule by any means, but there were a few pairs. Range lambs are straight and even, as a rule, though generally small and light at birth, and do not show the unevenness and irregularity of feature belonging to house-fed, or rather, house-bred lambs.

Beyond, on a longer slope facing the western sun, were the main flock. Passing to them the way was strewn with individuals of new-lambd ewes, stamping beside a reclining infant or licking a silly, spindly-legged youngster working onto his pins. So it continued right up to the main bunch. The lambd and unlambd ewes were thus separated by the former remaining scattered behind, while the latter moved on in a body. The lambs a day old or more that are well able to follow were held or bunched together with their mothers; the newborn are likewise gathered, towards evening, in the most convenient place to where they have been dropped. The lambd ones thus make up at least two bunches.

The shepherd keeps away from the corral. Lambing in the corral is filthy compared to lambing outside, unless the weather is really bad, and even then, perhaps, a storm is the lesser evil. Wet and exposure to cold winds are the worst enemies to the lamber. At night the new-lambd ewes are driven down from the bunch into the shelter of one of the innumerable coulees running to the river bottom, and are there "bedded down" for the night, with a lighted lantern on each side to keep away the coyotes. When the lambd bunch gets larger they must be started out slowly in the morning. They need half an hour to find their lambs before moving at all, or endless confusion and subsequent disowning of lambs will ensue. The dogs have little or no work at lambing time. The sheep do not travel far in a day, and dogging is bad anyway. Few ewes require assistance in lambing, owing to the healthy condition of range ewes from plenty of exercise. A good hint in this for the eastern shepherd. About one in four or five has twins, but this varies with the season. One of a pair of twins may be disowned, but not generally if new grass has come to give the ewes plenty of milk.

Losses so far this year have been few. The ewes were in good shape at lambing time, except in certain districts where water is not too plentiful. Snow has been scarce this winter, scarcely sufficient for the best health of the sheep.

The camp is not the most interesting part of the lambing outfit. It consists of a large open corral, with sometimes a shed adjoining, both little used in good weather. A camp or chuck

wagon takes the place of a shack. This is the sleeping and feeding place of the shepherds, generally two or three to a bunch at lambing time. The wagon has a box spreading over the wheels and it is covered with canvas. In one compartment, which is zinc-lined, is a stove; in the other are stored the provisions. Above the storage chamber or on the shelves spreading out over the wheels of the wagon is the bedding of the shepherds. Lanterns or harness and saddles surround the wagon in easy disorder.

The fare of the shepherd consists of fresh mutton, bacon, potatoes, beans, and canned vegetables, fruit or milk. Magazines and newspapers find their way into the sheep camps for the whiling of an hour before sleeping time.

July in the Garden.

July, though not as busy a month for the gardener as the months of May and June, is still a period requiring much care and attention to the growing crops and guarding against numerous insect pests and diseases. The greatest task is the annihilation or, what is better, the prevention of them by intensive cultivation, always keeping the soil around the growing crops stirred, which keeps weeds from gaining a foothold, prevents moisture from evaporating, and promotes changes in the soil beneficial to the plants. Watering is essential to maintain a steady growth during dry weather, and, as mentioned in my last article in May, it has always paid me well, especially in the production of early and choice specimens.

All plants of the Brassica, or cabbage, family, including cabbage, cauliflower, Brussels sprouts, etc., should be kept growing rapidly, not only to promote earliness, but to guard against disease, especially clubroot, the most serious pest of this class of plants. The only remedy, besides the application of lime and carbolized mixtures to the roots, is to keep the plants growing vigorously both by continuous cultivation and fertilizing, which are the essentials to the production of this class of vegetables.

Beans and peas require to be kept clean of weeds and the earth drawn up to them at frequent intervals during the month, care being taken not to cultivate when the soil is wet, as in the case of beans it is always sure to result in mildew and rust, especially when the pods are formed. The plots devoted to root vegetables need little care other than cultivation to keep down the weeds and conserve moisture, thus promoting rapid growth. Corn and potatoes are not hilled as much as formerly, many advocating surface culture or shallow intertillage as most essential. But in the case of potatoes, except where the stalks tend to grow exposed, hilling should not be resorted to, but low ridging, care being taken not to stir the soil too deep, is the method now extensively practiced. Of course, where cultivation is mentioned in this and previous articles, hand cultivation is referred to, either by the rake or hoe and hand cultivator, but if the garden is laid out for horse cultivation, the principle holds good in both cases. Tomatoes make the most of their growth during the month, and when grown on stable manure they often become rank before setting fruit. This is owing to an excess of nitrogen, the same cause that so often runs potatoes all to tops. Clipping off some of the branches, leaving only the strongest and thickest, will often greatly increase their earliness and productiveness. But provided the soil was in good condition at the time of transplanting and not over-rich in this element, the tomato plants should be quite bushy and stocky and in blossom and fruit. Still, they need support of some kind, the best being the hoop or ladder trellis described in my article for February; small stakes driven in the ground and the plants tied to them with soft twine, or what is better than anything, if it can be procured, brush placed between the rows, will result in an increased crop of early and better specimens. When kept off the ground the loss from rot in wet weather and the shading of the maturing fruits are prevented. Squash, pumpkins, and other plants of the same nature and requirements, begin to run and cover the ground, but if they grow rankly the fruit is apt to be small, at the expense of the vine, for the same reason as before mentioned in the case of tomatoes. Clipping the ends of the vines and working some wood ashes or phosphate around the plants will result in great improvement in most instances. A successful strawberry grower was asked how he got such large crops of immense berries. He said the secret was cultivate, cultivate, and cultivate. So in the vegetable garden this rule can be well applied during the coming month. Hoeing is easier than pulling. Continual scratching, even with a garden rake, results in the prevention of more weeds in five minutes than could be pulled out in an hour three weeks later.
Halifax, N. S. EDGAR E. MACKINLAY.

A Covered Pavilion for Cattle Judging at Winnipeg Industrial.

An innovation of very great importance as an educational feature is to be introduced at the Winnipeg Industrial this year, in the way of a covered stock-judging pavilion for the cattle classes. A portion of the implement platform, which is located quite near the cattle barns, is to be appropriated for this purpose. Separate rings will be provided for each class of stock. These will be enclosed and none but the judges and the attendants in charge of the stock will be allowed inside the rings. In compliance with a request from the Cattle Breeders' Association, the management is trying to provide three judges for the cattle this year, instead of two as formerly, viz.: one for Herefords, Polled Angus and Galloways, and one for the dairy breeds. The three classes can then be judged at the same time, and the judging can be got through with early in the week. It is also proposed to have a judging time-schedule arranged, by which both exhibitors and visitors may know exactly when the various classes will be called. Seats will be provided along each side of the rings, thus affording excellent opportunity for spectators to follow the work of the judges. Every breeder recognizes that the winning of prizes is not the only object in exhibiting stock; the publicity obtained is of far more importance, and, of course, the more people witness the judging the better the publicity, as people are thus educated and interested in live stock. Every exhibitor will, therefore, naturally do all in his power to facilitate these objects and thus advance his own interests, by seeing that full and accurate information is furnished to the secretary regarding his entries for the compilation of the live-stock catalogue, and will then see that every animal on entering the judging ring wears a number card corresponding to his catalogue number. These details are worthy of attention, and it is to be hoped when the classes are called on Tuesday morning of exhibition week that the exhibitors will have done their share toward making the judging of the cattle one of the great features of the fair. The management of the Winnipeg Industrial are to be congratulated on keeping so well up to the leading fairs of the continent in matters of this kind. Agriculture is coming to its own, the managers of all the principal fairs on the continent are recognizing the necessity of catering to those elements that make for agricultural education. Government grants to fair boards are restricted chiefly by the rural representatives on the ground that too much time and money are devoted to the attractions and racing features, but as soon as the rural population sees that agriculture and live stock is receiving its due proportion of attention from the fair managers, then will there be a readiness to devote public moneys to the upbuilding of the big fairs, through the instrumentality of which it is possible to accomplish so much for the advancement of the live-stock and agricultural interests of the country.

Pedigree in Swine Breeding.

At a meeting of the Swine Breeders of the State of Iowa, recently, Mr. McFadden, Secretary of the American Poland-China Record Association, thus spoke on the importance of pedigree:

"Only by the diligent use of the knowledge of pedigree have the best results in breeding been obtained, and yet nothing has been attended with such disastrous results as the pedigree craze. It seems quite impossible for the average breeder to know just how far to go with the use of the pedigree. He learns to study pedigree so as to derive the information he wants in regard to what it means, and to note the effect of the blood lines in crossing, and to determine what might reasonably be expected from an animal after the proper study of its ancestors. Having attained some little success along this line, a breeder is almost sure to become intoxicated with the pedigree craze, and then comes the disaster, both in a financial way and in the breeding results. No man ever yet made a success who bred for pedigree alone, and, on the other hand, no man has ever made a permanent success who disregarded pedigree. A pedigree should be valuable for the purpose of showing commingling of blood which produces certain results. A well-posted breeder soon learns that certain families have peculiar characteristics, and he may want just those certain characteristics, or he may wish equally as much to avoid them. It is unfortunate, however, that the study of pedigree frequently leads to the use of an animal simply because it is well bred. In no way is it more possible to perpetuate a certain undesirable quality than by the use of a well-bred, or so-called well-bred scrub. A thorough knowledge of families will enable a breeder to foresee certain results of development in an animal that is of great advantage in determining its value.

"The study of form, or standard of excellence,

and that of pedigree, constitutes the theoretical part of swine breeding as a profession. Their importance is becoming recognized more and more, and every opportunity is being taken by the up-to-date breeder to improve himself in knowledge of them. As has been indicated, some attain a large measure of success without formal instruction along these lines, and yet there can be no question but what their success would be greater and more readily attained with such instruction. Ideas and methods have radically changed in the last few years as to the necessity for being posted in them, and it is probable that there will be still greater and still more pronounced reasons for the necessity of such knowledge for the conduct of the breeding in the future."

Rural Education in Manitoba.

To the Editor "Farmer's Advocate":

Sir,—That the "centralization" of our rural schools, now being advocated by so many, would be advantageous, no one who has given the question any intelligent consideration will deny. The bringing together in a central school, with primary and intermediate departments, the children attending the several schools now required to accommodate the children of our most populous townships would simplify classification very much, as each teacher would have only about half the number of classes to instruct, which would be a great economy of time and should result in the more rapid advancement of the pupils. There would also be a saving in the cost of equipment and maintenance. But the greatest advantage would result from the necessary conveyance of the children to and from school, thereby placing all our children on equality as to educational opportunity. Where children are, as are many at present, from two to three and a half miles from school the attendance of these children must be very irregular or else the parents are heavily taxed by the necessity of conveying them back and forth at times. This equalizing of opportunity would make it possible to enforce a compulsory clause in our school law, which is very much required, as any one at all acquainted with the conditions existing throughout the country, particularly in those sections where some of the foreign population are located, will admit.

There are, however, difficulties in the way of accomplishing this very desirable change. Most advocates, so far as I have seen, cite the experience of our American cousins, notably of Ohio and Iowa, as proof of the feasibility and economy of this plan. But the conditions are vastly different. In these States the population is much denser, and the schools were much more numerous. Where, as in the case cited from Ohio, there were seven schools in a township with an area of twenty-five square miles, or where, as I have been informed by residents, in Iowa they have nine schools in a township six miles square, it might be possible by centralization to greatly improve the schools without adding to the financial burdens of the people. Here, with say an average of three schools to a township, it would be quite a different thing. This enhanced cost to the rate-payers will be the great obstacle in the way. I don't say it is insurmountable, but it will have to be shown, as I have no doubt it can be, that the advantages more than counterbalance the additional cost.

Our present schools cost about \$600.00 each per year, and for comparison we may assume that the school districts average twelve sections each or three schools to a township, not forgetting that they, the school districts, are rapidly decreasing in size. We have \$1,800.00 as the cost per township at present. Under the proposed plan two teachers, at least, per township would be required—say \$1,000.00; incidental expenses, say \$150.00; and the cost of conveyance of children, say five teams at \$400.00 per team, or what would be probably a better arrangement, eight teams at \$250.00 each—\$2,000.00; a grand total of \$3,150.00, or an increased cost per township of \$1,350.00, a fraction over \$9.00 per quarter-section. If we assume that there are four districts to a township, as I have no doubt there will be soon if our present system continues, it would reduce this amount to a little over \$5.00 per quarter-section. In this estimate I have not taken cognizance of the initial expense which would be incurred in building new schoolhouses or moving the present ones to new sites. As this amount could be spread over a number of years, and I believe would not in a given time, say twenty years, amount to more than we will be called upon to pay in any case, for this rebuilding and moving is going on all the time.

To those who have to send their children to the cities, at a heavy expense, because they have not the educational advantages at home, and to those far from the school who have to convey their children to it much of the time, such a change would be a lightening of rather than an addition to the burden, but to many who cannot afford to keep their children at school as long as they would

like, to say nothing about sending them to city schools, this additional \$5.00 or \$9.00 (or \$10.00 or \$18.00 where a farmer pays taxes on a half-section) will be quite a burden. There are, of course, compensations. Some of us would be spared many an hour's anxiety for the safety of the little ones during stormy weather. Our boys, and girls too, would be as far advanced at 14 years of age, when many of them have to leave school, as they are now if left at school till 17, and many families with four or five children tramping miles to school would save most of the difference in shoe leather; but then many have no children to go to school, while others are convenient thereto, and it will be hard to convince those that any such expensive change is necessary or advisable.

In view of all these circumstances, I fear it will be some time before this change, however desirable, can be brought about unless our Legislature comes to our assistance with a largely-increased grant to education. If the provincial grant could be doubled and then distributed amongst, say one-third the number of schools at present, it would go a long way towards solving the problem. It would also simplify matters if the change, whenever brought about, were made to apply to the whole Province. If it is left optional with the municipalities, then provision must be made for giving any section adopting the system its fair share of the Government grant—such as a distribution on the basis of attendance or results obtained; otherwise the centralized schools will be at a disadvantage. "PRO BONO PUBLICO."

Eastern Manitoba.

MARKETS.

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

FARM GOSSIP.

Central Canada Fair.

No exhibition in Canada has done more to foster and promote the interests of the farmer and breeder of moderate means than the Central Canada Show, held annually at Canada's capital. Nothing calculated to prove of advantage to these classes of the community has been left undone when once suggested. It is only just that we should say a strong word for the show that will shortly be held in Ottawa, and urge displays at and visits to the same. To escape bad weather, ever encountered in the past, and at the same time not to conflict with other exhibitions, the show dates this year selected are August 22-30, just before the Toronto Fair. Very satisfactory freight and passenger rates have been arranged by the Association. The fact that the Ottawa Fair is the first show on the list will not mean that western stockmen who exhibit there will have more to pay in freight charges than heretofore. The Association has completed an agreement with the railway companies, it is learned, by which the freight charges for the return trip will not be one cent more than in past years. Full rates will be charged from original shipping point to Ottawa; such exhibits will be returned direct to the next exhibition or home free. The Ottawa exhibition is first-class in every respect, no expense being spared. As usual the prize list includes special premiums—money and many valuable gold medals—calculated to encourage the farmer and breeder. Canadian-bred classes find great encouragement. Then the stage attractions are of the best. This year's military spectacular is "The burning of Moscow," and hundreds of soldiers will take part. Another feature is trotting and running races. Mr. Ed. McMahon is the secretary, and will supply all information desired.

Prof. Plumb Goes to Ohio.

Professor Charles S. Plumb, Director of the Indiana Agricultural Experiment Station and Professor of Animal Husbandry in Purdue University, has been elected Professor of Animal Husbandry in the Ohio State University, Columbus. It is the purpose of the Agricultural College of this institution to enlarge the instruction in animal husbandry, and an appropriation of \$2,000.00 has been made by the Board of Trustees to add specimens of pure-bred animals to the existing herds of the College. It is expected further appropriations will be made from time to time. Professor Plumb graduated from the Massachusetts Agricultural College in 1882. He was assistant editor of the Rural New Yorker from 1883 to 1884; from latter date until 1887 he was Assistant Director of the New York Agricultural Experiment Station; in 1887 he was elected Professor of Agriculture in the University of Tennessee. He began work in his present field on May 1, 1890, and on July 1, 1891, he was made Director of the Station. At present Professor Plumb is president of the Indiana State Dairy Association and president of the American Cheviot Sheep Society. Besides the bulletins of the Experiment Station, he published a book in 1895, on "Indian Corn Culture," and has contributed many articles to agricultural and live-stock periodicals and magazines; he also founded, and until 1891 edited, "Agricultural Science."

Government Examination of Seeds.

While intelligent farmers, with a fair knowledge of the seed trade, can obtain high-class seeds, many get their supplies in small towns or villages from local dealers who have but a limited knowledge of seeds. The result has been that those farmers who are not within easy reach of a good commercial center have experienced difficulty in securing reliable grass and clover seeds. The attention of the Department of Agriculture was directed to various grievances connected with the seed trade, and investigation has proved that there has been just ground for complaint.

In order to secure more definite information with regard to the actual conditions of the trade in the common grass and clover seeds, arrangements were made early in the year to collect a few hundred one-half pound samples of timothy, alsike and red clover seeds that were offered for sale by local dealers. Over five hundred samples have been obtained at various points in the different provinces in Canada where such seeds find a market. The information received with each sample included the place where the sample was obtained, its origin, the price at which it was offered for sale, and the year in which it was stated to have been grown.

These samples of seeds reached the Department under a variety of names, which were intended to designate their grade or quality, but which rather served to mystify the less intelligent purchasers. Such names as Linnet, Otter, No. 66, Salmon, Elk, Prime, Pine Tree, and such like terms, have been given to seeds by wholesale seed firms, and are not in any way expressive of their real worth. They are terms which have been coined in wholesale seed houses, and are evidently intended to take the place of such terms as Grade No. 1, Grade No. 2, Grade No. 3, screenings, etc., which, if used by a seed firm bearing a good reputation, would mean a good deal to any intending purchaser.

The samples which have been collected are being analyzed for both purity and vitality. The necessary equipment for a modern seed laboratory has been secured, and the rules adopted by the Association of American Agricultural Colleges and Experiment Stations for testing seeds are being followed in detail throughout. In making a purity test, two grams of red clover and five grams of timothy and alsike seeds are carefully weighed out from each of the one-half pound samples on a precision balance, sensitive to one milligram; the impurities are separated, and the percentage of pure seed is thus obtained. The impurities are then examined and the percentage by weight of weed seeds determined; the weed seeds are identified, and the number of each kind of weed seeds in a pound of the seeds offered for sale is calculated.

To test the vitality of the seeds, four lots, containing one hundred seeds each, are indiscriminately taken from pure seed which has been thoroughly mixed for the purpose. These seeds are placed—one hundred in each group, so as to check one against the other—between folds of blotting paper and set in a Standard Seed Germinator. This germinating apparatus, specially designed for this work, is so arranged that the heat, moisture, air and light are absolutely under the control of the operator—conditions which cannot be had except by laboratory methods. The seeds are kept at a temperature best suited to their germination. After they have been in the germinator twenty-four hours, those which have sprouted are removed, counted, and the number is recorded. This operation is repeated each day for ten days. By this method not only the vitality but the vital energy of the seed is shown.

Out of thirty-five samples of red clover seed which were collected in the Province of Ontario, twelve samples contained over five per cent., by weight, of foreign seeds. These foreign seeds consist of various kinds of more or less noxious weed seeds, the most prevalent being those of pigeon grass, rib grass, catchfly, Canada thistle, ragweed, curled-leaf dock, and sorrel, in varying proportions. As a rule, it would be expected that samples of this kind would be offered for sale at a price commensurate with their quality, but such is by no means the case. The average retail price per bushel of the ten samples which contained the largest percentage of weed seeds was \$6.95 per bushel. The real value of these seeds cannot, however, be accurately given until the germinating tests have been completed, as seeds which are free from weed seeds have not always shown the highest percentage of vitality.

The results of the investigation thus far would indicate that there has been, comparatively, a small amount of timothy, alsike or red clover seed willfully adulterated this spring, although a number of samples which have been analyzed show a large per cent. of inert matter such as sand, broken pieces of stems, etc. Four of the samples which were secured from local dealers in Ontario contained an average of seventeen and one-half per cent. of total impurities, one of which was purchased in Renfrew at \$7.20 per bushel, and from an average of three tests showed 23.6 per cent. of total impurities.

Sixty-four samples of red clover seeds were secured from local dealers in the Province of Quebec, but the testing of these samples for purity has not as yet been completed. The results of the work thus far, however, indicate that the farmers of Quebec do not get all the screenings from the Ontario-grown seeds. The percentage of total impurities from the sixty-four

samples ranged from one-fifth of one per cent.—which was obtained from a sample secured at St. Francois, and was being sold at the rate of \$6.60 per bushel—to eighteen per cent.—which was obtained from a sample received from St. Hyacinthe, and which was being sold at \$6.45 per bushel. Thirty-three per cent. of the samples of red clover seed obtained from Quebec Province contained more than five per cent. of total impurities.

The results so far include only the analysis for purity of the red clover seeds obtained from Ontario and Quebec. In examining the seeds for germinating the testing is all done in duplicate, and results will be published later on.

This seed investigation work, which is being conducted by Mr. G. H. Clark, B. S. A., has brought to light some important facts connected with the seed trade, and it is the intention of the Department to continue this work with a view to bringing out information helpful to seed growers, seed merchants, and to seed consumers, and to ascertain if the actual conditions of the seed trade in some of the more common grass and clover seeds require a system of seed control such as has been adopted in other countries.

Department of Agriculture, Ottawa.

South Perth, Ont.

The season still continues very backward, with very few really warm days, although the damage from frost is as yet very light, if any. Light rains are frequent and should cause a good growth, but the cold, drying winds in the daytime retard greatly the progress of such plants as corn, which, since coming through the ground, has made a very poor showing. The hay crop, too, will not be as heavy as last year. It has probably got a setback by the frost in May, and will not be more than a light average crop. Fruit, on the whole, promises well, although plums will probably not come up to last year's rather high average. It is yet too early to speak definitely of the honey crop, but for the apiarist the prospect is not by any means bright. Mangels appear to be coming through fairly well, and in this section they are looked upon as an important crop, as it is not allowable to feed many turnips to the milk cows. The Hessian fly is again getting in its destructive work, but I have yet to hear of late-sown wheat being much affected. Frequent showers are causing the milk to flow, and it is a banner year for the creamery company. And, by the way, it should interest your readers to know that on account of the milk being drawn to the separating station, a portion of the community, who have hitherto been to great inconvenience in getting their mail, have now practically the benefit of a rural mail delivery system. For a nominal charge the milk-drawer delivers the mail and posts letters twice a week right from the farm gate, and the patrons of the system now know exactly when their mail will arrive, as also when they can send it, without having to trust to the fickle memory of some neighbor.

I send you, under separate cover, a photo of our road-grader at work. The partial view of the horse behind is supposed to include that portion of the outfit which supplies the raw material (wood and water) out of which the energy is manufactured which leaves our roads in such excellent condition. Patching the worst spots with gravel is now in progress.

J. H. B.

Canadian Boys and Girls.

Miss Nellie Ware, Burton School, Christchurch, Hants, England, writes, saying the scholars in the Burton school are studying about Canada—107 children in that school. They wish Canadian boys and girls to write them telling all they can about this country, its schools, churches, homes, people, etc. They wish to know what games are played at school in summer and winter, subjects studied, how many holidays, description of locality, what trees grow, occupation of people, what is grown and raised on the farms, what fruit is grown, the price of land per acre to buy, to rent, what wages are paid to men servants and maid servants, the prices of all kinds of farm stock, what vehicles are used, what social pastimes are engaged in, and what countries the people come from, and what Halifax, Charlottetown, St. John, Toronto, London, Hamilton, Ottawa, Kingston, Winnipeg, Brandon, Victoria, (B. C.), Montreal and Quebec cities are like. We ask the boys and girls in all these places and in every part of Canada to write the Burton school, care of Miss Ware, and give them all the information asked for and as much more as you can think of. Please mention that you saw the request in the "Farmer's Advocate." Show this request to your teacher.

Graduate School of Agriculture.

On Monday, July 7th, there will be opened at the Ohio State University, Columbus, a school for the purpose of giving four weeks' advanced instruction in the science of agriculture, and particularly in the methods of investigating agricultural problems and teaching agricultural subjects. Four courses will be given—agronomy, zootechny, dairying, and animal and plant breeding. Only graduates of agricultural colleges or those recommended by State boards of agriculture have been allowed to enter. It has been announced that seventy students have already entered, including men from Canada and nearly all the States of the Union. The staff is composed of the most notable figures in American scientific agriculture.

Oxford County, Ont.

We have had remarkably cool weather for this season of the year; in fact, there was a slight frost on June 23rd, yet it did not appear to do much harm, although prejudicial to the best interests of the fall wheat and barley, now in head. I have seen some beautiful fields of fall wheat in this neighborhood. With favorable weather for filling, the kernels would be plump. There is both straw and heads enough to carry 40 bushels per acre. I have a small field of barley as good and strong as a moderate crop of fall wheat. I think the salt I sowed on it was of great benefit on our land at least. I think barley should always get from 100 to 150 pounds of salt per acre when the grain is say 3 or 4 inches high. Our oats are also a nice rich green color and doing well. The grass peas are also doing well so far. The pastures are simply luxuriant, and the cheese and butter makers are getting all the milk they can take care of with extra help. The price of cheese has dropped slightly. Our last sale was at 9½c. There have been buyers around picking up the grass beef. A gentleman from Buffalo has been here with one of our local men and purchased quite a large number of cattle at from \$70 to \$80 per head for three-year-old steers. The steer men are doing well this season, especially those who bought or raised good cattle. "It pays best always to keep the best." We prepared our root ground this year much better than usual and were able to thin our mangels with about half the work that we spent on them last year. It pays to work the ground well. We are going to have good crops of hay, although I think the early frosts hurt the hay crop more or less. Some commence haying this week. It is better to wait until the weather is warmer. It takes too long to cure hay at present.

There have been many complaints of the destruction the crows are committing in the corn-fields. The crows seem to be getting more numerous. It is all very well to tell us the great amount of good that Mr. Crow does in eating worms and grubs, but if he is to cheat us out of our corn crop, we must try to do something towards accomplishing his annihilation. One farmer set out some poisoned corn and bread, and destroyed quite a number of crows and also a valuable collie that \$10 would not have purchased. It is said that if a farmer puts up a little shanty or tent in the center of the field and goes into it before daylight with a good gun and plenty of ammunition, and then shoots the crows without coming out to be seen by them, they will afterwards be afraid to go near the field. Of course, one ought to take plenty of lunch for the day, and also the "Farmer's Advocate" to read when there are no crows to shoot. The farmers who sowed their turnips early have already got them thinned. Of course, in this cool weather the fly does not show up. When the ground is properly prepared and a vigorous plant-growth secured, the fly does not generally do much harm even under the most favorable conditions (dry, warm weather). The potato bug has not done much harm to the early potatoes, mainly on account of the exceptionally cool weather.

Brood mares and their foals are generally doing very well this season. I have only heard of one foal being lost, and there are a great many around here. A great many mares are being bred; the stallions generally are getting more to do than is really good for them. One Clydesdale stallion in our neighborhood is twenty years of age and is quite active and doing a good season in his own stable.

Live hogs are a little lower in price; the last we took out brought 6½ cents. We carefully weighed 15 hogs and delivered them to the Ingersoll Packing Co. next day, and what do you think was the difference between their weights and ours? Just 4 pounds.

There are not many sheep kept now, but I saw a few last week that had not been shorn. Apples have the appearance of being a good crop.

D. L.

Oxford Co., Ont.

Fumigation Kills Gall Louse.

The provincial inspector of San Jose scale for Ontario, Mr. Geo. E. Fisher, has been conducting a series of experiments this season with a view to obtaining some definite means of destroying gall lice as found on plum and spruce trees. The species affecting the plum appeared early in April and did considerable damage in Niagara township. About the 22nd of the same month, different plum trees were sprayed with fish-oil emulsion, crude petroleum emulsion, crude petroleum diluted 20 per cent. with water, and a strong solution of caustic potash, without seriously injuring the mite. On May 2nd the same trees were fumigated with hydrocyanic acid gas, 15-100 of a gram of cyanide being used for each cubic foot of space enclosed by tent. The exposure in each case was 45 minutes. This treatment settled the trouble at once. The lice were all killed and no noticeable injury was done to the trees. On June 13th the same treatment was tried on spruce trees with perfect success. Not only were the live insects killed, but the eggs did not afterwards hatch. We had the pleasure of inspecting samples of treated and untreated cones of spruce which were badly infested with this pernicious mite. After careful examination, we can testify to the completeness of the work. Not a single living louse was to be found imbedded in the treated specimens, while with those not subjected to the penetrating influence of the poisonous gas, innumerable minute creepers were to be seen.

Ottawa Notes.

The officials at the Central Experimental Farm have been kept very busy looking after excursion parties from surrounding counties. On Wednesday, a large number of Americans were brought in by the Ottawa & New York Railway.

CEMENT WALK CONSTRUCTION.

Mr. J. Fixter, the Experimental Farm foreman, gives the following explanations of how he recently constructed a granolithic walk: "Get a good foundation and good drainage. We used plenty of coarse stone in the bottom. 1st layer, 18 inches of coarse stone; 2nd layer, 12 barrows of stone, 4 barrows of sand and 1 barrel of cement; 3rd layer, 2 barrows of sand, 1 barrel of cement and 4 barrows of crushed stone. For the top layer, sand and cement, half and half. The stone should be washed well before the cement is put on them. Mix the cement thoroughly on a board with the sand dry, and then mix with water and crushed stone."

SOME PLAIN TALK.

Mr. S. G. Lawson, who was recently appointed cheese instructor for the Ottawa Cheese Board by the Eastern Ontario Dairymen's Association, has visited all the factories in the syndicate. In presenting his weekly report, he said: "I find that on the whole the makers did not have their factories in as clean condition as they should. Every factory should be scrubbed out not once a week, but every day, and the utensils kept clean and sweet. A maker cannot talk to his patrons about the condition of their milk unless he sets them a good example himself by having his factory in a nice clean and pure condition, and unless his own appearance is tidy and neat. If his factory is what it should be, then it will be possible for him to refuse bad milk and explain to the patrons how necessary it is that they should keep their milk in a clean, pure condition. The patrons also, if they see that the factory is well kept, will try and keep their milk in better condition."

WESTERN PROSPECTS.

Prof. Grisdale, agriculturist for the Dominion Experimental Farms, who returned from a western trip, says that there is a very promising outlook for crops in Manitoba and the Northwest. There is also a great increase in the area under cultivation in Manitoba. In the Northwest, where many new settlers have gone, there will be an increase in the wheat crop. On account of continued rains, sowing was late in the eastern districts and farmers only finished seeding about the first of June.

SEED GRAIN COMPETITION.

The work of the McDonald Seed Grain Competition is progressing rapidly under the supervision of Mr. G. H. Clark, B. A., Chief of the Seed Division, Department of Agriculture, and his able staff of assistants. The results are fully up to the expectations of the promoters. When the competition was started, 1,500 competitors entered, but many of them have dropped out of the race for the prize, for various reasons, and at the present time there are only about 800 boys and girls who are operating the seed-grain plots for the third year. These plots are distributed all over the Dominion of Canada. While the seed-grain competition will not continue after the present year, it is expected that the work which is being done by the competitors and the idea which they will get from this work will be carried on in the rural school districts of the Dominion.

FRUIT PROSPECTS.

Mr. Alex. McNeill, Dominion Fruit Inspector, has just completed a tour of the Western fruit district. He states that the prospects for good crops of apples, plums and grapes are especially bright. Apples were uninjured by the frost. Crawford peaches were a little on the light side, while cherries would also be a little scarce. Plums are retarded. He reports that there is a disinclination amongst the growers in Middlesex, Perth, Oxford and part of Huron to renew old trees or plant new ones. These are excellent apple districts and he greatly regrets this failure. On the other hand, he reports healthy young orchards springing up in Grey, Durham and Northumberland, and that the growers are paying great attention to pruning, grafting and re-stocking.

MAY VISIT SOUTH AFRICA.

Prof. Jas. W. Robertson, Canadian Commissioner of Agriculture, has left on a trip to the Maritime Provinces. He is at present in communication with Lord Milner with a view of establishing Experimental Farms in South Africa. He may be called upon to make a special report on its agricultural conditions and prospects.

MR. MURRAY'S APPOINTMENT.

Mr. J. Murray, B. S. A., who recently graduated from the Ontario Agricultural College at Guelph, has secured a position as assistant to Mr. G. H. Clark, of the Seed Division of the Department of Agriculture. Mr. Murray is a son of Mr. Robt. Murray, a prominent farmer of Simcoe County, Ont., and took a four-year course at the College. He graduated with honors and specialized in agriculture.

Profitable Steer Feeding.

Considerable interest is being taken in a phenomenal feeding record made at the farm of J. J. Hill, North Oaks. In November, 1900, forty-five steers were bought for the experiment. After commissions had been added, also the cost of dehorning, the cost of the steers at North Oaks averaged \$20.18 per animal. The steers were high-grade Shorthorns, but some had also more or less of the Hereford markings.

They were carried through the first winter on corn fodder, grown the same as corn for the silo, but fed in the dry form. There was some corn on the stalks, but not very much. No other grain was fed. In the summer the steers were pastured on blue grass, also without grain. They were fattened on corn fodder like that fed the previous winter, but with the difference that it contained more ears. The other food was shelled corn, with some oil cake added. The steers were sold on May 5th. After deducting commissions, yardage, and cost of food in the yards, they brought an average return of \$74.10. The difference between the net selling price per animal and the net cost price was \$53.92—that is to say, \$53.92 was the amount received for keeping each steer for about eighteen months.—Live-stock Record.

Educational Center Building.

A building, costing an enormous sum, is to be erected at the gateway to the Union Stock Yards, Chicago. It is intended to be the headquarters for the various breeders' associations of America. In it will be found their offices, including apartments for pedigree registers, etc. The first floor is to be set apart for an agricultural museum, where representative samples of the various products of American soil may be seen. One of the most charming features of the whole structure will be a capacious reading-room and well-equipped library, open to the free use of farmers and stockmen who may have occasion to spend a leisure hour in the big city. Such enterprise on the part of the stock-yards authorities will surely be appreciated by the live-stock world.

Experience with Shredded Corn Called For.

We would like to have the experience of others with corn stover or shredded cornstalks. Last fall, a machine was around here which husked the corn and tore the stalks into fine strips or shreds, but the latter did not keep satisfactorily with some; with others it kept well, and some had a total loss. Am writing in time, so that the question can be discussed through your paper.

THOMAS P. HART.

Oxford Co.

Clover Curing.

Mr. H. Harrison, of Ontario Co., Ont., referring to Mr. Hy. Glendinning's method of handling clover hay, which he tried as described in the June 16th "Farmer's Advocate," states: "We put it into the mow with a horse fork. The first two or three loads were allowed to lie where they fell from the fork, the balance of the hay falling on it, and being distributed from there over the mow. The hay in the solid lump at the bottom was very dusty when taken out. The rest of it was in good condition."

Milk Reform.

Owing to the very high death rate among the children of the lower classes in Chicago, the Board of Health of that great city have decided to take measures whereby the poor are to be supplied with pure milk at a price within the reach of all. One thousand bottles will be prepared and sent out daily from the science-room of the Northern University. The milk which was being bought by these people has been found to be highly adulterated. Out of twenty-four cans examined, six contained formalin and eleven more had been skimmed and watered.

Economy in Binder Twine.

Is it not time to save all of the binder twine that was used the year before? If at threshing time the twine were cut beside the knot, held by the band-cutter and thrown into a barrel, then in winter-time the knot cut completely off, could it not be soaked in solution and spun over again? I do not see why it should be completely wasted as at present. Now give this a roll.

WM. HUNTER.

Bruce Co., Ont.

Montreal Markets.

Montreal, June 26.—About 300 butchers' cattle, 400 calves and 300 sheep and lambs offered. No prime cattle offered and only a few that could be styled pretty good, the others being common and some of them rather lean. A few of the best cattle sold at from 4½c. to 5c. per lb., but there were not many sales at over 4c., while much the larger number were sold at from 3c. to 3½c. per lb. Canners paid from 2½c. to 3c. Calves were plentiful and lower in price, selling at from \$2.50 to \$8 each; only a few brought over \$5. Shippers paid 8½c. per lb. for good large sheep and the butchers paid from 3c. to near 4c. per lb. for their supplies. Lambs sold at from \$2.50 to \$4 each. Fat hogs sold at from 6½c. to 6¾c. per lb. for good lots weighed off the cars.

Toronto Markets.

Contrary to general expectation, deliveries of live stock at the Toronto Cattle Markets have been large. During the past two weeks, the receipts were as follows: Cattle, 6,059; hogs, 7,000; sheep and lambs, 6,636; and 736 calves. The quality of fat cattle coming forward has not been first-class, as nearly all the stall-fed animals have been shipped. And the high prices have had the effect of bringing forward unfinished grassers. Trade has been, and is still, good, with prices as high as ever. The best classes of butchers' and exporters are eagerly sought after, and more would have found ready sale.

Export Cattle.—Choice loads of export cattle are worth from \$6.50 to \$7 per cwt., and medium to good exporters, \$5.85 to \$6.25.

Export Bulls.—Choice, heavy bulls sold at \$5.25 to \$6 per cwt.; light export bulls at \$4.50 to \$5.

Export Cows.—Export cows sold at \$4.85 to \$5.75.

Butchers' Cattle.—Choice picked lots of butchers' cattle, 1,100 to 1,150 lbs. each, are being used for export purposes, and are worth from \$5.85 to \$6.12½ per cwt.; picked lots of butchers', 1,000 to 1,050 lbs. each, steers and heifers, sold at \$5.35 to \$5.60; loads of good butchers' sold at \$5.25 to \$5.40; loads of medium butchers' sold at \$4.75 to \$5.20 per cwt.; common butchers' cows at \$3.25 to \$4.25. The above quotations are for stall-fed or meal-fed cattle while on grass.

Feeders.—Few heavy feeders are offered, but those offered are quickly bought up at \$4.75 to \$5 per cwt.

Light Feeders.—Light feeders, weighing from 900 to 1,000 lbs. each, are selling at \$4.25 to \$4.50 per cwt.

Stockers.—There are few stockers of good quality, and they are worth all the way from \$3 for common and \$3.75 to \$4.25 for thrifty young steers.

Milch Cows.—Milch cows and springers sell all the way from \$30 to \$50 each, while a few very choice bring \$55, and even \$60 is sometimes reached.

Calves.—Calves for veal purposes sell at \$4 to \$4.75 per cwt.

Sheep.—Export sheep, owing to English markets being easier, sold at \$3.50 to \$4 per cwt. for ewes, and \$2.75 to \$3 per cwt. for bucks.

Lambs.—Spring lambs sold at \$2.50 to \$4 each.

Hogs.—Prices remain steady, at \$6.87½ per cwt. for selects, and \$6.62½ for lights and fats; sows, \$5 to \$5.50, and stags at \$3.

Crawford & Co. sold two loads of exporters, forty in all, at \$7 per cwt., less \$30 on the lot.

Whaley & McDonald, commission salesmen, sold 10 loads of cattle, at \$4.50 to \$5.50 for butchers' and \$6.80 for exporters.

Zeagman & Sons bought 60 stockers, 400 to 850 lbs. each, at \$3.25 to \$3.85 per cwt.; and 8 feeders, 1,000 lbs. each, at \$4.60.

Coughlin Bros. bought seven loads of exporters, at \$6.50 to \$6.75 per cwt.

	Extreme comparative prices to-day, June 25th.	Two weeks ago.	Same date last year.
Export cattle.....	\$ 7 00	\$ 6 65	\$ 5 40
Butchers' cattle.....	5 75	5 75	5 00
Export bulls.....	6 00	5 75	4 50
Feeders.....	5 00	4 80	4 75
Stockers.....	4 00	4 00	3 50
Sheep (per cwt.).....	4 00	4 25	3 75
Lambs (each).....	4 00	4 50	4 00
Hogs.....	6 87½	6 87½	5 00
Milch cows.....	55 00	55 00	52 00

GRAIN AND PRODUCE.

Wheat.—One hundred bushels of white sold at 78c. to 80c.; 100 bushels of red at 78c. to 80c.; 100 bushels of goose at 69½c.

Barley.—One hundred bushels sold at 52c. to 52½c.

Oats.—One thousand bushels sold at 48c. to 50c.

Hay.—Twenty-five loads sold at \$10 to \$12 per ton for timothy and \$8 to \$9 per ton for clover.

Straw.—Two loads sold at \$8 per ton for sheaf.

Dressed hogs.—Prices easier, at \$8.75 to \$9 cwt.

\$8 Beef.

Not since the cattle famine year of 1882 have such high prices been paid for cattle as the above sum, which was realized for a bunch of twenty-two high-grade Shorthorns sold on the Chicago market, Wednesday, June 11th.

Buffalo Markets.

East Buffalo, June 27.—Cattle—Slow; veals steady; tops, \$6.50 to \$6.75; fair to good, \$6 to \$6.25; common to light, \$5 to \$6. Hogs—Heavy, \$7.80 to \$7.90; mixed, \$7.70 to \$7.80; Yorkers, \$7.50 to \$7.60; light Yorkers, \$7.35 to \$7.45; pigs, \$7.30; roughs, \$7 to \$7.25; stags, \$5.75 to \$6.25. Sheep and lambs—Spring lambs, \$6.50 to \$7; fair to good, \$5.75 to \$6.25; culls to common, \$4 to \$5; yearlings, \$4.50 to \$5; sheep, top, mixed, \$4 to \$4.25; fair to good, \$3.60 to \$3.90; culls to common, \$2.25 to \$3.50; ewes, \$3.25 to \$3.95.

Chicago Markets.

Chicago, June 27.—Cattle—Good to prime steers, nominal, at \$7.60 to \$8.40; poor to medium, \$4.75 to \$7.50; stockers and feeders, \$2.50 to \$5.25; bulls, \$2.25 to \$5.75; calves, \$2.50 to \$6.50; Texas-fed steers, \$4 to \$7. Hogs—Mixed and butchers', \$7.25 to \$7.70; good to choice heavy, \$7.70 to \$7.85; rough heavy, \$7.30 to \$7.60; light, \$7.25 to \$7.40; bulk of sales, \$7.30 to \$7.70. Sheep—Good to choice wethers, \$3.75 to \$4; western sheep, \$2.75 to \$4; native lambs, clipped, \$4 to \$6.50.



"Small service is true service while it lasts;
Of friends, however humble, scorn not one;
The daisy by the shadow that it casts
Protects the ling'ring dewdrop from the sun."

"This House To Let."

"Yes," said old Mrs. Pounce, nodding her orange-colored cap-strings, "they put me in—the House Agency did—to take care of the house, with a bright-painted TO LET stuck up in front of the area windows, and coal and house rent free. Which I don't deny, my dear, is an object to a lone female like me, with neither chick nor child and my own way to make in the world, with fine laundressing out of the question with rheumatism in the finger joints."

"You seem like a respectable person, Mrs. Pounce, that has seen better days," was what the house agent said, when he handed over the keys, "and," says he, "I think we may trust you to take good care of our doorsteps and windows, show applicants over the house and answer all questions."

"You may say so, sir," says I with a courtesy; "there's many houses I've had charge of and never a fault has been found yet. And this sha'n't be the first one," says I.

"We've a large business," says Mr. Eagle, "and if you give satisfaction, Mrs. Pounce," says he, as civil spoken as possible, "it's likely you'll never be without a roof to your head!"

Well, my dear, of all nice houses—and I've seen a many in my day—this was the nicest. Brown stone front, with a bay-window and smug garden planted all in box-borders, hot and cold water all through, a little conservatory with an arched glass roof at the rear, and the hall floor covered with real Minton tiles, as made you think you was walking on pictures; walls painted with Cupids and Venuses and garlands of flowers, and dadoes of hardwood all throughout. Neighborhood most desirable; drainage and sewerage perfect, and churches conveniently near. Excuse me, my dear, if it sounds like an advertisement, but Mr. Eagle, the agent, wrote it down for me, and I never rested until I'd committed it all to memory, so I could speak it off, easy like, without any stops or hitches. And this I will say, as can't be said of all advertisements, there wasn't a word in the agent's description but what the house bore out!

And the board hadn't been up twenty-four hours before there was a rush to look at the house. Young married couples as wanted to give up apartments; old married folks as wasn't suited with their location; boarding-house keepers as made believe they was private families; and private families as wanted to take a few select boarders. But the rent was put up tolerably high and most of 'em dropped off after I'd named the sum.

"Never mind, Mrs. Pounce—never mind," says Mr. Eagle, rubbing his hands. "It's a house that there'll be no difficulty in letting without any reduction of rent. Just wait," says he, "until the spring sets in."

But one day in trots an old gentleman with gold spectacles and a smooth-shaven face, and "business" writ in every wrinkle of his forehead.

"This house to let, ma'am?" says he.

"Yes, sir," says I.

"Can I look at it?" says he.

"Certainly, sir," says I. I began, as smooth as oil, about the hot and cold water, the marble-floored bath-room, and the Minton tiles, when, all of a sudden, he put up two hands in a warning sort of way.

"That'll do, ma'am," says he, "that'll do. I've eyes and I can see for myself."

"Certainly, sir," says I; but I won't deny as I was took aback by that queer dictatorial way of his.

"Any ghosts about the place, ma'am?" says he.

"Sir?" says I.

"Ghosts," says he, out loud and sharp. "Mysterious footsteps—lurking shadows—clanking chains at midnight?"

"Mercy! no, sir," says I, beginning to feel my flesh creep all over.

"Rats?" says he.

"Certainly not," says I, "with solid cemented cellar floor and sealed boards."

"Beetles?" says he.

"Look for yourself, sir," says I, bridling up a little.

"I like the house," says he, after he had gone sniffing about the drain pipes and peered into the coal cellar and wine vault and sounded the copper boiler with his knuckles, just for all the world as if he was in the plumbing business. "You may tell the agent I'll take it, if he and I can come to terms about the rent. When shall you see him?"

"Most likely this afternoon, sir," says I.

"I'll drop in at his office to-morrow, at nine," says he. "I'm going to be married," says he, as composed as if he were saying that he was going to take a blue-pill. "And the house will suit my wife's ideas. She thinks we're going to board," says he,

with an odd sort of chuckle in his throat, "and she's not a bit pleased with the idea. It'll be a pleasant surprise for her," says he.

Well, no sooner had he gone than in comes a stout, middle-aged lady, in a black silk dress, rows of curls on either side of her face, and cheeks as red as any cabbage rose.

"I've just come from Mr. Eagle's office," says she. "He has given me the refusal of this house, in case it suits me."

"I don't know, ma'am," says I, "but what it's let already."

"Let already?" says she, with a sort of scream. "But that's impossible! Don't I tell you I've the refusal of it? Show me the premises at once."

Well, I was in a pretty puzzle, as you may believe; but I went all over the house with the curly lady and she declared it met her fancy exactly.

"Possession on the first of May, I suppose?" says she.

"Yes, ma'am," says I, "if—"

"There's no 'if' in the question," says she, as short as piecrust. "You may take down the 'To Let,' my good woman."

I courtesies very low, but I says to myself: "Not if I know it, ma'am, without orders from the agent himself."

Away went the lady with the curly hair and the rose-red cheeks, and I was just putting on my hat to run round to the house agency when in comes Mr. Eagle himself, all smiles.

"Well, Mrs. Pounce," said he, "so the house is let?"

"To my thinking, sir," said I, "it's let twice over."

And I up and told him about my old gentleman.

"Dear me," says he, "this is very perplexing. At what time was this personage here?"

"The clock struck twelve, sir," says I, "just as he went away."

Mr. Eagle hit himself a blow over the forehead like a play-actor.

"Confusion worse confounded!" says he. "It was twelve, precisely, when my customer left the office. We can't split the house in two, can we?"

"Well, we must tell your old gentleman just how it happened. I daresay he'll be reasonable about it."

But he wasn't reasonable, Mr. Eagle told me afterwards; he never saw anyone in such a rage.

"I've taken the house," says he, "and I'll have it, cost what it may. Do you say that the rent is two hundred pounds? I'll give you two hundred and fifty down; if my claim and that of this lady are equally good, the question of price must settle it."

Well, we supposed—me and Mr. Eagle—as that was the end of the matter. But not a bit of it. The lady came that same afternoon with an upholsterer and a tape measure to see about the carpets.

"Two hundred and fifty pounds, indeed!" says she, with a toss of her curls. "It will take more than a paltry two hundred and fifty pounds to unsettle my plans. I'll give three hundred sooner than lose the house!"

When my old gentleman hears this he grinds his teeth in a manner as was fearful to hear.

"It's my house," says he, "and I will have it! Three hundred and fifty pounds, Eagle!"

"Come," says Mr. Eagle, "matters are getting lively. Real estate is looking up in the market," says he.

But you should have heard what a whistle he gave when I told him, the very next day, that the curly lady had authorized me to offer four hundred.

"I'll not stand this any longer," says Mr. Eagle, jumping up and sending the papers flying all over the office table. "I've a conscience, if Fate has made a real estate agent of me. Tell her to come round this afternoon and sign the lease. Four hundred pounds is twice what we asked, and we asked all the property was worth to begin with."

So the curly lady had her own way, after all. The bald-headed old gentleman stamped about in a pretty rage when he heard as the house was let.

"I'll sue the agency," says he. "I'll have the house if it costs me all I'm worth!"

"Oh, hush, sir, hush!" says I, all in a tremble. "Here comes Miss Wix now!"

"Who?" says he.

"Miss Wix," says I. "The lady as has taken the house!"

And I got behind the door, fully expecting a scene after all that had come and gone. But to my surprise, she gave a little shriek and flew into his arms.

"Dear Josiah!" says she.

"Dearest Barbara!" says he.

"How on earth came you here?" says she.

"I was looking for a desirable residence for you, my own angel," says he.

"You duck!" says she.

"And I thought this would exactly suit you," says he.

"Oh!" says she, "it does. And I've taken it at four hundred pounds a year. It seems a good deal of money to pay, but I've been driven to it by a horrid old cormorant who was determined to have the house at any price! However—"

"Barbara," says the old gentleman with a little gasping sound in his throat, as if he was swallowing a lump, "that cormorant was I!"

"You don't mean—" says she.

"That we've been bidding against each other," says the old gentleman. "Yes, we have."

"And I was going to give you a pleasant surprise," says she, pulling out her pocket handkerchief.

"It is a surprise," says he. "But as for the pleasure of it—never mind, Barbara. Let's go in and measure for the carpets and curtains. Let bygones be bygones—but the next time we drive a bargain perhaps it might be as well to confide in each other. Two hundred pounds a year—on a five years' lease—is almost too much to pay for a pleasant surprise!"

"So that settled the matter, my dear," said old Mrs. Pounce. "They were married in a month, and they came there to live. And of all my experience in house-letting this beat everything—and so everybody says, my dear, as hears the story,"—[G. Layman, in Tit-Bits.

The Music He Liked.

"I always thought I was fond of music," said Farmer Greene, "but since I visited Matilda in Boston I've had my doubts about it. I hadn't been there a day before Matilda, she says to me, 'Now, father, we're going to have a musical, and I do hope you'll enjoy it!'"

"Of course I shall," says I. "You know how fond I am of them famous old Scotch songs you used to sing, and how I'm always ready to jine in when anybody strikes up 'Coronation.'"

"Well, this will be the best music you ever listened to," says Matilda, and my mouth watered to hear it.

"The night of the concert you ought to have seen the folks pour in, all silks and satins and flowers. Matilda wore, well, I don't rightly know what, but I think 'twas silk and lace. Pretty soon we all got quieted down, and then a German, with long hair and a great bushy beard, sat down to the piano and began to play. My, how he did bang them keys! There was thunder down in the bass, and tinklin' cymbals up in the treble."

"The lady that sat side of me whispered, when there was a minute's stop, 'Do you distinguish the different motives?'"

"My, no!" says I. "I don't see what anybody's motive could be for workin' so hard to make a noise."

"Then she smiled behind her fan, but I don't know what at, whether 'twas music or me."

"When the piece stopped everybody hummed and whispered to each other how lovely 'twas, and a good many told the German how much obliged they were. I didn't say a word."

"Then a tall woman, all fixed up with silks and furbelows, sang a piece that almost made my hair stand on end, it went so high, and had so many ups and downs in it. She was master smart; anybody could see that, but somehow I didn't fancy that kind of singin'."

It made me uneasy. When she was climbin' up to her high notes, I wondered if she'd ever got there; and when she dropped down again, I wanted to say: 'Now you've got through it safe once, don't try it again!'"

"Well, pretty soon Matilda came round to me and whispered, 'Father, how d'you like it?'"

"I don't care much for it," says I. "It's a little too much like frosted cake when you want plain bread."

"She laughed, and in a minute I heard her sayin' to one of the performers, 'My father's a little old-fashioned, you see, and would you mind?'"

"What do you suppose happened then? Why, that woman that sung the trills and warbles stood up, and, without any piano playin' at all, sung 'Ye Banks and Braes,' and 'John Anderson.' How she knew what I liked, I never could tell, but she sang the songs I've loved since I was a boy, and when she got through the tears were streamin' down my cheeks."

"Bless you, my dear!" says I, and I went up to her and shook both her hands. And it seemed to me she liked the songs herself, for when she looked at me her eyes were wet, too.

"I had a beautiful time, but I suppose it's no use thinkin' I appreciate real music."

The Old, Old Story.

I chose him out from all the rest—
My Tom—he had three lovely brothers;
But—well—he seemed to like me best
Of all the girls. Oh, there were others
That wanted him, but, somehow, he,
Right from the first, kept after me.

He was so splendid! Big and kind
And calm, and full of mischief very.
A romp seemed always to his mind,
While I was rather prim than merry.
Yet, when he was my own, I felt
How fond a lover near me dwelt.

Alas! There came a time of change;
He cared no more for home nor quiet.
His moods were reckless, wild and strange;
Night after night he spent in riot,
Returning when the dawnlight came,
Quite heedless of reproach or blame.

And so it went, till months were past.
I was too proud to bang or beat him,
Or pull his whiskers—yet, at last,
He left me. Now I sometimes meet him;
He has grown ugly, old and fat—
My handsome Maltese Thomas cat.

Ingle Nook Chats.

My dear Guests,—

"Many of us walk through the world like ghosts, as if we were in it, but not of it. We have eyes and see not, ears and hear not." . . . To be able to see what we do see is a great gift. Ruskin maintains that "The greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way." I do not suppose that his eyes were better than ours, but how much more he sees with them."—Sir John Lubbock.

To what a great number may these lines be applied! How few there are that really see the manifold beauties that surround them! How many, among the wealthy, travel from city to city to gaze on and rave over (the latter they must do to prove their artistic taste) the creations of the great artists, which are, after all, mere imitations, and shut their eyes to the loveliness that lies all about them!

"In her own home, the country," says Jerome K. Jerome, "Nature is sweet in all her moods," but surely at this season she has reached the zenith of her beauty. The meadows and grain-fields sway in the breeze like oceans of emerald, forming wavy undulations where "dark hollows seem to glide along and chase the sunny ridges." The ever-thickening canopy of the woods shades the frail ferns from the too-fervent sun-rays; along the lanes the thrifty anemone spreads her snowy blossoms, while soft-eyed daisies and dazzling buttercups brighten our every pathway. The air is redolent of the breath of roses, for is not this their very own month? Sunrise and sunset vie with each other in charming the eyes of those who can see, and even when the glory of the dying day is past, new beauties are born as the "orb'd maiden with white fire laden whom mortals call the moon" rises majestically behind the horizon. One cannot gaze on those wonders without being almost insensibly drawn to the contemplation of their Creator, or, as one of the Ingle Nook boys expresses it:

"I think how wonderful God must be,
To make all the beautiful things we see."

My pen lacks Ruskin's ability to tell what I see—also, it would take too much time and space to do so—so I shall leave my Guests to visit Nature's art gallery for themselves, and trust that each will come thence enriched with numerous treasures.

My dear Mrs. H—, it is very kind of you to take so active an interest in the Nook. Parents can do so much to stimulate or retard, as the case may be, the ambitions of their children, according as they encourage them by well-timed interest in their efforts,

or depress them by their lack of it, or, worse still, disparage their attempts. You are not the only mother among our Guests, nor need I mention that all such are specially welcome; so come again, and often.

The names of George Matheson and Arthur Burr were accidentally omitted from the list of contributors to the poetry contest.

OUR COMPETITIONS.

I have heard from but few of my Guests for Contest XX—"The Wild Flowers of our Province." Surely these darlings of the different parts of our Dominion can find some lover to sing their praises. I have hoped for an excellent showing this time, but there is nearly a month yet, so I shall await results, and in the meantime announce

CONTEST XXI.

Three prizes will be given for the most correct list of the authors of the following quotations, and the works in which they occur. Four marks will be allowed for each, viz., two for the author's name and two for the work. Contestants making highest marks will receive the prizes. In case of a tie, neatness, etc., will decide the winner. Address all work to "The Hostess," Ingle Nook Chats, Pakenham. Contest closes August 20th.

1. "The proper study of mankind is man."
2. "The age of chivalry is past."
3. "Not to fear because all is taken
Is the loneliest depth of human pain."
4. "I pass like night from land to land."
5. "True worth is in being, not seeming."
6. "Pleasures are like poppies spread,
You see the flower, its bloom is shed;
Or like the snowflake on the river,
A moment seem—then melts forever."
7. "God tempers the wind to the shorn lamb."
8. "A thing of beauty is a joy forever."
9. "There are moments when silence serene and
unbroken
More expressive may be than words which are
spoken."
10. "The last flower, with a brimming cup, may
stand
And share its dewdrop with another near."
11. "While Valour's haughty champions wait
Till all their scars are shown,
Love walks unchallenged through the gate
To sit beside the Throne."
12. "The world is no longer a mere dingy workshop,
but a stately temple wherein man may worship,
and where, at times, in the dimness, his groping
hands touch God's."

13. "Modesty seldom resides in a breast that is not
enriched with nobler virtues."

14. "Men whose lives glided on like rivers that water
the woodland,
Darkened by shadows of earth, but reflecting
the image of heaven."

15. "Tis better to have loved and lost,
Than never to have loved at all."

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

The Old Abbey.

Here, in the gloom it stands, 'mid oak and linden,
And shivering aspens tall.
Here where the thrush and merry bluebird
To their mates sweetly call.

O'er these gray walls of antique Norman structure,
The dark green ivy creeps.
Onward it climbs, and upward where the belfry
Its lonely vigil keeps.

Weird, awesome whisp'rings float thro' all the tree-
tops;

Yet deep, unbroken peace
Seems to have found a home amongst the elms
Whose rustlings never cease.

Mayhap some maid with hair of Saxon fairness
Passed o'er this threshold wide,
And when again her light feet pressed the green-
sward

She was a happy bride.

The mournful music of some deep-toned organ
Seems to fall on the stilly air;
Breathing, in accents soft, subdued, and solemn,
The low, sweet notes of prayer.

Up those long, shadowy aisles come ghostly footsteps,
Phantom forms pass swiftly by.
On, and still on, they tread, but 'neath the altar
The fright and echoes die.

A lonely owl perched high 'mid silken cobwebs,
Disturbs my reverie,
With a low hoot, and in the deep'ning shadows
All my weird fancies flee."

AGNES D. C. HISEY.

(For the Ingle Nook.)

"Young Mr. Dingle tells me that he is extremely fond of the poetry of Sir Walter Scott," remarked Wintergreen to Teaterhook. "Yes, I know; but he carries his fondness too far," replied the latter. "In what way?" "Well, he's a chicken fancier, as perhaps you know." "Well?" "And he has named his best egg-producer the 'Last Minstrel.'" "Queer name for a hen." "I should articulate! But that's Dingle exactly. Gave his hen that name so that he could have the lay of the Last Minstrel every morning for breakfast."—Pittsburg Commercial Gazette.



(G. Barison.)

"FLIRTATION."

Sofa Pillows.

I.

I intend to be practical this time. I shall make a desperate attempt not to indulge in any flights of fancy or redundant metaphors, but just have a plain, straightforward chat about those comfortable and comforting peace-promoters—sofa pillows.

We need them at this time of year. Yes, but we do! When is a woman in more need of sofa pillows than after bending over the washtub on a sultry July morning, or straining her arms at baking or churning, or enduring those spirit-quenching headaches that are sure to come on the busiest and hottest summer days? It is then that we need the "after-dinner naps" and the sofa pillows, but I wonder how many of us indulge in such luxuries.

I don't mean the elegant "touch-me-not" creations, perched on the right-angled slippery sofa, or on one of the leaves of the clover-topped table. They are beautiful, of course, but what tired woman wants to rest her head on a bunch of hawthorn blossoms, or lean her cheek on a moss rose (even if they be only painted), or let her sunburned arms lie limp across a tracery of Battenburg lace arranged over shell-pink satin? Such pillows are without doubt dainty adjuncts to a dainty room, and perhaps I shall tell you some time how to make exquisite ones, but it is for the plain, unpretentious, everyday pillow that I plead to-day.

It is easily made: Just a bit of common ticking and a few feathers for the foundation, and for the cover something as pretty and pleasing as you like, but, if possible, washable. Art muslin is a very good material for such a purpose; it is inexpensive, and comes in pretty designs, and when finished with a wide, double frill makes an attractive as well as useful pillow. White organdie, decorated with some simple pattern in outline stitch, and made up over a delicate color, also makes a pillow that one needn't fight shy of. The various denims and linens are nice for covers, and art ticking is exquisite. A novel cover is made of two large red handkerchiefs in some odd design, knotted at the corners. Besides these, one can get covers to buy, for a trifle sometimes, stamped on various kinds of material, which with a little work will make a pillow that will go far towards wooing sleep.

It is a good plan to have a generous supply of such pillows on hand, and if there is a cool, secluded nook on the lawn or veranda, fasten up a hammock, and on these hot, sweltering days see that you make use of it, if it be only for fifteen minutes. Does the butter you have worked so hard to obtain float white and soft on the cold clear water? Does the meat boil dry on top of the stove, or the loaf-cake flatten in the oven? Do the men come in wanting an early dinner when the potatoes aren't peeled yet and the baby is cross? Is your beauty-loving soul wounded more deeply than your cherished flower-beds by those persistently aggravating chickens? Then is the time to "keep a watch on your words," and as soon as the dinner dishes are washed, or whenever you have a spare moment, drop down among the pillows in the hammock. Through the cool, whispering leaves above you, or the redolent balsam branches, you can see the blue sky, always serene and fair even when the clouds are heaviest. The perfumes from your remaining floral treasures steal up to you, and the robins will hop softly about you, and the butterflies will flutter and gleam out in the sunshine. When your eyelids droop slowly you will hear the monotonous tap of the woodpecker, and the drone of the humming-bird, and a little breeze will sway the hammock, and lo! you are aboard a yacht with the pure, dimpling lake all around you and the sea-gulls swooping and dipping between you and the purpling shore—O, I forgot about the "metaphors"! I must stop at once, or there is no knowing how long you may sleep; but when you waken you will feel ten years younger and brighter.

Next time we shall try to consider the "touch-me-nots."
CHRYSOLITE.

Humorous.

Two Irishmen were assisting to unload a ship lying in the harbor of G—, and at dinner-time, on going to make their tea, one of them cried to the other: "Pat, did you see me can?" "Ha, sure," replied the other, "MacCann's just gone round the corner." "Begorra, it's not MacCann; it's me tae can I'm after askin' for."

In the course of the terrible march of the Irish Fusiliers from Dundee to Ladysmith, the men were much fatigued, owing to the rough journey. One man in particular stumbled along as if walking in his sleep. An officer passed. "Sir," said Michael, "what country is this we're marching over?" "The Natal tableland, my man," was the reply. "Bedad, sir," said Michael, "I think the table's turned upside down, and we're walking over the legs of it!"

THE QUIET HOUR.

The Enthusiasm of Self-sacrifice.

"In full and glad surrender we give ourselves to Thee,
Thine utterly, and only, and evermore to be!
O, Son of God, who lovest us, we will be Thine alone,
And all we are, and all we have, shall henceforth be
Thine own!"

What is our business in this world, do you think? If we are truly trying to copy our Master, Christ, it must be our business to help others, at any cost to ourselves. The strong cord of love drew Him down from heaven to suffer with and for mankind, and many of His faithful servants have been irresistibly drawn to sacrifice ease and riches, rejoicing to spend and be spent for their poorer brethren.

He who would save his life must lose it, and he who lives selfishly, for himself only, is really losing the life he clings to. The whole world is preaching the necessity of self-sacrifice, voluntary or involuntary. The vegetable is sacrificed that the animal may live, animals again fall a sacrifice to other animals and man, then their turn comes to decay and spring up into new life by ministering to the wants of the vegetable kingdom, and so the circle of death and life begins again. Then, every seed that falls into the ground gains a fuller life through death; except it die it "abideth alone." Without sacrificing seed no one can get a harvest at all, and he that soweth bountifully has a right to look for a bountiful harvest, while he that soweth sparingly need not be surprised if he has a very scanty crop to reap. This principle holds good in the spiritual as well as in the natural field. Did you ever know a man to be happy if he made it his chief business in life to seek happiness for himself? Even the little child who always tries to secure the largest piece of cake or candy, or the most coveted position in the games, is pretty sure to be discontented and unhappy. He thinks it is because he doesn't always get exactly what he wants—and many older children make the same mistake—but the trouble really is that he has never learned the lesson of "doing without."

There is one great difference, however, between the sacrifice of seed grain and the sacrifice of one's self. The first is done deliberately, for the sake of the future harvest; while the second is worthless if it is done for the sake of reward. "If ye lend to them of whom ye hope to receive, what thank have ye? for sinners also lend to sinners, to receive as much again." The disciples had not yet caught their Master's spirit, when, after declaring the things they had given up for His sake, they asked, "What shall we have therefor?" The widow of Zarephath was surely not acting from interested motives when she shared her last morsel with a hungry stranger—although he did promise that she should lose nothing by her kindness. Yet that sublime act of self-sacrifice was the direct means of preserving her own and her son's life till the famine was over. But God does not always make such a return as this. Indulgent mothers only educate their children in selfishness when they reward them at once for every generous act. The children learn to expect it, feel injured if no notice is taken of their sacrifice, and entirely lose the pleasure of giving. David was certainly right when he declared that he would not give to his God a present which cost him nothing. When the poor children belonging to a Sunday-school in the slums of New York gave more than fifty dollars to the persecuted Armenians, it would have destroyed their pleasure if someone had at once handed back the coppers they gave so generously.

The son of an Irish clergyman once asked his father for money for a miserable, ragged child who was begging at the door. The father explained that he couldn't do anything, as he had already so many in his own parish to help. "However," he said, "if you like to go without your own dinner and give it to the child, you may." The boy did this and received, as he said himself, the best lesson about charity that he ever had in his life.

"Measure thy life by loss instead of gain;
Not by the wine drunk, but the wine poured forth!
For Love's strength standeth in Love's sacrifice;
And whose suffers most has most to give."

We can all admire that heroic Dr. Smyth who fought so gallantly against an outbreak of typhus fever in Donegal. He was both doctor and nurse to his sick neighbors, and even brought one family from their miserable hut, which had neither window nor fireplace, to the hospital. They lived on an island, and, as the panic-stricken islanders refused to lend a boat, the doctor bought one from them. Then he carried the dirty, ragged patients one by one in his arms, and laid them in it,

rowing them across to the mainland. The epidemic was checked, but only at the expense of the gallant doctor's own life.

We can all admire him, but the important question is, are we capable of imitating him by laying down our lives for others? It is easy to dream enthusiastic dreams about the glory of martyrdom, but our readiness for heroic self-sacrifice is always tested in the humdrum atmosphere of everyday duties. If we, in actual fact, refuse to sacrifice time, money, strength, or anything else we have to give—right here and now—then we are never likely to lay down our lives grandly in the dim future.

"Blessed are those who die for God,
And earn the martyr's crown of light—
Yet he who lives for God may be
A greater conqueror in His sight."

As Robertson says: "The most trifling act which is marked by usefulness to others is nobler in God's sight than the most brilliant accomplishment of genius. To teach a few Sunday-school children, week after week, commonplace, simple truths—persevering in spite of dullness and mean capacities—is a more glorious occupation than the highest meditations or creations of genius which edify or instruct only our own solitary soul."

"So he dies for his faith. That is fine—
More than most of us do.
But say, can you add to that line
That he lived for it too?"

"In his death he bore witness at last
As a martyr to truth.
Did his life do the same in the past
From the days of his youth?"

"It is easy to die. Men have died
For a wish or a whim—
From bravado or passion or pride.
Was it harder for him?"

"But to live—every day to live out
All the truth that he dreamt,
While his friends met his conduct with doubt,
And the world with contempt."

"Was it thus that he plodded ahead,
Never turning aside?
Then we'll talk of the life that he led,
Never mind how he died."

HOPE.

Peace!

"Peace!" is the word, to the war-swept belt,
That the galloping burghers bring.
"Peace!" is the cry in a tone heart-felt
From coster and peer and king.
"Peace!" is the chorus—a mighty voice
Upraised in a rapt refrain—
As nations, a world-wide throng, rejoice—
But the graves of the dead remain.

Cheers from a myriad bursting throats
Greeting the welcome news.
Songs in a flood of thankful notes,
Till even the stones entuse.
An end to the dread-pent day and night,
An end to the long, long strain,
An end to the battle and march and flight—
But the graves of the dead remain.

The rifle is mute on the bowlered top,
The evening lamplights glow;
The farmer thinks on a different crop
Than bullet and shell may sow.
Over the veldt, all silent, vast,
The vultures wheel in vain.
The banquet of war is done, at last—
But the graves of the dead remain.

Mothers there are who now may sleep,
Nor dream of a moaning boy;
Wives who out of their gladness weep;
Maidens who dance with joy.
But in many a homestead tears are hot,
And many an English lane,
Where born of the tidings peace comes not—
For the graves of the dead remain.

—Edwin L. Sabin, in Leslie's Weekly.

Out in the Fields.

The little cares that fretted me,
I lost them yesterday,
Among the fields above the sea,
Among the winds at play,
Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.

The foolish fears of what might pass,
I cast them all away
Among the clover scented grass,
Among the new mown hay,
Among the hushing of the corn,
Where drowsy poppies nod,
Where ill thoughts' die and good are born—
Out in the field with God!

—St. Paul's.

THE CHILDREN'S CORNER.

Four Little Kittens.

Four little kittens, so downy and soft,
Were cuddled up by the fire,
And two little children were sleeping aloft,
As cosy as heart could desire;
Dreaming of something ever so nice,
Dolls and sugar-plums, rats and mice.

The night wore on, and the mistress said,
"I'm sleepy, I must confess,
And as kitties and babies are safe in bed,
I'll go to bed, too, I guess."
She went upstairs, just a story higher,
While the kittens slept by the kitchen fire.
"What noise can that be?" the mistress said,
"Meow! meow!" "I'm afraid
A poor kitty cat's fallen out of bed!
The nice little nest I made!"
"Meow! meow!" "Dear me! dear me!
I wonder what can the matter be!"

The mistress paused on an upper stair,
For, what did she see below?
But four little kittens, with frightened air,
Standing up in a row!
With eight little paws on the step above,
And no mother cat to caress or love!
Through the kitchen door came a cloud of smoke!
The mistress, in great alarm,
To a sense of danger straightway awoke:
Her babies might come to harm.
On the kitchen hearth, to her great amaze,
Was a basket of shavings beginning to blaze.

Four little kittens were hugged and kissed,
And promised many a mouse;
While their names were put upon honor's list,
For hadn't they saved a house?
And two little children were gathered tight
To their mother's heart ere she slept that night.



FOUR LITTLE KITTENS.

Stood by His Flag.

A writer in the Youth's Companion tells this story of a true Christian Hero:

A dozen rough but brave soldiers were playing cards one night in the camp. "What on earth is that?" suddenly exclaimed the ringleader, stopping in the midst of the game to listen.

In a moment the squad were listening to a low, solemn voice which came from a tent occupied by several recruits who had arrived in camp that day. The ringleader approached the tent on tiptoe. "Boys, he's a-praying, or I'm a sinner!" he roared out.

"Three cheers for the parson!" shouted another man of the group as the prayer ended.

"You watch things! I'll show you how to take the religion out of him!" said the first speaker, laughing. He was a large man, the ringleader in mischief.

The recruit was a slight, pale-faced young fellow of about eighteen years of age. During the next three weeks he was the butt of the camp. Then several of the boys, conquered by the lad's gentle patience and uniform kindness to his persecutors, begged the others to stop annoying him.

"Oh, the little ranter is no better than the rest of us," answered the big ringleader. "He's only making-believe pious. When we get under fire you'll see him run. Those pious folks don't like the smell of gunpowder. I've no faith in their religion!"

In a few weeks the regiment broke camp, and entered the Wilderness, and engaged in that terrible battle. The company to which the young recruit belonged had a desperate struggle. The brigade was driven back, and when the line re-formed behind the breastworks they had built in the morning, he was missing.

When last seen he was almost surrounded by enemies, but fighting desperately. At his side stood the brave fellow who had made the poor

lad a constant object of ridicule. Both were given up as lost.

Suddenly the big man was seen tramping through the underbrush, bearing the dead body of the recruit. Reverently he laid the corpse down, saying, as he wiped the blood from his own face: "Boys, I couldn't leave him—he fought so! I thought he deserved a decent burial."

During a lull in the battle the men dug a shallow grave and tenderly laid the remains therein. Then, as one was cutting the name and regiment upon a board, the big man said with a husky voice:

"I guess you'd better put the words 'Christian Soldier' in somewhere! He deserves the title, and may be it'll console him for our abuse."

There was not a dry eye among those rough men, as they stuck the rudely-carved board at the head of the grave, and again and again looked at the inscription.

"Well," said one, "he was a Christian soldier, if ever there was one! And," turning to the ringleader, "he didn't run, did he, when he smelt gunpowder?"

"Run!" answered the big man, his voice tender with emotion; "Why, he didn't budge an inch! But what's that to standing for weeks our fire like a man, and never sending a word back? He just stood by his flag and let us pepper him—he did!" When the regiment marched away, that rude headboard remained to tell what a power lies in a Christian life.

Recipes.

ESCALLOPED EGGS.

For this, take six eggs, five spoonfuls of minced ham, a little chopped parsley, a very little minced onion, three spoonfuls cream and one of melted butter; season to taste; one-fourth cupful

bread crumbs moistened with milk and a spoonful of melted butter. Line the bottom of a small, deep dish, well buttered, with soaked bread crumbs; put upon them a layer of chopped ham, with the onion and parsley. Set in the oven covered until smoking hot. Beat the eggs to a stiff froth; stir in the cream and a spoonful of melted butter; pour upon the ham; put the dish, uncovered, back into the oven, and bake until the eggs are "set."

SALMON SCALLOP.

For this, take one can salmon, one cupful of cream, one-half cupful of milk, two small tea-spoonfuls of flour, rubbed smooth; one tablespoonful of butter and a pinch of soda; pepper and salt to taste. Turn the salmon from the can into a collander, so as to drain, and pick the fish into small flakes with a fork, removing all bone and skin. Have ready the milk and cream heated in a double boiler with the soda, and add to them the butter and flour, stirring constantly until they thicken smoothly. Put in the salmon and toss about with a fork until heated through. Remove from the fire and fill greased scollop shells or pattypans with the mixture. Sprinkle crumbs there, and set it in the oven long enough to brown over the top of each, stick bits of butter here and there, and set it in the oven long enough to brown lightly. Serve with crackers or sliced lemon.

LAMB SCALLOP.

One cupful cold lamb, chopped fine, one and one-half cupfuls stewed tomatoes, one cupful fine bread crumbs. Arrange all in layers in a buttered dish, having crumbs at the top. Place butter between each layer. Season with pepper and salt.

ESCALLOPED ONIONS AND POTATOES.

Into a buttered dish put a layer of sliced raw potatoes, next a layer of sliced raw onions; season with salt and a little white pepper; repeat the process; the last layer should be potato. Pour over the top a pint of milk thickened with a little flour. Bake about an hour.

VEAL SCALLOP.

Cut veal from the leg or other lean part into pieces the size of an oyster; have a seasoning of salt, pepper and a little mace; rub some over each piece; dip in well-beaten egg and then into cracker crumbs, and fry as you do oysters.—E. C. Petty.

Belinda's Garden.

Belinda had a garden fair,
Laid out to suit her fancy,
With magic blossoms blooming there—
The strangest necromancy.

The largest flowers were, of course, in beds;
In cradles were the smallest;
The larkspur had the highest heads,
Because they were the tallest.

And all the larks that on them grew
Kept up a wondrous singing;
The trumpet-vine its trumpets blew,
The bluebells kept a-ringing.

In perfect time the four-o'locks
Held up their open faces,
And on the heads of brilliant cocks
The cockscomb bloomed in spaces.

To take her tea, Belinda sat
Upon a satin pillow,
Where here and there a pussy-cat
Grew on a pussy-willow.

Gay slippers on her feet were worn,
The lady's-slipper bore them;
The corn-flower yielded ears of corn
So large she had to store them.

To give her butter, fresh as dew,
The buttercups were handy,
And on the candytuft there grew
The best of sugar candy.

The honeysuckle on the spot
Supplied her well with honey,
Now, with such flowers as these, was not
Belinda's garden funny?

—Selected.

Some Sick-room Jest.

It has often been remarked how jesting words have been spoken upon the most unexpected and apparently inappropriate occasions. "Here I lie, dying of a hundred good symptoms," was Pope's half-bitter jest to a friend who visited him during his last illness. Was it not Sheridan who described himself, after recovering from a dangerous illness, as having "made a run-away knock at death's door"? The condition of his own health, particularly his digestive organs, was (to himself) far too awful and solemn a subject for Carlyle to jest upon, and we may search in vain amid the utterances of the Sage of Chelsea for any light or irreverent allusions to his own ailments, real or imaginary. But Mrs. Carlyle (who subsequent events proved was, if not the greater invalid, at least the shorter-lived of the pair) often joked about her own illness, and even about the more sacred sufferings of her husband, to her own friends and correspondents. Dean Ramsay tells of an old Scotch lady who on her death-bed overheard one of the attendants whisper, "She is going fast; her face is growing like a sheet of paper." "It maun be broon (brown) paper then," murmured the dying woman, who was of a very sallow complexion. An old Scotch woman, who was extremely stout, and afflicted with many ailments, once remarked to a friend, "I think there's o'er muckle o' me to be a' weel at the same time." But fat persons are proverbial for their good-natured endurance of their "burthen of flesh," which is, in its way, a form of disease. After all, it is pleasanter for their companions when invalids can take a cheerful view of their own complaints instead of incessantly lamenting over them. Doctors have encountered many a witty retort from their patients. A young physician, called in to attend on an old lady suffering from a sore throat, remarked that he himself had once been similarly afflicted, but had cured himself by growing a beard. "I dinna see how I can adopt that cure," remarked the old lady, drily. Equally ready was the venerable dame who, when her medical attendant reminded her that he could not make her young again, retorted with dignity, "Did I ever ask you to do so? I only want you to enable me to go on growing old."

One day, before the late Lord Russell was elevated to the bench, he was sitting in court, when another barrister, leaning across the benches during the hearing of a trial, for bigamy, whispered: "Russell, what's the extreme penalty for bigamy?" "Two mothers-in-law," instantly replied Russell.

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The Originator and the Original

THOM'S BLOWER ELEVATOR SILO FILLER.

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

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



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

Bicycles Below Cost

5000 Bicycles, overstock. For 30 days only we will sacrifice at less than actual cost.
New 1902 Models.
"Bellise," complete \$8.75
"Gossack," High Grade \$9.75
"Siberian," a Beauty \$10.75
"Hendert," Road Race, \$11.75
No finer bicycle at any price.
Choice of M. & W. or Record tires and best equipment on all our bicycles. Strongest guarantee.
We SHIP ON APPROVAL C.O.D. to anyone without a cent deposit and allow 10 DAYS FREE TRIAL before purchase is binding.
500 good 2nd-hand wheels \$3 to \$8.
Do not buy a bicycle until you have written for our free catalogues with large photographic engravings and full descriptions.
MEAD CYCLES CO., Dept. 360 R Chicago.

GOSSIP.
Messrs. A. J. C. Shaw & Sons, Thamesville, Ont., breeders of Shorthorn cattle, have recently added to their herd the roan three-year-old Scotch-bred cow, Mina 5th, by Landlord 23903, by Imp. Sittyton Stamp, a Cruickshank Secret; also as a sire to be used in the herd, the excellent young bull, Scottish Bowman, sired by Scottish Archer 25646, by the Missie bull, Imp. Scottish Pride 20839, and out of the Scotch-bred Wimple's Lass, of the favorite Kinellar Wimple tribe. The dam of Scottish Archer is a Kinellar Claret.

AUCTION SALE OF PURE-BRED SHORTHORNS.

I will sell by public auction, at the Davis homestead, adjoining Tempo, on

Wednesday, July 16th:

- 7 cows,
- 4 heifers,
- 2 heifer calves,
- 1 7-months bull calf, and
- 1 2-year-old bull,

comprising Roan Duchess, Royal Duchess and Filigree tribes.
Terms.—Twelve months' credit on approved paper, or 5% per annum off for cash. Teams will meet Glanworth noon train. Lunch at 2 o'clock.

CAPT. T. E. ROBSON, J. F. DAVIS,
AUCTIONEERS, Tempo, Ont.

Catalogues on application.

Note the advertisement of auction sale of Shorthorn cattle, on July 16th, property of J. F. Davis, Tempo, Ont., near Glanworth Station, 8 miles from London and 7 miles from St. Thomas.

NOTICE.
HELP IN THE HAYFIELD AND HARVEST.—The scarcity of labor throughout Canada this season, coupled with the general progress of agriculture, has stimulated the demand for improved labor-saving machinery, particularly in haying and harvest. The hay-loader is an implement which is rapidly coming into vogue. Pitching hay from the windrow onto the load is one of the heaviest and most tedious operations if done by hand, with which, fortunately, the loader attached to the rear of the wagon entirely dispenses. The horses in drawing the wagon elevate the hay. Not only is a lot of heavy labor saved, but the work is done much more rapidly. The loader is not only useful in haying, but in loading grain-field rakings, millet, Hungarian grass and other crops of that sort. David Maxwell & Son, of St. Mary's, Ont., who have been making a specialty of this class of machinery, as well as of binders, mowers, etc., make an announcement in this issue of the "Farmer's Advocate" regarding the excellent loader which they are sending out. Readers would do well to secure one of these labor-saving appliances either from the firm direct or one of their representatives throughout the country. Judging from the extraordinary demand for tedders, rakes, etc., those who desire to secure a loader for this season should lose no time in doing so.

GOSSIP. THE HAMILTON SHORTHORN SALE.

The combination sale, announced in a half-page advertisement in this issue, of selected Shorthorns from seven high-class herds, to take place in the new sale pavilion of the Hamilton Stock Yards Company, on August 13th, will afford Canadian farmers and breeders the best opportunity ever offered in this country to secure foundation stock for the establishment of herds or fresh blood to replenish and build up herds that have been depleted by the great demand for good cattle in the last few years, and which promises to continue. So great has been this demand that prominent breeders have been unable to meet it from their own herds even by importing large numbers. The supply and price of desirable cattle in the Old Country has become so scarce and high that that source cannot be drawn upon as formerly, and the result is that the leading breeders in this country have to look to the herds of the smaller breeders for suitable animals to supplement their own in filling their orders, and it is well known that in this way they have largely helped the latter to find a better market for their cattle than they could otherwise do. If there were more good cattle of desirable type and breeding distributed throughout the country, this patronage could be immensely expanded, to the mutual advantage of the large and the smaller breeders, and to the detriment of no one. The difficulty of securing a sufficient supply of suitable animals has been one of the principal drawbacks in the expansion of the business, and for the encouragement of those who have small herds and comparatively unknown to fame, though as well-bred as the best, it is encouraging to know that from such herds young animals have been drawn that have sold at auction for higher prices than many of the imported animals in the same sales, as why should they not, if they are better individuals and as well bred. It makes a wide difference, however, even in pure-bred herds in finding purchasers at good paying prices, whether the stock is of approved and up-to-date type and breeding or not, and the aim and hope of the promoters of the Hamilton sale is that Canadian breeders and farmers especially may be induced to avail themselves of the opportunity to start new herds or to strengthen those they have by securing some of the good cattle to be offered on August 13th.

With the increase of population and wealth the world over, beef cattle of the right sort are bound to be in demand, at good prices, as long as grass grows and water runs. Our best markets are the British and foreign markets, and the kind of cattle that will meet the demands of those markets and bring the best prices are not the scrubs and dairy grades found so commonly on Canadian farms, which cost as much to raise as do well-bred beef grades, and sell for half the price per pound, and have only the local market for stockers and butchers' beasts to depend upon. The scarcity and high price of help on the farm is compelling more farmers to seed their farms to grass, to cultivate less land, to reduce labor to a minimum by grazing cattle and feeding on the farm what grain and hay they grow, and the only way to make the most out of this system is to grow and feed good cattle. But this class is so scarce that they find it impossible to secure a supply. The only remedy lies in grading up the stock of the country by the use of pure-bred bulls. Men of means in every section should see that their neighbors have the opportunity to use such sires at a moderate fee. By this means they may help themselves, their neighbors and the whole country. Transportation is becoming so systematized and cheapened, that distance cuts but little figure in reaching the best markets, and it is surely the interest of Canadian farmers to cultivate the foreign market by producing the kind of cattle and other products that

fill the bill for that class and fill the pockets of the producers.

The importance, in establishing a herd, of securing a good foundation cow can hardly be estimated, and often means a difference of thousands of dollars in a decade in the sale of the produce. The herds from which the cattle to be offered at the Hamilton sale are drawn are known to be up-to-date in every respect and the breeders first-class men. A description of the animals to be catalogued is impracticable at this early date, but may be looked for in later issues of the "Advocate," but the best means of becoming acquainted with the character of the cattle is to apply early for the catalogue and have your order booked so that you will be among the first to receive it when ready for mailing. Nearly one-half the offering will be imported animals and the balance bred from imported stock direct or from good Scotch-bred and Scotch-topped families of the most approved type. A few choice young bulls will be included, and a special attraction will be the imported two-year-old bull, Imp. Wanderer's Last, bred by Mr. W. S. Marr; sired by the Cruickshank bull, Wanderer, and out of Missie 144th, by Roan Robin, who was in service in the Royal herd at Windsor, and at Collynie and Bapton Manor. Wanderer's Last was purchased at the Duthie-Marr sale in October, 1900, by Mr. W. D. Flatt, at \$785, and has been in successful service for the last two seasons in the herd of Captain T. E. Robson.

CANADIAN SHORTHORNS SELL HIGH AT CHICAGO.

At the combination sale of Shorthorns from the herds of Hon. M. H. Cochrane, Hillhurst, Que.; Hon. John Dryden, Brooklin, Ont.; W. C. Edwards & Co., Rockland, Ont., and G. Harding & Son, Wisconsin, held at Chicago, June 13th and 14th, 98 head sold for an average of \$536.40. The 82 head contributed by the three Canadian breeders sold for an average of \$527 each. The bulls in these lots, with few exceptions, brought much lower prices than the females and reduced the average.

The 15 females contributed by Messrs. Harding made an average of \$602. There were no bulls in their offering. Mr. Cochrane's offering of 18 head made the highest average—\$633.80. Included in his lot was the imported yearling bull, Golden Mist, by Golden Sun, which sold for \$2,010 to W. H. Dunwoody, Minneapolis, Minn.; and the roan Canadian-bred yearling bull, Good Morning, by Joy of Morning, which brought \$1,800, and would doubtless have gone much higher but for the fact that he had gone off a bit in shipping. He was bought by Baker & Baker, Oregon, Ill. These were the highest-priced bulls in the sale, the third highest being Mr. Edwards' Imp. Lord of the Manor, a roan two-year-old, which sold for \$675.

Mr. Dryden is to be especially congratulated on the fact that his contribution of 19 head, all of which were bred by himself, made the splendid average of \$565, while the highest price for a female in the Canadian contingent, \$1,000, was made by his yearling heifer, Victoria Countess, sired by his stock bull, Imp. Collynie Archer, by Scottish Archer; Geo. Allen, of Allenton, Ill., being the buyer. Mr. Dryden's Victoria Archer, a red two-year-old heifer by the same sire, was sold for \$910 to Mr. J. I. Flatt, Hamilton, Ont., who also bought the yearling heifers, Cowslip and Golden Fancy, both by Collynie Archer, at \$935 and \$615, respectively.

The 45 head contributed by Messrs. Edwards & Co., 29 of which were imported, sold for an average of \$448.90, the highest-priced female in their consignment being Imp. Camelia, by Cornerstone, which fell to the bid of E. S. Kelly, Yellow Springs, Ohio, at \$875. John Miller & Sons, Brougham, Ont., bought, at \$740, the roan yearling heifer, Roan Missie, bred by G. D. Fletcher, Binkham, Ont., and sired by Spicy Robin. The highest in the entire sale for a female, \$1,300, was paid for Messrs. Harding's Imp. Collynie Wimple, by Mr. E. S. Kelly, Imp. Lady Clara 6th, of the same herd and sired by Silver Plate, sold for \$1,000.

GOSSIP.

The extensive stock barns and sheep pens at Fairfield Farm, Ilderton, Ont., property of Messrs. J. H. & E. W. Patrick, the noted breeders and importers of Lincoln sheep, were totally destroyed by fire on the night of June 24th. The fire was caused by a trapdoor falling on Mr. E. W. Patrick and causing a lantern which he carried to explode. The show sheep were saved, but the loss on the buildings, which were but recently finished and were of a very fine class, will be heavy, as the amount of insurance, though not definitely known, is said to be but light compared with their cost.

In the list of prizewinners in officially authenticated Holstein-Friesian 7 days' butter tests in America for 1901-02, in the class of cows 3 years old and under 3 1/2, Calamity Jane 2nd, owned by Geo. Rice, Currie's Crossing, Ont., won third prize, her test commencing April 6th, 1902, 12 days after calving, and her record was 441.3 lbs. milk, an average of 63 lbs. per day, testing 4 per cent., equivalent to 19 lbs. 5.6 ozs. butter 80 per cent. fat, or 18 lbs. 85 per cent. fat. In the class for cows 2 1/2 years and under 3, Alta Posch, owned by James Kettle, Norwich, Ont., won 1st prize, yielding, in January, 21 days after calving, 536.2 lbs. milk, an average of over 83 lbs. per day, testing 4.3 per cent., equivalent to 27 lbs. 1.2 ozs. butter 80 per cent. fat, or 25 lbs. 4.3 ozs. 85 per cent. fat.

Colwill Bros., of Newcastle, Ontario County, have for a great many years been prominently identified with the breeding of Shorthorn cattle and Tamworth hogs. Their Tamworths have a continental fame from the many prizes they have won at the leading shows in Canada, notably Toronto, London and Ottawa. The stock boar is Colwill's Choice 1343, by Rob Roy 932; dam Thrift Girl 1242. As to his form and quality, nothing more need be said than that he won first prize in 1899, first in 1900, and first and sweepstakes, 1901 at Toronto, and showed a score of times at county shows and was never beaten. All the young stuff in the pens is sired by him, and out of such noted sows as Evelina 1515, by Aldrich 951; dam Elora 1261, by Glenside Karl; her winnings are 2nd at Toronto, 1900, and 2nd with four of her produce, same show, same year. She also won the same prize at Toronto last year, being the mother of the four sows that won the prize for best Tamworth bacon hogs. Another of the choice dams is Newcastle Queen 2090, also Newcastle Maid of Honor 2089, both daughters of Evelina, and by the old stock boar. These sows won 2nd and 3rd places at Toronto last fall as sows under two years, and together with the stock boar made the trio that won 2nd place for sweepstakes. Then there is another pair, Newcastle Belle and Newcastle Girl, both of which are exceptionally nice and will be competitors for honors at Toronto this fall, as sows under two years. They have a number of show animals of both sexes on hand and for sale. Mr. Colwill reports sales so brisk and the demand so active that orders are booked ahead, long before the pens are old enough to remove. In Shorthorns this firm is showing a small but select herd of Leavers and Miss Symes, headed by the massive, well-proportioned and richly-bred bull, Brave Baron 23259, sired by Imp. Indian Chief; dam Baroness Aberdeen 2nd 15064, by Imp. Heir Apparent. This bull has proven himself a sire of worth, his stock being a blocky, low-down lot. One two-year-old heifer in the herd deserves special mention, as she is a good one, belonging to the Miss Syme family and sired by Village Hero 19274; dam Beaver Meadow Lass, by Imp. Oxford. There is nothing on hand for sale in the herd, so that an extended description of the animals will be left till some future time.

Annandale Stock Farm, the property of F. Bonnycastle & Son, lies about three miles from Campbellford station (G. T. R.) and is the home of well-known herds of Shorthorn cattle, Cotswold sheep and Berkshire hogs. The Shorthorns now number forty-seven head, many of which are young, prime-looking animals, sired by the grand Miss Ramsden bull, Prince George 28973, by Prince 25544, by Imp. Hopeful; dam Queen Ann, Vol. 16, by Don Consul 13500. He is proving a sire of strong-backed, well-proportioned animals. The females are all of the Anchovy family; the foundation cow was Anchovy 2nd, by 8th Airdrie 1328; dam Anchovy (imp.) 2101, by Caballer 28114. For over twenty years this well-known and popular English family have been Scotch-topped on this farm, until to-day they are practically pure-bred Scotch, and the active demand that Mr. Bonnycastle receives for his cattle shows that they give universal satisfaction to buyers. Among the herd at present are several heifers from one to two years old which give promise of developing into good ones. There are also about ten bull calves, a blocky, level-backed lot. All these young ones are for sale at living prices. In the last year Mr. Bonnycastle has sold over thirty-five head of pure-bred cattle and not a complaint has been made.

The Cotswolds number seventy-five and are a big, blocky, well-fleeced lot. This year's lambs are sired by the ram, Topper 22282, by Allan's 13, 16414; dam Ross Ewe 104, 18921. He is a big, well-covered ram. Mr. Bonnycastle says this season's lambs are the best he ever had, and they, together with thirty-odd head of yearlings and two-year-olds, are for sale.

The Berkshires were originally founded on Snell-bred stock, crossed with the best bacon-type hogs that could be procured. A fine, lengthy lot of young ones are on hand at present. Lately an addition was made to the brood sows by the purchase from Mr. W. Wilson, of Snellgrove, of one of his prizewinners, a great lengthy animal. The stock boar is Cassie's Boy 8399, by Colonel Brant 5950; dam Norval Maid 6409, by Baron Lee 4th. There seems to be everything that could be desired in the make-up of this hog. A number of both sexes are for sale. They are good ones indeed.

RICHARD GIBSON'S SALE A SUCCESS.

The auction sale of Shorthorns from the Belvoir herd of Mr. Richard Gibson, of Delaware, Ont., on June 24th, was a very satisfactory one. There was good attendance of breeders and farmers, and the useful lot of cattle offered in good breeding condition, as taken off the grass, with no special fitting, were readily taken at fair prices, the bidding being brisk and steady from start to finish. A substantial and tastefully-spread luncheon in the spacious rooms of the beautiful residence was well enjoyed by the company. The sale was held under the shade of a grove of trees in the woodland pasture, and was admirably conducted, everything being fairly represented, and not a hitch of any kind occurring during the entire disposal. Capt. T. E. Robson officiated as salesman and did good work, keeping up the interest throughout without a break. No fancy or sensational prices were expected and none were made, but fair value was given and received in every case. The cows were generally nursing calves, and, therefore, not in high flesh, and a few were a little advanced in years, while the calves in nearly all cases being sold separately from their dams, makes the prices and the average appear smaller than might be expected, but on all hands it was considered a good sale, and Mr. Gibson expressed himself as well satisfied, the average on

all sold being close to \$115. Among the principal purchasers were Mr. Thos. H. Kelly, of Owatonna, Minnesota; Mr. James Wilson, Innisfail, Alberta; Mr. W. D. Flatt, Hamilton; Mr. A. J. C. Shaw, Thamesville, and John Trestain & Son, Strathburn. Following is a list of the sales and purchasers:

Wimple's Lass, 3 years; Jos. White, St. Mary's.....	\$200
Mina 5th, 3 years; A. J. C. Shaw, Thamesville.....	180
Petted Lorne, 3 years; James Wilson, Innisfail, Alta.....	180
Charming Sylph 6th, 5 years; T. H. Kelly, Owatonna, Minn.....	160
Charming Archeress, 2 years; J. T. Gibson, Denbeld.....	150
5th Barrington Lady, 9 years; T. H. Kelly.....	150
Lady Minto, 3 years; James Wilson.....	130
Soldier's Bride, 7 years; W. D. Flatt, Hamilton.....	130
Queen of the Links, 2 years; T. H. Kelly.....	125
Belvoir Lorne, 8 months; John Trestain & Son, Strathburn.....	125
Charming Sylph 9th, 1 year; T. H. Kelly.....	125
Queen of the Tournament, 3 years; R. H. Harding, Thorndale.....	115
Scottish Archeress, 3 years; W. G. Pettit & Son, Freeman.....	110
Christmas Card, 7 months; W. D. Flatt.....	110
Roan Lorne 3rd, 9 years; T. H. Kelly.....	105
Charming Sylph 8th, 2 years; J. A. McKillop, West Lorne.....	100
Belvoir Mina, 5 months; James Wilson.....	100
Scottish Maiden, 1 year; Geo. Hill, Delaware.....	100
Waterloo Princess 4th, 3 years; Percy Saabrook, Komoka.....	100
Fame, 7 years; W. D. Flatt.....	95
Charming Sylph 4th, 10 years; T. H. Kelly.....	95
Queen of Scots, 1 year; A. W. Smith, Maple Lodge.....	80
Famous 5th, 8 years; E. V. Docker, Wallacetown.....	80
Famous 6th, 8 months; John Trestain & Son.....	80
Rose of Middlesex, 4 years; James Wilson.....	80
Fair Rosamond, 2 years; W. J. Evans, Lawrence Station.....	65
Belvoir Fame, 7 months; W. D. Flatt.....	65
Rose of Scotland, 1 year; T. H. Kelly.....	60
Queen of the Bar, 6 months; R. H. Harding.....	40
Bull.....	
Scottish Bowman, 9 months; A. J. C. Shaw.....	130

The prize list of the Central Canada Exhibition, to be held this year August 22nd to 30th, at Ottawa, is being distributed and may be had on application to the secretary, Mr. E. McMahon, 26 Sparks St., Ottawa. Besides a liberal list of cash prizes, a large number of gold and silver medals are offered as specials, and every effort is being made to ensure a successful exhibition in all lines. It is hoped that the earlier date of the show will attract a large attendance.

THE NOXON BINDER.—Among the oldest and best-known agricultural-implement manufacturers of Canada, the Noxon Co., of Ingersoll, Ont., deservedly take high rank. Progressive farmers who are on the lookout for harvesting machinery to take off the approaching crops, which promise to be unusually heavy, will, therefore, be specially interested in the announcement concerning the Noxon open-back binder, which appears elsewhere in this issue. It is said of it that every purchaser gives a testimonial. A pleased purchaser is a strong ally of a manufacturer of farm implements. Note the special features claimed for the Noxon binder.

Parties contemplating a trip to Manitoba and the Northwest this summer should note the full-page advertisement of the Winnipeg Industrial Exhibition, to be held July 21st to 25th. No better opportunity could be had of seeing the result of the enterprise and skill of the people and of meeting with representative men from all sections of the Great West.

The sale of the Shorthorn herd of Mr. Geo. Dickie, Hyde Park, Ont., fell on a very wet day, the attendance, consequently, being small and the sale conducted under adverse conditions. The cattle were in fine condition and were a useful lot. It was bargain day for those who braved the storm, as prices in but few cases reached the three figures and purchasers were fortunate in securing "snaps."

One of the best arranged farms in Ontario is Fair View, the property of Mr. John Campbell, of Woodville, Ont., importer and breeder of Shropshire sheep and Shorthorn cattle. It is very doubtful if there is a man in Canada who has the brilliant show-ring record for Shropshire sheep that Mr. Campbell enjoys. Both in Canada and the United States his success has been phenomenal, yet, when we consider that there is no better judge of this breed of sheep in America than he and that he has always imported the best that money would buy, it is not to be wondered at. His flock at present numbers 150 head, all either imported or bred directly from imported stock. They are of Mansell, Williams and Mills breeding, and a better lot cannot be found together in Canada. The lambs this season are sired by Newton Lord (imp.), Paragon, a son of his, and Fair Star Rose (imp.). Mr. Campbell says they are the best lot of lambs he ever had, which is saying a great deal. A sight well worth a visit to see is the twenty-odd yearling ewes; perfection is the only word that describes them. The lambs are doing exceptionally well and will be in fine fettle for the shows. Also a pen of a dozen rams, a couple of which are imported. Mr. Campbell reports trade as extra good, but mostly American buyers.

The Shorthorns are all of the fashionable Strathallan family. There are 15 of them, headed by the splendid Scotch bull, Minister, a son of Imp. Prime Minister; dam Fairy Fame 26845, by Imp. Guardsman, which makes him a cousin to Ruberta, the American champion. The foundation cow was Golden Rose 18274, by Imp. Albert Victor; dam Rose of Strathallan 3rd 7830, by Sir George. The females are a big, fleshy lot, the heifers being an extra nice sample of up-to-date Shorthorns. At present Mr. Campbell is not offering any cattle for sale, having sold out pretty closely.

NOTICES.

HEAVES.

Lindsay, Ontario, Can.—I have used Newton's remedy for coughs and colds with excellent results. My brother has a mare that had the heaves so bad she was almost useless, and she was cured as sound as a colt by your remedy. I know of others that used it and to-day are as sound as a gold dollar. Yours, etc., GEORGE W. CURTIS.

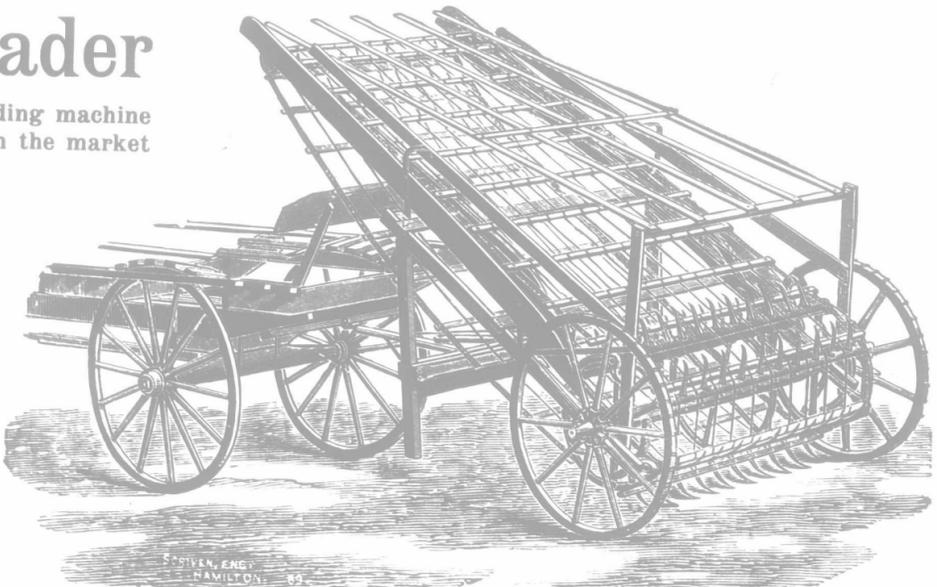
TWO FARMS OFFERED.—A fine dairy farm, with stock, crops, etc., is offered for sale in this issue by Arthur A. de Moleyns, of Sussex, New Brunswick. It should soon find a purchaser. Read the advertisement of "C." care Postmaster, Bagot, Manitoba, who offers 240 acres of land, one-half mile from C. P. R. station, for sale or in exchange for Shorthorn cattle.

Maxwell Hay Loader

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

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

David Maxwell & SONS, ST. MARY'S, ONT.



ATTRACTIVE COMBINATION SALE

OF

65 HEAD SHORTHORN CATTLE

IMPORTED AND CANADIAN-BRED, SCOTCH AND SCOTCH TOPPED

IN THE SALE PAVILION OF THE HAMILTON STOCK-YARDS COMPANY,
HAMILTON, ONTARIO, ON

Wednesday, August 13th, 1902.

THE CATTLE, WHICH ARE ALL YOUNG OR IN THE PRIME OF LIFE, ARE SELECTED FROM THE FOLLOWING WELL-KNOWN HERDS:

W. G. PETTIT & SON, Freeman, 12 Head.

J. M. GARDHOUSE, Highfield, 5 Head.

W. D. FLATT, Hamilton, 10 Head.

JAMES DOUGLAS, Caledonia, 5 Head.

ROBERT MILLER, Stouffville, 10 Head.

GEORGE AMOS, Moffat, 6 Head.

CAPT. T. E. ROBSON, Ilderton, 6 Head.

A. C. PETTIT, Freeman, 4 Head.

H. SMITH, Hay, 5 Head.

Among the bulls included in the sale is the imported WANDERER'S LAST, chief stock sire for the last two years in the herd of Captain Robson. The females of breeding age will have calves or will have been bred to the high-class sires in the several herds represented. Look for notes in Stock Gossip.

Catalogues will be issued in due time, for which applications may be booked with

MR. W. D. FLATT, HAMILTON, ONTARIO.

AUCTIONEER: COL. F. M. WOODS, ASSISTED BY CAPT. T. E. ROBSON AND OTHERS IN THE RING.

GOSSIP.

Springvale Stock Farm is in County of Durham, Ont., about 5 miles north of the town of Cobourg, and is the property of Mr. A. E. Hoskin, breeder of Shorthorn cattle and Clydesdale Horses. Mr. Hoskin is one of the wide-awake, energetic farmers of Durham, and on his model farm of 250 acres are magnificent buildings surrounded by acres and acres of orchard of choice fruit, while the stables, which are commodious, are up-to-date in everything that pertains to the health and comfort of his splendid animals as well as to the facility, ease and economy of feeding. He is also somewhat extensively engaged in breeding Yorkshire swine, of which he has a goodly number. The brood sows were bred by Messrs. J. Featherston & Son, Streetsville, the well-known importers, which is a guarantee that there are none better than Mr. Hoskin's. Young stock always on hand for sale. The Shorthorns are imported and home-bred. Perhaps the banner cow is Imp. Nonpareil 34th, bred by A. Campbell, Deystone, Aberdeenshire, Scotland; sired by Kintore Hero 70723, by Emancipator; dam Nonpareil 32nd, by Clan Alpine. The well-known Crulckshank Clipper bull, out of her and imported in dam is the bull Mr. Hoskin is now using as stock bull. He is sired by Count Amaranth 74289, bred by Duthie, and he by Count Arthur 70194; dam Sittyton Amaranth, Vol. 42, by Master of the Realm. It will thus be seen that this bull's breeding is positively gilt-edged. His mother is now in calf to the Missie-bred bull, Imp. Republican, Count Amaranth 2nd, Vol. 18, will soon be offered for sale, and is a prizewinner of perfect form and balance, pure white in color. Another of the dams is Rose 16th, Vol. 16, by Imp. Prime Minister; dam Rose square, well-built cow, and is suckling a five-months-old bull calf by Indian Wave, that bids fair to develop into an extra good one. Indian Wave is the sire of the heifer that sold last winter at Flatt's sale in Chicago for \$775.00, and resold for \$1,460.00. Another of the cows is Meg of Cobourg, Vol. 13, by Village Boy 5th 16352; dam Mary of Grafton 17791, by Imp. Neptune. There is a two-year-old heifer out of her and sired by Jubilo 30450, that is a choice one. Deep, thick and even, with very short legs. She is in calf to the stock bull. This heifer and others equally as good are for sale. The Clydesdales are a superior lot, being distinguished for their clean, flat bone and perfect feet. The foundation mare was Darling 2146, by Comyn McGregor (imp.) 657; dam Bess, by Imp. General Duke. This mare won first and sweepstakes at Toronto in 1892, and proved an extra successful

dam. Out of her, and sired by the great Southwestern, is Daisy of Springvale, a big fine mare that has never been beaten in the show-ring. She is nine years old, and is now in foal to The Abbot. A half-sister of hers, by Lowland Stamp (imp.), is Dowager of Springvale. She is also a show mare, and has a foal at foot by Abbot of Benwick. All told, there are seven Clydesdales, all of which are registered or eligible to register in the American Book. Among them are some fillies that are crackers. Any of them are for sale, and there is not a poor one in the lot.

Belvedere Jerseys are known all over the continent. Representatives of this noted herd can be found in every Province in the Dominion and almost every State of the Union. The owner, Mrs. E. M. Jones, of Brockville, Ont., is the proud possessor of some two dozen medals (gold, silver, and bronze), as well as a silver tea service and silver cup which she won at the leading shows, including Toronto, London, Ottawa, Montreal, Guelph, and Brockville; in fact, her show-ring record is one of almost unbroken success. The herd now numbers 46 head, at the head of which stands the massive, well-built bull, Gold Prince, by Prince of Belvedere; dam Lily May of Brockville. This bull is an exceptionally heavy animal for a Jersey, and stands on the shortest kind of legs. His skin is fine as silk and yellow as saffron. As a stock bull he has few equals and no superiors. Next in service is Laird of Belvedere, by same sire and out of Lady of Belvedere. He is also an extra-built fellow, but not as heavy as Gold Prince. The breeding cows of the herd are all butter-makers, as the following records of a few of them show: Lily Dochia, 15 lbs. 4 ozs., 7 days; Orphia, 15 lbs. 2 ozs., 7 days; Maud, 14 lbs. 9 ozs., 7 days; Hazel, 8 lbs. 6 ozs., 9 months after calving; Gananoque Belle, 8 lbs. 2 ozs., 9 months after calving; Martha, 8 lbs., 9 months after calving; Lady Star, 9 lbs. 4 ozs., 8 months after calving; Alice, two-year-old, 8 lbs.; Lady of Belvedere, two-year-old, 4 lbs. 1 oz. in 3 1/2 days; Maglan, two-year-old, 4 lbs. in 3 1/2 days; Gertie, two-year-old, 4 lbs. 3 ozs. in 3 1/2 days; Sweet Lily May and Golden Butterfly, also heifers, 4 lbs. 3 oz. in 3 1/2 days. No wonder Mrs. Jones enjoys a national reputation as a breeder of Jerseys. There is now on hand for sale: 1 year-old bull, 1 seven-months-old bull, 2 bull calves two months old, 2 heifer calves three months old, 4 heifers nine months old, 3 year-old heifers, 3 two-year-old heifers in calf and several cows in milk. Sales for the last year were distributed over Pennsylvania, Ohio, New York, British Columbia, Manitoba, Ontario and Quebec.

Minster Stock Farm lies about nine miles from Campbellford station on the G.T.R. The owner, Mr. Richard Honey, is making a specialty of Holstein cattle and Yorkshire hogs. That he is succeeding, a look over his crack animals would convince the most sceptical. The grand cows, Minster Rose, Queen of Minster, Minster Maid and a dozen others, are a sight to see. They have large, even, mellow udders, and a milk record of from 57 to 75 lbs. per day. A better class of Holsteins would be hard to find. The present stock bull is Hector de Kool 2142, bred by A. C. Halman, sired by Akkrum de Kool 3rd 1765; dam Waterloo Daisy's Pearl 3345. He is an extra nice young bull, very evenly built, with a splendid upper and lower line. There are a couple of bull calves three months old, by Lady Tennyson's Sir Booker 1538, he by Queenie Booker's Champion 939, one of which has extra quality and the man who gets him will be lucky. All told, there are a half dozen heifers, some in milk and some in calf, sired by Sir Booker; also one yearling heifer by Netherland Tirania Baron 1162. Some of these heifers, together with the two bull calves, are for sale. The Yorkshires are unexcelled for length, depth and evenness, and no man better understands the breeding of buccotype Yorkshires than Richard Honey. He certainly has it down to a science. His present stock boar is Summerhill Dictator 6960, by Look Me Over 2612; dam Imp. Summerhill Lily 3554. This boar was chosen on account of his perfect form, and his stock are his living images. A number of both sexes, various ages, are held for sale. Mr. Honey reports sales of both cattle and hogs as unprecedented. He has shipped stock all over Canada during the last year, and every buyer has reported as being more than pleased with his purchase, which is a guarantee of square dealing.

The sale of Jerseys and Berkshires from the Hood Farm herds at Lowell, Mass., June 11th and 12th, was fairly successful, the large number of 154 head of Jerseys sold, old and young, averaging \$116 each. The highest price, \$375, was paid by Mr. Thos. Lawson, Scituate, Mass., for the eleven-year-old cow, Figgis 76106, who was shown at Toronto Exhibition in 1899 and placed third in the prize list for matured cows by the American judge, but was worthy of a higher position, as she is a model dairy cow, with a record of 329 lbs. 14 ozs. milk and 10 lbs. 15 ozs. butter in 7 days. Figgis goes to the home of Flying Fox, the bull sold for \$7,500 at the Cooper sale in May last. Two other cows sold for \$500 and \$530 each. Fifty Berkshires of various ages sold for an average of about \$50 each. The highest price for a boar was \$150, and for a sow, \$130.

Homeseekers' Cheap Excursions to the West and Northwest.

Via Chicago & North-western R'y from Chicago, July 1-15, August 5-19, September 2-16 and October 7 and 21. Exceptionally low rates to a large number of points in Northern Wisconsin, Michigan, North-western Iowa, Western Minnesota, Nebraska, North and South Dakota. Better own a farm. Start now. Send two-cent stamp to W. B. Kniskern, 22 Fifth Avenue, Chicago, for copy of the "North-western Homeseeker." Apply to your nearest ticket agent for particulars, or address B. H. Bennett, 2 East King street, Toronto, Ont.—Advt.

Great Bargain Sale of New Brunswick Dairy Farm—240 acres, with machinery, crops, stock, etc. For particulars apply to ARTHUR A. DE MOLEYNS, Box 21, Sussex, N. B.

FOR SALE or EXCHANGE:

Two hundred and forty acres on main line C. P. R., half-mile from station. Will exchange for pedigreed Shorthorn cattle. For further particulars write "C," care of Postmaster, Bagot, Man.

Newton's HEAVE, COUGH, DIS-TEMPER & INDIGESTION CURE

A veterinary specific for WIND, THROAT, & STOMACH TROUBLE &c. Strong Recommendations. \$1.00 per can, dealers or direct.

Newton Horse Remedy Co. (D), Toledo, O. Trade supplied by Lyman Bros. & Co., Toronto, Ont.

\$50.00 Round Trip to California.

Chicago & North-western R'y from Chicago, August 2 to 10. The new Overland Limited, the luxurious every-day train, leaves Chicago at 8.00 p.m. Only three days en route. Unrivalled scenery. Variable routes. New Drawing-room Sleeping Cars and Compartment Cars, Observation Cars (with telephone). All meals in Dining Cars. Buffet Library Cars (with Barber). Electric lighted throughout. Two other fast trains, 10.00 a.m. and 11.30 p.m., daily. The best of everything. Daily and personally conducted tourist car excursions to California, Oregon and Washington. Apply to your nearest ticket agent or address B. H. Bennett, 2 East King St., Toronto, Ont.

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An Al Farmer's Knife
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FINEST HAND-FORGED STEEL BLADES. STRONG AND DURABLE.
BEAUTIFUL NICKEL HANDLE.

Specially selected and ordered by the Manager of the
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Cannot be Duplicated.

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

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And we will send you the knife, postpaid.

START OUT FOR THE NAMES TO-DAY.

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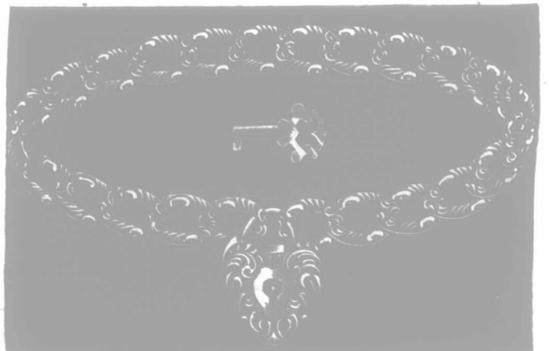
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Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, with SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

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HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

None genuine without the signature of
The Lawrence-Williams Co.
 Sole Importers & Proprietors for the U.S. & CANADA, CLEVELAND, O.
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars.
 THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

FARM FOR SALE

That splendid farm known as Spruce Park, the estate of the late James Deans, containing 200 acres, part of lots 37 and 38, concession 1, township of South Dumfries, county of Brant. This is one of the best farms in Ontario, and is adapted for all kinds of mixed farming, dairying or stock raising; has first-class buildings, good spring water, and can be divided into two farms. There is an orchard of 400 choice fruit trees in full bearing, and 500 Norway spruce. Price moderate, as the estate must be wound up. For particulars apply to—

Wm. Deans, Box 157, Galt, Ontario.

GRAND'S



TORONTO.

Auction sales every Tuesday and Friday at 11 o'clock. Private sales every day.

Usual Auction Sales of Horses, Carriages, Etc.

**FRIDAY, JUNE 20,
AND TUESDAY, JUNE 24,**

and the great closing sales in old premises

**FRIDAY AND SATURDAY,
JUNE 27 AND 28,**

consisting of

**Horses,
Carriages
and Buggies**

(New and Second Hand).

Many of them will be sold for storage charges without the slightest reserve.

COMMENCING JULY 1,

The sales will be conducted in the

**NEW PREMISES,
COR. SIMCOE AND NELSON STS.,**

which will be the best-equipped sale stables, riding ring and carriage and saddlery warehouses in Canada, and possibly in America. Arrangements are being made for the formal opening events, to be held in September, when several important sales of

**SADDLE HORSES,
CARRIAGE HORSES,
THOROUGHBREDS,
TROTTERS, ETC.,**

will be held.

**Walter Harland Smith,
AUCTIONEER AND PROPRIETOR.**

4 Imp. Clydesdale Stallions 4

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

GEO. G. STEWART,

ROSEBANK FARM,

P. O. and Station, Howick, Quebec.

IMP. CLYDESDALES AND AYRESHIRE.

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

ROBT. NESS & SONS, Howick, Que., P.O. & Sta.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

The engraving of a Lincoln ewe appearing on another page in this issue represents a noted prizewinner in the far-famed flock of Mr. J. T. Gibson, Denfield, Ont., which won the first prize for best flock of Lincolns last year at the Pan-American and the International Exhibition at Chicago. Mr. Gibson has a strong lot fitting again for the show this year, and will be pleased to meet his customers at the large fairs. This year's lambs are strong, good typical Lincolns, well covered with the right kind of wool. He can spare two or three imported two-year-old rams, and has lambs got by them to show how they breed, and will price them so that it will pay parties with small flocks to buy them.

WAVERLEY OAT COMPETITION.

In the March 1st "Farmer's Advocate" Wm. Rennie, seedsman, Toronto, offered \$100 in prizes to customers purchasing one pound or more of Waverley oats who estimated or counted the nearest to the number of grains of oats in the published engraving from a photograph of a head of that variety grown by them in 1901. The first prize was \$15; 2nd, \$10; 3rd, \$5; next ten, \$2 each; next fifty, \$1 each. Three persons having sent in correct estimate (232), the first, second and third prizes were equally divided. The result of the competition is given below:

Won \$10.00 Prizes.

Estimate.
 232—Wm. A. Minelli, Lambton, Ont.
 232—Geo. H. Loucks, Dundas, Ont.
 232—Geo. Young, Perth, Ont.

Won \$2.00 Prizes.

231—D. I. Rose, Hastings, Ont.
 231—Euclide Brosseau, St. John, Que.
 231—Jno. Hunter, Macdonald, Man.
 233—Joseph Fades, Victoria, Ont.
 233—William Johnston, Megantic, Que.
 233—H. A. Harrington, Oxford, Ont.
 233—Jas. Rogers, sr., Wright, Que.
 233—Robert Heal, Perth, Ont.
 233—J. D. Adamson, Marquette, Man.
 233—Thos. Coughern, Argenteuil, Que.

Won \$1.00 Prizes.

230—Ferdinand Rivard, Park, Wis.
 230—Robert Falls, Durham, Ont.
 230—David Kennedy, Argenteuil, Que.
 230—George Levins, Algoma, Ont.
 230—Roy Frizzel, Hants, N. S.
 230—John S. Beattie, Megantic, Que.
 230—Wm. Jones, Leeds, Ont.
 230—Peter V. Green, Hastings, Ont.
 230—Henry L. Fall, Perth, Ont.
 230—Archie Skelly, Argenteuil, Que.
 230—George Scott, Grey, Ont.
 234—John A. Mesurier, Northumberland, N. B.

- 229—W. R. Cole, Durham, Ont.
- 229—J. T. Atkinson, Brant, Ont.
- 229—R. T. Walliry, Peterborough, Ont.
- 229—Jas. McCrea, Troyencher, Man.
- 229—Chas. Wilson, York, Ont.
- 235—George Babin, Bruce, Ont.
- 235—John Hoskins, Algoma, Ont.
- 235—Geo. A. Biley, Wellington, Ont.
- 235—George Nott, Algoma, Ont.
- 235—Alfred Stong, York, Ont.
- 235—W. B. Van Vliet, St. John, Que.
- 235—Thos. McCutcheon, Kent, Ont.
- 235—Jas. McCullough, Wellington, Ont.
- 235—William Ross, Marquette, Man.
- 235—Robert Stewart, Picou, N. S.
- 235—P. M. Jeffrey, Huron, Ont.
- 235—W. W. Russel, Alberta, N.-W. T.
- 235—Daniel Moir, Perth, Ont.
- 235—John McNaughton, Wellington, Ont.
- 235—Hura Smith, York, Ont.
- 235—Lloyd Kerswill, York, Ont.
- 235—Peter Steckley, York, Ont.
- 235—James Henderson, Huron, Ont.
- 235—Juste Belanger, Rimouski, Que.
- 236—Jas. Sholbrook, Huron, Ont.
- 236—Jas. Calbick, New Westminster, B.C.
- 236—H. H. Pritchard, Bruce, Ont.
- 236—Mrs. Wm. Brunacombe, Essex, Ont.
- 236—J. J. Hall, Dufferin, Ont.
- 237—Jas. Patterson, Peel, Ont.
- 237—S. D. Carver, Peterborough, Ont.
- 237—Rawlings & Gooch, Alberta, N.-W. T.
- 237—Florrie McCailum, Prince, P. E. I.
- 237—Pierre Lauthier, Prescott, Ont.
- 237—Sheldon Ramsay, Assiniboia, N.-W. T.
- 237—Frank Leavitt, Alberta, N.-W. T.
- 237—David Smith, Durham, Ont.
- 237—W. R. Horner, Shefford, Que.
- 237—E. B. Shantz, Alberta, N.-W. T.
- 237—Wm. Wilson, Algoma, Ont.
- 237—Wm. L. Lashbrook, Perth, Ont.
- 237—Jas. Reynolds, Simcoe, Ont.
- 237—W. S. Goforth, Prince Edward, Ont.
- 237—S. A. Nicholson, Queen's, P. E. I.
- 237—James Wilson, Grey, Ont.
- 237—Wm. Knox, Huron, Ont.
- 237—James Michie, Huron, Ont.
- 237—A. W. Forfar, York, Ont.
- 237—Wm. Clements, Assiniboia, N.-W. T.
- 237—W. J. D. Leeson, Algoma, Ont.
- 237—John Orr, Chateaugay, Que.
- 237—Albert J. Buckley, Bruce, Ont.
- 237—Fletcher Buckland, Bruce, Ont.
- 237—Robert Pogue, Victoria, Ont.
- 237—James Quick, Essex, Ont.
- 237—J. L. Tolton, Bruce, Ont.
- 237—John Gallagher, Lanark, Ont.
- 237—John L. Tucker, Grey, Ont.

NOTICE.

METHODIST MAGAZINE AND REVIEW.—This deservedly-popular magazine begins its fifty-sixth volume with a special patriotic and Canadian number. It has well-illustrated articles on "The Fortress City," "Quebec," "Our Great Northwest," and a graphic account of "Harvest on the Prairie." An American missionary contributes a glowing tribute to the "Benefits of British Rule in Southern Asia." A vivid sketch and portrait are given of that "flaming torch," the late Bishop William Taylor, "Ireland and its People," "The Religious Side of Charles Dickens," "The Painter's Art in England" and other articles are well illustrated. Well-written stories are "Widow Trustmore's Memory Room," by Dr. J. V. Smith; "Going to Conference," and "As a Refiner's Fire." Publishers:—Toronto: William Briggs; Montreal: C. W. Coates; Halifax: S. F. Houstus. \$2.00 a year; \$1.00 for six months.

It Makes Them Say Things.

One little separator fellow says:
 "I skim as clean as
 Another sputters: "I run as easy as
 A third asserts:
 "I'm as quickly cleaned as
 Yet another hisps:
 "I'll last as long as
 And the chorus rings loud as they
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Cream Separator Standard.

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"Sunshine" Furnace

SPECIALLY BUILT TO HEAT A FARMER'S HOME

BECAUSE:

It burns either wood or coal—wood can be used in fall, and spring, and coal in severe winter weather.

Has double feed-doors, which will admit rough chunks of wood.

The dome is constructed entirely of heavy steel plate, which makes it a more effective heater than the cast-iron dome put in common furnaces.

The "Sunshine" will extract more heat from the same amount of fuel than any other furnace, and no other good furnace is sold so cheap.

MADE BY ALL ENTERPRISING DEALERS.
 WRITE FOR CATALOGUE.

The McClary Mfg. Co.,
 LONDON, TORONTO, MONTREAL,
 WINNIPEG, VANCOUVER; ST. JOHN, N. B.

The U. S. Bureau of Statistics has published a table giving the number of steers on farms and ranches in the cattle-producing States, which shows the available cattle supply of the West on April 15th. The total of all ages one to four years, for the thirty-three States footed up to 4,333,398. The census of 1900 gave 4,237,824 for the same States, which would give a decrease of 95,574 head. The five leading cattle feeding States—Iowa, Illinois, Kansas, Nebraska and Missouri—show a decrease of 1,121,864.

Special Excursion Rates.
 Via the Chicago & North-western Railway to Denver, Colorado Springs, Pueblo, Salt Lake, Hot Springs and Deadwood, South Dakota during June, July and August. A splendid opportunity is offered for an enjoyable vacation trip. Several fine trains via the North-western line daily. Full information and illustrated pamphlets can be obtained from B. H. Bennett, General Agent, 2 King street east, Toronto, Ont.—Adv.

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



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

The Barclay Mfg. Co., Brougham, Ontario.

CLYDE AND SHIRE HORSES

SHORTHORN CATTLE, LEICESTER SHEEP.

One extra good Shorthorn bull, 16 months old, red, by Imp. Prime Minister, g. sire Imp. Warfare. My motto: "The best is none too good."

ROSEDALE STOCK FARM, HIGHFIELD P. O.
om MALTON, G. T. R.; WESTON, C. P. R.
Rose Dale is fifteen miles west of Toronto.

WM. SMITH, COLUMBUS, ONT.,

IMPORTER AND BREEDER OF
Clydesdale Horses & Shorthorn Cattle

DR. PAGE'S ENGLISH SPAVIN CURE

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

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

**Teas at Wholesale Prices
FOR FARMERS.**

We are after more mail-order business. Send us your address, and we will mail you our latest WHOLESALE price list.

- 25 cent teas at 17 cents.
- 40 cent teas at 25 cents.
- 25 cent coffee at 18 cents.
- 40 cent coffee at 25 cents.

Etc., etc., etc.

You pay the same prices as the storekeepers, and get better goods. Terms, cash on delivery.

Crighton & Co., 102 Church St., Toronto.

Wide-Tire Metal Wheels

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

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

BINDER TWINE

SEASON 1902.
"Farmers' Special" binder twine supplied to FARMERS ONLY at 11c. per lb., baled in cotton grain bags, bound with rope halters, and weighing 60 lbs. to the bag; length over 500 ft. per lb.; quality and length guaranteed. Cash with orders; purchaser pays freight. Address orders, J. T. Gilmour, Warden, Central Prison, Toronto. Further particulars, address James Noxon, Inspector, Parliament Buildings, Toronto.

J. R. STRATTON,
Toronto, June 10, 1902. Prov. Secretary.

Spring Brook Holsteins and Tamworths.

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

GOSSIP.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS.

From May 16 to June 16, 1902, forty records of seven days each and two records of thirty days each have been approved. The records of seven days each average as follows: Eleven full-aged cows; age, 7 years 1 month 17 days; days after calving, 34; milk, 416 lbs.; butter-fat, 14.247 lbs., equivalent butter 80 per cent. fat 17 lbs. 12.9 ozs., or 16 lbs. 9.9 ozs. 85.7 per cent. fat. The highest record in this class was made 129 days after the cow freshened. She produced 18,632 lbs. butter-fat, equivalent to 23 lbs. 4.6 ozs. butter 80 per cent. fat, or 21 lbs. 11.8 ozs. 85.7 per cent. fat. Four four-year-olds; age, 4 years 6 months 29 days; days after calving, 18; milk, 396.6 lbs.; butter-fat, 12.941 lbs., equivalent butter 80 per cent. fat 16 lbs. 2.8 ozs., or 15 lbs. 1.6 ozs. 85.7 per cent. fat. Thirteen three-year-olds; age, 3 years 3 months 23 days; days after calving, 25; milk, 356.3 lbs.; butter-fat 12.064 lbs., equivalent butter 80 per cent. fat 15 lbs. 1.5 ozs., or 14 lbs. 1.2 ozs. 85.7 per cent. fat. Two heifers in this class produced over fifteen pounds of butter-fat each, one 15.222 lbs., equivalent to 19 lbs. 0.4 oz. butter 80 per cent. fat, or 17 lbs. 12.1 ozs. 85.7 per cent. fat; the other 15.344 lbs., equivalent to 19 lbs. 2.9 ozs. butter 80 per cent. fat, or 17 lbs. 14.4 ozs. 85.7 per cent. fat. Twelve two-year-olds; age, 2 years 2 months 6 days; days after calving, 24; milk, 270 lbs.; butter-fat, 8.836 lbs., equivalent butter 80 per cent. fat 11 lbs. 0.7 oz., or 10 lbs. 4.9 ozs. 85.7 per cent. fat.

SPLENDID SHORTHORN SALES.

The brief report, in our last issue, of the Bigler sale, held at Hartwick, Iowa, June 5th and 6th, gives but a very imperfect idea of its importance. The disposal of 115 head for \$95,450, or an average of \$830 each, is a remarkable record, and attests that the great demand for good cattle in the West continues unabated. A significant feature of the sale was that the highest-priced animal was the pure Bates cow, Wild Eyes 61st, by Airdrie Duke of Hazelhurst, sold for \$3,040, showing that prejudice as to family merit is found in a well-bred beast of any line of breeding. At this sale 32 animals brought over \$1,000 each, and eight head over \$1,500 each. At the sale, on June 3rd, of a selection from the herd of N. A. Lind, at Rolfe, Iowa, 53 head sold for an average of \$1,060. On June 7th, at Hartwick, Iowa, 35 head from the herd of Korns & Lee sold an average of \$150.

British Columbia Farms.

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

THE SETTLERS' ASSOCIATION OF B. C.
BOX 540, VANCOUVER, B. C.

High-class Herefords

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

A. S. HUNTER, DURHAM, ONT.

The Sunny Side Herefords.

Imp. Sunny Slope Tom 1st at head. Lord Wilton, Garfield, Grove 3rd, Diplomat and Anxiety blood represented. For sale: 5 bulls from 9 to 30 mos., and 20 choice young cows and heifers. Inspection and correspondence solicited. om O'HELL BROS., Southgate, Ont. Lucas station, G. T. R. Elderton station, L. H. & B.

INGLESIDE HEREFORDS.

A few choice heifers and young bulls by

Mark Hanna, sweepstakes bull at Pan-American.

Shropshire Sheep and Tamworth Swine.

H. D. SMITH, Compton, Quebec, om

High-Class Shorthorns and YORKSHIRE PIGS.

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

JAS. McARTHUR, Goble's, Ontario.

DON'T

BUY A SEPARATOR UNTIL YOU HAVE SEEN THE

National.

EXAMINE
The simplicity of the design. All wheels and bearings protected, being perfectly safe in the hands of a child. It has anti-friction ball bearings. Few parts to wash—only two pieces inside the bowl. The National is made by The Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship. In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years. The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day.

The National will well repay investigation by intending purchasers.
National No. 1, capacity 330 to 350 lbs. per hour.
National No. 1 A, capacity 450 to 500 lbs. per hour.

AGENTS WANTED IN UNREPRESENTED DISTRICTS.

The Raymond Mfg. Co. of Guelph, LIMITED.
GUELPH, ONT.

om- WE ALSO MAKE GOOD SEWING MACHINES.

"A SPLendid SILO"
BUILT FOR ADOLPHUS HOOPER,
AT EXETER, HURON COUNTY, WITH

Beaver Portland Cement



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

EXETER, HURON COUNTY, Nov. 27, 1901.

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

ADOLPHUS HOOPER.

Please Mention the Farmer's Advocate.

High Park Stock Farm Galloway Cattle. A few choice young heifers and bulls for sale. Inspection invited. -om
SHAW & MARSTON (Late A. M. & R. Shaw)
 P. O. Box 294, BRANTFORD, ONT.

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

JOHN DRYDEN,
 BROOKLIN, ONTARIO.

MEMBER OF
CRUIKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

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

"ORCHARD HILL" SHORTHORNS.

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

om **ARTHUR JOHNSTON, Vandeleur, Ont.**

JAMES A. ORRERAR, Shakespeare, Ont.
 BREEDER AND IMPORTER OF -om

HIGH-BRED SCOTCH SHORTHORNS

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

ROSEVALE SHORTHORNS

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

SHORTHORNS (IMP.)

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

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

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

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



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

Shorthorns & Clydesdales

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

J. & W. B. WATT,
 SALEM, ONTARIO
 (POST AND TELEGRAPH OFFICE).

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

Our herd contains such families as Matchless, English Lady, Mildred, Village Buds, Missie, Stamford, Mysie, Vanillas, Claret, and Marthas. The imported bulls, Scottish Peer and Coming Star (a prizewinner at Chicago in 1901), now head the herd.
 Farms 2 miles from Elora Sta., G.T.R. and C.P.R., 12 miles north of Guelph. -om

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

IN WRITING
 PLEASE MENTION FARMER'S ADVOCATE.

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

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

SHORTHORNS.

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

LAKE VIEW STOCK FARM.

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

SHORTHORNS FOR SALE.

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

Maple Lodge Stock Farm.

ESTABLISHED 1854.

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

A. W. SMITH,
 Allen Craig Station, Maple Lodge P. O., G.T.R., 3 1/2 miles. -om

HAWTHORN HERD

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

SHORTHORNS FOR SALE: 6 yearling and heifers, all ages. Cows and heifers in calf to Sir James, deep milkers. -om

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

GEO. ISAAC, BOMANTON, ONT.,
 BREEDER AND IMPORTER OF

Scotch Shorthorn & Clydesdale CATTLE HORSES.
 Forty-one head of Shorthorns arrived from quarantine 20th March. One Clydesdale stallion for sale. **OSBOURNE STATION, G. T. R.** -om

HIGH-CLASS SCOTCH SHORTHORNS

of the following families, for sale at moderate prices: Village Girls, Broadhooks, Beaufort Roses, Missies, Claret, Marr Floras, Nonpareils, Minas and other choice families. Write for catalogue. Shropshire rams and ewes for sale as usual. -om
ROBERT MILLER, Stouffville, Ont.

W. C. PETTIT & SONS
 FREEMAN P. O., ONT.,
 IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

Make a Special Offering for May and June:

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

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

SHORTHORNS.

THORNHILL HERD. ESTABLISHED 27 YEARS.

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

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

Mercer's Shorthorns

Are represented by Missies, Stamfords, Floras, Claret Princesses, Red Roses, Fashions, Crimson Flowers, and Matchless families. Headed by Village Squire 24993, a son of Abbottsford. Stock of both sexes and all ages for sale. -om

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

MAPLE GROVE SHORTHORNS.

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

SHORTHORNS FOR SALE.

Two young bulls, 7 and 10 months; two heifers, 3 years old, with calves at foot; one heifer 1 year old. **JAS. RIDDEL, BEKTON P. O. and STN.** -om

PLEASE MENTION FARMER'S ADVOCATE.

First-Class Farm for Sale

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

GEORGE SEBBEN,
 INGERSOLL, ONTARIO.

THE SHEEP OF THE CENTURY.

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

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

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

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

Clydesdales and Shorthorns

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

JOHN BRIGHT, MYRTLE, ONTARIO.

Spring Grove Stock Farm.

Shorthorn Cattle
 AND
Lincoln Sheep.

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

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

T. E. ROBSON, ILDERYON, ONT.

Bug Death
 KILLS
 Potato, Squash and Cucumber Bugs; Currant, Gooseberry and Tomato Worms; and all bugs that eat the leaves of plants.

Kills the Bugs. Feeds the Plant.

Send us your name and address and we will send you, free, descriptive catalogue of **BUG DEATH** and its uses.

Bug Death Chemical Co., Limited,
 St. Stephen, N. B.

Pat. in Canada Nov. 2, 1897, Jan. 25, 1900.
 NON-POISONOUS. PREVENTS BLIGHT.

Our New Methods in the treatment of
CANCER Tumors and Tubercular
Swellings have been
most successful. For full particulars
Address: THE YANSELL INSTITUTE,
LONDON, ONT.

WINDMILLS



We do not make a windmill for ornament.
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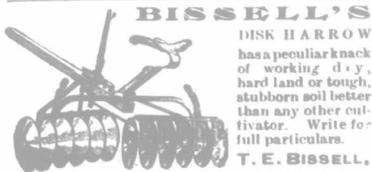
CANADIAN AIRMOTOR

robs the wind of its power, and gives
it to you at your

BARN OR PUMP.

Does more hard work than any other
farm implement.

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



BISSELL'S

DISK HARROW
has a peculiar knack
of working dry,
hard land or tough,
stubborn soil better
than any other cul-
tivator. Write for
full particulars.

T. E. BISSELL,
ELORA, ONT.

Large sizes made for
Northwest farmers.

SCOTCH SHORTHORNS.

We are now offering a few young
bulls, from 6 to 11 months; also
a few heifers, from 6 months to 2
years; all showing No. 1 quality.

W. G. HOWDEN,
COLUMBUS P. O.



Shorthorn Cattle, Lincoln Sheep

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

J. T. GIBSON, om DENFIELD, ONT.

QUEENSTON HEIGHTS SHORTHORNS

SCOTCH AND SCOTCH TOPPED

In service: Derby (imp.) = 32057 = ;
Lord Montalis, by Collynie Archer (imp.)
= 28890 =. Some choice heifers and
young cows with calf at foot or in calf to
imported bull at moderate prices.

HUDSON USHER,

QUEENSTON, ONT. om

FARM 3 MILES NORTH NIAGARA FALLS

SHORTHORNS FOR SALE

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

ALEX. LOVE, - **EAGLE P. O.**
BIRMARCE STATION ON M. C. R.

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale.
Imported Christopher = 28899 = heads the herd of
large cows of grand milking qualities. Also a number
of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS,
CALEDONIA, ONT.

PLEASE MENTION FARMER'S ADVOCATE

GOSSIP.

Mr. R. H. Harding, Thorndale, Ont.,
breeder of Dorset Horn sheep and
Chester White hogs, whose advertisement
runs in our columns, offers Dorset lambs
and yearlings of good quality and in
healthy field condition, at reasonable
prices; also a few Chester boars of
March litters, which he reckons good
value. Write him for prices.

Dunedin Park Farm is situated in the
County of Kent, about three miles
south-east of Chatham, Ont., and is the
property of Mr. W. W. Everitt, owner of
a very choice herd of St. Lambert and
combination Jerseys; also breeder of
Berkshire hogs and pure-bred poultry.
The 30-odd head of Jerseys has at the
head of the herd that grandly-built and
richly-bred stock bull, Handsome Rioter
45633, sired by Lillium's Rioter, winner
of first prize at Montreal and Ottawa,
1891, and first at Toronto and Ottawa
in 1892, and first at Toronto, Ottawa
and Montreal in 1895; he by Rioter of
Rocky Farm. The dam of Handsome
Rioter is Hugo Beauty 2nd, by Can-
ada's Sir George. As a stock-getter this
bull is a grand success, as the many
beautiful heifers on the farm testify.
Among the splendid lot of cows is Vita
of Glen Allan, by Nell's John Bull, by
Canada's John Bull; dam Vita, by
Great Ado. This cow has repeatedly
made 1 lb. 12 ozs. of butter a day for
weeks at a time. Another of the good
ones is May of Glen Allan, by Marius of
Glen Allan; dam Vita. Still another is
Nell of Maple City, by Perfect Combi-
nation; dam Charity of Glen Rouge; and
thus we might go on. Mr. Everitt's
Jerseys are an exceptionally sweet lot,
with their deep, heavy quarters and large,
even udders. In the stables, besides the
stock bull, is an eighteen-months-old bull
out of the last-named cow and sired by
the stock bull, that is a well-formed
animal and should be in use, as he can
not fail to be a successful sire. There
is also another about the same age, out
of the cow, Charity of Glen Rouge, and
sired by 100 Per Cent., whose dam,
Cheerful of St. Lambert, has a record
of 22 lbs. 2 ozs. of butter in 7 days.
This bull is a light fawn in color, and
is one of prizewinning form. The many
heifers in the herd are a choice lot, a
number of which are for sale, together
with the two bulls mentioned above.
The Berkshires are of Snell and Green
breeding and are of the kind that are in
demand to-day. There are both sexes
and all ages for sale.

Mr. W. H. Ladner, Ladner, B. C., has
recently purchased in Ontario and had
shipped over the C. P. R., two very ex-
cellent Scotch-bred Shorthorn bulls. The
roan two-year-old, Squire Wimple 33006,
was bred by Geo. B. Bristow, of Rob
Roy, and used in the herd of James
Lemon, of Walter's Falls, from whom he
was purchased for Mr. Ladner. He
was sired by Village Squire, who was
bred by H. Smith, of Hwy., and was
got by the champion show bull, Ab-
botsford, of the Cruickshank Village
Bud family, from which came the
World's Fair champion, Young Abbots-
ford. The dam of Squire Wimple is
Wimple's Gem 2nd, of the favorite Kin-
ellar Wimple family, her dam being an
imported cow. He is a massive bull,
weighing 2,200 lbs. at 2 years and 9
months, and is of the approved modern
type, low-set, thick-fleshed and full of
quality. He has been a first-prize and
sweepstakes winner at Union district
fairs, and has proved an excellent sire.
The younger bull is the white yearling,
Commander, purchased from H. Smith,
Hwy.; sired by Imp. Christopher, of the
Cruickshank Lovely tribe; dam Village
Pansy, of the Village Bud family. He is
built on the most approved pattern,
shows fine breed character and excellent
fleshing qualities and promises to main-
tain the prestige of his illustrious an-
cestry, which includes prizewinners and
champions galore. We congratulate Mr.
Ladner on securing two such excellent
bulls and predict for them a splendid
record as sires and show bulls.

SUCCESSFUL DISPERSION OF MAN- ITOBA'S PIONEER SHORTHORN HERD

The dispersion sale of the Pioneer
Herd of Shorthorns, property of Walter
Lynch, Westbourne, Man., on June 11th,
was a grand success, the bidding being
brisk, the prices entirely satisfactory,
and the buyers all Manitoba men. The
entire herd of 60 head sold, save one
the stock bull, were bred on the farm
and of one family, descended from im-
ported Lily, by Warden, a careful se-
lection of sires of approved type having
been continuously used since the stock
came into Mr. Lynch's hands, and the
result a useful lot of cattle, uniform in
type and character, the cows regular
breeders owing to the natural conditions
in which they were kept, good milkers
and good feeders. They were good
farmers' cattle, and farmers and breed-
ers took them at good prices, 51 fe-
males of various ages making an aver-
age of \$206.17, 9 bulls an average of
\$102.77, the whole number aggregating
\$70,519, or an average for the 60 head
of \$1,175.16. The stock bull, Scotch
Canadian 36400, a roan three-year-old,
bred by Mr. Shepherd Tarves, Scot-
land, and imported in dam by Arthur
Johnston, Greenwood, Ont., was secured
by Jas. Bray Longburn at \$370. The
highest price for a female was \$160,
two others brought \$120 and \$100.

Horn Fly Oil

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



Sold in Cans (with directions)—
QUART, each, 25c.; doz., \$2.70. GALLON, each, 60c.; ½ doz., \$3.30
BY EXPRESS OR FREIGHT AT PURCHASERS' EXPENSE.

Ask your dealer, or send direct to **WM. RENNIE, ADELAIDE and TORONTO.**

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

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

H. CARGILL & SON,

Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.

ARTHUR JOHNSTON

BREEDER AND IMPORTER OF

SHORTHORNS ONLY.

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

GREENWOOD, ONT., P. O. AND TELEGRAPH OFFICE.

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

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

Thorold Cement

FOR BUILDING PURPOSES."

A WELL-TO-DO FARMER NEAR ALVINSTON THIS TIME.



BASEMENT BARN OF JOHN BLACK, NEAR ALVINSTON, ONT.

Walls 36 x 60 feet, 8 feet high.

Mr. Black used Thorold Cement in both basement walls of barn and floors of stables.

ALVINSTON, ONT., Oct. 22, 1900.

ESTATE OF JOHN BATTLE, Thorold, Ont.:

DEAR SIRS.—It is with pleasure that I testify to the good qualities of your Thorold
Cement for building purposes. I have just completed an eight-foot wall under my barn,
36 x 60 feet. I have also floored all my stables with it, using in all 150 barrels of cement. The
work was done under the supervision of William Hand, a man who I am pleased to recom-
mend to any of my fellow farmers contemplating erecting concrete walls or floors.

I remain, Yours truly, JOHN BLACK.

ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.

MANUFACTURERS OF THOROLD CEMENT.

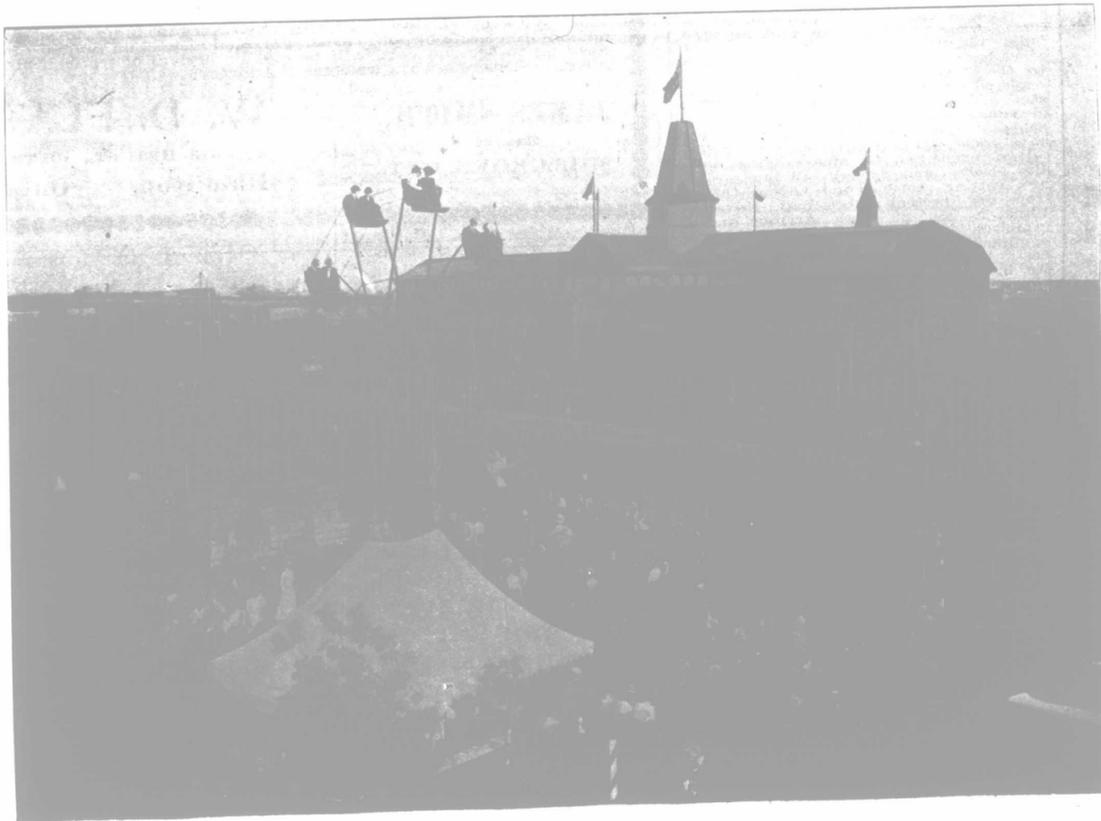
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ESTABLISHED 1855
TAYLOR'S
 FIRE & BURGLAR
SAFES
 HAVE MANY PATENTED IMPROVEMENTS
 NOT FOUND IN OTHER MAKES
 THAT WILL WELL REPAY AN INVESTIGATION
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 THE BEST SAFE
J. & J. TAYLOR.
 TORONTO SAFE WORKS.
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Free Treatment

DR HOPE'S

TINY
TABLET
TREATMENT

You can't get well without it.

For LIVER KIDNEY and NERVE Troubles.

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

DR. HOPE MEDICINE CO., LIMITED, TORONTO, ONT.

GEORGE D. FLETCHER,
 BINKHAM, ONTARIO,
 Breeder of Shorthorn Cattle, Yorkshire Swine, and Single-comb White Leghorn Fowl.

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

Shorthorns & Yorkshires

We are offering two Shorthorn bulls, 13 and 18 months, bred close to imported stock, at \$80 each. Two-months Yorkshire pigs, sired by our Toronto winner, at \$7. Embden geese eggs, 25c. each. Barred Rock eggs, five settings for \$2.

W. R. BOWMAN,
 MT. FOREST, ONT.

For Sale: Very heavy, massive cows of Bates and Cruickshank breed. Two-year-old heifers in calf. Stock bull, Imperial 2nd, No. 28883. Bull calf, 11 months (Caucopper Boy 2nd = 30878), dam Flora = 32974; also dark red heifer calves. **John McFarlane, Dutton, Ont.**

WE HAVE FOR SALE

10 SHORTHORN BULLS

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

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

HOLWELL MANOR FARM

SHORTHORNS,
 SHROPSHIRE,
 YORKSHIRES,
 SCOTCH COLLIES.

D. G. GANTON, ELMVALE, ONT.

CHARLES RANKIN, WYEBRIDGE, ONT.

Importer and breeder of

Shorthorns, Oxford Downs and Berkshire Pigs
 Young stock always on hand.

GOSSIP.

Shorthorn breeders and farmers looking for registered stock in this line should note the correction of the P. O. address in the advertisement of Mr. John McKenzie, in this issue, which is Keward and not Chatsworth, as it appeared in a previous issue. Chatsworth is Mr. McKenzie's station on the branch of the C. P. R. running from Streetsville Junction to Owen Sound. Keward is the post office.

Messrs. Alfred Mansell & Co., livestock exporters, Shrewsbury, England, have recently shipped per SS. Lycia, from Bristol, 13 Shropshire yearling rams, 1 two-shear ram, and 16 Shropshire ewes of the same age, bred by and selected from the famous stock of Mr. A. E. Mansell, the consignee being Mr. Robert Miller, of Stouffville, Ont.

English Jersey fanciers are enthusiasts. They had the best-attended ring-side in the cattle section at the Bath and West of England Show, last month. It was a grand class of cows that battled for the prizes. "Surely entries of such dimensions deserve better recognition in the prize list," says the London Farmer and Stock-breeder.

Mr. H. J. Davis, Woodstock, Ont., reports the following recent sales of Shorthorns: To Messrs. Kuntz & Son, Fremont, Ohio, eight head of fine Scotch Shorthorns, among the lot being two fine Crimson Flower heifers, one Buckingham heifer, two Buchanan Lassies, and a fine show cow and one Miara heifer; to Robert Miller, Stouffville, a Bracelet cow and heifer calf, also a rightly-bred Duchess of Gloster (four-year-old cow).

Messrs. Wm. Stewart & Son, Menie, Ont., breeders of high-class Ayrshire cattle and utility breeds of poultry, in ordering a change in their advertisement, write: "We have sold all the bulls recently offered. We have sold since last fair time over 20 head, thanks to the 'Advocate' for the assistance rendered. We have a grand lot of young stuff left; indeed, we have the best lot of young females that ever graced the fields of the Menie Stock Farm. We have some choice young bull and heifer calves, from two to nine months old; also, cows and heifers all ages. We are getting some good young things from our present stock bull, Hover-a-Blink, a son of Jean Armour and a grandson of Sprightly (imp.), by Auchindran (1), one of the best, if not the best, Ayrshire bulls Scotland boasts of. We have a bull calf out of Sprightly (imp.) and by White Prince (imp.), that will likely be heard from in the near future. Our stock of milking cows are giving a good account of themselves on the luxuriant pastures we have this spring.

In Kent County Ont., two miles south of Northwood station on the G. T. R., which is his post office, lives Mr. Mac Campbell, a gentleman well-known all over Western Ontario on account of the high-class order of pure-bred stock always to be found on his well-kent farm, including Shorthorn cattle, Leicester sheep and Berkshire hogs. The Shorthorn herd numbers 25 head of Scotch-bred cattle, at the head of which is the richly-bred bull, Dunblane 39334, by Imp. Blue Ribbon 17095; dam Verbena 25002, by Imp. Warfare 6492. Dunblane is said to be the best son Blue Ribbon ever sired. In females one of the earlier dams was Trixy 20501, by Imp. Patriot 6409; dam Scotch Lassie 14752, by Imp. Hospodar. In the herd are a number of females descended from this cow and by Arthur Bright 26085, Famous Chief 23857, and Prince of Kinsale 14117. Another of the good cows is Betsy Bobbit 25034, by Daisy Chief 13674; dam Miss Betsy 15369, by Empire 6989. This cow traces to Imp. White Lily. An extra nice two-year-old heifer out of her and sired by Daisy Chief is for sale. Another of the dams is Lady Strathallan of Botany 25760, by Roan Prince 14438; dam Lady Bell of Kent 14634, by Crown Prince of Strathallan 2992. Out of her is a typical one-year-old heifer sired by Arthur Bright. Still another is Lulu Mint, Vol. 16, by Sir Morton 6883; dam Lulu Northwood 21450, by Daisy Chief. There is also a yearling heifer out of her by Arthur Bright, and a half-sister, Lulu Northwood 2nd, by Invincible 3rd 20282. In all there are 10 heifers from six months to two years old, and in the lot a man can find something to suit him if he can be suited. There is also a one-year-old bull by Arthur Bright, out of Lulu Northwood 2nd, which is the making of a compact, meaty, fashionable animal. Any of these young ones can be bought. Mr. Campbell's Leicesters are a big, thick lot of sheep, showing lots of substance and quality. This season's crop of lambs are a nice even lot. They are sired by Sir Wilfred 3rd 3643, by Sir Wilfred 2486, by Balfour Box 1449; dam Kale 2nd 1125, by Cheswick 852. Mr. Campbell says his lambs this year are the best he ever had, and he has raised some good ones. The Berkshires are of the improved type, showing length, depth, size, smoothness and quality all blended together to make the perfect bacon type. The stock bear as Oliver Cromwell 2820, by Prince of Perth 1963; dam Dairymaid 1350, by Iron Duke. Both as an individual and as a stock animal he is all that could be desired. At present there are for sale 5 sows six months old and 1 boar same age, a nice, smooth, even lot.

Shorthorn Bulls.

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

H. SMITH, HAY, ONTARIO.

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

Hillhurst Shorthorns AND HAMPSHIRE DOWN SHEEP.

THERE are few herds on the continent that can boast of three as good stud bulls as Joy of Morning 153003, Scottish Hero 145553, and Scottish Beau 145552. These are all imported bulls, of the richest breeding, and right well do they reflect the possibilities of the future character of the Shorthorns being bred at Hillhurst. The breeding cows at Hillhurst are of Scotch and English breeding, and are especially noticeable for their size.—*Live Stock Indicator*, May 15, 1902.

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

TROUT CREEK HERD OF Shorthorns

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

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

Queenston Cement

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

Isaac Usher,
 QUEENSTON, ONT.

Rapids Farm Ayrshires.

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

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

Come and see or write for prices.



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

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

PLEASE MENTION THE FARMER'S ADVOCATE.

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

NO HUMBBUG & PERFECT INSTRUMENTS
Hamans Swine V, Stock Marker and Calf Dabber. Stops a wine of all ages from rooting. Makes 45 different ear marks, all sizes, with same blade. Extra Extra Hours. Testimonials free. Price \$1.50 or send \$1 for trial; if it works, send balance. Pat'd U.S. May 6, '02 for 17 yrs.; Canada Dec. 17, '01, 18 yrs. **FARMER BRIGHTON, Fairfield, Iowa, U. S.**

SHORTHORNS (imported)
One imported and one Canadian-bred bull, a few cows and heifers.

THOS. RUSSELL, EXETER, ONT.
Imp. Shorthorns and Lincolns
A. D. MUGUGAN, RODNEY, ONT., P. O. AND STA.

Now offers one year-old roan bull, out of Imp. Day-spring; sire Abbotford 14916; a prizewinner sure. Also a few choice heifers out of imp. and home-bred dams, and ram lambs out of imp. Dudding ewes.

R. MITCHELL & SON, NELSON, ONTARIO.

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

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

BELLEVUE SHORTHORNS. Both sexes. IMPORTED AND HOME BREED. All ages. Prizewinners at home and abroad.

EDWIN BATTYE, GORE BAY P. O. AND PORT. MANTOUAN ISLAND.

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

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

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

E. & C. Parkinson, Thornbury P. O. & Stn., G. T. R.
SPRINGBANK FARM. Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

SPRUCE HEDGE SHORTHORNS. We are offering females of all ages. Among them are prizewinners and youngsters that are sure to win.

SHORTHORNS Scotch and Scotch-topped. War Eagle = 27609 = at head of herd. Young bulls, cows and heifers for sale. Ry. station: Coldwater, Midland branch, G. T. R. Write for prices. **S. DUNLAP, Eady P. O., Ont.**

CHOICE SHORTHORNS. 4 bulls, from 5 to 17 months old, sired by Ashburn Duke; also a few heifers, sired by Indian Duke; for sale.

J. R. HARVIE, Orillia P. O. and Station. W. J. WALKER, EADY P. O., ONTARIO, BREEDER OF

Scotch and Scotch-topped Shorthorns, Barred Plymouth Rock fowls, and Bronze turkeys. R. R. station: Coldwater, G. T. R. Write for prices.

ASHTON FRONT VIEW STOCK FARM. Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome. **A. J. WATSON, Castlederg, Ont. C. P. R. Station and Telegraph Office, Bolton; or G. T. R., Falgrave.**

Brookbank Holsteins

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

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

LAWNRIDGE STOCK FARM.

Jerseys for Sale. Yearling bull and bull eight months old. Registered cows and heifers of choicest breeding and individuality. Some fresh and others coming in soon. 100 head to choose from.

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

Riverside Holsteins.

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

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

CHOICE JERSEYS. Am offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap.

WM. N. HASKETT, Avon Manor, Markdale, Ont.

We have now on hand young females sired by **Nero of Glen Rouge 50241,** and cows and heifers bred to him.

E. B. HINMAN & SON, GRAFTON, ONT.

Holsteins FOR SALE. Young stock, sired by Prince Pauline De Kol, the richest butter-bred bull and finest sire in Canada.

H. Bollert, Cassel, Ont.

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

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

HOLSTEIN BULLS 4 FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inks, Netherland, Royal Aggie, and Tritonia Prince, and out of imported females that have proven their worth at the fair.

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

Ridgedale Farm Holstein-Friesians for Sale. 2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. **E. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C. P. R.**

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

W. W. EVERETT, CHATHAM, ONTARIO. "Dun Edin Park Farm," Box 555.

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

FOR SALE: A SPLENDID LOT OF Jersey Cattle. 41 HEAD TO CHOOSE FROM.

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

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

72 Head of High-class Jerseys 72 IN THE BRAMPTON JERSEY HERD NOW FOR SALE. Two yearling bulls of first-class dairy breeding and sure prizewinners. Seven bull calves, the best we ever had. Also a large number of cows and heifers. We have what you want. Come and see, or address, stating what you want.

B. H. BULL & SON, BRAMPTON, ONT. C. P. R. and G. T. R. stations within 2 miles of farm.

F. L. GREEN, BREEDER OF Jersey Cattle and Yorkshire Pigs. Choice stock of each sex for sale.

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

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

ADVERTISE IN THE FARMER'S ADVOCATE.

FOR SALE:

Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Auchin-brain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshires and Yorkshire sows could be served before shipping. Collie pups, from Perfection Queen. Address—

T. D. McCALLUM, Nether Lea, Danville, Que.

SPECIAL OFFER FOR THIS MONTH.

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

Isaleigh Grange Farm, Danville, Que.

FOR SALE:

High-class IMPORTED AND HOME-BRED AYRSHIRES, including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productivity. Come or write.

WM. WYLIE, HOWICK, QUEBEC.

SPRINGHILL FARM.

Importers and breeders of choice, deep-milking

Ayrshires

Males and females for sale.

ROBERT HUNTER & SONS, Maxville, Ont.

LIVE STOCK EAR LABELS REDUCED

Send for a circular and order early, before the rush. Large and small lots and odd numbers supplied.

R. W. James, Downsview, Ont.

W. F. STEPHEN, Trout River, Que., breeder of Ayrshire Cattle. A few choice bull calves for sale at reasonable prices; sired by Klondike of St. Annes 8897, and from deep milkers with good udder and teats. Carr's Crossing, 1 mile, G. T. R.; Huntingdon, 5 miles, S. L. & A. R.

J. YUILL & SONS Meadowside Farm, Carleton Place, Ontario. Breeders of Ayrshire cattle, Shropshire sheep, Berkshires swine, and Barred Plymouth Rocks. A fine lot of the long Large English Berkshires for sale, ready to ship.

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

AYRSHIRES FOR SALE. 2 two-year-old bulls, 2 yearling bulls, and a number of spring calves, both sexes, from deep-milking dams. Prices reasonable.

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

AYRSHIRES AND LEICESTERS We breed for milk and quality, and employ only the best sires. Are now offering young Ayrshires of both sexes. **DONALD CUMMING & SONS, Lancaster, Ont.**

AYRSHIRE FEMALES FOR SALE Carrying the same breeding as our prize-winners, including such offspring as Floss and Tom Brown, the World's Fair winners. We breed for constitution, quality, and production.

DAVID BENNING & SON, Williamstown, Ont.

THE ONTARIO VETERINARY COLLEGE (LIMITED), TEMPERANCE ST., TORONTO, CANADA Affiliated with the University of Toronto.

Patrons: Governor-General of Canada, and Lieut.-Governor of Ontario. Fee \$65.00 per session. Apply to **ANDREW SMITH, F.R.C.V.S., Principal. 18-2-y-om**

Tredinnock Ayrshires.

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

SPRING BURN STOCK FARM H. J. WHITEKER & SONS, PROPS. Breeders of North Williamsburg, Ont. AYRSHIRE CATTLE, OXFORD DOWN SHEEP, BERKSHIRE PIGS AND BLACK JAVA FOWLS.

For Sale: 5 Bulls, from 6 to 12 months old. Females any age. One 2-year-old ram, six shearling rams, and five ram lambs.

Winchester, C. P. R. Morrisburg, G. T. R.

Menie Stock Farm Choice young AYRSHIRE bulls and heifer calves, from 2 to 9 months old. Also cows and heifers all ages. Write **WM. STEWART & SON, Menie, Ont.**

Ayrshires and Yorkshires A yearling bull and several choice calves from heavy milkers, fit for exhibition purposes. Three Yorkshire boars fit for service; three sows ready to mate, also a number of young pigs fit to ship. **ALEX. HUME, MENIE, ONTARIO.**

DAVID A. McFARLANE, Breeder of high-class AYRSHIRES. KESLO, P. Q. Young stock for sale from imported and home-bred foundation. Prices reasonable.

EUROPEAN ADVERTISEMENTS.

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

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

English Shorthorns. Booth and Bates Shorthorns, topped with Cruick-shank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American Herd-book. Royal and Highland prizewinners included for the last two years. Closes on 2400 won in prizes last year and this. **WM. BELL, Ratcheugh Farm, Alnwick, Northumberland, Eng.**

JOHN BRYAN & SON, Southleigh, Witney, OXFORD. One of the oldest registered flocks of pure-bred Oxford Downs. Annual sale of rams. Oxford ram fair. Rams and ewes for sale at home. Inspection invited.

Robert W. Hobbs, Kelmscott, Lechlade, England. One of the largest flocks in Oxford Down Flockbook. Numerous prizes obtained for ram lambs at principal shows. Rams and ewes always on sale.

J. E. GASSWELL'S LINCOLNS. Laughton, Folkingham, Lincolnshire, England. Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged 254 each; 14 of the best averaged 263 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearings for sale; also Shire horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingham, G. N. R.

HAMPSHIRE DOWN SHEEP.

"RESERVE" FOR CHAMPION IN THE SHORT-WOOL CLASSES, SMITHFIELD, LONDON, 1901.

Splendid Mutton, Good Wool, Great Weight. This highly valuable ENGLISH BREED OF SHEEP is unrivalled in its wool-fertility early maturity and hardness of constitution, adapted to all climates, whilst in the quality of mutton and large proportion of lean meat it is unsurpassed; and for crossing purposes with any other breed, unequalled. Full information of

JAMES E. RAWLENCE, SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION, SALISBURY, ENGLAND.

REGISTERED Southdown Sheep, Suffolk Sheep and Berkshire Pigs.

THE Cheveley flocks and herds, the property of Col. H. L. B. McCalmont, C.B., M.P., are unique for the purity of their blood, typical character, and individual merit. In their foundation, etc., no expense has been spared in securing the best and most perfect specimens of the different breeds. In each case full records are kept of individual pedigrees, so that any selections made from these flocks will, in addition to being of the highest merit and typical character, have also the great advantage of individual pedigrees.

The Southdowns have secured the highest show-yard honors during 1900 and 1901 at the leading English shows; in the latter year, besides winning the champion prize, gold medal and breed cup at Smithfield Show, two medals for best Southdown, six firsts, three seconds and numerous minor awards were won at Royal, Birmingham, Royal Counties shows, etc. The Suffolks are equally well bred, and numerous prizes have also been won. In fact, for individual merit, pedigree, and purity of breeding, it would be difficult to find better and more suitable flocks of either of these breeds from which to perpetuate their high individual merits. Apply to—

H. J. GARROD, Cheveley, Newmarket, England.

Shorthorn Cattle

and Lincoln Longwool Sheep.

HENRY DUDDING

Riby Grove, Great Grimsby,
Lincolnshire,

Has always for inspection and sale the largest flock of pure Lincoln sheep and Shorthorn herd in the country, and many prizewinners. The sheep are famous for their great size, fine lustrous wool, and 150 years' good breeding, and at the home sales have made the highest prices on record. The Shorthorns comprise the best Bates, Booth, and Scotch blood, including the best prize strains of Duthie, Marr, Willis, and Harrison. During the last year 86 prizes have been taken by the Riby Shorthorns and Lincoln sheep at the leading shows in England.

Cables: Dudding, Keelby, England.

WALTON HERD

OF

PEDIGREE PIGS,

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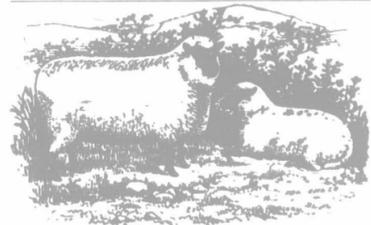
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Consists of imported and show sows; the sires are big, long fellows, of the bacon type. For Sale: a few grand young sows from 3 to 6 months old. **JNO. LAHMER, Vine, Ont.**
Vine Station, G. T. E.

GOSSIP.

About five miles south of Bismarck station, on the M. C. and the L. E. & D. R. railroads, in Ligin County, Ont., lies the farm of Mr. Alex. Love, whose post office is Eagle, Ont., breeder of Shorthorn cattle and Berkshire swine. The herd of Shorthorns number 25 head and are a splendid lot of deep, short-legged animals, among them being the cow, Cleopatra 2nd 28/53, sired by Imp. Reporter 6424; dam Imp. Cleopatra 1st 11/11, a cow of more than ordinary quality and substance. Another is Joan's Star, by War Eagle 13/15; dam Miss Joan 25/14, also a finely-built animal. Another is Lady Rose 3rd, a Miss Ramsden cow, sired by Speculator 2nd 24/33, a Miss Ramsden bull by Speculator, a Cruickshank Secret; dam Lady Rose 2nd, also a big, fine animal. Still another is Leonore of Sylvan 20th, by Indian Brave 215/00, by Imp. Indian Chief; dam Leonore of Lmdale, by Imp. Warrior. Another is Lady Rosebud 2nd, by Speculator 2nd; dam Lady Rosebud 9632. Again, there is Kelsa's Leda 2nd, Vol. 16, by Scotland Yet 2337; dam Leda Kelsa 18634. The cows mentioned represent the older breeding cows, while the younger ones are mainly sired by Scottish Chief 27244, by Imp. Scottish Pride 20839; dam Fancy's Gem 26852, by Imp. Guardsman. There is one yearling bull sired by him and out of Rosebud 2nd, a good type of the breed; also a number of nice blocky heifers. The present stock bull is Royal Arthur 30458, by Royal Standard 27658, winner of first prize at Toronto; dam Vacuna 31st 27365, by Norseman 16397. This bull is both a good individual and stock-getter. The young ones are all sired by him, with the exception of one six-months-old bull calf, which is sired by Abbotsford 19446, which is a credit to his illustrious sire. Mr. Love reports a very successful year in Shorthorns, but has still the one bull and a few females for sale. The Berkshires are a very superior lot, being exceptionally long and deep, with fine shoulders and backs. They are bred from Snell foundation, and an even lot than these it would be hard to find. There are on hand for sale young ones of both sexes from two to six months old.

Camden View Stock Farm, the property of Mr. A. J. C. Shaw & Sons, lies in the County of Kent, about three miles west of Thamesville, Ont., his post office, a station on the G. T. R., and two miles east of Kent Bridge on the C. P. R. For a number of years Mr. Shaw has been engaged in the breeding of Shorthorn cattle and Berkshire hogs, having always endeavored, by careful selection of breeding stock, to improve his herd, and that he has succeeded in this a cursory glance over his splendid herd of 25 head will show. His present stock bull is Red Chief 40769, by Lord Blaine 30681, by Lord Becho, out of Missie Melrose, of Lord Polwarth's branch of the Marr Missie tribe; dam Maiden Star 5th 34705, by Admiral 23417. He is a bull of commanding appearance, with plenty of size and quality, and should be a successful sire. The young animals in his selection are mostly sired by Lord Lovell's Heir 2nd 26322, by Lord Lovell's Heir 20887; dam Queen Esther 2nd 1508, by Imp. Lancaster Royal 1263. He is a big, heavy-fleshed roan, that has proved his worth as a sire and the soundness of Mr. Shaw's judgment in his selection. Another bull that Mr. Shaw purchased to use some this year is Prince George 40540, by Prince 25544; dam Lily Ramsden 40438, by Speculator 8567. He is a straight-bred Miss Ramsden on the dam's side, and is a nice even model, and no doubt will prove his worth as a sire. Also there are three other young bulls, bred by Mr. Shaw, about eight months old, sired by Lord Lovell's Heir 2nd, and out of the following cows: Camden Minerva, by Commander 18828, by Conqueror (Imp.); dam Bothwell Queen, by Windsor (Imp.); Ramsden Princess, by Commander; dam Stella Ramsden, by Daisy Chief. Lady Minto, by Earl of Buckingham 24560; dam Miss Ramsden 33450, by Commander. These cows are all of the low-down, deep, fleshy kind, and the young bulls are a choice lot, showing heavy, fleshy bodies on short legs. Any and all of the bulls mentioned are for sale at a price that should soon sell them. Among the other cows is Bothwell Queen 22654, by Imp. Windsor; dam Gipsy Queen 3rd 20690, by Imp. Toft-hills. She belongs to the Gipsy Queen family. There is a heifer out of her by Earl of Buckingham that is hard to beat. Another extra good heifer is Rose Bruce, by Captain Bruce 32001; dam Red Rose of Clara 27259, by Canadian Chief. She traces to Miss Syne (Imp.). Another particularly good heifer is Daisy Aberdeen, by Imp. Aberdeen Hero; dam Duchess of Croton 37896, by Chief Captain. She is an exceptionally deep, fleshy heifer, and will be a prizewinner sure. A few heifers are for sale. Mr. Shaw's Berkshires are as good a bacon type as we have seen for many a day. The banner sow, Camden Souvenir 7th 8357, by Duke of Oxford 5957, is an extra long, smooth animal. The stock boar is of Green's breeding, and is a good one. There are about 60 young ones of both sexes for sale. Mr. Shaw is also showing a splendid young carriage team, three years old, Cleveland Bays, well matched, 16 hands high, well broken, which are for sale.

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We agree to pay \$50.00 cash to man, woman or child reporting the largest number of eggs from 12 hens for any 300 days in 1902. Also \$25.00 for next largest. Hens to be fed "International Poultry Feed," and sworn statement to be mailed us before Dec. 31st, 1902. Will pay promptly and mail report to every one. If two or more report the winning number the money will be paid to the one whose letter also gives the best facts in regard to raising poultry for profit.
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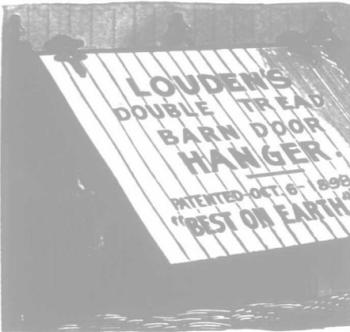
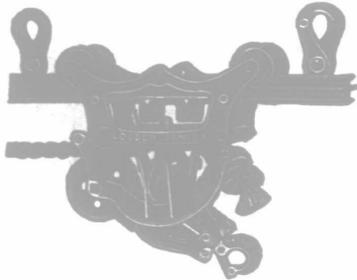
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