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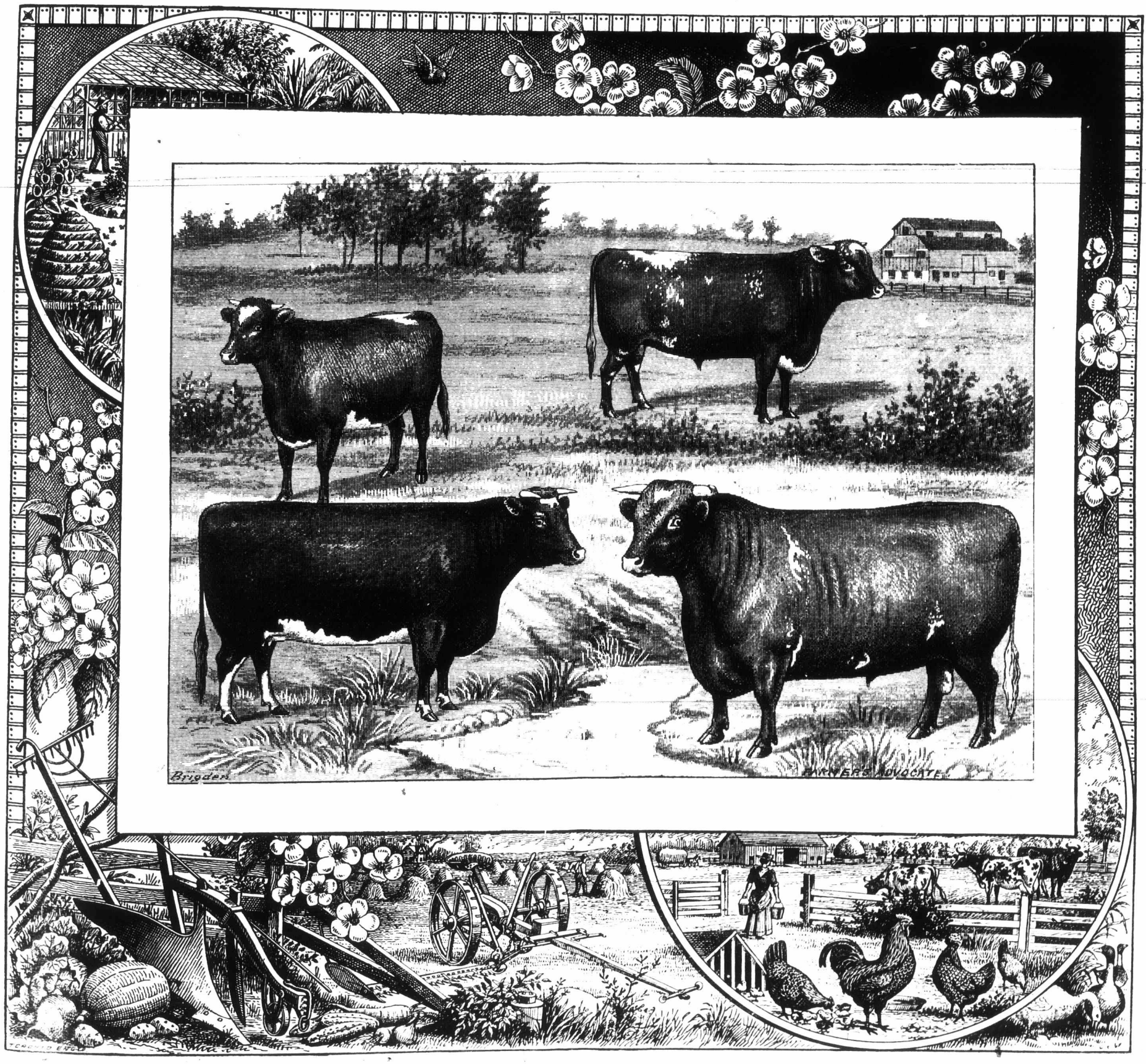
* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

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VOL. XXXI.

LONDON, ONT., AND WINNIPEG, MAN., MARCH 2, 1896.

No. 401.



A TYPICAL SHORTHORN GROUP
FROM THE HERD OF S. J. PEARSON & SON, MEADOWVALE, ONT.

EDITORIAL.

Valley Home Herd.

The frontispiece in this issue represents a scene upon the farm of S. J. Pearson & Son, Meadowvale, Ont. The commodious barn shown in the background is the dwelling of the excellent Shorthorn herd represented by the four animals whose life-like portraits grace the picture.

The Valley Home herd numbers about 40 head of pure Scotch Shorthorns of Cruickshank and Campbell breeding. They are, as the specimens in the illustration show, of the thick-fleshed, useful sort so much in demand at the present day. The herd is in the most desirable breeding condition, as all the mature females are regular breeders. The heifers are a desirable lot, among which are many good show animals.

The bull represented in the foreground, British Statesman (63729), Imp., is within a few weeks of being 4 years old. He is of Campbell (of Kinellar) breeding; sired by Royal James (54972), a Cruickshank bull, and out of a Campbell cow, Red Bess, by Gladstone (43286). British Statesman is a rich, mossy roan of great substance, carrying a great depth of natural flesh. He is beautifully topped, bearing long, level quarters and deep ribs, and a capital fore end. As the illustration shows, he stands on remarkably short legs. His excellence as a sire is shown in the young bull and heifer in the background.

The large heifer in the group is Mina Lass 4th, just turned 3 years old. She is out of Mina Lass (Imp.) and sired by Tofthills (56656), Imp. She is a good representative of the grand old Mina family, which has produced many prize winners. This heifer is a thick, evenly-fleshed animal of good quality, with excellent level top and well-sprung ribs, and a greater depth of body is seldom seen. She is a likely heifer for future honors in the show ring.

The young bull is Mina Statesman = 22506 =, a model calf at 13 months old. He is sired by British Statesman and out of Mina Lass, Imp. He is a rich roan, of capital build and excellent style. He is well sprung and deeply ribbed, and is a mellow handler. He has a grand coat of soft hair, and was successful in winning first honors wherever shown last fall.

The young heifer, Cecilia 11th, is about 16 months old. She is a rich roan, beautiful in form, clean-cut and stylish. She should win an honorable place in the best show rings this coming season. Her sire is the present stock bull, and dam Cecilia 8th. There are numerous others in the herd equally as good as those mentioned. Among them are twelve Nonpareils, one of Mr. Cruickshank's noted families as prize winners and as great milkers. Others in the herd are of such noted tribes as the Jilts, Clarets, and Bessies.

The Valley Home farm is conveniently situated between the G. T. R., at Brampton, distance seven miles, and the C. P. R., at Streetsville, two miles distant, while the Orangeville branch of the latter at Meadowvale is about a mile from the farm. This herd has been built up with great care and skill, and it is with regret that the ADVOCATE learns of the decision of Messrs. Pearson & Son to disperse it by auction in April, as elsewhere announced.

The Book on Silage.

Mr. E. D. Tillson, of Tilsonburg, who has had 14 years' experience with ensilage and silos, of which he has five (as recorded in our January 1st issue), writes:—"I have some five or six books treating on silos and ensilage. I have the first one published in America, and the last one by Prof. F. W. Woll, of the University of Wisconsin; this is the latest and, I think, the best work on the subject I have seen. It is for sale by the FARMER'S ADVOCATE, London, Ont.; price, 50 cents in paper, or \$1.00 in cloth. I would advise everybody who wants to build silos, or feed ensilage, to send for this book; it gives more and better information than I could give if I were to take six months at it."

[NOTE.—We are obliged to Mr. Tillson for his commendation of the work we are offering as a premium (or for sale at the price stated). A paper-bound copy can be secured by sending us the name of one new subscriber to the ADVOCATE, accompanied by \$1, or a copy well bound in cloth for two new yearly subscribers and \$2, which can be easily secured in any neighborhood.

It is claimed that by a system of inoculation swine plague has been virtually stamped out in Hungary, the mortality being reduced from 20 to about 1 of 1 per cent. Inoculation against pleuropneumonia is also reported to have been successful.

Railway Rates on Breeding Stock.

A regulation which cannot fail to be disastrous to the farmers of Canada, if allowed to continue in force, is the recent change in the freight rates upon the carriage of small lots of young cattle by the Grand Trunk and Canadian Pacific Railways. Previous to Jan. 1st last animals up to one year old were rated at 1,000 pounds, after which the rate increased correspondingly with the age. The present regulations provide that any animal over six months be rated at 4,000 pounds! This would not only be a great blow to breeders in getting new bulls, but it would render the purchase of pure-bred animals by smaller farmers to a large extent prohibitory, which neither the one nor the other is in a position to endure at the present time. In all conscience, the margin of profit on pure-bred stock has been narrow enough all along, but this new "tariff" will operate something like the proverbial "last straw" that fractures the patient camel's back. An equally severe but far more general blow, should this new regulation be allowed to stand, will be that dealt to the producer of grade cattle for beefing purposes, and the dairy farmer, who would resort, in many instances, to the use of locally-bred sires, be they good, bad, or indifferent—too often of the two latter classes. In fact, this regulation might very appropriately be designated "An Act to promote the general use of scrub sires." We were in hopes that the "scrub" was a "back number," but the railway men have evidently determined to reinstate him. (The ages of young bulls shipped usually range from six to fifteen months.) But, seriously, the effect of this upon the cattle stock of Canada in a few years would be widespread and disastrous. It will affect females as well as males, thus hindering the establishment of young pure-bred herds. Especially at this juncture is it important that everything possible be done to improve the quality of our stock, for several reasons: 1st. The keenness of competition between the many countries of the world makes success possible only when quality is the chief factor. 2nd. The cost of production in beef and dairy produce is materially lessened by regular introductions of new (always pure-bred) blood into the herds. 3rd. We can no longer ship live cattle into the interior markets of Britain; we must therefore export animals of only the highest quality or be beaten in the race by United States and Argentine beef. One great necessity in connection with the proposed Canadian dressed meat trade will be to keep up a sufficient and continuous supply of choice beeves for slaughter.

For these and other obvious reasons we heartily endorse the action of the various Canadian cattle breeders' associations at Toronto, as recorded elsewhere, in passing resolutions protesting against the tariff change referred to, which surely must have been made by the railway companies without proper advisement or a due consideration of its far-reaching consequences, and which would in the near future include a serious curtailment of their own freight-carrying trade. When the facts have been properly laid before the authorities by the able committees having the matter in hand, there will surely at least be a restoration of the previous tariff. In this connection we might mention that the Manitoba and Northwest Cattle Breeders' Association has taken similar action, realizing as they do that the question of rates on breeding stock is, if possible, a matter of even more vital import in the West than in Eastern Canada.

The Bacon Trade.

SIR,—The low prices ruling for hogs the last few months have been very disappointing to farmers, drovers, and pork-packers. Probably the two former have been under the impression that export packers have been coining money, but the market report enclosed you from the "London Commercial Record" will show what has been the cause of the very low prices, viz., the great increase of hogs in Denmark. We would naturally suppose that it would bring about a reaction in that country, and we earnestly hope this will be the case, though it is to be feared the number of young pigs in the hands of farmers in that country is very large. The greatest difficulty in making sales in England at the present time is that all heavy bacon, fat or lean, is in decreasing demand, and the increasing demand is for lean sides from hogs weighing alive, 160 to 190 lbs. It is evident that this is in accord with the interest of farmers, because many experiments at Government farms in Canada, the United States, and foreign countries have demonstrated that all feeding animals yield the best returns for feed when marketed young, say pigs at six or eight months old.

WM. DAVIES.

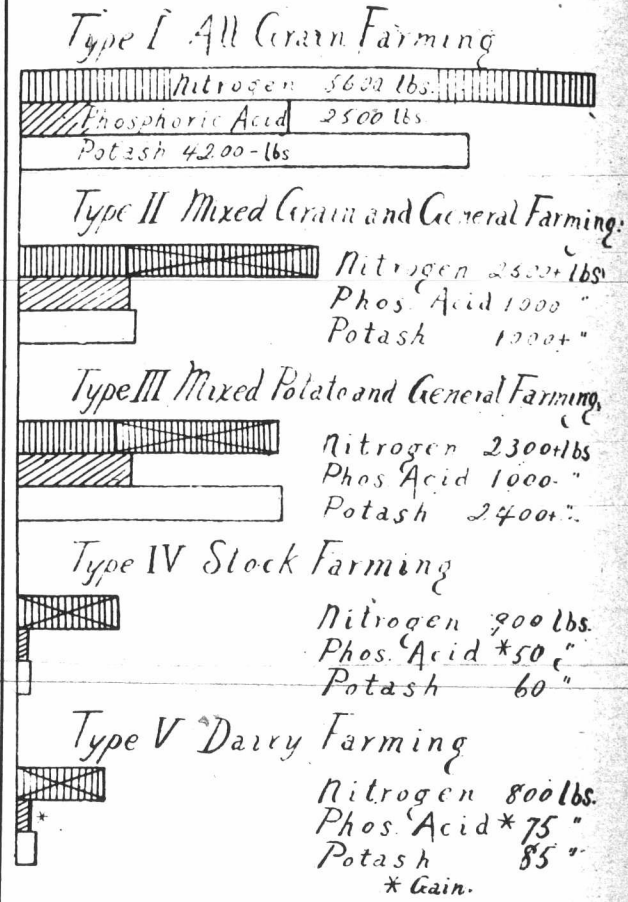
Toronto, Feb. 25, '06. Pres. Wm. Davies Co. (Ltd.)

[NOTE.—The report referred to states that during the week prior to Feb. 14th some 9,000 hogs

were killed in Ireland, and 30,000 "on the continent," meaning, we understand, Denmark. Though shippers' prices have fallen, complaint is made that British retail dealers are unreasonably keeping up the prices of bacon in the face of strong competition for cheap dressed beef, mutton, poultry, thus discouraging consumption.—EDITOR.]

Different Methods of Farming Compared.

The tendency, especially upon new farms, is to presume upon their fertility, and also to fall into a careless rut, the inevitable result of which is soil impoverishment and loss to the occupant. Just as certain as night follows day, crop after crop removes the materials from which they are built up, and unless replaced soil-poverty and man-poverty ensue. The divinely implanted laws of Nature cannot be violated with impunity. As a man sows so will he reap.



The accompanying illustration, reproduced from the Minnesota University Bulletin, No. 41, teaches some valuable lessons upon the conservation of soil fertility by the different methods of farming. By Type I, or All-Grain Farming, no stock is kept except work horses, the manure from which is not preserved or used. One hundred and sixty acres are under the plow. The grain is all sold from the farm and the straw is all burned in piles and no attention given to the ashes. One hundred acres of wheat is raised, yielding 15 bushels per acre; also, 40 acres of barley yielding 40 bushels per acre, and 20 acres of oats yielding 50 bushels per acre. The table shows the amount of fertility taken from the farm each year. This estimate is decidedly under the mark because the plant food used up by weeds is not taken into account. The calculations are all based upon a farm of 160 acres.

Type II.—Mixed Grain and General Farming.—Eighty-five acres are in grain, 65 of which is sold and 20 reserved for feeding on the farm. The animals kept are 10 cows, 4 head of young stock, 15 sheep, 8 hogs, 4 work horses, and 2 steers. All of the straw is used for food and bedding for the animals. Forty acres are sown to wheat, yielding 20 bushels per acre, all of which is sold; 20 acres are sown to oats, half of which are sold, while the other half is fed to the stock. Ten acres of barley is raised, yielding 45 bushels per acre, one half of which is sold and the remainder fed. Seven acres of rye and 3 of flax are raised and sold, also 50 bushels of potatoes. Two steers, 5 sheep, 8 hogs, and 1,500 pounds of butter constitute the animal products which are sold. The table shows the amount of fertility removed from the farm.

Type III.—Mixed Potato and General Farming.—With this system of farming about 40 acres of the grain is replaced by potatoes. In other respects the farm is managed in about the same general way as the preceding example. The draughts upon the soil in potato farming are the heaviest upon the potash and least upon the phosphoric acid. Provided a sufficient amount of clover is grown the loss of nitrogen is not so serious.

Type IV.—Stock Farming.—Ten beef cows, 10 dairy cows, 10 horses, 5 steers, 10 head of young stock, 30 sheep, and 20 hogs are kept. No grain is sold. Twenty acres of the farm are sown to oats, 20 to barley, 10 to corn, and 5 to peas. Five acres of oat hay is raised for soiling purposes, if necessary; one acre of potatoes and one of millet are also raised. The remainder of the farm is in meadow and pasture. When stock farming is followed, and all the grain raised on the farm is consumed as food, and a small amount of milled products or other food purchased, there is no loss of fertility to the farm, but in most cases there is

a gradual gain. The loss of nitrogen is more than balanced by the gain from the growing of clover.

Type V.—Dairy Farming.—Thirty cows, 5 head of young stock, 4 horses, and 20 pigs constitute the live stock kept upon the farm. The crops raised are as follows: 10 acres of wheat, 25 bushels per acre; 7 acres of rye; 20 acres of oats, 50 bushels per acre; 1 acre of millet, 1 acre of potatoes, 2 acres of roots, 10 acres of fodder corn, and 5 acres of oat hay for soiling, if necessary. Twenty-five tons of both clover and timothy are cut. The rest of the farm is given over mainly to pasture. The sales from the farm are approximately: all of the wheat and rye, 16 pigs (250 pounds each), 2 head of cattle, and 5,000 pounds of butter. The food purchased, mainly from the sales of the wheat, is 7 tons of bran, 7 tons of shorts, and 2 tons of oil-meal. Five cords of hard wood is burned as fuel, and the ashes are all saved and spread on the land with the manure.

When dairy farming is followed under the conditions as stated there is no loss of fertility from the soil, but rather a gain. There is practically no loss of fertility in the butter that is sold, while the food that is purchased is more concentrated in fertility than the grain that is sold. The only sources of loss of fertility when the skim milk and the food raised are both fed on the farm is in the handling of the manure. When the manure is handled in larger quantities, as in dairy farming, there is not so great a loss as when smaller quantities are handled. The gain of nitrogen through the growing of clover will more than offset the nitrogen item. It will be noticed that the "potash" item in "Dairy Farming" and the "phos. acid" in "Stock Farming" are marked with stars, which indicate a gain in these elements.

Hence, in dairy farming, when a part of the grain is exchanged for cheaper milled products, the skim milk fed on the farm, and clover is grown, there is no loss of fertility from the soil, but rather a constant gain.

What Subscribers Have Just Written Us.

"I would not be without the FARMER'S ADVOCATE for \$2 a year. It is a first-class paper."—R. F. TIMMONS, Elgin Co., Ont.

"I keep all my copies and have them bound for future use. The ADVOCATE is first in every respect."—DAVID GANTON, Simcoe Co.

"The Scottish threshing scene is very good. Illustrations help very much. The accounts of farmers' meetings published make me eager to attend them. Your paper is a great help and I propose never to be without it."—GEO. B. PICKETT, King's Co., N. B.

"We are highly pleased with the ADVOCATE and wish you a prosperous year."—W. J. GIBSON, P. E. I.

"Have taken the ADVOCATE for the last twenty years and intend to do so as long as printed. The 'Helping Hand' is quite an improvement."—JAS. H. SMITH, Waterloo Co., Ont.

"The ADVOCATE is a welcome visitor. May it always maintain its independence of rings and selfish organizations and continue its valuable suggestions."—B. B. McLEAN, Huron Co.

"You should be encouraged for the manly and independent stand taken in the farmers' interests."—R. HOPKINS, Ottawa.

"I think more of your paper every year."—THOS. R. HUGHES, Cote des Neiges, P. Q.

"Money is hard to get, but there is so much good reading in the ADVOCATE we do not like to give it up."—CHAS. MOFFAT, Northumberland Co., Ont.

"There are a great many single articles that are worth twice the subscription price."—JOHN McPHERSON, Elgin Co.

"My wife and family look for it as regularly as the time comes."—JOHN NIGHTINGALE, Ontario Co.

"Would congratulate the publishers of the FARMER'S ADVOCATE on their efforts to maintain its high reputation with readers throughout the land."—THOS. RICHARDSON, Carleton Co.

"To permit my subscription to lapse would be like cutting the acquaintance of one of my best friends."—JOHN S. NELSON, Simcoe Co.

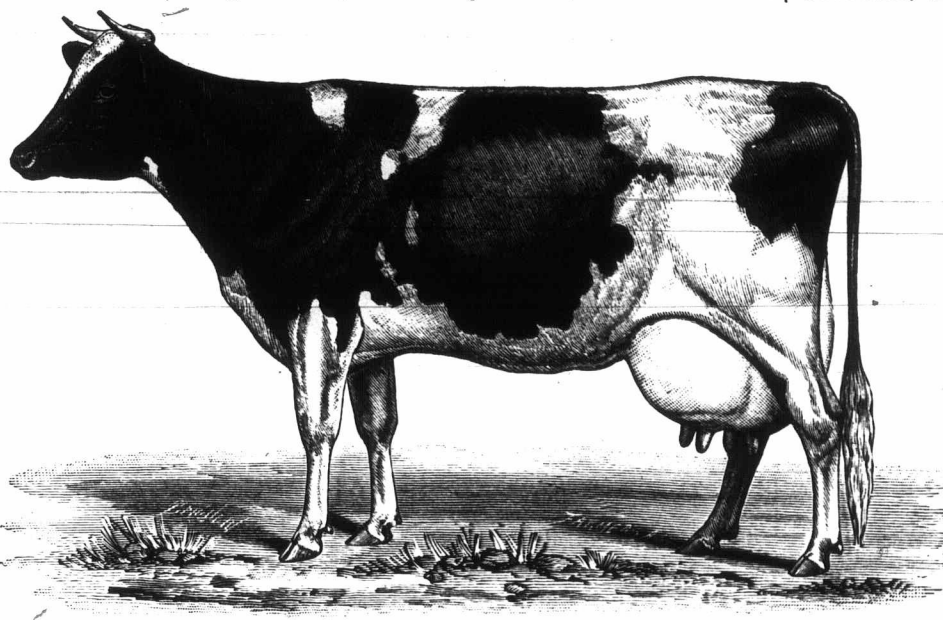
"My father, F. T. Ferguson, has taken your valuable paper every year but one since it was founded. That one year without it was enough."—J. J. FERGUSON, B. S. A., Leeds Co.

The entries for the London (Eng.) Show of the Hackney Horse Society number 442, against 431 last year. There will be 229 Hackney and Pony stallions, 180 mares, and 33 geldings.

STOCK.

Our Extra Illustration.

Carmen Sylvia 306, C. H. F. H. B., whose portrait appears herewith, is a typical Holstein dairy queen, owned by C. J. Gilroy & Son, Glen Buell, Ont. She is a grand performer and a record-maker for her age—being only four years old when she nobly upheld the standard of the breed in the milking test at the Industrial Exhibition at Toronto, 1895, where representatives of the leading dairy breeds were entered for competition. She gave in 48 hours, 122 lbs. 10 ozs. milk, containing 14.515 lbs. solids, and was pronounced the champion in the test. Then, again, after four weeks spent in show rings, and travelling to and from some 950 miles, she landed at Gananogue, Ont., where the Provincial Dairy Show was held. Here were entered some 24 choice cows representing the best dairy breeds. (It was thought by many that some of the fresher cows entered in this competition would win; but here, as at Toronto, Carmen proved herself equal to the occasion, and led her class, as well as obtaining the grand sweepstakes prize over all other breeds by a large score of points. She now holds the two-days public test record for Canada, having twice defeated all other breeds in public competition. As an individual show cow she has been successful. Her winnings are: First as a three-year-old and sweepstakes in her class and member of sweepstakes herd at Sherbrooke, Que., 1894; first in her class at Ottawa, 1894; first as an aged cow at Kingston, 1895; sweepstakes in Toronto milk test, 1895; first and medal in her class at Montreal, 1895; first and diploma in her class at Ottawa, 1895, and was also a member of gold medal herd there also; first in her class and grand sweepstakes over all at Gananogue Dairy Show, 1895. She gave 8,000 lbs. milk since 28th August, 1894, till February 15th, 1895. In this herd is to be found a daughter of this great cow, now one year old, which won first



THE SHOW RING AND DAIRY TEST WINNING HOLSTEIN-FRIESIAN COW, CARMEN SYLVIA.

at Montreal, 1895, as a calf; also a bull calf dropped August 28th, 1895; and a full sister's daughter. All give promise of doing good service in the near future. They are all sired by their great show bull, Inka Kathleen's son, No. 851, C. H. F. H. B. He stands at the head of the herd as a good sire and good show animal, heading, as he did, the herd which drew the gold medal at Ottawa, 1895, as best herd of Holstein cattle there among five herds in competition. Another female especially worthy of mention is Gilly Flower, No. 1395, C. H. F. H. B. She has a record of 48 lbs., testing 4 1/2 per cent. fat, in one day as a two-year-old, and 1,357 lbs. milk in one month at same age.

She is a grand breeder, producing prize winners in strong competition. Her daughter was third prize winner in the strong yearling class at Toronto, 1895, and was also a member of the gold medal herd at Ottawa.

Other females of the herd are worthy of special mention, but space will not permit; but in conclusion would say that out of eight head exhibited by Messrs. Gilroy & Son at leading shows last fall six returned having won first honors at one or more of the fairs, while the remaining two were second winners in same section as their firsts. This indicates the merit of the herd kept at Maple Glen stock farm.

Prize Winning Shorthorn Calves.

SIR,—In your issue of January 1st, 1896, under the signature of H. Cargill & Son, appears the following: "Judging from these and the fact that Mr. Russell was successful in winning all the good prizes at London last fall with calves sired by him (Rantin Robin), we should say we were fortunate in acquiring him as a helpmate for Royal Member." The facts are these: Mr. Russell was awarded one first on calves; we were awarded three firsts and one second. We will make no comment, but leave your numerous readers to decide to whom was awarded "all" or nearly all the "good prizes" on calves at London. In justice to ourselves we make this explanation. R. & S. NICHOLSON, Sylvan, Ont.

Our Scottish Letter.

The spring season is once more upon us, and with it the time for horse shows and bull sales. The winter, in the sense in which it was understood, has scarcely existed, and now should frost or snow come it will do a lot of damage. The mildness of the season has been a godsend to hill-farmers. The shortage in fodder would have played havoc with hill flocks had the weather been severe, and the condition of the sheep-folds at present promises well for the lambing season which is now drawing near. Markets here are utterly demoralized, both sheep and cattle making miserable prices, and how the figures ruling on Monday at the foreign-animal sales at Yorkhill paid the consigners in Canada and the States is a mystery to farmers in this country. The best cattle from America are shipped at Baltimore, and come, we presume, from the Blue-grass State of Kentucky. As a rule, States cattle are much better quality and show far more breeding than the cattle which come from Canada. Considerable interest is taken here in the scheme outlined by Prof. Robertson, and the future of that scheme will be awaited with interest. The Aberdeenshire and Northern farmers generally have inaugurated a company to prosecute the sale of genuine Scottish beef in London market, and there is every prospect that the venture will be a success. Every one thinks his own cow the whitest, and hence we may be prejudiced, but there is pretty general agreement that nothing excels the best home-grown beef. Londoners like the best—and prime Scots are the best. Prof. Robertson's scheme is welcomed here because of its transparent honesty. The proposal is that Canadian meat should be sold as such—and with competition of this kind the farmer here does not quarrel. Only one of the

Spring bull sales is over—that of the Shorthorns at Aberdeen, and so far prices have indicated an advance on those realized a year ago; 170 bulls were sold, their average price being £22 15s. 9d. per head, or about £2 more than was realized a year ago. The Inverquhomy yearling bull, Invader, made the highest price, 82 gs., at which figure he was secured by Mr. Peterkin, Dunglass, Conon.

Shorthorn breeders are making an effort to further the dairying properties of their favorites, and special prizes are being offered this year at the principal shows for Shorthorns excelling in dairy qualities. The Aberdeen-Angus breeders, not to be outdone, are taking similar steps, and altogether this is to be commended as a step in the right direction.

Horse matters have bulked largely during the past week. The great annual show of Clydesdale stallions was held in Glasgow on Friday, Feb. 7th, when no fewer than 60 aged horses, 36 three-year-olds, and 14 two-year-olds were entered, and most of these were forward. This is a complete reversal of the conditions formerly prevailing, and shows that the same policy is being pursued here as on the other side of the Atlantic, fewer entire horses being now kept than used to be the case. The owner who is shrewd enough to hold a grip on the trade is thus very likely in the end to be a good deal the better of the trade, and hence we believe the movement of Messrs. A. & W. Montgomery in importing the American-bred Clydesdales, Prince Sturdy, Prince Shapely, and Prince Superior, from Colonel Holloway's stud, is a wise one. The character of the horses entered and exhibited on Friday left little to be desired. Mrs. Simpson's Lord Colum Edmund 9280, which was awarded the first premium for a stallion to travel in the district, is a massive, well-matured horse with magnificent action. He is the third horse of the famous Hatton Bella 626 tribe which has won this premium. His breeder was Mr. W. S. Park, Hatton, Bishopton, who sold him when a yearling for £1,300 to his present owner, and his dam, Hatton Bella, also dam of Lord Erskine 1744, which won the same premium in 1882, and granddam of Prince of Erskine 9647, which won in 1894. The sire of Lord Colum Edmund was Prince Gallant 6176, a son of the noted Top Gallant 1850, out of a daughter of Prince of Wales 673. In the three-year-old class, first prize went to a very promising young colt, Prince of Clay, owned by Mr. Jas. A. Wallace, Claycrop, Kirkcinner, and got by the champion Prince Alexander 8890, out of the champion mare, Pandora, by Darnley 222. His granddam (that is, the dam of Pandora) was Mr. James Lockhart's Galloway Lass, better known as the Merryton Shire mare Flora by Lincolnshire Lad. She was dam of many prize animals, and was undoubtedly the best breeding mare ever brought north by the late Mr. Lawrence Drew. In spite of this fourth-part Shire in his composition, Prince of Clay may very likely breed good stock, as he has a double crop of Darnley blood; Jeanie Black, the dam of Prince Alexander 8890, being one of his daughters. Mares by Darnley still breed about the best. In the open class for three-year-old horses, on Friday, Prince of Clay again won, and the third, fourth, and fifth colts were, like him, out of Darnley mares, while the second was out of a mare by Darnley's grandson, Lord Lothian 4008; the sixth was out of a mare by his son, and the

THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED BY THE WILLIAM WELD COMPANY (LIMITED). LONDON, ONT., and WINNIPEG, MAN.

JOHN WELD, Manager.

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Large numbers of new subscribers continue to come in. We are greatly obliged to our readers and agents for the splendid increases made, and are gratified at the satisfaction our premiums have given those making efforts on behalf of the ADVOCATE. Our offer is still held open and includes several new and attractive features. See pages 97 and 101. Drop us a card for further particulars and free sample copies. The paper commends itself.

Independent Canadian Records Should be Preserved.

There seems to be no end to the restrictions imposed upon stock farmers and breeders, beginning with the British cattle embargo and ending with the new railway tariff affecting breeding cattle, referred to elsewhere. Vexatious red-tape regulations on the breeding sheep trade between Canada and the United States have been promulgated from Washington. From the same quarter, also, issued the obnoxious "Treasury Order" compelling registration in the American live stock records in order to secure free entry of breeding stock shipped across. As one prominent American stockman said to us, their Government simply "did what they were told" in that matter. As a natural sequence, about a year ago a suggestion to amalgamate the Canadian records with those of the other side was "boomed" for a short time, but it did not find favor with our breeders, the proposal of the Hon. John Dryden to have a registrar of live stock directly in connection with the Agricultural Department commending itself to their good judgment as economical and efficient, being calculated to maintain in its integrity an independent, uniformly high standard. We notice, however, that the "amalgamation" scheme has been resurrected in a limited form—a proposal being suggested to turn the Canadian Clydesdale Record in with the American Association, whose registration is, no doubt, carried on with great enterprise and ability. All things considered, we still favor an independent record, keeping the work of issuing certificates, publishing volumes, etc., in the country, and having all directly under our own control. With a revival of the horse trade in view, this is all the more important. If transferred to the other side, it would tend to encourage inferior records springing up in Canada. It is all very well to propose liberal terms, but once the Canadian Record is abandoned where would our Association find itself in the course of a few years in the event of discovering it necessary to re-establish a Clydesdale Record here. Furthermore, it would be removing one of the strongest elements for keeping the Canadian Association together, the need for which, in dealing with railways, governments, fair associations, etc., is every day growing more important and necessary. As a Canadian institution, amalgamation would practically snuff it out. This might suit our friends across the lakes, but it is not in our interests. We have in the Dominion the men and the country, as our past achievements have abundantly demonstrated, for a splendid future in live stock husbandry, and towards that Canadians in every way possible should build. Furthermore, to amalgamate one record would be but the thin edge of the wedge for further projects in the same direction. If the Americans are disposed to do the proper thing in this matter, let there be a friendly agreement between these two Associations upon a uniform standard and system of registration, and a mutual recognition of each other's records—and also by the Government—which would certainly commend itself to our Canadian breeders and farmers in a way that the "Treasury Order" policy of forcing Canadian stock into United States books never can, so doing away with the extra trouble and expense involved in cases where horses are registered in both books.

What is "Character"?

[Paper read by Robt. Miller before the Dominion Shorthorn Breeders' Association.]

The term "character," used in various ways, when applied to Shorthorns is one of which many people have but a vague idea as to its meaning. We have heard judges, when asked their reasons for giving one animal preference over another, answer, with a wise look, that it was because of the great amount of "character" displayed by the one in comparison with the other. The inquirer, being awed by the look and the ambiguity of the term, if a humble man with no great pretensions as to judgment, usually subsides at once, with a look of sorrow for himself because he had not noticed the great difference, or, perhaps, a look of admiration for the man with such wisdom and superlative judgment. We have also heard the term used to cover the indifferent qualities of an animal offered for sale, and intended to check the criticism of the would-be purchaser.

The term when used in either of the above ways is being abused, for it has a useful meaning, and to the practiced eye is the first consideration in an animal. It means breed type—in head, horns, carriage, color, hair, and general outline; or, in other words, the judgment of the eye.

While each of the points of an animal's make-up must always be of great importance, no one of them, or two or three combined, can be of such importance as character, because they cannot make a good animal without an even balancing of the whole. Constitution is an important factor in an animal; but of what use would a good constitution be in a bad animal? A good head or good back with well covered loin are both valuable points, but fail utterly in making a good animal without other points to agree with them.

The first impression destroys all chances of selling if it be unfavorable, and assists very much in making a sale if favorable; so that minor points are lost in the demand for a well-balanced whole, which must be present to satisfy the eye in order that a detailed examination be proceeded with. Too often style is called character, and style of the gaudy kind, such as a high head, rather long legs, with ribs inclining to be short. This may have been very nearly the meaning of the term twenty-five years ago, but it is now counted among the exploded fallacies, and left with the craze for fancy line breeding to be buried with the past.

Style is a term scarcely used now, because it is a very misleading one and cannot properly be applied to an animal of the most approved present-day type.

"Character" applied to Shorthorns means type of the most valuable, vigorous, early-maturing, smooth, and uniform kind; it is the first quality to be desired by the breeder who wishes to be successful, and must be the constant watchword of all breeders who aim to keep in the forefront with those who are making such rapid strides towards perfecting the greatest breed of cattle that the world has so far produced.

Shorthorns, though scattered throughout the whole civilized world, though subjected to all imaginable kinds of treatment in the hands of all classes of men, and in all climates, still retain their proud position of being the "aristocratic" cattle whose rich and hot blood overcomes all obstacles in their great pioneering work, which may be almost likened to the work of the British Empire in pushing the broad lights of Christianity and civilization to the darkest regions of the earth.

FARM.

The Pioneer Farm.

We take pleasure in drawing the attention of our readers to a little pamphlet just issued by the Ontario Department of Agriculture, Toronto, giving a brief account of the Pioneer Farm and the Wabigoon County, Rainy River District, Ontario. This is a section of country lying between the towns of Fort William and Rat Portage, on the C. P. R. While to all appearances it is well suited to agriculture, no settlers have hitherto taken up land there, and until the Department took steps to develop it, it seemed to have been entirely overlooked. Being situated within easy reach of a promising market, in a region where agricultural land is scarce, and on the direct line of railroad communication, its value was apparent. But Mr. Dryden did not feel warranted in drawing the attention of the public to the country without first satisfying himself as to what its agricultural capabilities really were. He, therefore, hit upon the plan of himself taking the place of the pioneer, and testing it on behalf of the Province by establishing a farm there, which he did in the spring of last year. As practically no clearing has to be done, considerable progress was made, and the experiment has thus far proved quite successful. So promising is the outlook that the Department decided to issue the pamphlet above referred to, giving general information regarding the section, which is now open for settlement. The pamphlet is illustrated and contains a map of the district.

At the present time, when considerable demand exists for cheap land, especially on the part of young men of small capital, any effort to open up and develop such resources is to be commended. Let it be shown that young farmers have as good or a better chance of securing farms and homes in their native Province than they have further west, or possibly in the United States, and much will have been done—it may be, even to prevent them from deserting farm life altogether. Of the resources of these new sections we have as yet but an inaccurate idea, but we believe that they are very considerable, both in the fields of agriculture and mining. We hope to see Mr. Dryden's colonization efforts eminently successful. Already we are told numerous enquiries have been received by the Department, and it is expected that a considerable number of farmers will have taken up locations before the season closes. Those who wish to obtain a copy of the pamphlet should address a card to the Department.

Weeds a Benefit.

There is little so bad that no good can be taken from it. Almost every dark cloud has its silver lining. Weeds have received many a hard word, and look, but had it not been for them some of the most valuable lessons in agriculture would never have been learned. We till to destroy weeds, and by that tillage cause crops to yield and multiply. While weeds are a menace to a crop in which they are allowed to grow, the one only and sovereign remedy for them is the very tillage which they have introduced. When their mission has matured, says Meehan's Monthly, they will disappear, because there will be no place in which they can grow. It would be a great calamity if they were now to disappear from the earth, for the greater number of farmers still need the discipline which they enforce. Probably not one farmer in ten would till his lands well were it not for these "teachers," and many of them would not till at all. Until farmers till for tillage sake, and not to kill the weeds, it is necessary that the weeds should exist; but when farmers do till for tillage sake, then weeds will disappear with no effort of ours.

Water in Relation to Weeds.

BY PROF. J. HOYES PANTON.

In discussing the question of weeds, we usually emphasize seven objections to their being permitted to grow where we are raising crops: (1) They involve extra labor; (2) they render fields unsightly; (3) they add impurities to the grain; (4) they rob useful plants of their food; (5) they do injury by shading those growing near, and so preventing their proper development; (6) they afford places of shelter for injurious insects; (7) they waste water. This last is one of the worst features in connection with weeds.

The importance of water to plant life is such that we cannot afford to waste it through useless channels. Let us consider briefly the use of water in the plant economy:

1. It serves as food by entering into the formation of starch, which is produced by the union of water and the carbon dioxide of the atmosphere when it enters the cells of the plant. From these compounds, water and carbon dioxide, the chlorophyll granules (minute green bodies which are very numerous in the leaves), through the influence of sunlight, are able to produce starch, a substance that may be considered among the crude materials in plants from which other more complex compounds are prepared.

2. It is an important factor in the circulation of sap, acting as a carrier of compounds in solution to all parts of the plant.

3. It performs an important service in maintaining the firmness of the cells, so as to give the plant form. When plants wilt, it is largely due to the withdrawal of water from the cells, and if not permitted too long the flaccid leaves may be restored to their former condition by furnishing the plant with water.

4. The temperature of the plant may be modified largely through the influence of water, which may indirectly exert an effect upon the chemical changes taking place in the plant.

5. Its use as a solvent of substances in the soil, and thus preparing them for absorption by the plant, is of great importance. Plants can feed only upon material in the form of a liquid or a gas, consequently the presence of water becomes necessary. Keeping in view the value of this common compound, how important it is to take care of it and to guard against its waste.

There is no doubt that if more attention were given to the preservation of water we would hear much less about damage sustained by our crops during a time of drought. Let us suggest some ways in which this may be done:

1. *Mulching* is largely recommended and followed by fruit growers. This checks the evaporation of water, and so retains it among the roots of the plants and extends the time they are able to obtain moisture from the soil.

2. *Tillage* by constantly stirring the soil makes the surface in such a condition that it prevents evaporation, and thus acts as a mulch. The finely-divided earth on the surface checks the ascent of the water from below farther than to the layer thoroughly stirred. It is a common practice among gardeners and nurserymen to keep cultivating during a time of drought. Fields treated in this way retain their moisture, while those where no cultivation has been carried on suffer from the loss of it.

3. *Drainage* also serves to keep the soil in such a condition as to retain sufficient moisture for plant growth during a dry time.

4. *Subsoiling* is also found to aid materially in the preservation of moisture. This has been shown by experiments carried on for the purpose of ascertaining its influence in retaining moisture.

5. *Destruction of Weeds* becomes of great importance in this connection. Very few are aware of what enormous quantities of water are thrown into the atmosphere by plants; consequently the growing of such as are not needed is permitting an extravagant use of water which should be passing into plants from which we desire to obtain a crop.

During the summer of 1895 the writer conducted some experiments with the object of ascertaining to what extent some weeds pumped up water from the soil and passed it into the air through their leaves. Two species of plants were selected, the common mustard (*Brassica sinapistrum*) and the pigweed (*Amaranthus retrofractus*). These were placed in large pots and put in the garden, with conditions much as might be found in the field. A check pot with no plant in it was placed near the others. For nearly two weeks the experiment was continued, and during the time showed that on fair days (9) the average amount thrown off daily by the mustard was 11 ounces, and by the pigweed, 10½ ounces.

The greatest was on a dry, bright day, with light wind: 19½ ounces by the mustard and 13.45 ounces by the pigweed. On a hot, sultry day the mustard transpired only 7 ounces. During four days of more or less rain the average was about 6½ ounces in each case.

This is a large amount of water to have passing from the soil through useless channels. Taking an average of 10 plants to the square yard, it shows that the mustard would throw off from an acre 21 tons, or 4,235 gallons, of water daily.

The sunflower is reported by some observers to throw off 25-30 ounces daily, and the cabbage, 19-25 ounces. Another way of expressing how much water is used by weeds is ascertaining the number of pounds of weeds grown and considering that

each pound of dry substance has required 400-500 pounds of water in its formation. With such data before us, it does seem a serious case is made out against allowing weeds to grow among our crops. In connection with our experiment it is well to note that water was regularly supplied to the plants, but not more than it was considered they could properly take up. However, this, no doubt, would be a better supply, likely, than what they would have obtained in the field, and consequently the amount above represents larger figures than would probably result under normal conditions.

Hydraulic Rams.

SIR,—In your issue of FARMER'S ADVOCATE, Jan. 1st, I gave a short description of how a hydraulic ram could be utilized on many farms and how it might be put in to work satisfactorily. In next issue Mr. Taylor takes exception to some of my statements, and fears some of my points are misleading to those not practically acquainted with the working of a hydraulic ram. Will Mr. Taylor point out what is misleading in my article? He says "I advise the use of a tile drain, and where the fall is none too great this is a mistake." I reply that leading the water along the bank of the stream until sufficient head is obtained in a tile drain is the cheapest and most practical method of obtaining a head of water. It is simply the same as the headrace of a mill, and is used because a high dam is hard to keep nowadays on account of great freshets. Mr. Taylor says "the tiles must have a certain amount of fall, which will make the supply barrel that much lower than the dam." If he will read my article carefully he will perhaps see that it states that the tile drain must not have more than six inches of fall in fifty yards, and by the diagram he might at once see that the water stands as high in the supply barrel as in the dam. Perhaps he does not know that water will rise as high as its source, if confined. I would like to ask Mr. Taylor where freshet water goes if it does not get around his salt barrel or into his open ditch, and if cattle would not tramp the banks of his tailrace all in when ground is soft with rain. He says "fifty feet of feed pipe is too long and will lose power, owing to friction of water in a pipe of such length." The best authorities on hydrostatics say that fifty feet is the *shortest* feed pipe that should be used, but that it should be of such diameter that the water will not lose its power or momentum in rushing into the air-chamber of the ram, the long column compressing the air to a greater degree than a short column would, just as a long stick of timber, when in motion endwise, strikes a heavier blow than a short one moving with the same velocity. He tells how his pipes are only eighteen inches underground and says he would not advise anyone to put them in that deep only, as they might get frozen. In the one I described (excepting the dam of three feet on a very small stream) all pipes, ram, supply barrel, and tile were completely underground, away from freshets, the tramping of cattle, and free from frost in winter. I think it too far to pump water a mile with a ram for practical success without great expense in purchasing large pipe, as the whole power of the ram would be expended in trying to force a stream of water through a small pipe a mile long, and at some elevation, no doubt. If pipes were large enough the ram would lose very little in friction of water in the pipes, but the expense is an item to be considered by many, especially if buying pipes a mile in length.

R. C. ALLAN.

Winter Manuring.

We have received a letter from "R. C. M.," who favors winter manuring for the following reasons: 1st. It saves manure. 2nd. It saves more valuable time in summer. 3rd. It regulates the farm work. 4th. It gives quick returns and larger profits. 5th. It keeps the yard clean in winter and spring. 6th. It does away with the heavy labor of manure hauling during the hot days of summer.

In order to save the most valuable portion of the manure—the liquid—he thinks it wise to cut all the bedding, in which condition it will better absorb the liquid and work more easily into the land. The manure can, in this condition, be taken directly from the stables daily and spread upon the field, when such a thing as loss from leaching or overheating cannot occur. In the beginning of winter it is not always convenient to haul manure, when it should be neatly piled in the yards; all sorts mixed together. This may be taken out in February, and after that time daily drawing would be beneficially practiced. There is also a time in the spring when a heap will have to be made. This can be drawn out later and spread upon grass or in an orchard, ten or twelve loads per acre being about the most economical dressing.

Our correspondent differs from many others in the matter of spreading manure upon deep snow. He claims that depth of snow is no objection, except in getting to the field. The writer claims great results in obtaining a catch of grass upon land that has been winter manured. He claims that manure should be kept as near the surface as possible, only plowing it down when it is soon to be plowed up again, as in preparing root land. When land is underdrained, either naturally or artificially, no loss can occur from winter manuring. The melting snow and falling rain tend to combine the manure and soil in the most desirable form. "R. C. M." doubtless has comparatively level land.

The N. B. Farmers and Dairymen's Association.

The 20th annual meeting of the Farmers and Dairymen's Association of New Brunswick convened in the Legislative Council Chambers, Fredericton, February 4th, 5th and 6th. The meetings were the best-attended in the history of the Association, but still more should have been present, especially from York Co. A number of prominent men were present, including Premier Blair, Hon. Jas. Mitchell, Provincial Secretary; Prof. Robertson, Prof. Faville, Mr. J. E. Hopkins, Experimental Farm, Nappan; A. G. Gilbert, Ottawa; Mr. John Robertson, Provincial Dairy Commissioner; and others. President Baxter presided; W. W. Hubbard, Secretary. The President referred to the marked advance made by the Association during the past few years. Several farmers' meetings were held last year in different parts of the Province. He pointed out the need of more education for the young farmers. New Brunswick could boast of having great natural resources for general agriculture. Fruit growing only needed more attention to make it rank among the first industries. Improvements in breeding stock should be considered more carefully, as it costs as much to raise a poor animal as a good one. More farmers should be sent to Parliament, so that the farmers could get what they wanted. Bee-keeping and poultry raising were industries yet in their infancy in New Brunswick, but were promising.

Prof. Jas. W. Robertson gave an address on "A Bowl of Bread and Milk." The Province should raise its own bread, growing what is needed, and not ship in from outside; more money would be kept in the Province. This was practical economy. Food had four uses to be applied in feeding animals and man: 1st, to form fluids and tissues; 2nd, to repair waste; 3rd, to be consumed as fuel; 4th, to be stored in body for future use. In speaking on "the marketing of perishable food products," he said the success of the farmer depends upon the way in which he rears, feeds, and markets his animals and their products. Cattle would be shipped as dressed beef in the near future; when this was inaugurated it would be a boon to live stock industry. Cold storage and aid from the Government would solve the question.

In the discussion on cold storage it was agreed that it would prove of advantage to New Brunswick, but some thought it premature.

His Honor Judge Stevens delivered an encouraging address, paying a high tribute to farming and the part it now played in the intellectual, industrial, and commercial life of the nation.

Hon. James Mitchell, Provincial Secretary and Commissioner for Agriculture, expressed the pleasure it gave him to see so many representative farmers met to consider the best methods of carrying on their work. In the name of the Government, he assured them that they would do everything in their power, so far as their means would allow, to assist the farmers and dairymen of the Province to pursue their noble calling successfully, till our Province would take her rightful place in the Dominion. The Government were spending a considerable sum of money to assist the agricultural societies, and some societies are doing good work and deserve credit therefor, but others are not: they are relying chiefly on the Government grants, and not upon their own resources. It might come to be a question with the Government whether it was right to take public money to assist those who were not doing what they might and could do to assist themselves.

Poultry Raising (by A. G. Gilbert).—Young chickens should be left in the nest twenty-four hours, and not fed for thirty-six hours after hatching. They should then be given stale bread dipped in milk and squeezed dry. Warm, comfortable houses, with darkened nests, should be supplied, and a scratching-room provided with window facing the south. Hens should be fed, when laying, such foods as will make up the materials of the egg. The hen should not be gorged, but should obtain her food gradually from morning until night. Ground or cut bones, green clover, oyster shells, gravel, and water in abundance are also necessary. Hens should not be kept over two or three years. Care should be exercised in breeding to select only the best hens, and breed to a pure-bred rooster of the desired strain. Gather eggs daily, and keep no rooster during the summer. The Plymouth Rocks, White Javas, and the Wyandottes are about the best breeds for general purposes. When dressed they are most marketable. A valuable paper was read on "Poultry Management," by Mr. J. Oldman. Bee-keeping was also discussed.

Orchard Management was treated by Prof. E. E. Faville, Director of Nova Scotia School of Horticulture. Sod should never be allowed to take the place of thorough cultivation in any orchard. Trees abhor wet feet; drainage was essential; old orchards needing drainage could be treated where drains were placed deep enough. In planting orchard avoid novelties; stick to the reliable kinds; intermix varieties in planting to aid fertilization of blossoms. In full bearing orchards potash was the essential fertilizer to apply; unleached wood-ashes were recommended. Pruning should begin in the early life of the tree and be carried on each year. Prevention by spraying should be the rule in combating fungous growths and insect pests. Soil and location for different fruits should be studied. In marketing all fruits, proper grading should be made.

Calf Feeding was treated by B. J. Crawford. In order to secure good cows good calves were needed. They should have strong constitutions, of right form, with healthy organs, to produce first-class milk. Give proper food, aided by fresh air, pure water, sunshine, exercise, and the eye of the feeder. Give such foods as tend to promote prosperous growth. Avoid strong food in large quantities. If calves run to fat they may be spoiled for milk cows. Teach the young calves to chew the cud as soon as possible by feeding them hay. Straw helps in making cud quickly. Clabbered milk is best to feed the young calf.

The Dairy Cow—Mr. J. E. Hopkins pointed out the great benefit seen in the increased milk, butter, and flesh products where the dairy cow was given kind treatment, condemning the too frequent application of fork, milk-stool, and club. As to breeds, the cow that produced the desired results was the one to be sought. He described the various dairy breeds.

Fruit Growing (by Mr. F. P. Sharp).—The tender sorts of apples when topworked on hardy stocks had proven hardy in various counties of the Province. There was no county in N. B. where fruit could not be grown successfully.

W. W. Hubbard, Corresponding Secretary, gave a very valuable report on "Agricultural progress in general in New Brunswick and the Maritime Provinces."

Following are the officers elected for the ensuing year:—President, W. S. Tompkins, Middle Southampton; Vice-President, Henry Wilmot, Belmont; Secretary-Treasurer, John McLaughlan, Glassville; Corresponding Secretary, W. W. Hubbard, Sussex.

The next annual meeting is expected to be held in St. John.

To Pulp or Not to Pulp.

SIR,—While I do not desire a controversy with Mr. A. C. Hallman, I do not wish to be placed in a false position. In his last article (Feb. 1st), he finds fault with me for introducing what he terms "side issues" in support of the use of the pulper. I would ask your readers to note Mr. Hallman's article in the *ADVOCATE* of Dec. 16th, 1895, and mine in Jan. 1st, and Mr. Hallman's of Feb. 1st, and draw their own conclusions with regard to the "side issues." If Mr. Hallman does not base his whole article on mere "side issues" and "assertions," I would like to know what it is founded on. I do not doubt but that he has fed turnips whole, and believes it is waste labor to pulp them. He is doubtless honest enough in his opinions; but if we look for "facts" in Mr. Hallman's letter we find they are conspicuous by their absence. He says: "It is freely admitted by drovers that in this and surrounding localities there are some of the best and most practical feeders in the country." That may be the case, but what in the world has that to do with pulping roots? I don't deny that stock may not be fed successfully on whole roots. The question is not, Can I make good beefers on whole turnips and other feeds? but, With a given quantity of roots and fodder, how can I make the most out of it? Can we obtain as good results by feeding the roots whole? I say, No!—emphatically, No! Like Mr. Hallman, we used to feed all our roots whole, and could make just as good beef and have just as thrifty stock; our cows milked as well as now, when we pulp all our roots. But that is a "side issue"; it has nothing to do with the question. We may obtain as good results in the condition of our stock, and yet the results may be unsatisfactory when compared with pulping. We find from actual experience, not "ideas," that with a given quantity of roots and fodder, it pays by all odds to pulp the roots when feeding. It costs labor, it is true, but we find it pays. If we had an unlimited quantity of roots and fodder, it might not pay so well; even then I would not like to say but that it would return a good dividend on the extra labor invested.

I will pass over Mr. Hallman's "modern barn comforts" argument, as that is a "side issue": that is about as near the question as the east is to the west.

Mr. Hallman then says: "A turnip is at no other time as crisp and juicy as when first broken. In no way will an animal receive the full value of its succulence except when eaten immediately after being broken." If turnips are pulped once a day they lose considerable moisture by evaporation. Now, while that may be true to a certain extent, it is entirely misleading in its true sense. The value of the succulence of turnips is not and can not be realized to its fullest extent by feeding the roots separately and the other dry foods after. The turnips will be all taken into the stomach together and separately from the other foods, and consequently will not be assimilated in such a ready manner. I hold it pays to mix the feed as much as possible before feeding; the stock will eat it with much better relish. Take a homely example: I suppose Mr. Hallman eats bread once and a while, and I have no doubt he indulges in that "succulent" luxury, "butter." Now, does he eat that butter "whole" by itself, or does he "mix" it with the bread? Why, he "mixes" it, of course, you will say. But does it pay?—does the immense amount of extra labor in spreading (pulping) pay? Yes, most certainly it does; you will not dispute the fact that mixing, in this case, assists mastication, assimilation, digestion, and everything else that tends to produce the most desirable results. Identically the same results are derived from pulping and mixing roots and other dry foods. You

will be able to get your stock to eat more readily the dry feed, such as hay and straw. With regard to the "evaporation" question: If you do pulp roots a day ahead of feeding, and mix with the cut feed, the evaporation is not lost. The moisture will simply be absorbed by the cut feed, and a certain amount of fermentation will set in, which is more of an advantage than a disadvantage.

Mr. Hallman says: "Consider the immense amount of extra labor of handling from 2,000 to 4,000 bushels of turnips that some farmers grow from year to year." Yes, it is quite a consideration; but we are not justified in trying to make it appear a more losing job to pulp 4,000 bushels for a large farmer than for a small farmer to pulp 100 bushels. If it pays one, it will pay the other. If one loses, the other loses also. We are satisfied to go on pulping. And I believe it will require a good few "ideas" and "side issues" yet to prove to us the contrary.

Waterloo Co., Ont.

[NOTE.—This friendly controversy has brought out helpful points on both sides of a very practical subject, but the pressure of matter on other and more reasonable topics requires it to be closed now. Both sides have had two rounds each.—EDITOR.]

Modern Maple Syrup and Sugar Making.

BY W. H. BARBER.

(Concluded from page 71.)

In making sugar draw off the syrup at 13 lbs. or a little thinner, strain it as above described and allow it to partially cool. Then boil it again in a large pan for the purpose, being very careful not to burn it. The fire should be slackened as the liquid becomes thicker. A thermometer will give the density at which it should be drawn off, which is 235° F. Then turn it into molds or pails and allow it to cool, when it will be ready for market. If stirred while cooling it will be of a lighter color. Covered tin pails are best for marketing sugar, as they keep it moist until used; besides, they exclude dirt and loss from the breaking of cakes during shipment. In making stirred sugar, it should be boiled until the thermometer indicates 252° F., and then the liquid is stirred until it hardens, when it will be very white and beautiful, and resembles in appearance soft "A" sugar of our markets, but it retains all the matchless maple flavor.

Many complaints are heard on account of low prices paid for maple products shipped to large cities to be sold on the markets or by commission men. Owing to the great difference in quality of maple syrup and sugar and the lack of any generally accepted standard of excellence, the best syrup is apt to be sold at prices ruling for inferior grades. The same may be said of sugar; therefore, the producer of an A 1 article should use every effort to secure private customers who will appreciate his syrup and will be sure to order it every year. This trade can be secured by writing friends in the towns and cities and sending them samples of syrup or sugar. Such customers once secured will be retained from year to year at profitable prices. Another good plan is to ship direct to some responsible retail grocer in a good section of a city or town. The commission man's profits are thus saved, and the grocer will be certain to have pure maple syrup for his customers. For the best grocery trade, gallon and half-gallon cans are most common, while quart cans are desirable for small families, as syrup loses in flavor if long exposed to the air before used. On this account a package small enough so that its contents would be used in a very short time would be most suitable. Great care should be used to exclude all the air, and that the can is sealed tight by means of a screw-cap. A disc of thin pasteboard or blotting paper placed in the top of the screw-cap, which should be screwed down tight, will exclude all air. A small pair of gas-pipe pinchers are the best tool for tightening the screw-caps. A little exposure to air will ruin the flavor of the best of syrup, therefore it should never be opened until it is to be used.

Wherever a market can be secured for the syrup, at fair prices, it is much better than making sugar, but where syrup cannot be disposed of readily, large quantities are made into sugar as stated above. Covered tin pails are the neatest and best package for sugar, and they can be secured at small cost. Small cakes, one and two ounce, are also in demand for fancy grocer's and confectioner's trade. Large quantities of maple sugar, principally of an inferior grade, have been shipped annually from the Province of Quebec to Chicago and other cities of the Western States, where it is, no doubt, used for adulteration purposes in connection with glucose, making a cheap syrup which is sold for genuine "Vermont Maple Syrup" throughout the Western States. Nor is adulteration confined to our neighbors to the south of us, for a large confectionery manufacturer in one of Canada's leading cities has placed upon the market an imitation maple sugar, made of a cheap grade of German sugar with just enough maple to give it a slight flavor. If such imitations were offered for sale for what they are they would do little or no harm to the genuine goods, but the fact is they are sold for the pure article, which causes the trouble, and our lawmakers should see that proper legislation is enacted to punish such frauds as these. Such legislation would be in the interest of both the producers and consumers of maple products.

Round Silos—A New Idea.

Several Farmers' Institute delegates report that round silos are growing in favor. From Ontario, Division No. 6, we have received the following:—"Mr. John Irwin, Thornbury, is the happy possessor of a round silo built of two-inch planks set on end. Instead of iron hoops to hold the planks in position he has adopted the following device: Three 2"x6" scantlings are set up on end at equal distances apart. The inside edges of the scantlings are flush with the inside surface of the silo, and thus the scantlings project four inches beyond the outside surface. Then, instead of a continuous hoop, three rods are used, which are long enough to reach from one scantling to the other, each end of the rod passing through a hole bored in the scantling and projecting far enough to admit of a nut and washer to hold it in position. Thus the three rods take the place of a hoop, and the scantlings, besides staying the structure, do away with the iron casting which is commonly used to fasten the ends of the hoop. The silage freezes a little in this kind of silo, and is thrown into the stable a few hours before feeding to allow it to thaw.

"As a safeguard against the staves (which swell when the silo is filled) 'buckling' or bursting the iron bands, rubber washers or steel springs have been suggested. The spring would also allow contraction when the silo was empty and drying out."

Another Cement Concrete Silo Described.

SIR,—In reply to your card concerning the cement concrete silo I built last season, I might say it is my first experience with silos and ensilage. Several practical men have examined the ensilage and pronounced it first-class. My silo is 13 feet 6 inches square inside, with 1 foot of a bevel off each corner, and 25 feet high. The walls are 16 inches thick at foundation and 7 inches at plates. Although my silo has given entire satisfaction (there is not a crack or a check to be seen), I think it would be advisable to build the walls a little heavier. I used in its construction 47 barrels of cement at \$1.10 per barrel, 30 loads gravel at 10 cents per load, and 10 loads field stone. In regard to labor, we did that ourselves. We were working at the silo in the beginning of harvest parts of days, and I kept no account of the time. Although it was our first experience, I consider I have the best silo of its size in Huron County. I used one part cement to six parts gravel. We also superintended building a silo for Mr. P. Curtin, of Centralia, which he started to fill inside of two weeks from the time it was finished. It is also giving satisfaction. If any readers of the *FARMER'S ADVOCATE* wish any further information I will gladly give all I can.

Huron Co., Ont.

Two Years' Experience.

SIR,—In reply to yours of 13th inst., I am glad to be able to report that our cement silos have been satisfactory in every respect. The walls of the silos are as smooth and perfect in finish as the day they were built. We have not been troubled with any frozen ensilage, except, perhaps, a little around the doors. As to the acid making holes and roughness in the walls, it has not happened. As far as our experience goes, we could not wish for any better silos than the cement ones.

Bothwell, Ont.

STANLEY C. MASON.

DAIRY.

A Farm Dairy Building.

SIR,—In answer to your St. Joseph's Island correspondent, I would say: Whether a farm dairy should be built of stone or wood, under ground or on the surface, will depend somewhat upon local conditions. The following suggestions are offered:

1. I would not build under ground, owing to the extra labor of carrying in and out.

[NOTE.—Also because the air of the room is not likely to be so pure, though it might be cooler for summer use.—Ed.]

2. As an exception to No. 1 we may suppose the case of a hillside, and in such case would prefer to have the dairy higher than the outbuildings. Such a dairy I would build of stone.

3. The cost of material would guide largely in our choice of stone or wood for a dairy built on the surface. In any case we would much prefer a concrete wall to a solid stone wall, owing to it being a much better non-conductor of heat and cold.

4. Our preference is for a wooden building. Studding sheathed on outside; cracks battened; lined with cheap lumber, then building paper (not tar-paper), finished with V siding—say, basswood—put on perpendicularly. Ceiling also of V siding. As to flooring, Norway pine, joints white-leaded and the floor oiled, is, we believe, the best floor. A cement floor, well laid, answers very well. Doors and window should both be double. Such a building is always dry and not subject to fluctuations in temperature.

F. J. SLEIGHTHOLM,

Strathroy Dairy School. Supt.

[NOTE.—As Director of the Ontario Traveling Dairy for a long time, Mr. Sleightholm had opportunities of seeing a great variety of dairy buildings. We have used (mainly in winter butter-making) for several seasons, with great satisfaction, a building such as described in paragraph 4, with cement floor.—Ed.]

How to Make Butter of Good Texture and Grain, with an Even Color.

It is very important that those making butter in the dairy should have a knowledge of the proper temperatures employed to ripen and churn cream without injuring the texture of the butter. A good thermometer should be provided. When purchasing one, put six or more in a dipper of water and select one from the greatest number registering the same. The cream should not be ripened at a temperature higher than 60° or 62° in summer, nor higher than 65° in winter. A small lot of cream is easily affected in temperature by the surrounding atmosphere and should be set in a cool room in warm weather, or in a tub of water cold enough to hold the temperature at 60° while ripening; change the water, or use a little ice if necessary, to keep the temperature uniform. A little heat may be necessary in cold weather if the room is not warm enough to hold the cream at 65°. It takes more trouble to make good butter than some can or are willing to give it; as a result our markets are overstocked with an inferior article. High ripening and churning temperatures injure the texture, giving it a soft, oily appearance, disliked by dealers and consumers.

A quart of sour cream or buttermilk fresh from the churn, having good flavor, should be put into the sweet cream, stirring well each time fresh cream is added, until enough is gathered for a churning, then let it stand until ripened properly. Cream is ready to churn about six hours after it turns thick. The churning temperatures are about 58° in summer and 62° to 70° in winter. Fill the barrel-churns only one-third full, and vary from these temperatures, as experience will teach, so as to churn in 40 minutes; quick churning and overworking of the butter injures the grain also.

If all butter-workers would take the trouble to get a lesson or two on how to salt their butter in the churn, specks, mottled or streaked butter would be a thing of the past. To do it successfully the butter should be washed with plenty of water at 46° in winter and lower in summer, using some salt in the water to harden the fine granules; sift on sufficient salt to suit the taste, and rock the churn back and forth to mix thoroughly; then press into one corner of the churn with the butter spade and let it remain from two to four hours before working. If the room is warm, remove the butter to a cool place. The salt dissolves in the butter and very little working is necessary. The granules should be fine and hard to have good success. A few trials will give the new beginner very great pleasure with the improved quality of the butter.

Specks are chiefly caused by curd in the cream not being strained out, and mottled or streaked butter by the salt not being evenly distributed; the butter should have been worked more, or a second preparation of cream from the separator to the churn.

Success in the art of manufacturing butter that will command highest market prices must begin with a knowledge of the chief factors necessary to make butter having fine flavor and firm texture, so desirable in good butter, which is being inquired after by dealers and intelligent housekeepers. This knowledge is most important, as the foundation of good butter is laid by the treatment the cream receives from the separator to the churn, temperature and germs producing fermentation being the chief factors employed.

A Cheese and Butter Makers' Convention.

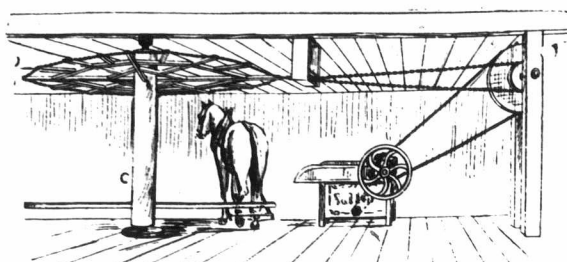
A cheese and butter makers' convention will be held at the Dairy School, Guelph, Ont., on March 6th, 1896, under the auspices of the Provincial Dairy School, the Ontario Creameries Association, and the Dairymen's Association of Western Ontario. It is important that every maker who can should attend this meeting. There is to be afternoon and evening sessions, at which addresses will be delivered by several of the foremost and most practical dairymen in Ontario, upon such subjects as "Handling over-ripe milk," "Separators and separating," "Preparation of cream for churning," "Cheese and butter starters," "Cheese and butter making," etc. President A. F. McLaren, of the Western Dairymen's Association, will occupy the chair. Addresses will be delivered by Hon. John Dryden, Dr. Mills, Hon. Thos. Ballantyne, and others. Full particulars may be obtained from J. W. Wheaton, London.

Butter Back from Europe.

On the steamer Teutonic, which came in from Liverpool last Friday, were 1,336 tubs and 63 firkins of American butter. These goods were shipped from here nearly two months ago and met a very dull market in England; so dull, in fact, that at no time was it possible to get the original cost of the stock. When our market was on the "boom" two weeks ago, it occurred to the owners that the butter might be returned to this side of the water and sold for more than it was worth abroad, and the goods were reshipped at once. An ocean voyage, with several handlings, has not improved the appearance of the stock, and it reached here just when our market broke, so that there is no present sale for it. We are advised that several thousand tubs more of creamery would be returned if there was a place for it here.—[New York Produce Review.

THE HELPING HAND.

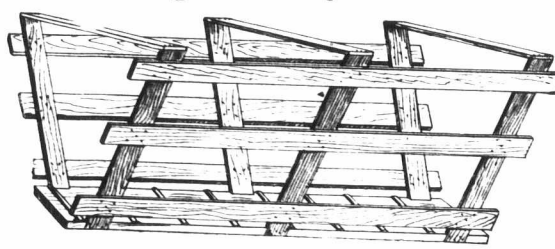
A Home-Made Horse-Power.



HOWARD MILLS, Grey Co.:—"This is a very convenient and cheap horse-power. It is very easily made and occupies but little space in the barn: if you have a mow raised seven or eight feet above the floor it may be put under, so long as there is room for your horse to go under the wheel. The wheel is made of ash or elm scantling from ten to sixteen feet long (according to the size of the wheel you intend making). The two main arms and the one for the horse are three by four inches, the rest are two by four, to make it lighter. Each arm has a V-shaped notch in the outer end for the drive-chain to run in. A post about fifteen inches in diameter and seven or eight feet long is used. Drive two gudgeons, one in each end of the post, and cut two holes through the post at right angles, one three by four inch, and the other three by six inch, for the two main arms, and then set it up. A couple of washers under it will make it run easier.

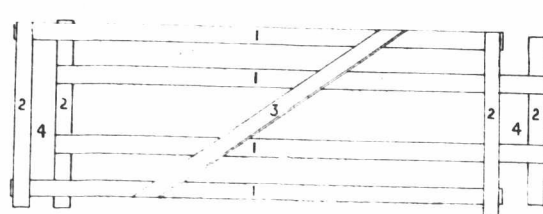
The illustration A shows how the main arms are made, B shows how the wheel is made, there being sixteen arms in all. C is a side view of wheel in position. Put one arm in the three by four-inch hole first, and then slide the other in the three by six-inch hole till the notches come together and it drops down, and wedge them down tight. D shows how the pulleys are made. Place them on a level with the wheel to guide the chain to a small grooved wheel fastened to a large one running on the same shaft. A belt is run from the larger wheel to a block on a cutting box, grain crusher, or other machine."

Hog and Sheep Loader.



D. C. BLACK, Middlesex Co.:—"In looking over your issue of January 15th I noticed a cut of a sheep and pig loader by W. C. Huff, and I have no doubt but it is very handy, but too expensive for loading hogs. I now enclose you a cut of one I made two years ago, and all my neighbors have taken a pattern from it. It can be made in twenty minutes with saw, hammer, and nails. Take a plank ten or twelve feet long, ten or twelve inches wide, cut three gains on each edge of plank six inches from each end, and one in the middle; cut them an inch deep, and five or six inches wide; get six boards three feet long, nail three on each edge of plank in the gains. Now nail your first side board lower edge even with the bottom of the plank to keep their feet from sliding off (our artist has not obeyed this). Nail one or two more above, according to width, to keep them from going over sides. Now spread the top as wide as you like for their body to pass along, say two feet and a half. Nail a cross piece at each upright to keep them spread out, also nail cleats across the top of plank every foot to keep from slipping back, and the loader is ready to use. Put one end on the wagon, and the other in the pen door. Now you can drive them up, and they cannot avoid going to their right place."

Portable Hurdle Fence.



Figures 1 and 2 represent the movable hurdle fence used on the farm of Theodore Louis, Wisconsin, the noted American authority on swine husbandry. It is used for hurdling swine, but would be equally valuable for sheep and cattle. The width between the bars and height of the hurdles may be

made to suit the sort of animals to be kept by it: (1) Fence board twelve feet long; (2) one by three or four-inch slats; (3) two-inch slats. Observe that slat (2) is reversed at every other panel.

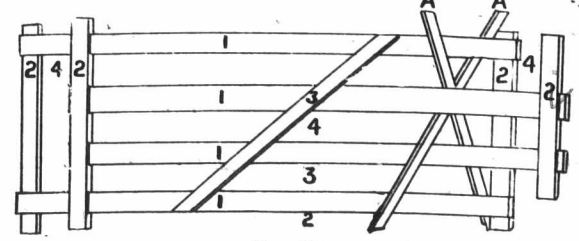


FIG. II.

(4) This open space must be one inch wider than slat (No. 2). The fence stands worm or zigzag fashion; the right-hand end of Fig. 1 protruding through the left-hand end of Fig. 2, and so on throughout the whole fence. A A represent stakes driven, as shown in Fig. 2, to hold the fence firm.

POULTRY.

Poultry Diseases and Causes.

BY M. MAW, WINNIPEG.

Many diseases that affect the poultry in America and England are unknown in Manitoba. I attribute this to the bright sunshine and dry, clear weather we have during the winter months, not to any extra knowledge or care we give our poultry; on the contrary, it is a surprise to me that so many manage to pull through the winter in the overcrowded, badly ventilated chicken houses. I frequently receive letters stating symptoms of disease, etc., but neglecting to state how the birds are housed or what the condition of general flock, and very few think of enclosing a stamp for reply. I always answer every inquiry to the best of my ability, but not having up to the present time "made my pile," it seems hard to have to devote time, knowledge, and postage stamps to enlighten other people's darkness. I will now proceed to answer some of the inquiries that I think will be generally useful. One reads: "My birds are dying off; they seem to grow lighter every day. They have good appetites. I have tried several kinds of medicine advocated in the poultry journals, but they are no good,—my fowls all die." My answer is: This is tubercular, or consumption. There is no cure. The best plan is to kill and bury all affected birds. It is caused by filthy, overcrowded, badly ventilated houses; sour food; stagnant water. Never try breeding from such stock. The disease is hereditary, and once implanted in your flock they will be useless.

[NOTE.—According to modern science, consumption is not hereditary, neither is it "caused by filthy, overcrowded, badly ventilated houses"; although a predisposition to the disease is hereditary, and the conditions named would tend to make the subject susceptible to the contagion. The treatment recommended, however, is all right.—Ed.]

Another inquirer says: "I have lost several of my best fowls. They did not show any signs of sickness and were nice and fat. We found them usually under the roost in the morning, dead." This is enlarged liver, caused by over-feeding and want of exercise. The best cure or preventive is less fattening food and more work. It usually affects the older birds of the heavy breeds.

Roup.—I have a number of inquiries concerning roup, and would say that roup is an advanced stage of cold, caused by draughts and bad ventilation. The best preventive is to stop the draught and let out the foul air. A good ventilator is made of stovepipes penetrating the roof through a close-fitting hole, and coming down to within six inches of the floor. This will keep all the fresh warm air in the house, and carry off all the damp and dangerous gasses. In an advanced stage roup is almost incurable, and, unless a very valuable specimen, it is best to kill and burn the bird. In the earlier stages, known by running at the nostrils and swollen eyes, it is easy to handle. The best cure I ever used is coal oil. Take a small tin (a salmon tin is just the thing), fill it three parts full of coal oil, and plunge the head of the bird in, taking care to cover the ears with the oil; draw it out at once. One dip is generally sufficient to effect a cure, but if necessary repeat the dose in three days. There are hundreds of cures advertised for roup. They are, most of them, expensive and useless; and if you succeed in saving a bird in the advanced stage its constitution will generally be affected, and it will be useless for breeding purposes.

Scaly Leg is a very common disease. It affects the legs, forming large masses of scale on the joints and toes; if neglected, will eventually cause lameness and even death. It is caused by a small insect, and usually affects old birds. It is easily cured. Soak the legs in warm water, dry, and apply with a feather a mixture of half fresh lard and half coal oil. Two or three applications will remove all scale and effect a cure.

Gape and Tape Worms have not done much damage in this country yet, probably owing to the newness of the soil. Still, as a preventive, it is a good plan to scatter air-slacked lime wherever the fowls have been located any length of time. A dose of turpentine, given in the early morning feed, will eject any worms, and do no damage to the birds in any case.

Cholera is an unknown disease here, although I have had letters stating that the birds had it and were all dying off. It always turned out to be diarrhoea;—bad food or stagnant water was the cause. To cure, change the food, give clean spring water, and a little powdered chalk or boiled rice will be all that is necessary.

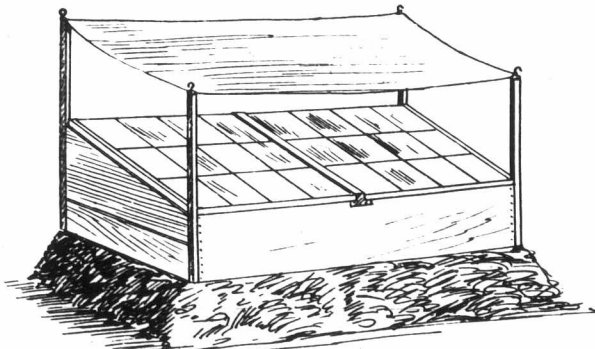
There are numerous other diseases, that affect fowls, hard to detect. A percentage will yearly die, in spite of our best efforts. It is the ultimate fate of all living creatures. I have given, in this article, simple, inexpensive instructions, which, if carefully attended to, prevent much loss. You must keep in mind that "prevention is better than cure." Remember these points: Cleanliness, ventilation without draughts, clean spring water, wholesome food, sharp grit and exercise will keep your birds in good condition. Neglect of any of these may ruin your chance of profit.

GARDEN AND ORCHARD.

Hotbeds.

BY B. H. GARNER.

Early greens and vegetables are much relished by every one who has them, but without timely preparation they cannot be secured. Such a thing as a hotbed too often appears out of the reach of any except market-gardeners. There is nothing in connection with the making and manipulation of a simple hotbed which need prevent any and every farmer from having one. The hotbed, like the ice-house, is gradually finding its way on the farm.



The first step in the making of a hotbed is to draw hot manure from the barnyard (horse or sheep manure is the best) to the spot intended for the bed, which should be on the south side of a large building or a high close-board fence. Here it should be mixed and turned to have it of an even temperature throughout. The following day the foundation may be started by building the manure into a pit in the ground or upon the level. Cheap frames can be made from any wide boards nailed together at the corners, using short strips on the inside to better hold the nails and strengthen them. The back of the frame may be from eighteen to twenty inches high, while the front should be from ten to twelve, for a frame five by eight feet. Saw the end pieces on a straight line from the height of the back to the front. After nailing these pieces, nail four-inch strips along the upper edges of the end pieces, letting them extend above about two inches. These strips guide the sash at the outer ends. It is better, when large frames are used, to have them narrow with separate sashes instead of one large one; on account of more convenient handling and greater strength. The middle slides can be made by setting in four-inch strips for the support of the edge of the sash. Place the glass in the sash by laying the bottom panes in first and laying the next one over it about an inch, to freely shed the rain. Just before placing the frame upon the pile permanently, set it on the spot intended for the bed and mark off a space one foot larger each way, leaving a free path all around it. Then remove the frame and shake the manure lightly, to the depth of about four inches, over the place marked out. Then tramp this down firmly and lay on another layer till it is built up to about twenty inches, then place the frame on it and fit the sash to be sure it is in the right position. Remove the sash and place a little more manure in the deepest part of the box and tramp. A small quantity of salt and ashes may be thrown on this, to prevent insects breeding on the top. Place on this, to within seven inches of the top, light, rich soil, but do not mix any manure with it. When it is finished drive a couple of short stakes through the earth into the manure and close it up till the following day. Then pull out the stakes and if the bottom ends are warm the bed is ready for the seed, provided the soil used is not too damp.

Many failures are caused by too thin a covering of earth. This can be told by the temperature of the soil;—if it becomes too warm more earth is needed. Sprinkle the bed occasionally, but do not soak it. Pick out the weeds as soon as they appear and thin out the plants as soon as the danger of frost is past by transplanting some in the open garden. Leave the sash off on mild days to give the plants stamina. As the days become hot it is well to prepare a canvas shade, which should be spread about fifteen inches above the bed, hooked to stakes driven at the corners. For early lettuce, cabbage, tomatoes, and other vegetables, such a hotbed is well worth the trouble of making and caring for it.

Glengarry Co., Ont.

Potato Scab.

EFFICACY OF CORROSIVE SUBLIMATE AS A REMEDY.

SIR,—In 1894 my potato crop, though well up to the mark for quantity, was quite disappointing owing to the scabiness of the tubers, and no apparent cause could be found in the soil or mode of cultivation. Stable-manure had been spread broadcast and plowed in, but as that is my usual process some other cause must have contributed to the unsatisfactory result. In 1895 I used manure as before and followed the same process of planting and cultivation, but dipped all the seed for two hours or so in a solution of corrosive sublimate before planting. The corrosive sublimate (which is a strong poison) was dissolved in hot water and then put into a barrel and water added to make a strength of two ounces to fifteen gallons. The result was a crop so clear and clean that all the prizes possible were captured at the local show (three firsts and one second), and every one who passed an opinion said they never saw such fine potatoes before. T. COPLAND. Saskatoon, N. W. T.

The Peppermint Industry.

For the preparation of peppermint, the plants are cut when in bloom, like hay, dried, placed in close wooden vats and steamed. The oil cells burst and the oil passes upward with the steam, which is condensed and conducted into a receiver, where the oil rises and is removed. About 350 pounds of dry peppermint produce one pound of oil. An acre of land yields from six to ten pounds of oil, often more—even as high as 50 pounds. New York and Michigan States produce the most.

VETERINARY.

Home Treatment for Farm Animals.

[From an address by F. Torrance, B. A., D. V. S., President of the Manitoba Veterinary Association.]

(Continued from page 55.)

Flatulent or "Windy" Colic.—In this case you have the same indications of pain as in spasmodic colic, but in addition to these the abdomen is distended with gas, and sounds hollow when struck lightly with the fingers. The breathing is short and fast, and in bad cases the nostrils are widely dilated and the appearance of the animal is distressing. The hurried breathing is caused by the distension of the bowels and stomach with gas. They press forward upon the lungs to such an extent that the animal has great difficulty in inflating them with air. The accumulation of gas in the bowels or stomach renders this condition of flatulent colic highly dangerous. It distends the bowels so that it is impossible for them to move, except with difficulty; and, during the violent struggles of the animal when he throws himself down, there is imminent danger of rupture of the bowel or stomach, and then, of course, recovery is out of the question. Flatulent colic is usually the result of some mistake in feeding, such as giving too large a feed of boiled grain, especially when a horse is tired after work, or allowing a horse to drink copiously after feeding, when fatigued from a long drive. When a horse is tired out, no greater mistake can be made than to feed him oats as soon as he is put in the stable. He should have a few swallows of water and then get a small feed of hay, and in half an hour or an hour, when he has cooled and rested, give him a drink of water and then his oats.

"Another very frequent cause of flatulent colic is over-feeding, particularly if given immediately before hard work. Many people, if they expect to make a long journey, think to fit their horses for the fatigue by giving an extra allowance of oats before starting; this is most injudicious. The horse starts to his work feeling full and oppressed; he soon grows dull and listless, and fails to respond to the whip; sweats profusely; attempts to lie down. If looked at carefully, you cannot fail to observe that he is unusually full over the last ribs. The flanks may be distended with gas, though sometimes it is confined to the stomach. With this condition, pain and distress are constant, and such cases are rapid in their course and often fatal. Treatment should be prompt and energetic. An *antacid* should be administered at once, and common baking soda is the remedy most likely to be at hand. Two to four ounces of this should be given at once, dissolved in water, and the addition of a teaspoonful of ginger or Cayenne pepper is useful." Powdered charcoal is a good home remedy and may be given in any quantity, shaken up in water; it has the property of absorbing the gas, and thus relieving the pressure. In cases when the trouble chiefly in the stomach, the administration of one or other of these remedies will usually give relief in a short time, but it is different when the distension is situated chiefly or entirely in the large intestine. In this case, remedies administered by the mouth have a long distance to travel before they reach the seat of disturbance, and with a disease so rapid in its course, they are often of no use whatever. Many of these cases can only be relieved by the prompt puncture of the bowel by a trocar and canula, the gas escaping through the canula with a whistling sound. But this, of course, is an operation for the surgeon, and is out of place in speaking of home remedies. When promptly and properly performed, the operation is without danger to the animal, and will save life in many a desperate case.

In cattle, this condition of *tympanites*, or *bloating*, is of very frequent occurrence, often following a large feed of succulent food. It is not as dangerous to cattle as to horses, and is more easily relieved. The same remedies may be administered, but in larger doses. If these are not successful, the farmer may venture to puncture the stomach himself with an ordinary pocket-knife, if no better instrument is at hand, inserting a quill in the wound to keep it open until the gas has escaped. There is this difference between puncturing a cow and performing the same operation on a horse, that in the case of the horse the puncture must be made in the bowel, and a large opening, such as that made by the blade of a knife, would be fatal, from the leaking out of the contents of the bowel, and consequent inflammation. In the cow, on the other hand, the paunch is always the seat of the bloating, and, when distended with gas, it is easily reached by knife or trocar; and as the puncture is at the upper part, the contents cannot easily leak out. In addition to this, there is another reason for the impunity with which the stomach of the cow can be wounded. Cattle do not readily take on the process of suppuration in wounds. Wounds in cattle do not easily form puss, and in them wounds which penetrate the abdominal cavity are not usually fatal. Small wounds, such as that made by a knife in puncturing the stomach, heal up readily without any particular care. The operation upon the cow can be performed by anyone without any previous experience, but it is most important to select the proper place; this is on the left side. Feel for the edge of the last rib, then find the hook bone and select a point half way between them and an inch or two nearer the back. Plunge the knife in boldly—you can't go too deep, but avoid enlarging the wound when you withdraw it. The gas will then make its way out of the wound, but it is better to insert a quill or tube of some kind to keep it open. The gas will soon escape, and you will be gratified by seeing your cow return to her usual size.

But to return to the treatment of colic. When the urgent symptoms of pain or distension with gas have been relieved, it is a good plan to give a bottle of oil, or dose of aloes, to open the bowels. This is advantageous in removing from the system any irritating matters that are present in the alimentary canal, and thus prevent a recurrence of the colic when the effect of the remedies has passed off. Now, a word or two as to *injections*. These are useful in most cases of colic in helping to rid the bowels of offending substances, partly by softening the bowel contents and partly by stimulating the bowel to contract and expel the faeces. Warm soapsuds is the usual injection, and from one-half to one gallon may be given at a time. It is a mistake to suppose that an injection-syringe or pump is necessary to give an injection. A very good substitute may be made out of a short piece of rubber hose and a tin funnel. The funnel is fastened into one end of the hose, the other end inserted into the bowel; raise the funnel above the level of the horse's back and pour the injection into it. It will flow gently into the bowel and have as good an effect as if injected with a syringe. Now, some of you are thinking, I dare say, that this is all very well as far as it goes, but how are you to tell whether a horse has colic or inflammation of the bowels. Well, there are many points of difference, some of them only to be noticed by the expert, and others to be seen by everyone, but I warn you there are many cases of inflammation which begin as colic, and you cannot hope to distinguish between them in every case. The following points will be useful to you in deciding whether in any given case you had better send for the veterinary surgeon at once or trust to your own skill in the matter: In the first place, consider the symptom of pain. In colic this may be just as severe as in inflammation, but there is this difference: In colic the pain is not generally continuous, but there are moments—sometimes considerable intervals—when the animal is apparently free from pain. In inflammation, on the other hand, the pain is usually continuous. In colic the pressure of the hand on the belly causes no manifestation of pain. In inflammation a sore spot can often be detected. The gravity of a case, then, can be partially measured by the character of the pain: if intermittent, colic; if continuous, inflammation. Next take the pulse. This is a matter requiring a little skill, but it is readily within the reach of anyone who is willing to practice a little. In the horse the pulse is usually felt on the edge of the lower jaw, where the artery can be felt pulsating beneath the skin. In health, the pulse should beat about 40 times a minute, and varies in different horses from 30 to 45, averaging about 40. The pulse is readily quickened by excitement and by exercise, a fact which must not be forgotten by the amateur. Now, in colic the pulse is not much quickened, if at all, except in bad cases of flatulent colic, and will range below 60. In inflammation, on the other hand, the pulse is rapid, and increases in rapidity as the disease progresses. A slow pulse, then, indicates colic; a fast one, inflammation. The appearance of the animal, to a practiced eye, is often sufficient to enable one to tell at a glance whether inflammation is present; a haggard expression of the face and the glassy appearance of the eye being characteristic of inflammation. These are the most salient points of difference between them, and will be of use in deciding what to do if you have the misfortune to have a sick horse.

APIARY.

Spring Feeding the Colony.

The first examination in the spring should be mainly for the purpose of ascertaining whether or not the honey stores have been exhausted. It should be early and not so extended as to risk the loss of much warmth of the brood-chamber, says Frank Benton in his Honey Bee Manual, recently issued at Washington, D. C. Merely lifting one end of the quilt, or, if the bottom board is a loose one, tipping the hive back so as to get a view in between the combs, will suffice. Should there not be at least the equivalent of two full frames of honey, it is best to supply the deficiency at once. If combs stored with honey and sealed over are not in reserve, liquid honey or sugar-syrup may be poured into empty ones and placed in the hives. A less "dauby" plan is to use one or more feeders directly over the brood nest, supplying several pounds of food at once. An excellent way is to give at one time all they need in the shape of bee candy, made by mixing fine sugar with just enough honey to produce a stiff dough. This cake should be wrapped in heavy paper and laid on top of the frames, after having punctured the paper in several places with a pencil or sharp stick, to give the bees access. A few strips of wood laid across the frames before the cake is placed on them will give the bees a better opportunity to reach the food. Rye flour put in sunny places and sprinkled with honey to attract the bees will be collected until new pollen comes.

A Note from the Ontario Foul Brood Inspector.

Editor FARMER'S ADVOCATE:—

SIR,—Your report of the Ontario Bee-keepers' convention, which was held lately in Brantford, is a credit to your journal and the writer. If I were a farmer I certainly would take the ADVOCATE. I take three bee journals and will soon take two more, which will make five. Every farmer should take the ADVOCATE and some other agricultural journals. I will here give you the names of a few good farmers that should take your journal. . . Woodburn, Ont. Yours truly, Wm. McEvoy.

QUESTIONS AND ANSWERS.

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

Legal.

CATTLE AT LARGE.

MUSKOKA SUBSCRIBER:—"We are not organized into townships in this part of Muskoka, and, consequently, have no pounds or by-laws regulating cattle running at large, and we are damaged considerably by scrub bulls running at large. Is there any effective means by which we can, under the law, protect ourselves from this damage?"

[We think, in your unorganized district, your only effective remedy is to herd or fence, or in some such way protect your own animals. Of course, if your own farm be fenced in with sufficient fences and then strange animals break through, the case is different and you could recover damages.]

FIRE ON RENTED FARM.

CONSTANT READER:—"B rented a farm from A in March, 1895, for a term of years, and in September, 1895, the barn on the farm was burned down and B lost all his crop, on which he had no insurance; A, however, had the barn itself insured. Can A collect the rent due before replacing the barn?"

[If there is no lease in writing and no agreement was made as to what would be the rights of each party in case of the destruction of the buildings by fire, A can collect his rent.]

Veterinary.

CATARRH IN YOUNG PIGS.

D. C. BLACK:—"I have a number of young pigs, two, four, and eight months old. All of them are coughing. Most of them are kept in a stone pen. They are fed on chop oats and barley, also a few carrots and mangolds. Can you tell me what ails them and give a cure?"

[Like all other animals, pigs are subject to cold chills, etc., causing cough, sore throat, etc. The reason why so many are affected is that the same cause affected all—probably some particular change in the weather. A little careful dieting and warm housing, with the administration of the following powders, will, no doubt, soon relieve the urgent symptoms: Belladonna powder, two drams; licorice powder, two ounces; jalap powder, one ounce. Mix and divide into twelve powders. Give one, night and morning, to six small pigs, in some warm slop. DR. WM. MOLE, M. R. C. V. S.]

RINGWORM.

S. H.:—"I have a two-year-old beast, in fair condition only, and noticed a few days ago several roughish, irregular spots on the skin. On rubbing them with the hand the hair came off freely with some of the cuticle. The spots are located on side flank and around rump. When rubbed hard blood will show; afterwards the parts dry almost like ringworm. I enclose some of the hair, etc., rubbed off."

[Ringworm is a common disease of cattle, and, unlike mange, is not confined to those ill-cared for, and is defined to be an affection implicating the hairs of the skin, not always but usually assuming a circular form—a parasitic fungi of a vegetable character and known by the scientific name of *linea tonsurans*. It is first manifest by slight swelling and some itchiness of the skin. The fungus has a whitish appearance, about the size of half-a-dollar, which, when peeled off with the finger, exhibits a raw surface, discharging a thin, yellowish matter. The fungus dries into a powder of a fine, bran-like character. This covers the epidermis between the hairs and true skin, and forms around them a complete whitish sheath. The hairs break unevenly, become ragged at their ends, and have the appearance, under the microscope, of being eaten through. At the same time their broken ends are much altered—bent, twisted, and lighter in color than the healthy hair. In noticing the rings, occasionally one or more of them run together, forming a patch of some magnitude. They are usually found about the head, neck, back, and thighs, and surrounding the eyes in great numbers, giving the animal a most unsightly appearance. Treatment must be persistent, as the disease is of a highly contagious character, difficult to cure unless thoroughly done. Treatment: First wash the parts with a solution of carbonate of potash, water and soap, then apply the following mixture: Tincture of iodine, one ounce; tincture of iron, one dram; oil of turpentine, one ounce; spirits of wine, two ounces. To be painted on every day until well. To prevent a recurrence of the disease, the stable should be thoroughly cleaned and whitewashed; the harness, collars, clothing, blankets, etc., well washed and exposed to the atmosphere for a day or two. DR. WM. MOLE.]

CRACKED HEELS AND HIDEBOUND.

READER:—"My horse (twelve years old) when left in the stable a day or two breaks out at the heels. His skin is very dry; seems as though hidebound. He is very hard to feed, taking half more than his mate doing the same work. Kindly advise through your valuable paper."

[Scratches, cracked heels, and grease may for our purpose be classed the same disease in various forms, due to the same cause. It is a very common malady and prevails most during autumn and winter months, confining itself to the hind limbs. Usually sets in with swelling, heat, and tenderness, with stiffness and slight lameness, which passes away after driving and returns on being placed in the stable; generally seen in aged horses of a slow, sluggish constitution, which predisposes to this affection. May be caused by over-feeding on grain of a coarse character—wheat, barley, rye, beans, peas—or an over-supply of oats; unwholesome fodder; close, hot, dirty stables; constant contact with dung and urine; working in deep, irritant mud in limestone districts; snow and freezing mud; more often than not washing legs without properly drying them. These causes induce a dropsical swelling of the limbs (stocking), thus weakening the parts, inducing cracking, etc. As the disease proceeds, or takes on a more intense form, blisters or vesicles appear, which burst, discharging a bright, amber-colored fluid, which is very corrosive in its effects upon the skin, and then known as grease. The relation between the skin and internal organs are most intimate, therefore a visible disorder of the skin will point to some particular fault in the diet, or to an injudicious use of cold water when the body is heated. It is a very troublesome affection in the heavy draught horse, especially so in stallions. Treatment: First give a dose of purgative medicine: eight drams of Barbadoes aloes and two drams of calomel in ball to clear away irritating matter from the bowels. Give soft bran and flax-seed mash, carrots and roots of all kinds, and the following powders: Sulphate of soda, 4 ozs; carbonate of soda, 4 ounces; nux vomica, 2 ounces. Mix and divide into 24 powders; give one night and morning in food. As a wash for the skin and heels apply daily the following lotion: Bicarbonate of soda, ½ ounce; carbolic acid, 2 drams; glycerine, 2 ounces; water, 1 pint. DR. WM. MOLE.]

CRIB BITER.

A. C. MAILLORY, Essex Co., Ont.:—"I have a mare, eleven years old, which has the habit of cribbing the manger. Will you kindly tell me the cause, and if it can be cured, and what can I do to prevent the habit?"

[A chronic crib biter may be easily recognized by the appearance of the incisor teeth: they are worn and rounded at the anterior borders, and by an enlarged condition of the muscles of the neck and jaw, that may be seen on each side above the channel of the throat (named *Sterno muscularis*), chest and jaw. A crib biter seizes the manger or some fixture (the collar shank when nothing else can be taken hold of) by the front teeth, arches his neck, and makes a belching noise: after a time the abdomen becomes enlarged, the animal unthrifty, dry in coat, and hidebound. A wind sucker smacks his lips, extends his head or presses it against some solid body, arches his neck, gathers his feet together, blowing himself out sometimes to a tremendous extent. To prevent cribbing is often very difficult. One method has been resorted to with some success, by passing a very thin flat file between each incisor tooth, which renders them slightly loose and sore, thus preventing a firm hold on the manger. A neck-strap with a small projecting piece in front placed under the jaw will often-

times remove the vice. Placing the animal in a loose box, and feeding out of a swinging pail, removing immediately, will at times cure this habit. Certain animals try to get through long hours of enforced idleness by quietly nibbling the top rail of the manger. DR. WM. MOLE.]

SOW EATING PIGS.

H. P. T.:—"I have a Berkshire sow that has killed and eaten eight young pigs in one litter, and ten in her last. Can you tell me the cause, and how she can be cured? She is a thoroughbred, prize-winning strain, and I would like to raise a litter from her."

[Naturalists give the pig credit for the greatest amount of intelligence among animals. Showmen state that pigs are more apt at receiving instruction than any of our animals, and say that their wits are quick and their sympathies remarkably strong, but the reverse is commonly assumed. It is perhaps due to their highly sensitive organization that they are liable to attacks of mania, and that it is during these attacks of delirium that they will destroy and eat their offspring shortly after birth. To prevent them doing so may be troublesome, but precaution should be taken to be on hand at the time of farrowing, and see that she is provided with plenty of drink, such as warm milk, gruel, and allow the young pigs to suckle only after she has been satisfied. DR. WM. MOLE.]

NOTE.—See also page 55, Feb. 1st issue.—EDITOR.]

LYMPHANGITIS IN COLT.

SUBSCRIBER, Oxford Co., Ont.:—"My colt is sore and tender across the kidneys and swollen in the right hind leg. Have given him sweet nitre and saltpetre. He is now two years old, of light breed, and has good care."

[It is very rare to meet with any disease of the kidneys in the horse; the bowels are more often affected from injudicious feeding. Read answer to question above, as this is a variation of the same disease. In this case it appears to be the result of debility and not to the various causes detailed. The dropsical condition of the leg is known as lymphangitis; the bowels become constipated, the urine scanty, and will require slightly different treatment. There is no objection to sweet nitre and saltpetre, and no doubt before you read this the urgent symptoms will have passed away. It generally leaves some permanent enlargement and the animal becomes subject to recurrent attacks. Give iodide of potassium, 1 ounce; powdered colchicum, 2 ounces; powdered gentian, 2 ounces; powdered capsicum, 2 drams. Mix and divide into twenty-four powders, one to be given as a drench in half a pint of warm gruel night and morning. DR. WM. MOLE, Toronto, Ont.]

Miscellaneous.

OATS VS. SHORTS FOR STOCK.

SUBSCRIBER, Meaford, Ont.:—"Which is, oats or shorts, the cheapest food for horses and cattle, both at \$15 a ton, or bran at \$16 a ton?"

[Shorts would be a trifle cheaper than oats, and either shorts or oats considerably cheaper than bran. This is true so far as the value of the different foods are concerned, and when cattle are to be fed the shorts are the most suitable, but it is pretty generally acknowledged and believed that oats are peculiarly suited to the horse. An addition of a small proportion of shorts to the ground oats may be economical value as horse food.]

SUGAR-CANE.

OLD SUBSCRIBER, Terrebonne, Que.:—"1. Is sugar-cane cultivated in this country? 2. Is its culture advantageous? 3. What is the best kind of cane to be cultivated in this country? 4. How can it be converted into syrup? 5. Where can I get a treatise upon its culture and manufacture into syrup?"

[1, 2. Sugar-cane has not been grown successfully in Canada to our knowledge. 3. The only sort we ever knew to receive a trial was sorghum, which is too easily damaged by frost to be of any use in our climate. 4. The process of syrup-making is too elaborate and of too little interest to our readers to warrant its publication in the ADVOCATE. Bulletin 34 of the Division of Chemistry, U. S. Department of Agriculture, Washington, contains an account of the process of manufacture. 5. Other bulletins upon sorghum and sugar-making can be had by applying to the U. S. Department of Agriculture, Washington, D. C.]

ALFALFA IN AN ORCHARD.

JOHN TAYLOR, JR., Wellington:—"Is it wise to sow alfalfa in an orchard to remain permanently? Would not the deep roots injure the trees?"

[In our opinion it would not be wise to sow alfalfa among young trees, for the reason that the roots would go deeper than the roots of the trees, and would possibly injure them by depriving them of fertility. In an old orchard such evil effects need not be feared; in fact, the plants would not grow luxuriantly in such a location. If alfalfa were grown there it would be wise to pasture it off with hogs, or allow it to go back into the land.]

SWINE QUARANTINE.

TAYLOR BECKETT, Monck Co., Ont.:—"Will you kindly let me know through the ADVOCATE how long swine are held in quarantine coming from the United States into Canada, and what is the cost?"

[Twenty-one (21) days; average cost about \$2.50 per head.]

DIRECTING THE HORNS.

J. S.:—"Is there a way of causing the horns of an animal to turn as you wish? Will scraping on the under side turn them down?"

[The course of an animal's horns can be directed, or at least influenced, by scraping upon the side in which they are desired to turn. The writer has operated a file to good effect for this purpose. The generally accepted theory explaining it is that the side which is cut or scraped is checked in growth, while the opposite side continues to grow and thus curves the horn in the desired direction.]

DOUBLE-COMBED LEGHORN.

MR. RODER, Middlesex Co.:—"I have a Brown Leghorn hen that has two perfectly developed combs. They are separate from the head to the top of the combs. I would like to know if any other poultryman has anything like it?"

DOG-POWER.—RAPE IN OATS.

READER, Muirkirk:—"I could send you some of the readers of the ADVOCATE furnish the paper a description of a tread power, so that I can make my dog do the churning with a dairy churn? (2) What is your opinion of sowing rape with oats in the spring to make fall pasture? How much should be sown per acre?"

[(1) We trust some reader who owns a dog-power will favor us with a description of the same. (2) A number of good farmers and shepherds have practiced sowing rape seed among oats, and report themselves well satisfied. About two pounds of seed per acre is sufficient. If "Reader" tries this plan we trust he will report results to the ADVOCATE for the benefit of others.]

SOWING BUCKWHEAT, GRAIN, AND MANGOLDS.—TROTTING COLT.

SUBSCRIBER, Meaford:—"1. Is it better to sow buckwheat in drills or broadcast? 2. Which is better, deep or shallow sowing for all kinds of spring grains? 3. Would you advise sowing mangolds and carrots in the same land that grew these crops last year. I have very little manure this year and the ground I propose sowing is very rich. Upon taking my selected mangolds to the show I had one of them weighed which tipped the beam at twenty-four pounds. This was a first prize winner. Can any of your young subscribers beat this? 4. What is the cause of cracking in the limbs of young horses as they step about in the stable? 5. At what age is it safe to try a trotting horse's speed without injury?"

[1. Generally speaking, buckwheat does better sown with the drill, as then the depth and covering of the seed is more uniform than when sown broadcast. It comes up more regularly, each plant holding its own throughout the growing season. 2. The depth of sowing spring grains varies with kinds of grain, sort and condition of the soil. In wet or heavy soil, shallow sowing should be practiced: wheat, oats, and barley, from one and one-half to two inches; peas a little deeper. In light dry soil from two to three inches is shallow enough for barley or wheat, while peas and oats do well an inch deeper. 3. It is always preferable to follow a certain rotation of crops as far as practicable, but in this particular case the proposed plan of sowing upon the same land as last year should answer well. It may be well to sow mangolds where the carrots grew and vice versa so far as possible. 4. The joints of young horses are often somewhat loose until maturity is reached, when the muscles and ligaments become more firm and bracing. 5. We take it that "Subscriber" wishes to know at what age it is wise to commence to develop a colt's speed. This is a question that cannot be answered definitely. A horseman with good judgment may commence driving out a colt even before one year old, and before he is two have him going rapidly without injury. A great deal of judgment is necessary to be exercised in matters of this sort. We would say, speaking generally, that a colt showing evidence of speed should be hitched and jogged when two years old, though many trotting horsemen do so earlier. He should be worked along gradually, fed well, and never driven to excess or weariness. Many a good colt has been ruined by allowing him to run until three years old, then, considering him a mature horse because he has size, his owner gets him shod and drives him to the utmost limit of his speed. Such treatment often sends them over on their knees and fetlocks and breaks them down into common plugs before they are six years old.]

CREAM SEPARATORS.

O. M. DOANE, Simcoe Co., Ont.:—"Kindly give me, through the columns of your paper, the names of firms handling cream separators?"

Write the Canadian Dairy Supply Co., 327 Commissioner St., Montreal, who handle the Alfa de Laval; and the Waterloo Mfg. Co., Waterloo, Ont., who are now turning out the Alexandra.]

HOTBED.

FRED YOUNG, York Co.:—"Please let me know, through your valuable paper, the best idea in constructing and heating a hotbed, and oblige."

[See Mr. Garner's article in another column.]

LOSSES IN THE SILO.

Bruce Co., Ont.:—"We used to take the ADVOCATE, but for a time dropped it, we regret to say, as one often comes across in its pages an idea about stock raising alone or stable building that would save many times the subscription. Last year we erected a frame silo, 20 x 22 feet, with 10-inch joist: 1 ply of rough lumber, tar-paper and block siding on the outer side, and 2 ply of lumber, 2 ply tar-paper

and block siding on inner side; on a stone foundation. We cut the corn with an ensilage cutter, and tramped it every day for a fortnight, but when we commenced to use it we found that there was almost eight inches of a crust on top that was rotten, and also some in the corners. Is there any way to prevent this waste? We find ensilage excellent food for stock so far, and very cheap."

[We do not think it possible to perfectly save the top layer of six or eight inches, but it may be kept better by covering with a foot of cut straw (wetted) or swamp-grass. This spoiled ensilage is not usually so bad but what animals will eat it all. Some simply tramp the surface well, and wet the top ensilage thoroughly, which forms a close mouldy covering two or three inches thick, completely shutting out the air. If it be convenient to begin feeding a few days after, the silo is filled there will be no loss. The trouble in the corners arises from imperfect settling. The inside boards of a silo should invariably be dressed, so as to facilitate settling, and there should be a bevel or "cut-off" of say a foot in the corners. Of course it must be air-tight.]

JERSEY SCALE OF POINTS.

W. H. RYAN, Grey Co.:—"I am desirous of knowing the points or marks of high-class, pure Jerseys, such as color or otherwise. I am about buying and have not the requisite knowledge so as to depend on my own judgment. Would you kindly describe such Jerseys in the ADVOCATE and give me address of Recording Secretary?"

[The following is the scale of points adopted by the American Jersey Cattle Club at the annual meeting held May 6th, 1885:—

Table with columns: POINTS, COUNTS. Rows include: 1. Head small and lean; face dished, broad between the eyes and narrow between the horns... 2. Eyes full and placid; horns small, crumpled, and amber-colored... 3. Neck thin, rather long, with clean throat, and not heavy at the shoulders... 4. Back level to the setting-on of tail... 5. Broad across the loins... 6. Barrel long, hooped, and deep at the flank... 7. Hips wide apart; rump long... 8. Legs short... 9. Tail fine, reaching the hocks, with good switch... 10. Color and mellowness of hide; inside of ears yellow... 11. Fore udder full in form and not fleshy... 12. Hind udder full in form and well up behind... 13. Teats rather large, wide apart, and squarely placed... 14. Milk-veins prominent... 15. Disposition quiet... 16. General appearance and apparent constitution... Perfection... 100

FOR BULLS.

The same scale of points shall be used in judging bulls, omitting Nos. 11, 12, and 14, making due allowance for masculinity. Secretary, J. J. Hemmingway, No. 8 West 17th St., New York, U. S. A.

The usual colors are: Fawn, silver-gray, dun or cream, in addition to specimens which are more or less black. Solid colors—that is, destitute of white markings—are preferred. Notwithstanding this preference, the World's Fair (Columbian) sweepstakes winner, and also the winner in the cheese test, bore white markings.]

FEATHER EATING.

JAMES FELL, Victoria Co.:—"Can you tell me what is the matter with a flock of hens who, though they are well fed on grain and hot feed, have commenced to devour the feathers of each other, commencing under the front part of the necks and leaving large spaces of the breast bare? Would you kindly let me hear of a remedy, or what is the cause of this, through the columns of your paper?"

[The habit of pulling and eating feathers is common among fowls confined. It is exceedingly difficult to cure the fault when once acquired, and it is best to kill the fowls for table use at first sight, as they quickly teach others to do the same. The cause is doubtless a need or appetite for something contained in the feathers, or a sheer want of something to do. A mixture of dried flesh and bone, with a small quantity of sulphur, will act as a preventive. Bits of fresh lean meat, or scraps, or ground fresh bones will answer. It is also well to scatter grain among litter to employ their time in scratching for it. Slightly paring back the top part of the beak with a sharp knife, it is said, will usually stop feather picking.]

COW-STABLE FLOORS AND VENTILATION.

WM. HORRICKS, Renfrew Co., Ont.:—"In reading the speech of Mr. John Gould, of Ohio, at the Dairymen's Association of Western Ontario, in 1895, I notice he says: 1st, that an earth floor is the best cow-stable floor that can be built; 2nd, that the air that does the damage falls. (I suppose he means foul air or gas.) He says that the holes to let in the good air should be at the top. I would like your opinion on these points? What do you think of cement concrete for cow-stable floor; also the cost as compared with plank? I have been a subscriber to your paper for scarcely a year, but it has been a great help to me already."

[Except for roomy box-stalls or large pens, we decidedly would not recommend earth floors. In ordinary stalls they would be found most objectionable, wearing into holes in rear and becoming filthy. Carbonic acid gas exhaled by animals in breathing is heavier than pure air. However, at night especially the air of the stable becomes heated from the breath and bodies of the cattle, and naturally rises; hence the advantage of an exit

above, which may be kept open unless the weather becomes exceedingly cold. Pipes or tiles from outside down and underneath the feed-alley floor, with small openings into each manger, are found very effective in bringing in fresh air, which keeps up a circulation as the heated air rises. We notice this plan illustrated in a pamphlet recently issued by Isaac Usher & Son, Thorold, and which can doubtless be got by dropping them a post card. We prefer a properly-constructed cement concrete floor to any other for a cow-stable. The writer has had one in constant use for five years with complete satisfaction. It is not only comfortable both for animals and attendants, but saves all manure, liquid as well as solid, is durable, and costs probably one-third (or even more than that) less to build than a good plank floor, which soon wears out. The cost will vary according to circumstances.]

HENS EATING EGGS.

W. D.:—"My hens, which are well fed in a small, comfortable house (part of bank barn) without a run, are laying regularly, but they eat more eggs than I do. What is the cause and cure?" [Lack of exercise. Provide them a run in the barnyard.]

EGG-BOUND HENS.

SUBSCRIBER, Chater:—"Would some of your readers be kind enough to tell me what to do for my hens? They are fat and look rosy and healthy till they begin laying, and then their trouble begins. In many cases they will only lay two or three eggs (sometimes one), and then the first thing I know they will make for the roost at any hour of the day, and sit there until better, but often they cannot even get that far. Generally when affected this way they lay a thin-shelled egg, and then quit for a few days. When sick they drop wings and tail, half close eyes, and become completely stupid. They have an abundance of fresh grit. No frost in their quarters, which is a cattle and hog barn, 30 x 50 feet, and they have full run. The barn is well ventilated, and has lots of light. It is somewhat damp. Get about a half-dozen eggs per day. Think they would lay well if rid of this trouble? They had the same disease last year."

[Your hens get their food too easy, and would have no trouble if they had to scratch harder. They want lots of exercise and less stimulating food. In your building you seem to have everything necessary for success, with the above exception. You probably feed your cattle and hogs grain, and of course the hens get a lot of food with very little trouble. When in the half-paralyzed condition you describe they are egg-bound, being unable, through excessive fat and probably large size of eggs, to lay. They take to the roost to avoid the attentions of the rooster. When in this condition shut the hen up in a box or coop, give a large teaspoonful of castor oil, also an injection of castor oil by pressing the neck of the oil-bottle into the egg cavity, but be careful not to break the egg by rough handling. Half an hour will usually give relief. Thin shelled or shellless eggs are often caused by over-stimulating feed, especially this time of year, when it is often hard to collect all the materials necessary to form perfect shells. Broken oyster-shells, old lime, and even cinders are a great help. Cabbages contain lime and all other egg-forming elements. You must be careful to collect those thin-shelled eggs as soon as possible, or your hens may begin eating them, which is a bad habit and hard to cure. M. MAW, Winnipeg.]

CHANGING SEED.

HUGH ROGERS, Grey Co.:—"Do you think seed grain runs out if kept on the same soil for a number of years, and what kind of land would it be best to get seed from to sow on gravelly or loamy soil? Would it be best to get it from heavy red clay or sandy soil?"

[No; not when a selection of the best is made for seed. Select for seed well-matured, large, plump grain, then your samples may be improved. There is an impression that seed for heavy soil should be taken from light soil, and vice versa, but this is a fancy, not a necessity. A. E. SHUTTLEWORTH, O. A. C., Guelph, Prof. of Chemistry.]

NOTE.—If Prof. Shuttleworth's advice with respect to the selection of the seed were strictly and generally carried out it would probably add millions of bushels of improved quality to the grain product of the Dominion. But the question is the expression of so general a conviction that it seems worth while that it should be made the subject of careful experiment. There is no doubt that for the several kinds of seed or grain certain kinds of soil are much better adapted than others. The vigor and quality of seeds, other things being equal, should depend upon and vary with the suitability of the soils upon which they are grown; hence it is probable that if a farmer has a second or lower quality of soil for producing a certain crop, he should, if possible, obtain seed raised on the most suitable soil; but the question whether the farmer having the optimum soil should sow seed from an inferior one is open to doubt. Yet, many believe that there is something so beneficial in "a change of seed" that the gain, even in the latter supposition—that is, sowing seed from inferior soil—compensates by the change itself for the possible inferiority of the seed sown. If any readers of the ADVOCATE have made experiments, or have had experience throwing light on the subject, we shall gladly publish the results.—EDITOR.]

And indeed I have the chain of evidence behind me is complete. A Kansas cyclone couldn't have done up a given space worse. But for all that I am hugged and kissed and trotted and thumped until I wish to goodness I had never taken that journey round the room.

THE BABY.

The Siege of Saragossa.

The siege of Saragossa is one of the three great historical sieges in which the undisciplined heroism of a people was pitted in mortal conflict with the highest military science and power of their own age. The first of these three is the siege of Jerusalem by the Romans under Titus, the prolonged agony of which is recorded by Josephus in pages which for absorbing interest have not been surpassed by any records of great historical events. The second—the siege of Leyden by the Spaniards—is described with thrilling force in Motley's history of the Netherlands. The siege of Saragossa has yet to find a competent historian, though the technical details of the conflict are given fully in Napier's history of the Peninsular war.

The French first beset Saragossa on the 15th of June, 1808. The flame of resistance to the treacherous and tyrannical invasion of Spain by Napoleon had spread over the country. The Saragossians, dismissing their military commander (whose courage and loyalty they doubted), summoned Palafox to their aid—a Spanish nobleman with little military experience, who had been leading a patriotic but unavailing rising in Aragon.

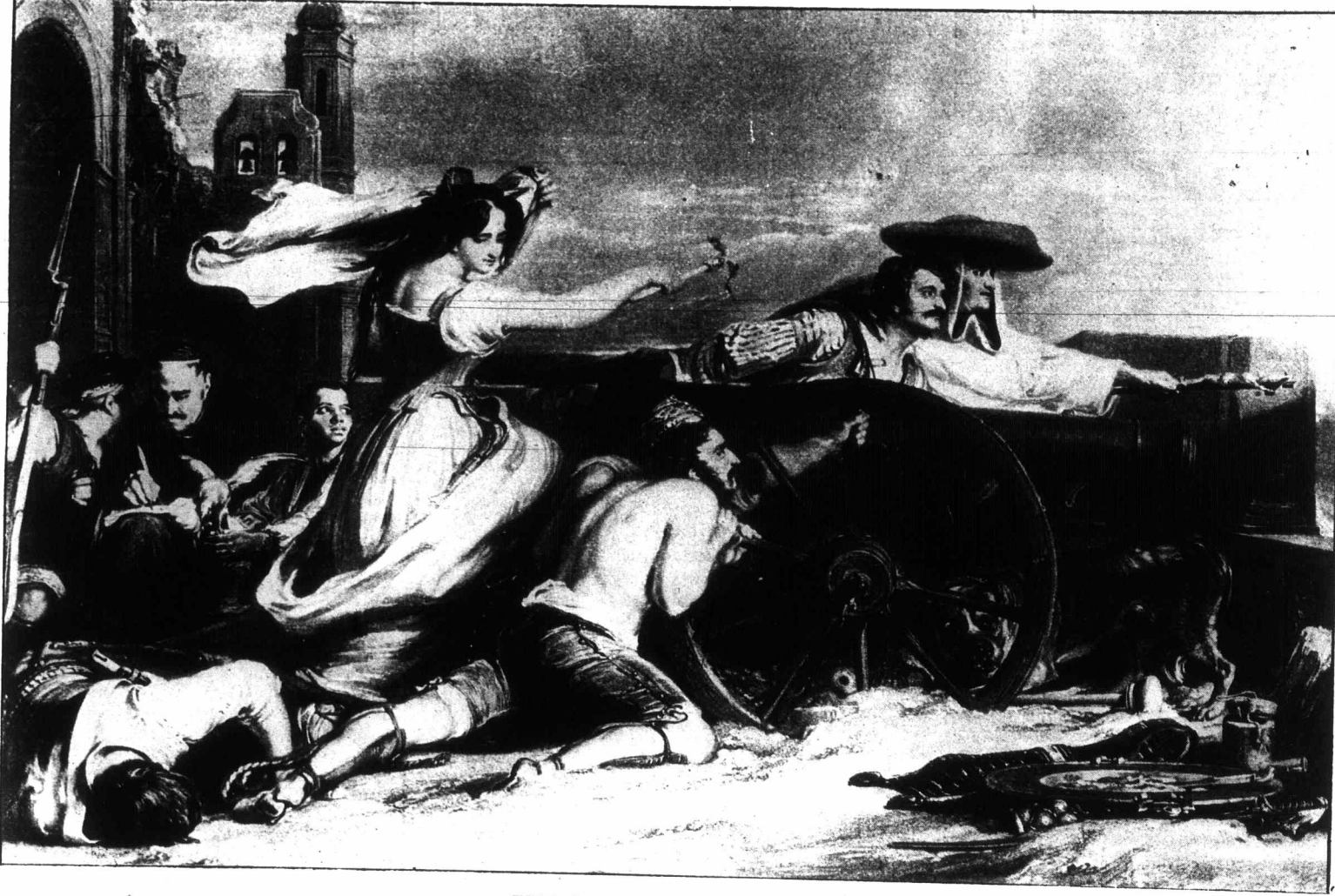
Saragossa fell before the military science of the French. The walls of Saragossa went to the ground, but Saragossa herself remained erect, and as the broken girdle fell from the heroic city the besiegers started at the view of her naked strength. In the month that followed the bombardment never ceased, the war being now in the streets of Saragossa. The sound of the alarm-bell was heard in every quarter. The people crowded into the houses nearest the lodgments of the enemy. Additional barricades were constructed across the principal streets. Mines were prepared in the more open spaces and the internal communications from house to house were multiplied until they formed a vast labyrinth, the intricate windings of which were only to be traced by the weapons and dead bodies of the defenders. After weeks of bloody warfare, pestilence began its deadly work amongst the ranks of the devoted people. By the beginning of February the daily deaths were from four to five hundred, the living were unable to bury the dead, and thousands of carcasses, scattered about the streets or courtyards or piled in heaps at the doors of the churches, were left to dissolve in their own corruption or to be licked by the flames of the burning houses. The suburbs, the greatest part of the walls, and one-fourth of the houses were in the hands of the French. Sixteen thousand shells thrown during the bombardment and the explosion of forty-five thousand pounds of powder in the mines had shaken the city to the foundations, and the bones of more than forty thousand persons of every age and sect bore dreadful testimony to the consistency of the besieged. The principal leaders

The Greatness of Little Things.

"As vinegar to the teeth and as smoke to the eyes, so is the sluggard to them that send him."—Prov., x.: 26.

The minor morals are not neglected in the Scriptures. Cleanliness and punctuality have their place in religion as well as the weightier matters of the law. These lesser features must all be filled in ere the beauty of the Lord be seen upon us. There may be the main things that constitute the backbone of Christianity, and yet the character may be imperfect and ungainly. There may be faith, righteousness, and truth, and yet little of the loveliness of the bride prepared to meet her husband.

You would not select activity and punctuality as the cardinal tests of a man's condition before God, and yet these things are by no means of trifling importance. To be a sluggard is a great blemish. "What thy hand finds to do, do it with thy might." Sluggishness is a continual injury inflicted on others. It is a cutting, vexing thing. One of the Christian laws is to "look, not every man on his own things, but every man also on the things of others." If we would adorn the doctrine of Christ we must be active, early, punctual. It is a sin to waste another man's time, as much as to waste his property. No doubt it is the natural disposition of some people to be slovenly and inexact. But what is your religion worth if it does not correct such a propensity? "If any man be in Christ he is a new creature." It should be the meat and drink of a disciple to be making progress in bringing "into captivity to the obedience of Christ" those thoughts that hitherto have been



THE SIEGE OF SARAGOSSA.

The fortifications of Saragossa soon fell before the French assaults, but the real conflict only then began: every street and every house was defended by the desperate people with a ferocity unparalleled. The French at last forced their way to the Corso (the leading thoroughfare of the city), where a hideous spectacle was exhibited; for the public hospital being set on fire, the madmen confined there issued forth among the combatants—muttering, shouting, singing, and moping—each according to the character of his disorder; while driveling idiots mixed their cries with the shouts of contending soldiers. The ferocious energy of resistance grew instead of decreasing with the advancing of the French, who, after two months of strenuous conflict and heavy losses, were finally compelled to withdraw on the 10th of August.

The brave citizens were fully aware this was but a respite, and the energies of the people were now directed to repairing the breaches and strengthening the shattered defences of the city in preparation for the death-struggle. Four months later thirty-five thousand French troops, with a full force of engineers, sappers, and siege-guns, appeared before the devoted city.

In the memorable conflict that now took place all classes took part. The younger monks joined the ranks of the fighters, the older ones attended the sick and dying. To attend the hospitals, and carry provisions and arms to the combatants, companies of women were formed, under the command of the Countess of Brenta, a lady of heroic mould and noble character. After two months of incessant assault the hastily-constructed ramparts of

were sick, slain, or swept off by the plague, and on the 20th of February the remnants of the blood-stained arms surrendered, and the sickly survivors of its heroic garrison were permitted to march out with all the honors of war. Our picture, for which George IV. paid 800 guineas, was painted by Sir David Wilkie. He has, with some artistic license, grouped here some of the leading actors in this great tragedy. The principal person at the gun looking over the parapet is Don Joseph Palafox; the priest with a crucifix is Father Consolacion, a friar whose engineering skill did much to protract the defence; the priest writing is Boggiero, famed for his heroism in the defence and the cruelty with which he was treated on his capture by the French. The female figure about to fire the gun was one of the many women who took an active part in the defence of the city. Her lover being slain, she took his place at the gun, stepping over his dead body with the enthusiastic bravery that inspired the whole people.

THE QUIET HOUR.

Trifles.

The massive gates of circumstance
Are turned upon the smallest hinge,
And thus some seeming pettiest chance
Gives our life its after-tinge.

The trifles of our daily lives—
The common things scarce worth recall—
Whereof no visible trace survives,
These are the mainsprings, after all.

allowed to run wild. "Ye are God's husbandry." Our effort should be to bring all the outspread field of life under cultivation—to leave no corner lying waste. A man's life is the field that belongs to the Heavenly Husbandman. Every corner is valuable and should be turned up and occupied, every yard of soil turned to account. Those who are bent on being rich know well how much depends on taking care of small fragments. If we were ambitious to be "rich towards God," we would not cast anything away. The farthest advanced Christian may be known by his care to serve Christ in little things which others leave to chance, by his care to cultivate for Christ those little corners of life which others allow to be filled with weeds. When any portions of the field, even outside edges and corners, are left unsown, uncared for, the roots and seeds which grow on these spread widely and injure all. It is sad to see the whole field damaged by the weeds that run to seed on its borders. Do we not often see a Christian life marred and made almost useless by certain minor outside parts of it not being Christianized? The smallest extremity should be occupied for the Lord, as well as the heart. And remember, although the heart is the chief thing as to acceptance with God, the smallest things of life often become the most important for His service in this world. It is precisely at the extremities of our life-course, those parts that run out into diminutive points, that we come into contact with others. If these little outside things, which they feel and see, be not baptized in the spirit of Christ, we have no means of letting them feel our Christianity at all. A Christian may be

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MEADOWSIDE FARM,

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Breeders of high class Ayrshires, choice Berkshires, and Shropshire Sheep. Young stock always for sale, at reasonable prices. Our Ayrshire herd is the largest and oldest in Canada. Write for prices. Parties met at Queen's Hotel, Carleton. 20-y-o



HAVE NOW 3 Young Ayrshire Bulls, ON HAND 1, 2 and 3 years old, respectively; all prize winners; the 3-year-old having won 1st at leading exhibitions. Write: 19-y-om

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John Newman & Sons Box 221, Lachine, Que., breeders of Ayrshire Cattle and Carriage Horses.

We have a choice young two-year-old bull and a yearling, bred from imp. cows and from our grand stock bull Glencoe, fit to top any herd; also yearlings, bull calves, and heifers of all ages. Prices to suit the times. Write or call. 15-1-y-o



Ayrshires! PURE-BRED, of different ages, and both sex No inferior animals. Write for particulars.

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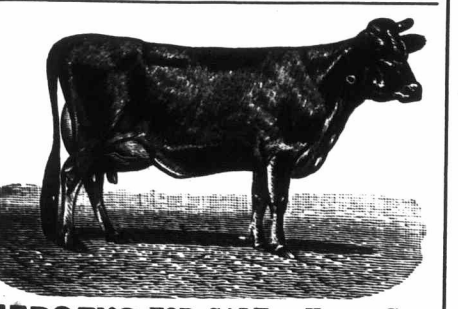
AYRSHIRE CATTLE

The bull Tom Brown and the heifer White Floss, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester Sheep and Berkshire Swine. 5-1-y-o

DAVID BENNING, Glenhurst Farm, WILLIAMSTOWN, ONT.

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Ayrshire Cattle, Berkshire and Tamworth Swine. FOR SALE.—Four Ayrshire bulls of different ages, sons of such noted animals as Nellie Osborne 5358, and Gold King 1382. They are good ones. Write for prices. R. REID & CO., Hintonburg, Ont. One mile from Ottawa.



JERSEYS FOR SALE.—Young Cows and Heifers in calf, Heifer Calves and Bull Calves, richly bred, best testing strains, and good color. Also first-class Berkshire Boars and Sows, bred straight from imported stock. Come and see or write for prices. J. C. SNELL, - Snelgrove P.O., Ont. R. R. Station, Brampton, G. T. R., and C. P. R. 8-y-om

MAPLE CITY HERD OF JERSEYS.

For Sale.—Two choice Bulls: Massena's Son 17608, A. J. C. C. whose dam gave 9,059 lbs. 6 ozs. milk in one year and 15 days, yielding 902 lbs. 3 ozs. of butter; also a yearling son of Massena's Son. A few Bronze Turkeys also for sale. WM. W. EVERETT, Chatham, Ont. 3-1-y-o

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Breeders of high-class Ayrshire cattle; choice young stock of either sex and any age always on hand. Our herd contains a number of Columbian winners. 21-1-y-o

A. J. C. C. FOR SALE.—Bull Calf, solid fawn, eight months; grandson of 100%, who was own brother to sire of Mary Anne of St. Lambert. One Heifer, 10 months, sire Baron Hugo of St. Anne's. Price, \$100 for pair, express prepaid. H. E. WILLIAMS, Sunny Lea Farm. 17-1-y-o KNOWLTON, P.Q.

JOS. CAIRNES, CAMLACHIE, ONT., Breeder of pure St. Lambert Jerseys, Chester White Swine, and Bronze Turkeys. A few extra good young Sows, eight months old, now for sale, due to farrow March; also a few choice four-months Pigs at low prices. Correspondence solicited. 3-1-y-o

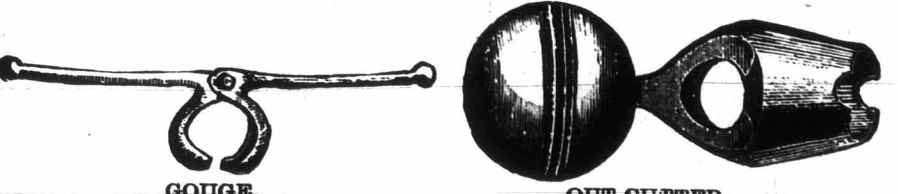
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Saccharometer for Maple Syrup makers. Secures proper and uniform density. Once tried will never be done without. Easy to use as a Thermometer.

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One set of these tools will be given any subscriber sending us the names of four new yearly paid-up subscribers. Cash price, \$1.50 per set.

The Book on Silage. How to build, fill, and feed from a Silo. See contents in previous issues. Supt. Bedford, of the Manitoba Experimental Farm, pronounces it "right up to date, and very practical." Mr. Bedford has had several years' actual experience with ensilage.

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To any subscriber sending us the names of ten new yearly paid-up subscribers we still offer a young Collie, six weeks old or over, eligible to registration, and bred by Mr. R. McEwen, Byron, Ont., one of America's foremost breeders.

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HALF THE FAMOUS BELVEDERE HERD OF JERSEYS, owing to most of my farm being sold. Not a Culling Out; but purchasers given their choice at **Lowest Prices** ever offered. For many years I have taken everywhere

FIRST HERD PRIZE,

and some of these animals, with their descendants, are for sale. There is seldom such an opportunity to get together a superb Dairy Herd, that will also

MRS. E. M. JONES, Box 324, BROCKVILLE, Ont., CAN.

"Dairying for Profit," By Mrs. E. M. Jones. Best book ever written. 50 cents by mail. ROBT. BROWN, Box 107, Brockville, Ont., Can.

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The entire herd of A. J. C. C. H. R. Lee Farm Jerseys. Forty head of reg. bulls, cows, heifers, and calves; same number of high grade cows and heifers. Excellent chance to start a herd cheap, as they must be sold within the next 90 days. Come and see, or write E. PHELPS BALL, Lee Farm, Rock Island, P. Q. 17-y-o

JERSEYS FOR SALE

At the head of the herd is the grand young St. Lambert bull, Nabob, son of Nell's John Bull. Stock of both sexes and different ages, and of choice breeding, now on hand.

JONATHAN CARPENTER, WINONA, ONT. 13-1-y-om

W. F. BACON, Orillia, - Ontario, - BREEDER OF -

CHOICE REGISTERED JERSEYS Young bulls and heifers of the best blood for sale. Write me for prices and particulars. 19-1-y-om

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EDGAR SILCOX, Shedden, Ont. Breeder of high-class St. Lambert Jerseys. A couple of young Bulls for sale, grand individuals, nine and fourteen months old, from Rose of Oak Grove and Edna Hugo, sire Robin of Meadowbrook. 21-1-y-o

A. M. MCINTYRE, CORONMORE FARM, Lawrence, Ont.,

Breeder of choice Jersey Cattle of the St. Lambert strain, and Welsh ponies. A couple of choice Bull Calves now for sale, by Rustler of St. Lambert and Ida's Romeo, and from cows of choice breeding. 21-1-y-o

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WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 21-y-om

To Stockmen & Breeders.

LITTLE'S

PATENT FLUID

NON-POISONOUS SHEEP DIP

AND CATTLE WASH.

For the destruction of Ticks, Lice, Mange and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc. Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.

The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS. BROOKLIN, ONT., Sept. 4th, 1890.

DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested, I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders. JOHN DRYDEN.

Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, Ont. Sole Agent for the Dominion. 7-1-y-om

BOOK TABLE.

In writing to advertisers please mention the Farmer's Advocate.

WHERE TO LOOK FOR GOOD SEEDS.

Crow & Page, Ridgeville, Ont., make a lot of desirable offerings in their '96 catalogue. It can be received for the asking.

George Keith's (Toronto) seed business is long-established and reliable. His 1896 illustrated catalogue will be found helpful to every farmer or gardener who receives it.

A. G. Hull & Son, St. Catharines, Ont., have issued a nursery stock catalogue of trees, plants, and vines that should be in the hands of every farmer who has not an abundance of these things.

The D. M. Ferry & Co.'s (Windsor, Ont.), catalogue represents, perhaps, the largest seed business in America. The valuable hints to the successful culture of garden crops makes the catalogue especially desirable.

James J. H. Gregory & Sons' (Marblehead, Mass.) catalogue of home-grown seeds contains an extensive retail price list, and description of their many lines. A description of many desirable sorts of potatoes occupies considerable space.

The Steele, Briggs Seed Co. (Ltd.), Toronto, have issued a 112-page catalogue, profusely illustrated. While flower seeds, bulbs, roses, vines, plants, and shrubs occupy the major portion of the book, field seeds, garden tools, and novelties are given their due attention.

Wm. Rennie's (Toronto) illustrated "Horticultural Guide" for amateur gardeners divides its 61 pages into departments for flower seeds, vegetable and farm seeds, bulbs, plants, shrubs and fruits, and miscellaneous articles, including tools, sprayers, and other machinery. This firm tests all seeds.

J. A. Simmers' (Toronto) 86-page illustrated catalogue is very complete in its various departments. This firm publishes a weekly price list of farm seeds, including grasses, clovers, barley, beans, buckwheat, flax, peas, oats, rye, wheat, sunflowers, and a large number of desirable varieties of corn.

A post-card request with your address to the above enterprising firms will secure copies of these instructive and handsome catalogues.

Vol. XVIII of the Clydesdale Stud Book of Great Britain and Ireland has been received from the Secretary, Mr. Arch. McNeillage, Glasgow, Scotland. It contains the pedigrees of mares Nos. 12,380 to 12,697, and stallions Nos. 10,922 to 10,117. It also contains a list of members of the Clydesdale Horse Society, as at 1st January, 1896. The frontispiece is an illustration of Royal Gartly (984), winner of the Cawdor Cup, 1885. The volume, like all former numbers, is well compiled, printed, and bound.

Volume V of the Dominion Swine Breeders' Record is to hand from the Recording Secretary, Henry Wade, Toronto. It shows that swine recording has been brisk during the last year. The book contains, in all, the pedigrees of 2,611 hogs of the various breeds, divided as follows: Berkshires—Boars, Nos. 2601 to 3731; sows, 2701 to 3731; Improved Yorkshires—Boars, Nos. 1101 to 1157; sows, 1301 to 1916; Chester Whites—Boars, 401 to 501; sows, 502 to 623; Poland-Chinas—Boars, 603 to 633; sows, 112 to 839; Tamworths—Boars, 132 to 240; sows, 177 to 371; Duroc-Jerseys—Boars, 1 to 63; sows, 1 to 76. The volume is complete in information and well gotten up.

NOTICES.

HOW PARK SEEDS AND BERKSHIRES. The name How Park is not new to the readers of the FARMER'S ADVOCATE. It is not long since it was the home of one of the largest and finest Shorthorn herds in America. The farm is now owned and managed by Messrs. Shuttleworth and Harris, Brantford, who are devoting special attention to dairying, the production of seed grains, and breeding improved bacon Berkshires. Their advertisement, elsewhere, mentions the various lines dealt in. These home grown and carefully selected seeds cannot but give satisfaction. The Berkshires seen by our representative are of the modern pattern, having long and deep sides.

HOW TO REACH FIRST CLASS MEN.

Publishers FARMER'S ADVOCATE, London, Ont.: GENTLEMEN.—Some one should be congratulated on the gratifying results to us of advertising in your publication. It is hard to say to whom the honor belongs, whether to the Editor for the work which has made the ADVOCATE a standard text book on good farming, the printer who made such an attractive ad, the pressman who prints the paper so well, or the excellence of the "Ideal Wind Mill" and "Maple Leaf Grinder." We are prepared to give you full credit, however, for we are in receipt of numerous enquiries from every part of Canada from first-class men who say "I saw your ad. in the FARMER'S ADVOCATE."

Yours truly, GOLD, SHIPLEY & MITCHELL Co. (Ltd.) TO SPRAY OR NOT TO SPRAY?

There is but one answer to the above query—Spray. Practical fruit growers agree that it is past the experimental stage. One of our best fruit authorities, as recorded in a recent issue of the ADVOCATE, laid down as the four essentials of success: (1) Cultivation; (2) Pruning; (3) Manuring; and (4) Spraying. Insect pests and fungous diseases must be controlled if a good paying crop, either in quantity or quality, is to be secured. The main point is to get apparatus that will really spray effectively—not a mere squirt-gun that throws a coarse, irregular stream. A member of the ADVOCATE staff lately spent nearly an hour at the works in London, Ont., carefully examining the mechanism and actual working of the Heard Spramators, advertised in another column, and must confess that for simplicity, strength, evident durability, and efficiency, on however large a scale the work is to be done, either for low bushes or for high trees, the makers are to be congratulated upon the success they have achieved. We have no hesitation in recommending fruit growers to write at once for the instructive catalogue which they have issued. It not only describes the Spramator accurately, but gives a great deal of valuable data regarding spraying mixture, fungous and insect diseases. The prices for their apparatus are certainly not unreasonable.



W. C. EDWARDS AND COY IMPORTERS AND BREEDERS.



Pine Grove Stock Farm, ROCKLAND, ONT.

Laurentian Stock and Dairy Farm, NORTH NATION MILLS, P. Q.

Shropshires and Scotch Shorthorns

The imported Cruickshank bulls Knight of St. John and Scottish Sportsman are at the head of this herd of Imported and Home-bred Cows and Heifers of the most approved Scotch families.

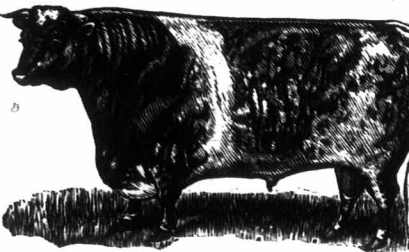
AYRSHIRES, JERSEYS, SHROPSHIRES, BERKSHIRES.

Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Lisgar Pogis of St. Anne's heads the Jerseys. The young stock are all from time tried dams. Write for full particulars.

7-1-y

ED. McLEAN, Manager.

Dispersion Sale



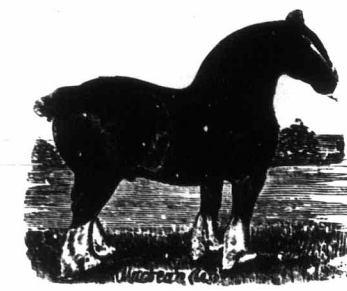
April 15, '96

OF THE Valley Home Herd OF SHORTHORN CATTLE.

AT ONE O'CLOCK P.M. At our farm, one mile from Meadowvale Station on C.P.R.

Our entire herd of Shorthorns, consisting of about forty head, comprising such well-known Scotch families as: Nonpareils, Minas, Cecillas, Jills, Clarets, and Bessies, topped out with the best imported Cruickshank and Campbell bulls. Among the lot are some of the best show animals offered at public sale for a number of years, as well as cows that have proved themselves heavy milkers. The heifers are a choice lot, sired by such imported bulls as British Statesman, Tofthills, and Village Boy 6th. In all 10 bulls will be offered, among which is the imported British Statesman, who is a first-class show bull in any country and is bred from one of the best milking strains in Scotland. For further information see catalogue, which will be sent on application.

CLYDESDALES AND HACKNEYS



A FEW FIRST-CLASS CLYDESDALE Stallions, Mares & Fillies for sale. Prices to suit the times. Come and see them, or write for prices.

GRAHAM BROS.,

Claremont, Ontario. 25 miles east of Toronto, on C. P. R. 4-1f-om

ISALEIGH GRANGE STOCK FARM, DANVILLE, QUEBEC.



A CHOICE assortment of the following pure-bred stock always on hand: Ayrshire and Guernsey Cattle of the choicest breeding and most fashionable type and color. High-class Improved Large Yorkshires of all ages. "Sanders Spencer stock." Shropshires of the finest quality. Our breeding stock has been selected, at great cost, from the choicest herds and flocks of both England and Canada, and have been very successful winners in all leading show rings.

J. N. GREENSHIELDS, Proprietor. T. D. McCALLUM, Manager, Danville, Que. 9-y-om

SPRING BROOK STOCK FARM



Holstein-Friesian Cattle and Tamworth Swine.



A very select lot of young bulls, ready for service. Breeding the best. Quality unsurpassed. In females the choice is equally as good, all ages. A number of rare yearlings; also fresh cows and young calves. My Tamworths are unsurpassed for quality; a large number of all ages of both sexes. Write at once for bargains.

Petersburg, G. T. R.; Ayr, C. P. R. A. C. HALLMAN, New Dundee, Waterloo Co., Ont.

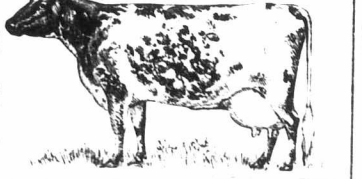
A Great Bargain

IN THE REALLY HIGH CLASS Holstein-Friesians! I now offer for sale every animal in my herd, than which there are none better in America, at prices to suit the hard times. The herd consists of mature cows with large milk and butter records, and their descendants; heifers in calf, others ready to breed, and heifer calves; bulls fit for service. Also several very choice bull calves; if taken at once will go at \$12. Write for particulars and breeding to H. BOLLERT, Maple Grove Stock Farm, Cassel, Ont.

Alex. Hume & Co., Importers and Breeders of



AYRSHIRES AND YORKSHIRES. We can sell you choicely-bred and CHOICE BULLS or HEIFERS, or young COWS, or CALVES a month old. Or, for less money, CALVES of three to five crosses, whose dams have milk records of 8,000 to 10,000, testing 3.6 to 4.5. Also PIGS of any age. All at low prices.



SEE STOCK NOTES. Telephone and Station—Hoard's, G.T.R. Burnbrae P.O. 5-1-y-o

For Sale Cheap,



That grand Ayrshire "HEATHER JOCK" —1212— Stock Bull. Bred by D. Morton & Son, Hamilton; Sire Royal Chief (Imp.) —75— (1617), dam Primrose (Imp.) —1265— (5507). This bull has proven a sure stock getter and can be purchased at a bargain if taken at once. Having a number of his progeny at breeding age, we cannot use him. Speak quick if you want a bargain. We have also some choice young York-hire Sows of breeding age from the stock of J. E. Brethour. Correspondence a pleasure.

A. & H. FOREMAN, Collingwood, Ont. 1-1-y-o

THE GLEN STOCK FARM Shropshires

We will sell at moderate prices a number of Yearling Rams and Ram Lambs, also a choice lot of yearlings and two-year-old Ewes and Ewe Lambs. Our herd of Ayrshires are in splendid form, and parties in need of young stock of either sex will do well to see what we have to offer before purchasing elsewhere.

WHITESIDE BROS., INNERKIP, ONT. 7-y-om

"Best Quality with Greatest Quantity" STILL THE MOTTO AT MAPLE SHADE.

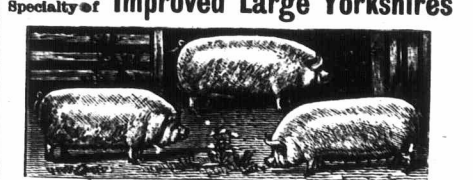
OUR Shropshire lambs are not numerous, but they are of good quality and good size. We still have left also a few strong, smooth, home-bred yearlings of good breeding and character. Our Shorthorn Calves are developing finely, characteristic quality and thick flesh of the typical Cruickshank Shorthorn. Prices moderate; if you doubt it, write and believe.

Address—JOHN DRYDEN, Brooklin. (30 miles east of Toronto.) 16-2-g-om

ASHTON GRANGE HERD IMPROVED YORKSHIRES

Imported or out of imported stock. We have a choice lot of young stock ready for shipping. We ship to order, and guarantee satisfaction. W.M. TAIT, St. Laurent, near Montreal. 7-1-y-om

A Specialty of Improved Large Yorkshires



I have now on hand a choice lot of young boars fit for immediate use. Prices very moderate. Orders for spring will receive careful attention. Pigs of the most desirable type and at reasonable prices.

3-y-om J. E. BRETHERTON, Burford, Ont.

LARGE IMPROVED YORKSHIRES

A choice lot of young pigs from four weeks to six months old, including boars fit for service and sows ready to mate. Prices to suit times. Satisfaction guaranteed. Apply to WM. GOODGER & SON, Box 160, Woodstock, Ont. 11-y-o

J. G. CLARK, Woodroffe Stock Farm, OTTAWA,

BREEDER OF CLYDESDALE HORSES, AYRSHIRE CATTLE, and IMPROVED LARGE YORKSHIRES.

I now have on hand a number of choice young Yorkshires, both sexes, which I will sell at prices to suit the times. Pairs supplied not skinned. Correspondence solicited. 11-1-y-om

YORKSHIRE PIGS

Of the best type and breeding. Pairs not skinned for sale at all seasons. I. M. HURLEY & SON, Belleville, Ont. Box 442. 17-1-y-om

BERKSHIRES AND YORKSHIRES!

Choice stock for sale at reasonable prices. Orders filled in rotation. Inspection invited. Write for prices. THOMAS WATSON, Springvale, Ont. 11-1-y-o

ENTERPRISE STOCK FARM.

E. CAVERLEY, Sine P. O., Ont., Breeder of large English-Berkshire and Poland-China Swine. Orders booked for spring pigs from February litters. Can supply pairs not skinned. Prices lower than the lowest. 11-1-y-o

LARGE ENGLISH BERKSHIRES.

My herd won 246 prizes, 10 diplomas, 5 medals; also Prince of Wales prize, and sweepstakes over all breeds since 1888 at the leading fairs in the Dominion. Choice stock of all ages for sale. Pairs supplied not akin. GEO. GREEN, Fairview P. O., Ont. Stratford Station and Telegraph Office.

LARGE ENGLISH BERKSHIRES, IMPROVED LARGE WHITE YORKSHIRE SWINE, SHORT-HORN CATTLE, AND SHROPSHIRE SHEEP.

A choice lot of Boars of either breed, fit for service, for sale. Young Sows in pig, and a lot of very fine Boars and Sows three months old.

Herd won 65 firsts and 45 second prizes at leading fairs, 1895. Inspection invited. Address, H. J. DAVIS, Woodstock, Ont., 8-y-om

D. A. GRAHAM, PARKHILL, ONT.

Importer and breeder of large English Berkshires. I am prepared to book orders for spring pigs. Pairs and trios furnished not akin; dams weighing 300 to 600 lbs.; sires, 400 to 800 lbs. Prices right. Poultry: Choice breeding pens of B. P. Rocks, S. L. Wyandottes, and Pekin ducks. Eggs in season, 13 for \$1. Bronze turkey eggs, 15c. each. 21-1-om

Large English Berkshires!

Our Berkshires made a clean sweep of all the first (11) prizes offered for Berkshires at the late Toronto Industrial Exhibition, including 1st and 2nd prizes for herd of boar and two sows, boar and four of his get, and sow and four of her produce. We now have a fine lot of young pigs for sale from two to three months, also boars and sows about five months old. Write for prices. J. G. SNELL & BRO., Snelgrove, Ont. Brampton and Snelgrove Sts. 2-y-om

Eldmale Herd of Tamworths

The first-prize boar under six months at the Western (London, Ont.) and other fairs; fit to head any herd; also September pigs from prize-winning stock. JOHN C. NICHOL, Hubrey, Ont. 5-

W. P. HUFF, CHATHAM, ONTARIO.

BREEDER OF CHOICE TAMWORTHS Descended from the stock of John Bell, of Amber, and the Grant & Co's importation. Young stock of No. 1 quality always on hand. Some choice sows now ready to breed. Rock-bottom prices. 21-1-y-om

NORMAN BLAIN, COLD SPRING FARM, - ST. GEORGE.

Breeder of Choice TAMWORTHS Young boars fit for service, and sows ready to mate. Orders booked for April and May pigs. Prices moderate. Correspondence invited. 5-1-e-o

BARTON HERD OF TAMWORTHS

Choice stock of all ages and either sex, descended from imp. stock. Pairs and trios not akin. Write for prices. 19-1-y-om W. T. ELLIOTT, Hamilton Market.

MR. H. REVEL, Woodlands Farm, INGERSOLL, - ONT., Breeder of

Choice Tamworth & Poland-China Swine Young stock of all ages and either sex for sale at reasonable prices; bred from or descended from imported stock.

ESSEX HERD OF POLAND-CHINAS

R. B. McMULLIN, Goldsmith, Ontario, Importer & Breeder of Registered Poland-China Swine. Young stock for sale. Registered pedigrees furnished. All-o eggs for hatching - B. P. Rock and Black Minorca varieties. 3-1-y-om

HERRON & DAFOE, AVON P. O.

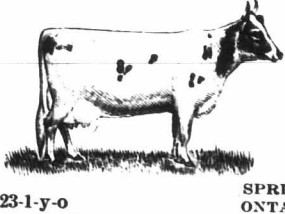
Importers and Breeders of Poland-China, Chester White and Tamworth Swine Young stock of the above, any age and either sex, imp. and descended from imp. stock, for sale at hard-times prices. All stock registered. Mention ADVOCATE. 21-1-y-om

WHEN You fry fish or oysters in Cottolene they will not be greasy. Always have the skillet or frying pan cold when the COTTOLENE is put in. Remember that COTTOLENE heats to the cooking point sooner than lard and that it must not be allowed to burn.

COTTOLENE

when rightly used, never imparts to food any disagreeable greasy odor or flavor. For pastry or any shortening purpose, but 2/3 the quantity that was formerly used of lard, is necessary, if Cottolene IS USED

Look for the trade-marks - "Cottolene" and steer's head in cotton-plant vessels - on every tin. THE N. K. FAIRBANK COMPANY, Wellington and Ann Sts., MONTREAL.



23-1-y-o SPRINGFIELD, ONTARIO.

Bargains for next 30 days

in Holsteins, Jerseys, and Ayrshires. As I am overstocked and short of feed, I will sell the following choicely-bred stock at a great sacrifice: One Ayrshire bull calf at \$30.00. Will register stock in purchaser's name if taken soon.

Alexander Woolley.

OXFORD HERD OF POLAND-CHINAS

Our herd made a clean sweep of all the first prizes (30) at the late Toronto, Montreal and Ottawa Exhibitions. DARKNESS QUALITY, the unbeaten winner at the World's Fair, heads the herd. Stock for sale. Write for prices.

W. H. JONES, 15-y-om Mount Elgin, Ont.

THE FARGO HERD OF POLAND-CHINAS

Are of the choicest quality and breeding. I have young stock for sale from an imp. boar and imp. and home-bred sows, also a few choice sows in farrow to the imp. boar Black Joe. Those desiring a first-class article at the right price, should write at once or come and see my stock. OLIVER DRURY, 13-1-y-o FARGO, ONT.

CANADA: WILKES

Over 100 head - all ages, sexes and different families. Six gilts and ten tried sows, all bred and safe in pig for April and May litters, from \$15 to \$25 each. If you want a bargain, write CAPT. A. W. YOUNG, Tupperville, Ont. 17-y-om

DUROC-JERSEY SWINE

We have the best and greatest prize-winning herd in Canada. Write for what you want. We have everything. TAPE BROS., Ridgetown, Ont. 20-y-om

Special Offering

Duroc-Jerseys!

Four fine young boars (2 extra good) ready for service; five very fine young sows fit to breed, and choice lot young fall pigs. Very low prices to sell quick.

"Pioneer Herd," Peter Lamarsh, 5-1-y-o Wheatley, Ont.

Summit Farm DUROC-JERSEY SWINE

Herd of I have a few choice young sows still for sale, which I am offering cheap. Order taken for spring pigs. Write for particulars to 3-1-y-o F. W. TERHUNE, Brantford, Ont.

DUROC-JERSEYS FOR SALE

Our stock is of the best quality and breeding obtainable. Special offer of young sows now ready to breed. Boars fit for service; and younger ones of both sex at hard-times prices. STRATHBURN, 21-1-y-o

BERDAN & McNEIL, ONTARIO.

DUROC-JERSEYS

of the best type and breeding. Choice young sows ready to breed. Boars fit for service, and younger pigs (both sex) now on hand. 21-1-y-om HUGH McCUTCHEON, Glencoe, Ont.

IMP. CHESTER WHITE and TAMWORTH SWINE.

Having won the sweepstakes for the best boar and two sows of any age and sex at the Toronto Industrial Exhibition (Toronto) 1895, we offer for sale 40 choice boars and sows from four to six months old. Prices away down for next 60 days. Pedigrees furnished. Reduced rates by express. Drop a card for prices. H. GEORGE & SONS, Crampton, Ont., Middlesex County. 7-y-om

E. D. GEORGE, PUTNAM, ONT.

Importer and Breeder of Ohio Improved Chester White Swine The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 15-1-y-om

GIDEON SNYDER, Jr., Jarvis, - Ontario,

Breeder & Importer of Ohio Imp. Chester & Berkshire Swine. Also Brick and Tile manufacturer. Junction of Air Line and Hamilton & North-western Rys.

O. I. CHESTER WHITE SWINE.

Stock for sale. All stock registered. Toulouse Geese, Pekin Ducks, Bronze Turkeys, eggs \$1.50 per 11. Partridge and Buff Cochins, Plymouth Rocks, Silver Gray Dorkings, Golden, Silver, and White Wyandottes, Brown and White Leghorns, Black Hamburgs, American Dominiques, Black Red and Black Summatras, and Indian and Pit Games, eggs, \$1 per 13. Will mix sittings if desired; also a few pair of Wild Turkeys for sale. G. BENNETT & PARDO, Charing Cross, Ont. 7-1-y-om

Stock for the West.

As we have decided to ship a car of thoroughbred stock to the Northwest, parties residing in the West and wishing stock delivered at their express office at about one-fourth the usual rate should write for prices. Choice young boars and sows bred from our herd of imp. Chester White and Duroc-Jerseys now ready for sale. Satisfaction guaranteed. Write at once. WM. BUTLER & SONS, 7-y-om Dereham Centre, Ont.

CHESTER WHITES and BERKSHIRES

Young pigs now ready for shipping, and young sows in pig to imported boars. All are held at reasonable figures. Can supply pigs at all ages. Orders by mail filled with care, and correspondence cheerfully answered. Write for prices, stating what is wanted. 18-om J. H. SHAW, Simcoe Ont.

CHESTER WHITE HOGS

From prize-winning stock of the choicest strains. Quality the best. Prices as low as the lowest. 19-1-y-om J. H. CHALK, Calton P. O.

ADVERTISE IN THE ADVOCATE

STOCK GOSSIP.

In writing to advertisers, please mention the Farmer's Advocate.

We draw attention to the "Farm for Sale" advertisement offered by G. P. Collyer, London, Ont. Such a farm in one of the finest portions of Manitoba, improved and stocked as described, offers a great opportunity to intending settlers in that country. That splendid country is rapidly advancing, and to own a farm and stock there will soon be most desirable.

\$3,000 FOR COLT STAKES.

The Ontario Trotting and Pacing Horse Breeders' Association have made arrangements with the Toronto Industrial Exhibition Association to have their colt stakes for 1896 trotted at the Industrial Fair on the 1st, 2nd and 3rd of September next. There will be six stakes, each with a purse of \$500 as follows: Yearling trot, yearling pace, two-year old trot, two-year old pace, three-year old trot, and three-year old pace; both the three-year old purses eligible to three-minute class. The stakes will be open to all colts foaled in the Dominion of Canada. Entrance fee, \$5, payable March 7th, when colts must be named; \$10, April 15th; \$5, June 1st, and \$5 July 1st, with five per cent. additional from winners. Further information and entry forms can be obtained from Dr. L. Carr, Stony Creek, Secretary of the Breeders' Association, or H. J. Hill, Secretary Industrial Exhibition Association, Toronto, to whom all entries must be sent before the 7th of March.

MAPLE LODGE HERD.

A member of our staff visited the Shorthorn herd of James S. Smith, Maple Lodge, Ont., and found the herd in excellent condition for breeding. The animals to be sold on March 25th are among the best in the herd, nearly all just blooming into usefulness, and are without doubt meritorious Shorthorns, possessing very desirable pedigrees. We may say, which is pretty generally known to be a fact, that the dairy qualities of this herd have been carefully looked after. Several of the matrons, which are dams of animals to be sold, have daily records of fifty pounds of milk and two pounds of butter. Uniformity in color and type have been secured throughout the herd by the wise selection of bulls. Among the cows to be sold is a large roan four-year-old of fine quality, Lovely Queen 11th, by Conqueror by Vice-Consul. She has a fine calf at foot by British Flag by Barmpton Hero. She is now supposed to be in calf to Cathness, one of the present stock bulls, by Jocelyn by Vice-Consul. Cathness is an excellent animal, 21 months old, weighing over 1,600 pounds, in nice breeding condition. He is of great substance, stands well on short legs and is very showy. Princess of Colonus, by Conqueror, dam by Duke of Colonus, is a massive red cow of excellent quality. She has a fine calf at foot and is again in calf to Cathness. Lovely Queen 11th is a six-year-old full sister to Lovely Queen 11th. She is red in color and may be termed a high-class show-ring animal. She is forward in calf to Cathness. Constance 4th of Maple Lodge is a thick-bodied, red four-year-old, forward in calf to British Flag. Other females to be sold are three heifers, twelve months old, all by British Flag. Two are from cows of the Lovely strain and one from the Livinia family. They are all growthy heifers of nice quality. The six young bulls to be sold are of two sizes of three each. The older lot are about thirteen to fourteen months old, while the younger group are about nine months. Two of the larger lot are from British Flag and out of Lovely Queen 10th and 9th Princess of Thule. The latter cow has one of the largest dairy records of the herd. The other bull of this lot is by Sam Mario by Conqueror, and out of a Daisy Cow by Duke of Colonus. Two of the young calves are red, by British Flag, and out of Constance 2nd of Maple Lodge and her dam. The third, a pretty roan, is by Abbotsford and out of Duchess of Gloucester. We may say that every bull is a good one; in nice growing condition. They have mossy coats and sappy bodies and all good colors. As the advertisement shows, there will also be included in the sale a draught from the

SPRINGHURST HERD

belonging to H. & W. Smith, Hay. This herd has made for itself a reputation in the show rings of the great fairs of Canada. At its head stands, without doubt, one of the best bulls in America. It will be remembered that he came within a toss of winning the first award in the two-year-old section at the last Toronto Industrial Exhibition. He is Abbotsford by Blake 1517 and out of Village Blossom, dam of the world-renowned Young Abbotsburn, winner at Chicago over all breeds. Abbotsford has grown decidedly thicker and lower than when seen at the shows, while his smoothness stands as much in evidence as ever. Already two of his sons have been selected for service in the well-known herds of James S. Smith, Maple Lodge, and T. Douglas & Sons, Strathroy. The breeding females consist of about a dozen well-bred young cows kept in breeding condition. They are nice individually, being straight and smooth, with good loins, well-sprung ribs, and are fine, mel-low handlers. Among those to be sold is Village Girl, a young cow of great scale, smooth and level, probably one of the best females in the herd. She is in good condition to push along for next autumn's campaign. Sire, Prince Albert 3669; dam, the imported Cruickshank cow, Village Blossom, famous alike for her long line of prize-winning ancestry and her descendants. Another to be disposed of is Bonnie Bird, also a real gem, promising well as a valuable breeder, as she is the mother of Blinkbonnie, one of a pair of exceptionally fine yearlings to be included in the sale. Her mate is Larkspur, a beautiful roan, full of quality, bred and qualified for the show ring. She is of that good old Syren foundation, topped out with the well-known show bulls, Royal Barmpton (Imp.), Earl of Mar (Imp.), Prince Albert, and Abbotsford. Another offering is Lily Strathallen, a choicely-bred representative of the Rose of Strathallen tribe. Her sire is the sweepstakes show bull, Greenhouse Chief from Rose of Strathmore, by Vice-Consul. She is a thick, smooth beast, robed in a white, mossy coat. The males to be sold from this herd are a pair of young bulls, much after the same pattern as their sire, Abbotsford, being thick, low, smooth, and stylish. Messrs. Smith will be pleased to mail catalogues to any address.

STOCK GOSSIP.

In writing to advertisers, please mention the Farmer's Advocate.

Secretary Levering, of the American Shropshire Association, writes us that Vol. XI. is now in course of preparation, and will contain 1,300 individual pedigrees.

Mr. John Tremaine, of Forest, Ont., offers for sale a few choicely-bred young Holstein-Frisians. The young stock in the herd is directly descended from the herd of the noted breeders, B. B. Lord & Son, Sinclairville, N. Y., as the herd was originated by a selection of imported cows from this famous herd, and the stock now comprises those and their descendants.

Mr. John C. Nichol, of Hubrey, Ont., states that he has been informed by Mr. M. Kirch, of Carroll, Iowa, that the Tamworth boar pig he sold him weighed 370 pounds at the age of nine months. This pig is a full brother to the pig specially mentioned in his advertisement in this issue. He states the pigs are all doing well, and he is looking forward to brisk demand this spring. The price of pork has greatly improved since the beginning of the year, and a brisk trade in choice, easy-feeding bacon hogs is now setting in. Mr. Nichol has something choice to offer at very reasonable figures, he assures us. Write him at once.

W. C. Edwards & Co., Rockland, Ont. (per Jos. W. Barnett, manager), write: "Our stock are all doing well. We sold the young bull Rockland Ranger to Mr. J. C. Cameron, of Thurso, last week, and there is every prospect of a brisk trade in the near future. The people in these parts are just beginning to find out that they have good Shorthorns near at home, and that they no longer have to go west when they want a good bull. They are also finding out that breeding for all milk and no beef is not just the thing. We have a few bulls left from our imported sires and good milking dams that we will price right to intending purchasers."

J. E. Brethour, Burford, Ont., writes: "The Oak Lodge herd of York-hires is in better condition at this season of the year than they have ever been, and the prospect for a good season is encouraging. Orders have not been as numerous during this winter as usual, but sales have been quite up to expectations. I have received a lot of orders for pigs to go to the United States, and the demand for really good Yorkshires is very much on the increase. This breed is doing wonders in crossing upon the American breeds of swine by giving more length of carcass with rapid growing qualities. I have now on hand some of the best young boars from six to ten months old that I have ever offered for sale, and most of them are bred from that grand stock boar Oak Lodge Diamond who has produced so many good ones."

Mr. Arthur Johnston, of Greenwood, Ont., writes this office to say: "Sales of young bulls have been slower than in former years, though enquiries are quite as numerous as they have ever been. This difference is greatly due to shortness of fodder in all parts of Ontario. Fodders have never been so scarce in these parts, and farmers' cattle are both lean and dirty. Our own Shorthorns are now nearly up to their usual February form in all respects. Our young Shorthorn bulls, of which we have thirteen fit for immediate service, are in prime shape. They are as great, fleshy, short-legged, deep-bodied, thriving a lot as we have ever had. We have two white ones that are truly beautiful. Indian Brave, the Toronto prize yearling bull, has grown and thickened immensely. He is now a big, massive bull, gay and sprightly as a kitten, with abundance of true Shorthorn character."

G. A. Brodie, Bethesda, Ont., writes: "Notwithstanding the scarcity of feed in this locality, by the use of the silo I will be able to bring my stock through the winter in good shape. The young stock are doing remarkably well, and are looking nicely. I have six promising young bulls still for sale, and a few choice heifers of excellent breeding. My stock bull is of the Kinellar sort, bred by the representatives of the late S. Campbell, Kinellar, Scotland. Sales are brisk this winter. I have already sold eight head as follows: One cow to W. H. Meyer, Cashel, Ont.; one bull calf to Samuel Selfridge, N. S.; one yearling heifer to J. C. West, N. S.; one heifer calf to Geo. West, N. S.; one yearling heifer to L. Farmer, N. S.; two heifer calves to Kings Co. Agricultural Society, N. S.; one bull to Thos. Parker, Aylesford, N. S. There also seems to be a good demand for seed grains. I have already sold over 1,100 bushels oats and 300 peas, and expect to be sold completely out early in the seed grain season."

Alex. Hume & Co., Burnbrae, Ont., write: "Our herd of forty-four head is in splendid condition. We have a good supply of well-cared ensilage, but short of other feed. Our cows are now dropping us a fine lot of superior calves, which combine quality and fashion in color and form with true dairy type. The cows are in just the pink of condition and dairy men like to have milk vessels which delight one to see, with flesh and body built up ready to stand the siege of a season. Our pure-bred herd combine quality of form, touch, color, etc., with milking qualities in a marked degree. Our grade cows of various crosses are a superior lot, as our factory and creamery account will testify, and also our list of prizes won at all the fairs in our section, which is a noted dairy district. They are grand milkers and handsome cows. The result of over twenty years' breeding and selecting. Those wishing to build up a dairy herd would find it to their advantage to write us early and secure some young calves, either pure bred or grade of either sex. We sell more in our immediate neighborhood than to those at a distance, which, we think, speaks well for our stock. Our pigs are doing nicely. A few sows due to farrow first week in March, and others later. We have also a few pigs ready to mate and with what we have, and coming forward, we will be in a position to do a good spring trade. We have just sold to Mr. A. Terrill, Wooler, our first prize Toronto bull calf, Dominion Lad. He is a handsome young bull, and Mr. Terrill is to be congratulated on his choice. No doubt he will raise himself felt on Mr. Terrill's already good herd. Colin Campbell, one of third prize herd of calves at Toronto, sold to Mr. John McMillen, Exeter, a young bull calf to Mr. Anson Connor, Sargison, P. O. township of Brandon."

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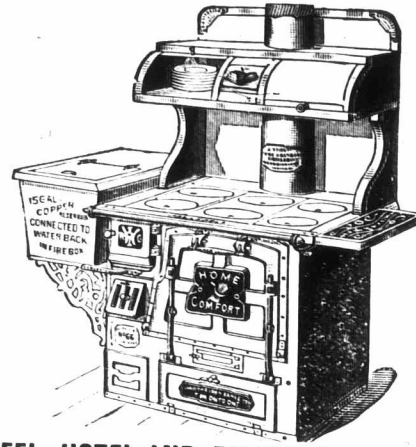
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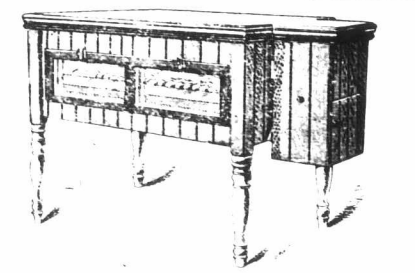
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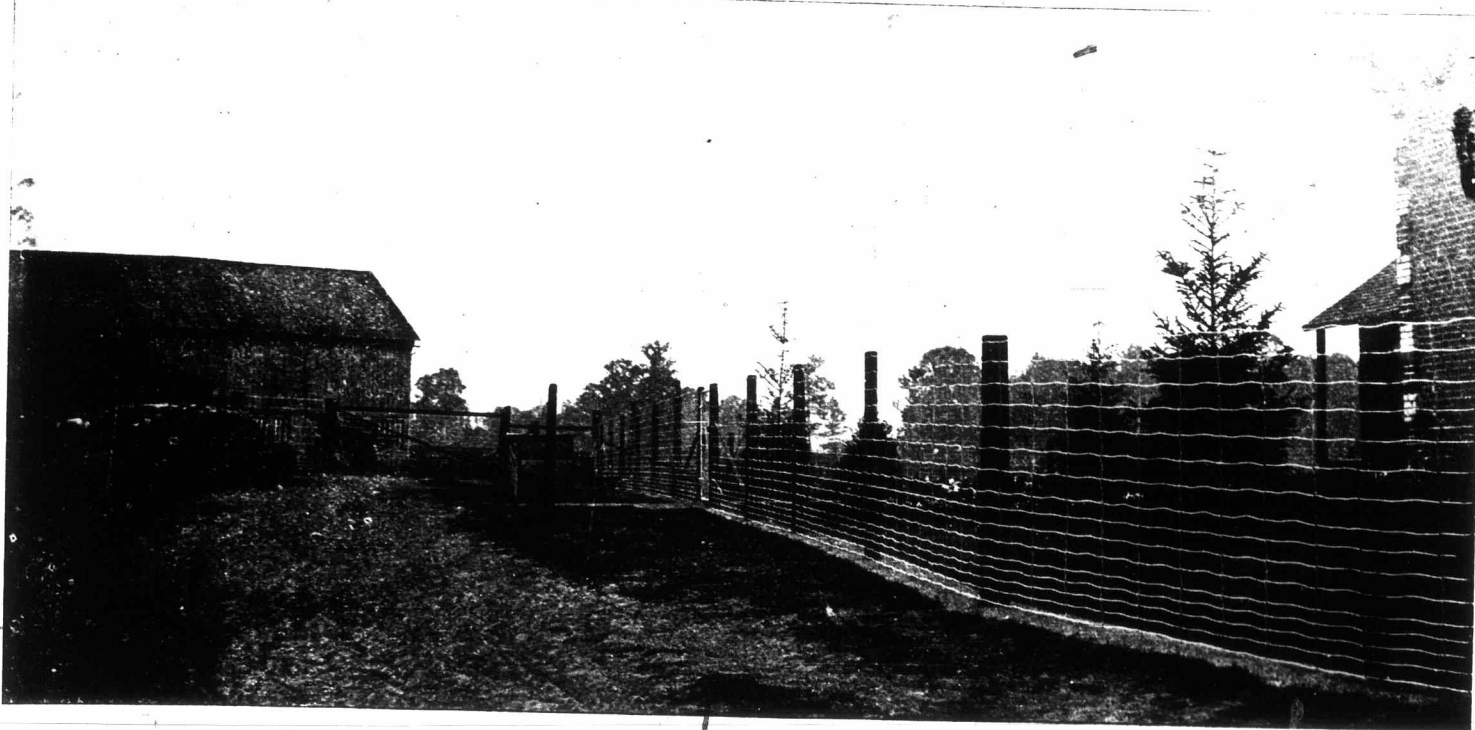


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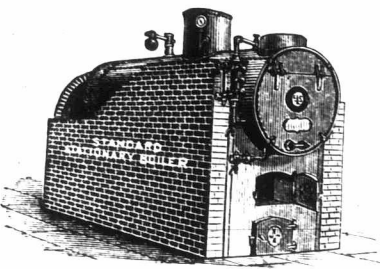
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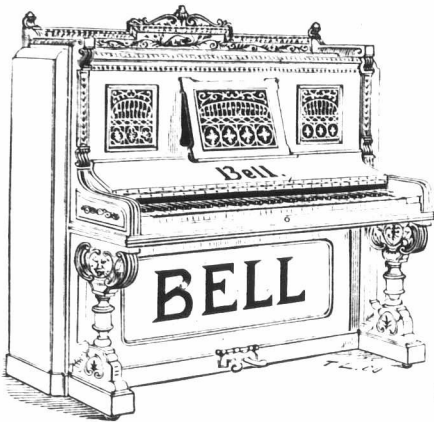


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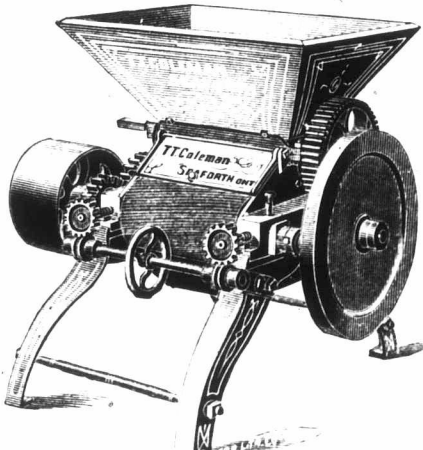
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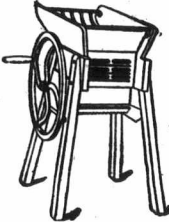
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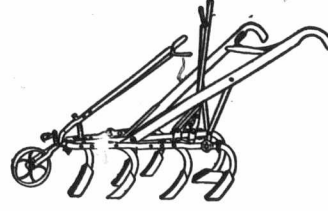
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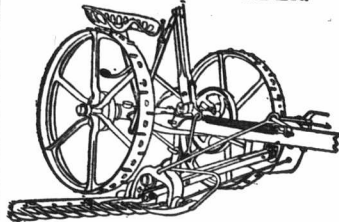
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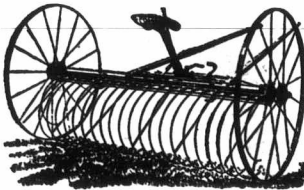
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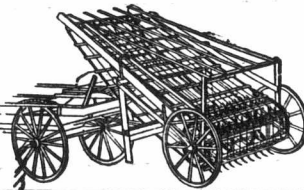
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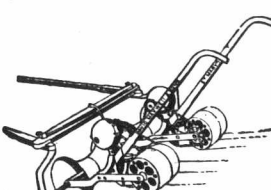
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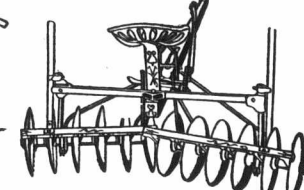
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This stock is imported, is an extremely early variety, straw long and very heavy; grain very large, weighing over 40 lbs. per struck bushel. They easily yield 100 BUSHELS per acre. This is no exaggeration, but an actual fact, and you have only to see a sample to be convinced that such yields are possible.
 Price, per lb., 25c.; 5 lbs., \$1.00, post-paid; peck, 80c.; bushel, \$2, carriage extra; two bushels, \$4, bags included.

NEW WHITE MAINE another leader. This is an especially good variety for feeding purposes. The straw is short and stiff, consequently there is no waste by lodging. Although the grain is not so heavy as that of the "Illinois," yet this variety has been known to yield over 90 BUSHELS of cleaned seed per acre.
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EVERGREENS and ornamental trees, Nursery grown. 250 choice evergreens, 10 varieties. \$2; 400 ornamental trees, 5 varieties \$2; 6 other \$5 and \$10 bargains. 100 Scotch Pine, 2 ft. high, \$8; 1,000 10 to 12 inches, \$10. All other varieties & sizes cheap. Local Agents Wanted. Illustrated catalogue sent Free.
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STOCK GOSSIP.

In writing to advertisers, please mention the Farmer's Advocate.

MR. A. C. HALLMAN'S HOLSTEIN-FRIESIANS.

A couple of miles north of New Dundee, Ont., is the stock farm of Mr. A. C. Hallman, one of the leading Canadian breeders of Holsteins, and from whose herd many of the Canadian winners have sprung. This herd was first established in 1888 by an importation direct from Holland. Other selections were soon added from the well-known herds of Smith & Powell, Syracuse, N. Y.; T. G. Seomans & Son, Walworth, N. Y., and Hon. Gerritt S. Miller, Peterboro, N. Y. Possibly no other herd in Canada has stood the test and won as many prizes for a number of years in succession. Last year their winnings at the Toronto Industrial were nine prizes on eleven individuals, and a large share of the prizes at London, including three diplomas as sweepstakes on bull any age, on yearling heifer and four calves, owned and bred by exhibitor; the above prizes being won in competition with some of Canada's best. On looking over the herd we found them in good thriving condition (although fed on low allowances, owing to shortage of fodder), and very uniform in type and markings. At the head of the herd is Netherland Statesman Cornelius, a grand stock bull, and probably the winner of more prizes and medals than any Holstein bull in Canada. He last year won second at Toronto, and first for bull and four of his get, a prize that he and his get have secured for a number of years at Toronto. He is the sire of Netherland Consul, the grand show bull recently sold by Mr. Clemons, of St. George, to R. S. Stevenson, of Ancaster, and many other noted winners. The dam of Netherland Statesman Cornelius, Aaggie Cornelius 2nd, has a butter record of 19 lbs. in seven days, while his grand-dam, Lady Fay, has a milk record of 95 lbs. in a day, and 22 lbs. 8 ozs. of butter in a week. Beside the stock bull stood a grand young 2-year-old, Flora's Sir Jacob, a smooth, even fellow of capital type and good bone; a winner of second as a yearling at Toronto last year, and first at London. He is from the imported cow Flora Lane, a winner in the past at Toronto and other leading fairs, with a record of 20 lbs. of butter in seven days. He was sired by Mavourney's Ira's King, a son of the cow Mavourney, who has a milk record of 90 lbs. per day and 20 lbs. of butter in seven days. The herd contains the following females and many more grand individuals: Lady Acma, a five-year-old of the Artis family, might safely be said to be one of the best; a cow of splendid type, and showing great milking propensities. She is a daughter of the imported cow Acma, from the herd of Mr. Miller, Peterboro, N. Y. Lady Acma has a record as a three-year-old of 50 lbs. of milk per day. Pollanthus Netherland, the Aaggie Netherland strain, is another grand cow; her dam, Pollanthus 2nd, being by the famous bull Prairie Aaggie Prince, while she herself was sired by Royal Canadian Netherland, a son of the well-known Netherland Prince. Pollanthus Netherland won third in the three-year-old class at Toronto and London, and has tested four per cent. Her dam is a half-sister to the silver medal bull at Toronto last year, "Netherland Consul," while her grand-dam was imported direct from Holland and has a record of 13,160 pounds of milk in a year as a two-year-old. Princess Medina 2nd might also be reckoned among the best. She is a daughter of Princess Medina, who was a winner of first at Toronto as a calf, and also as a two-year-old; later on she was sold to the British Columbian Experimental Station. Princess Medina was sired by Prairie Aaggie Prince, one of the greatest sires of the day. The granddam of Princess Medina 2nd, Princess Margaret, has a butter record of 20 lbs. 1 oz. in seven days, as a four-year-old. She is still in the herd, and is so well known that comment is unnecessary. Ideal Netherland, a daughter of Ideal, is a four-year-old of grand conformation and good markings. Her milk has tested five per cent., and she last year won second place as a four-year-old at London. We also saw the only daughter left in the herd of Prairie Aaggie Prince, a grand cow with a record of 60 lbs. of milk as a three-year-old, and a winner at both Toronto and London. We were much pleased with the two-year-old heifer, Ebbe Netherland, and consider her the making of a remarkably fine cow. She was shown as a yearling last year, winning first money at Toronto and first and diploma at London. She is from an Artis cow, Dundee Abbie, and by the stock bull, Netherland Statesman Cornelius. Among the younger things we saw a daughter of Princess Margaret, a winner of first as a calf at London last year. She is thriving nicely, and promises to turn out something extra good. In another stall was a finely-formed and well-marked calf, full sister to the heifer that won the diploma last fall. In adjoining stalls were four grand young yearling bulls, one of which was fourth at Toronto and second at London, from Polyanthus 3rd, full sister to Netherland Consul, silver medal bull at Toronto last year; another is the son of Princess Medina 2nd; one from Ideal Netherland, and one from Lady Acma—all grand cows and heavy milkers. The young stock are sired by Netherland Statesman Cornelius, and are of fine quality and well marked. The young bulls are promising animals and should be ready sellers. Tamworth Swine have also been added to the stock the last two years, and have now increased to a large herd, domiciled in a convenient and comfortable piggery. The breeding stock was selected from Jno. Bell, of Amber, Ont., and Caldwell Bros., Orchardville, and also include an importation from England. A couple of choice imported sows were seen, and also a number of others of choice breeding. A large portion of the young stock now on hand are from the imported sows, and include youngsters from two weeks to three months old; young sows bred, and boars ready for service. The stock boar, Wolverton Chief, was bred by Andrew Dunn, of Ingersoll, Ont., and is from imported stock on both sides, while the imported sows are from the herd of Jno. Norman, Cliff House, Tamworth, Eng.

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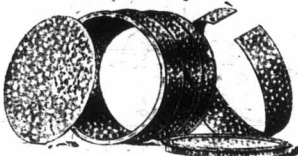
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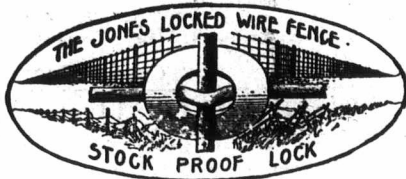
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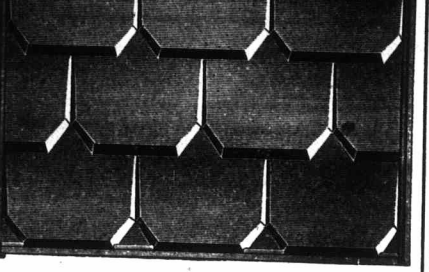
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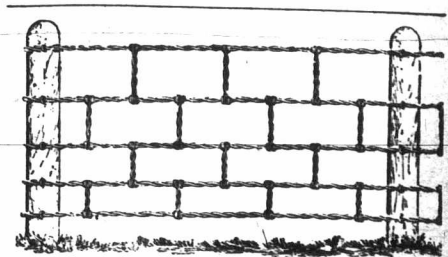
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