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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXX.

LONDON, ONT., AND WINNIPEG, MAN., AUGUST 1, 1895.

No. 387.



THE SCOTCH BRED SHORTHORN COW "WAREAKE,"
FIRST PRIZE WINNER AT THE ROYAL OF 1890.

EDITORIAL.

Our Frontispiece.

In our July 15th issue we gave a portrait of the "Royal" prize-winning Shorthorn bull, Nonsuch, and in the present number we accord the place of honor to the roan cow, Warfare, the property of Mr. Geo. Harrison, Lealholm, Yorkshire. She was bred by the late Mr. S. Campbell, Kinellar, Aberdeen; calved January 20th, 1891; sire First Consul, dam Roan Rosebud 2nd by Gravesend. She captured 1st in a class of eleven, being a fine specimen of the Scotch type. Last year at Cambridge she stood second to the Queen's champion heifer, Bouquet. "Her promotion was well-merited," observes the English Live Stock Journal, whose portrait we reproduce. She has also won many prizes in Scotland and Ireland.

The British Dairy Farmers' Association are considering a proposal to make their next official tour to Canada.

Mr. Walter Long, who has been in the British Parliament for fifteen years, has been appointed Chairman of the Board of Agriculture under the new Government, as successor to Hon. Mr. Gardner.

The Council of the British Dairy Farmers' Association have accepted the generous offer of Sir James Blyth to present £400 to be given as prizes for plans and models of dairies at the London Dairy Show.

An acre yielding seven tons of silage will last a cow 443 days, fed at the rate of 32 pounds per day. Fourteen tons per acre is not a large yield, which would feed one cow two years and 186 days. Need any one starve his cows or feed dear hay?

Advices have been received from the Belgian Government that they will permit experimental shipments of Canadian cattle to Belgian ports during October, November and December, and would remove the embargo altogether if no pleuro-pneumonia were found.

In view of the recent change of Government in England, the Ottawa authorities promise to again open negotiations with a view to having the embargo on Canadian cattle—which has been continued there under the past two administrations representing both sides of politics—removed.

In all probability the potato-patch will require another going over with Paris green. A severe trimming of the vines by insects is a great injury to the crop, even though the growth is fairly well advanced. Remember that potatoes are largely starch, which is formed in the leaves from the carbonic acid of the air; so to remove the green parts is to hinder the formation of starch—potatoes. Spraying is the best and most modern method, but an application along with plaster answers a good purpose, especially if applied when the tops are damp with dew or rain.

The American Fat Stock Show will be held at the Chicago Coliseum, November 6th to 16th. Included in the exhibition under the direction of the Illinois State Board of Agriculture will be poultry, dairy and horse shows, and an agricultural and horticultural display. The Coliseum, on the site of the Wild West Show, adjoining the World's Fair Grounds at Sixty-third street, is to be, it is said, the largest exhibition building in the world. The committee of the Board having these shows in charge—J. Irving Pearce and Irus Coy, of Chicago, and A. J. Lovejoy, of Roscoe,—is working hard. The horse show will be made the leading feature.

The bill in charge of Mr. McLennan, M.P., providing for the branding of Canadian cheese, has been deferred till next session of the House, in order that the Agricultural Department may consider it during recess, and also that further public discussion may take place. The measure was opposed by the Dairy Commissioner. While the bill was before the Agricultural Committee circulars were sent out inviting an expression of opinion on the subject by the dairymen of the country. Of the 778 replies received, 64 only were adverse to the proposal. It was originally intended that butter should also be subjected to the branding operation, but that feature of the bill was dropped. As it appeared before the House the bill provided that cheesemakers should register, and that each cheese should be numbered and branded with the date of manufacture and the word "Canada."

Wheat Prices and Wheat Supply.

An article by R. F. Crawford, in the Journal of the Royal Agricultural Society of England, presents in a summarized form the conclusions which appear to be justified from the result of an inquiry into circumstances attending the supply of our staple bread cereal during the last twenty-five years.

The fall in the price of wheat has not been confined to any one country, as a similar change has taken place in all grain markets accessible by the ordinary channels of communication. In countries where ports are free to wheat, the decline has been manifest. In protectionist countries its presence has been obscured by the repeated augmentation of the duties. The sources of wheat supply consumed in the United Kingdom may be summed up in: Home supply, America, Russia, India, and other foreign countries. A careful survey of a table of figures given by Mr. Crawford shows that, except in exceptional periods, there has not been a remarkable increase such as would induce one to say that the fall in wheat was due, in a noteworthy degree, to over supply. There was, however, an augmentation in the available supply in 1883-85, and also in 1890-93. This was brought about by improvements in production and in transport, and in connection with the latter by the introduction of fresh areas of cultivation, which can be profitably worked at an outlay inferior to that expended on the older centres of production.

UNITED STATES OF AMERICA.

The harvests of 1879-81, in the European wheat-importing countries, were, perhaps, the poorest recorded during the century. The crops in the United States in the same period were extraordinarily abundant; the volume of grain shipped to Europe in the three years, 1878-81, amounted to nearly 500 million bushels, or more than double the greatest quantity exported in any triennial period prior to 1878-79. It is since these years that wheat prices have been on the down-grade in all the markets free to American grain. It is since these years that the shrinkage of the wheat acreage of the United Kingdom, the largest foreign consumer of American grain, has become more and more apparent. The development in the United States since 1882 has not been uniform. While the wheat-growing acreage in the Western States has developed, there has been a decided contraction in the Eastern States. It would seem evident that whatever else may have affected the prices of American grain in foreign markets in the first thirteen years to which this inquiry relates, there was a process of approximation going on between the prices of Eastern and Western markets, due to a diminution in the cost of transport. For one explanation of the fall since 1882 the exploitation of fresh areas of cultivation beyond the Mississippi had an important influence.

RUSSIA.

The wheat crop of Russia is grown, for the most part, in the south and south-east divisions of the Empire. The system of wheat cultivation in many portions is of a primitive nature. Cultivators in the Chernozom region depend almost entirely on the natural fertility of the black soil, which, under favorable climatic conditions, is said to yield abundant crops without the application of manure, and with very indifferent tillage. Notwithstanding the fall in prices, Russia has exported wheat in increasing quantities, owing, no doubt, largely to the low cost of production—lower even than on the best virgin soils of America, due to the existence of a belt of rich black earth which extends across the southern portion of the Empire.

INDIA.

The area devoted to the cultivation of wheat in British India is over 20,000,000 acres, in addition to which there is an estimated acreage in the native States of about 6,000,000 acres, making a total area of approximately 26,500,000; the average yield per acre being about ten bushels. Prior to 1880-81, the exports of wheat from India were comparatively insignificant in volume. Since that year they have ranged, with many fluctuations, from 14,000,000 bushels to 58,000,000 bushels in a single year. Estimates of the cost of production average about 2s. 4d. per bushel.

ARGENTINA.

Among other countries producing large quantities of wheat may be mentioned Argentina, which in the ten months ending October last sent about 20,000,000 bushels to England. Virgin soil and a low cost of production appear to be the principal factors in the rapid growth of her wheat industry. The average cost is put at about 1s. 5d. per bushel.

CANADA.

According to the Canadian census of 1890, the wheat crop of Canada amounted to over 42,000,000 bushels, an average of over fifteen bushels per acre. According to other estimates, the Canadian wheat product during the three subsequent years ranged from over 60,000,000 bushels to over 41,000,000; Ontario and Manitoba being the largest producers.

CONCLUSIONS.

The deductions drawn by Mr. Crawford are as follows:—

1. That the decline in the price of wheat has been more or less uniform in all European countries whose ports are free to grain.
2. That the fall is mainly the manifestation of a natural economic process, consisting in the settlement of new lands, and the consequent extension of the margin of cultivation to regions where the cost of production is much below that of the older centres of production.

3. That a review of the prices of the last quarter of a century would indicate that the fall has been more apparent since 1882 than in the earlier years.

4. That coincident with the fall of 1882 there has been an expansion of the wheat-growing area west of the Mississippi, particularly in Dakota.

5. That what is called the fall in price of wheat has consisted largely of an approximation of the prices in importing countries to those in the great exporting countries, owing to improvements in transport and reductions in the cost of carriage; that is to say, the fall has been, to a great extent, a fall in freights.

6. That one of the circumstances connected with the changes in the price of wheat between 1881-88 and since 1890, has been an increased quantity available (not an actual over-production) for consumption per head of the population.

By some advocates of bimetallicism, the "gold standard," with the "appreciation" of gold, has been the cause of the decline of wheat, but not long ago we witnessed a remarkable rise in the price without the aid of a bimetallic currency. We notice that Mr. Chas. W. Smith, author of an English work, entitled Commercial Gambling, has another explanation of it. He contends that the combination of commercial and financial gambling had been one of the principal causes of the depreciation of wheat prices, and that the values of "option" and "future" contracts of "fictitious" wheat were almost the sole regulators in fixing the price of actual produce. In other words, he blames the speculators, or gamblers of the grain exchanges, for the fluctuation in prices. A few of these men, on both sides of the Atlantic, are able, he contends, to manipulate the market to their own advantage, though obviously some of them must be losers. We still concur with Mr. Crawford, however, in thinking that natural economic processes of supply and demand exercise the major control. Like other forms, grain exchange gambling is essentially bad and disastrous, and many efforts are being made to suppress it by legislation. In the recent rise the farmer, as a rule, did not reap the advantage. The rise is said to have been based on the poor prospects for American winter wheat, together with the fact that wheat stocks on hand were many million bushels short compared with the year previous.

Winter Wheat Growing—Valuable New Varieties—Premiums.

The recent advance in the price of wheat, together with its more generally recognized utility as a stock food, has this season awakened more than usual interest in this staple cereal, and a very considerable area will no doubt be sown. We therefore feel warranted in devoting a large portion of our space in this issue to so important a subject. Besides the articles on "Wheat Prices and Wheat Supply," and "Profit or Loss in Wheat-growing?" we publish special reports from various parts of the country as to methods of cultivation and the varieties that have succeeded best. These reports are made by thoroughly practical and observant men. One of the most necessary steps towards success is the choice of the best available varieties. We take pleasure in directing the attention of our readers to the announcement on another page, where particulars are given regarding two heavy-yielding new varieties which have done remarkably well—Dawson's Golden Chaff and Early White Leader—a quantity of which (for seed) we have secured, and which may be easily obtained by getting new subscribers for the FARMER'S ADVOCATE. Read the Premium announcement carefully; it will pay you. The seed offered has been most carefully selected and cleaned.

European Harvest Prospects.

Farm prospects in England, says the Mark Lane Express, are very bad in many parts. The drought that visited a large portion of the country in 1893 seems to be repeating itself this season. Oats and barley are reported as being very short and backward; wheat, thin and short of straw; peas and beans stunted and thin; mangels, a bad plant and backward; swedes, gone in some parts; the hay crop is about half an average. The pastures are bare, and neither dairy or feeding cattle are "doing much good." Wherever lucerne is growing it defies the dry weather and grows on apace.

In France there are signs of growing uneasiness respecting the well-being of the wheat crop. Seasonable weather is necessary for the development of all cereals, and although complaints have not yet taken definite form, it is feared that with diminished area, patchy fields and inauspicious blooming period, the wheat crop will turn out only a poor average.

In Germany, changeable but, in the main, favorable weather has improved the outlook for spring corn and wheat.

Official returns indicate unsatisfactory crop conditions in Western and Central Russia, but in southwest, south and south-east governments, whence Black Sea and Azov ports chiefly draw supplies, the appearance of both winter and spring crops is stated to be considerably above the average, but harvest will be two or three weeks later than usual. In Odessa the harvest can be regarded as assured, but a few days' rain would be advantageous. The barley crop in Barbary is reported to be a good one.

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14. Letters intended for publication should be written on one side of the paper only.

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CONTENTS.

EDITORIAL:—
 293—Illustration. 294—Our Frontispiece; Editorial Notes; Wheat Prices and Wheat Supply; Winter Wheat Growing—Valuable New Varieties—Premiums; European Harvest Prospects. 295—Good Grounds for Faith in Canada; Profit or Loss in Wheat-growing.
 STOCK:—
 295—The Selection, Feeding and Fitting of Dairy Cattle for the Show Ring; Ensilage in Drought. 296—Our Scottish Letter. 297—Death of Donald Fraser; Western Stock Prospects Bright; Sheep-Shearing Machine; "Stockman" on Fitting Short-horns for Show, and the Records; English Sheep and Wool Notes. 298—Care of Lambs After Weaning; Sheep Feeding Experiments.
 FARM:—
 298—Raising New Breeds of Cereals. 299—Winter Wheat—Varieties and Methods of Cultivation—Practical Reports; Our Inquiries re Fall Wheat. 300—Autumn Cultivation.
 DAIRY:—
 300—Pure Cultures in the Dairy; The "Thistle" Milking-Machine.
 APIARY:—
 300—Bee-Escapes. 301—Removing the Combs; The North American Bee-keepers' Convention at Toronto.
 POULTRY:—
 301—Some Details of Incubator Management.
 QUESTIONS AND ANSWERS:—
 301—Veterinary; Miscellaneous.
 LIVE STOCK MARKETS:—
 302—Toronto; Montreal; East Buffalo Stock Letter; Chatty Stock Letter from Chicago.
 SHOWS AND SHOWING:—
 302—Toronto Industrial Fair.
 MISCELLANEOUS:—
 302—Cutting Horse Food.
 MINNIE MAY'S DEPARTMENT:—303.
 QUIET HOUR:—303.
 CHILDREN'S CORNER:—303.
 SOCIAL CORNER:—304.
 UNCLE TOM'S DEPARTMENT:—304.
 STOCK GOSSIP:—306, 308, 311.
 BOOK TABLE:—306.
 NOTICES:—307.
 ADVERTISEMENTS:—304 to 312.

Good Grounds for Faith in Canada.

"It is refreshing, however, to find that the year of grace, 1895, bids fair to eclipse all its predecessors in the shipment of cattle and sheep from this to the Old Country. This is surely a striking proof of the vitality of the Canadian live stock industry, in which exporters have already embarked millions of dollars."—*Cattle Exporters and Butchers' Advocate, Montreal.*

The natural conditions of Canada are pre-eminently favorable to live stock husbandry, the sure foundation of pure-bred stock was early laid, and we have the men with the necessary intelligence, integrity and stability to achieve success in any arena in the future as they have in the past. Canada bids fair to become the world's greatest

breeding ground. With Manitoba, the great Northwest, and British Columbia, as well as the older Provinces, in our view, we have as yet witnessed but little more than the dawn of its development. The exports of "animals and their products," the produce of Canada, grew from \$24,719,297 worth in 1888 to \$31,736,499 in 1893, of which nearly \$28,000,000 worth went to Great Britain. "Agricultural products," the growth of which depend very largely upon live stock husbandry, amounted to over \$22,000,000 more in exports. The significance of this is very apparent when we consider that the total exports, the produce of Canada, in 1893 amounted to but a trifle over \$102,000,000. Canadian agriculture, with Canadian live stock husbandry as a sheet-anchor, is a good thing to have faith in.

Profit or Loss in Wheat-Growing?

Sir John B. Lawes recently drew attention to the fact that the exhaustion of the soil under continuous wheat-cropping without manure at Rothamsted has been very slow. Eighteen bushels per acre were grown in the favorable season of 1894, the last time manure was put on the land having been fifty-five years ago, though prior to that time we believe the land had been heavily manured. During the past ten years the average has been 11½ bushels per acre, and during the ten years previous, 14½. The greatest yield was 21½ bushels in 1854, and the lowest, 4½, in 1879, the variations being due to the character of the seasons. Owing to a series of unpropitious seasons between 1871 and 1883, the average yield of this unmanured land was lower than it had been during the last ten years. Still, there is a gradual diminution in the crop going on, and if the seasons were all exactly alike, instead of being widely different, we might expect to find this decline to be precisely the same each year. It is stated as the result of elaborate calculations, that the falling off in produce for soil-exhaustion alone from year to year is a little more than one-sixth of a bushel per acre, or a little over one per cent. per annum, which is rather a slow rate of depletion for land cropped continuously without any fertilizer, and emphasizes what thorough cultivation will do.

The land devoted to the continuous growth of wheat was treated in three different ways, viz.: (a) without manure; (b) with 14 tons per acre of farm-yard manure, and (c) with a great variety of chemical manures, both singly and in combination. On the plots to which 14 tons of farm-yard manure were applied annually, the average yield of wheat for 40 years was over 34, or 2½ times as much as off the unmanured land. The average for the first half of the period was 35½, and for the second half, 33½ bushels. The average increase over the unmanured plots was 21.87 bushels per acre per annum, which may be taken as the return for the application of the 14 tons of manure, together with the increased store of fertility left in the soil from unexhausted manure, and what is contained in stubble, roots, etc. With regard to the other two classes of experiments, we can only say that mineral manures alone gave very little increase of produce; that nitrogenous manures alone gave considerably more than mineral manures alone; but that mixtures of the two gave very much more than either separately.

The average produce (about 35 bushels) from the manured land was about seven bushels above the average of the United Kingdom, on land under ordinary cultivation. According to the report of the United States Secretary of Agriculture, the average over the Republic for the four years 1890-3 was only between 12 and 13 bushels per acre. The Dominion Statistician puts the average yield of Canada at about 15 bushels per acre. Ontario's average of winter wheat for 1894 was 21.2 bush., and for the 13 years (1882-94), 20.1 bush.; spring wheat, 1894, 14.6 bush., 1882-94, 15.2 bush.

Incidentally we might mention just here that according to the summarized report of 4,000 experts, the cost of wheat-production in the United States in 1893 was \$11.48 per acre, including rent of land and all other expenses. During the same year the average yield was less than 12 bushels per acre; so that at the way wheat has been selling of late years a very considerable valuation must be placed upon the straw to bring the United States wheat-grower out even. To regulate the price of wheat is a hopeless task for the producer; but he may turn loss into profit by bringing up his average yield by the choice of the best available varieties adapted to his conditions and by superior methods of farming, and, in so far as is consistent with the latter, keeping down the cost of production by economical management.

WORK AT THE FAIRS.—The Fall Exhibitions will afford splendid opportunities for obtaining new subscribers for the FARMER'S ADVOCATE. Write us for "Terms to Agents" and free sample copy.

STOCK.

The Selection, Feeding and Fitting of Dairy Cattle for the Show Ring.

BY WM. STEWART, JR.

We will suppose that the beginner in making a start has selected his females with which he is to form a nucleus for his future herd of dairy cows, and that these have been selected with great care, for the future usefulness of the herd greatly depends upon the foundation upon which it is based. Do not begrudge the breeder from which you make your purchase a few paltry dollars, providing you are getting an animal that will add volumes to your herd in after years. A poor animal is dear at any price, and will in nine cases out of ten be a damage to you instead of a source of pleasure and profit. In selecting your dairy cow see that she has the wedge shape when viewed from the front, from the side and from the top. She must have a good constitution to stand feeding. She must have a loose frame throughout; lots of space between the last rib and the hocks, wide between the ribs, ribs well-sprung; a strong, straight back; broad and strong, but not heavy loin; spine well-defined; lots of room for the lungs; good, deep, but not heavy flank; capacious udder, hanging squarely and well carried up, as it is less liable to be damaged from various causes; the teats must be of good size and squarely set; the milk veins must be well-developed; the skin must appear soft and mossy to the touch,—do not get too thin a skin as that is a sign of a weak constitution; on the other hand, it must not be too thick and hard,—the whole covered with a good, soft, mossy coat of hair. Look well to her disposition, to which the eye is a mirror. See that she has a good, placid countenance. We will suppose, then, that you have selected your females. Next comes the sire, and he is half of the herd. Too great care cannot be taken in the selection of the sire. The same points as given above will apply to him, except those referring to udder. He must not only be good individually, but also his parentage on both sides. Consider well whether he will couple right with your cows, and we will consider now the nucleus for your future herd selected.

Feeding.—There are scarcely two animals that feed alike. Great care has to be taken regarding the feeding of those cows as to profit. Do not give your cow more than she will assimilate; on the other hand, do not begrudge her what she will eat up clean, and think by so doing you are making a saving. The dairy cow is a machine for manufacturing good wholesome food into milk for the manufacture of A 1 cheese and butter. The more food, then, you can get your cow to eat, providing she is utilizing it, the more money you will make. Feed, then, plentifully but economically, of good nutritious food suitable for the production of milk, such as well-cured hay and ensilage, bran, oil meal or linseed-meal; mangels, with the addition of a ration of cracked grain, say two quarters oat or barley chop, or both mixed, one-quarter bran and one-quarter pea-meal, with the addition of a little flaxseed-meal. If your cows are on pasture of which there is an abundance very little can be added until this begins to fail, when the above can be given. Commence by bringing the cows into the stable night and morning during milking hours. Commence carefully by giving a small quantity to each animal as you see they stand in need, increasing the amount until within three or four weeks of showing, at which time they can be kept in altogether and receive their full ration as above. Be careful not to over-feed, but keep each animal moving along nicely, paying every attention to having them in full vigor for the show-ring. See that their coats are bright, and in order to have them so, wash each animal thoroughly with soft water and castile soap, then put on a blanket; if one is not enough, put on two; you need not keep the blanket on all the time, but at intervals. Repeat the washing at intervals of a few days, applying the blanket, and you will be surprised how the old coat will be replaced by the new. Groom carefully, not to scratch the skin; use the brush and lots of elbow-grease, and you will have a coat that will not fade between the stable and the show-ring.

Ensilage in Drought.

On the occasion of a recent visit to the farm of Mr. R. W. Stevens, Lambeth, Ont., we were pleased to observe an evidence of foresight that was proving most helpful in overcoming the effects of the drought. At the date in question—July 18—he had about six feet of No. 1 ensilage in his silo held over from last winter. For the last few weeks his cows have been housed night and morning and given a liberal allowance of the ensilage, which was quite equal in quality to what it was in the dead of winter. And the animals consumed it greedily, its succulence being a great help to the milk flow. Mr. Stevens informed us that last year he was also fortunate enough to reserve a portion of the contents of his silo for summer feeding when the pastures became parched and brown. It is a simple matter to grow a few acres more corn, and by deepening the silo or putting up a small additional one, have a supply of food that can be drawn upon at any time. Mr. E. D. Tilson, of Tilsonburg, Ont.; the Messrs. Gilmour, of Nilestown, Ont., among others, have also found the advantage of old ensilage under such circumstances.

Our Scottish Letter.

A RETROSPECT OF THE ROYAL.

The Royal Show at Darlington, near to the home of the Shorthorn, was another great event of the week. The best sections in the stock department were those for Shorthorn, Aberdeen-Angus and Galloway cattle; Clydesdale horses, and Lincoln, Shropshire and Wensleydale sheep.

Shorthorns.—About the Shorthorns, it is only needful to remark that they may have been equalled at former shows of the Royal, but we question very much if they have ever been surpassed. The best male animals exhibited were Lord Polwarth's champion, the first-prize winner in the aged class, Nonsuch 65069; the reserve, Mr. George Harrison's Champion Cup 55969, and Mr. J. Deane Willis' yearling, Count Victor, a most massive animal for his age. Nonsuch was bred in Fifeshire, by Mr. I. Hill, Langside, Cupar, and was second at the H. & A. S. last year. He is a bull of immense substance and great wealth of flesh. The French syndicate, headed by M. de Clercq, bought him, so that he will leave the country. Champion Cup and Count Victor were both bred by Mr. Deane Willis, who is rapidly taking the very foremost place as a breeder of Shorthorns. At his place, Bapton Manor, Codford, St. Mary's, Wilts, he has the largest herd of Aberdeen Shorthorns in England, and one of the best herds in the world. One of his most successful breeding bulls was Count Lavander, which now does duty in the royal herd at Windsor. Champion Cup, however, was not got by him, but by a bull named Challenge Cup. He is a capital animal, but probably more votes would have been cast by the public in favor of Count Victor as the reserve, if not as the champion himself. He is a son of Count Lavander, and his dam was a Sittyton Gondolier cow. He is one of the grandest yearlings seen for years, and for substance, scale and wealth of cover he can hardly be surpassed. His coat is faultless, and his whole appearance beyond reproach. He, too, leaves the country, having been purchased by Mr. Don MacLennan for exportation to South America. The champion female was Mr. Deane Willis' three-year-old red and white heifer Miranda, by Count Lavander, a cow of depth, width, substance, and great wealth of flesh, but a little uneven in her cover. Possibly there were other heifers excelling in some points, but Miranda was, taken all in all, about the best. Her stiffest opponent was Her Majesty the Queen's two-year-old red heifer Frederica, which led her own class. She was got by Volunteer, out of Fragrant, an Aberdeen Shorthorn cow descending from the celebrated Sittyton bull, Clear the Way. Frederica was a hot favorite for the championship, and there is a style, quality and levelness about her which, coupled with her immense scale, make her next to impossible to beat. Mr. Deane Willis was again winner of first prize with the yearling heifer Seraph, whose sire was Roan Robin. She, too, is a red heifer, very thick, solid and blocky, and full of quality. The first aged cow was Mr. George Harrison's Warfare, which stood first at the H. & A. S. last year, and at the Bath and West of England Show this year. She was bred by Mr. Silvester Campbell, Kinellar, a gentleman who needs no introduction to Canadian Shorthorn breeders.

Aberdeen-Angus cattle are becoming strong opponents of the Shorthorn in the North of England, where they have secured a very firm footing. The show of these at Darlington was very fine, and the best class all through was that for yearling heifers. Both male and female championships were won by Mr. George Smith Grant, of Anchorachan, Glenlivet, the bull being Equestrian 9953, and the cow, Legend 16578. The reserve for the bull class was Miss Morison Duncan's bull, Edric 9110, like the champion bred at Ballindalloch, and purchased at the Dalmore sale for 275 gs. These are a pair of very fine bulls, and we should say it is a moot point which is the better. Some would prefer Edric for his greater length, and on the whole, finer quality, except about the head. Equestrian is more compact and has finer bone. He is a son of Prince Inear, while Edric is a son of Iliad. Several very good bulls were exhibited by Mr. Arthur J. Owen, Shanvaghey, Abbeyleigh, Queen's County, Ireland, and it is a doubtful point to our mind whether his second prize yearling heifer, Shanvaghey Nan II., was not the best of the heifers exhibited. Another successful exhibitor was the Countess Dowager of Seaford, who won first prize with the two-year-old bull, Bernadotte. Legend was followed in her class by Her Majesty the Queen's very pretty young cow, Gentian of Ballindalloch, which won last year at the H. & A. S., Aberdeen. The reserve champion female was Mr. William Nimmo's Rose of Benton 19854, bred by Mr. Clement Stephenson, who also bred and owned the first yearling bull, Lighthouse by Cerberus, out of one of the Luxury tribe, and the first yearling heifer, Jipsey of Benton 22371, a daughter of Albion. Lord Huntly, with Waitress of Aboyne, was winner amongst the two-year-olds. She is a beauty, and as her age will admit her to compete with the yearlings at the H. & A. S., Dumfries, she will not be too easily beaten.

Galloways may to some folks appear to be the same breed as the Aberdeen-Angus, but there are no points of resemblance between the breeds except that both are polled. With greater truth may it be said that there are many points of resemblance between the Galloway and the Highlander, in spite of the fact that the one is polled and the other very much the reverse. The most successful breeder of Galloways in our time is Mr. James Cunningham,

Tarbrooch, Dalbeattie. Whoever might forsake the ancient breed, Mr. Cunningham remained firm in his allegiance, and he has his reward, for many of the best are bred by him, and now that the tide seems turning in their favor a brighter day will dawn for those who cling to the old blackskins of the Province of Galloway. The Duke of Buccleuch, who has always been a steady patron of the breed, was first at the Royal with the fine aged bull, Baron Wedholme of Drumlanrig 5912. His stiffest opponent was Mr. R. F. Durdgeon's Crown Jewel II., a son of the famous Harden. With Glenlivet 6210, a bull bred at Drumlanrig, Mr. C. Graham, Harelawhill, was first in the two-year-old class, and a phenomenal yearling, Nonpareil of Castlemilk, bred by Sir Robert Jardine, Bart., and owned by Mr. W. Parkin-Moore, of Whitehall, Mealsgate, Carlisle, was first in his class. This youngster is just about invincible. He may not be perfect in the formation of his head, but otherwise he is faultless. The cows and heifers were, however, far in advance of the bulls. Mr. James Cunningham exhibited his invincible cow, Madonna II. of Tarbrooch 11056, and won, and his son, Mr. John Cunningham, of Durhambill, Dalbeattie, was equally successful with a splendid two-year-old heifer, Dora of Durhambill, which, however, was bred at Tarbrooch. Mr. Pilkington had a capital three-year-old cow in Annie Laurie III. of Cavens, which stood first; and the same gentleman also successfully exhibited other Galloways, all of which were well brought out. Mr. John Cunningham had also the first yearling heifer.

Clydesdales have never been better represented at the Royal. Mr. I. Douglas-Fletcher, of Rosebaugh, was a successful exhibitor, winning first prizes with his very handsome three-year-old horse, The MacEachran 9792, winner at the H. & A. S. last year, and looking very fresh and new, and the splendid three-year-old mare, Lady Patricia, which he purchased at the Edengrove sale a year ago for 250 gs. Lady Patricia was got by the Edengrove stud horse, Patrician, out of the Macgregor mare, Bet of Balig, and was champion at the Royal last year. She has much improved in the interval, and is a filly which it will be hard to beat in her class, having a fine combination of size, substance and quality. Mr. William Graham, of Edengrove, also showed a number of choice animals. He was first with the massive two-year-old colt, Bridegroom 9-86; his splendid four-year-old Macgregor mare, Royal Rose, which was also first at the Royal and many other shows last year, and May Queen, the unbeaten two-year-old filly of last year, also got by Macgregor. She was bred by Mr. Andrew Mitchell, Barcheskie, Kirkcudbright. A beautiful yearling colt named Balmiedie Royal Engineer, bred and owned by Mr. W. H. Lumsden, was first in his class, and is a horse of fine quality, with good action and plenty of size. Mr. Thomas Smith, Blacon Point, Chester, exhibited a number of first-rate animals, and was first with the yearling filly, Jessie Macgregor, which stood first at Ayr. The Marquis of Londonderry exhibited several very good Clydesdales—the yearling filly named Kite, the two-year-old horse, Carthusian, and the three-year-old mare, Lady Helen. All of these were favorably noticed by the judges. Lord Polwarth, Messrs. A. and W. Montgomery and A. B. Matthews were also successful.

The Sheep.—Two of the British breeds of sheep alone can at the present time be said to be in a very flourishing condition. Generally, the breeders and feeders of sheep are better off than they were at one time, and especially during the disastrous year of 1892; but the two breeds which have had a marked degree of success are the Lincoln long-wool breed and the Shropshire short-wool breed. These are in favor for the foreign market—your own Canadians purchasing the Shropshires, and the South American colonists being keen on the Lincolns. Mr. Robert Miller, Brougham, Ont., is at present in this country buying the former, and there are other customers on the outlook for the latter. Wool of all kinds has experienced an advance, but the most remarkable prices are being got for Lincoln wool, which is selling in some cases as high as 30/ or \$7.50 for the tod of 28 lb. This is more than 1/ or 25c. per lb., and it is long since any such price was realized for wool in this country. The great characteristic of the Lincoln wool is its wonderful lustre; indeed, until one examines it closely the term lustre as applied to wool is unintelligible. To appreciate it, the dry, hard wool of some of the short-wool breeds, especially that on the more modern of the Down races, has only to be examined alongside of the Lincoln wool and the striking difference between them is at once detected. The mutton of the Lincoln may not be of the finest quality, but the quality of its wool compensates for a good deal of deficiency in other respects. In the Argentine Republic, Lincoln rams are largely used for crossing with Merino ewes, and the wool from the crosses is in great demand in the United States.

Shropshires are the most popular of all the Down breeds. It is next to impossible to believe that the whole of these are not in one form or other and by some process of modification derived from the Southdowns. Oxford-Downs, for example, are admitted to be the result of crossing Hampshire-Down ewes with Cotswold rams, and persistently breeding with the best of the crosses. These are the largest and heaviest of the Down breeds, and Oxford wethers at 18 months old are often of almost incredible weight. The Shropshire is not at all like the others in this respect, and is well-

adapted for crossing with the mountain breeds—Cheviots and Blackfaces—for the production of nice handy hogs and hoggets—small joints coming rapidly into favor. In Scotland the Shropshire is the only rival to the Border Leicester for producing big, well-grown lambs on good land. They have established themselves chiefly in the midland counties of Perth and Forfar, the oldest breeder in Scotland being the Earl of Strathmore, at Glamis, and the most successful, Mr. Thomas Buttar, at Corston, Coupar-Angus. Mr. Wallace, Duniface, Dunfermline, and Mr. D. J. Thomson Gray, Innerpefferay, Comrie, are also successful breeders of Shropshire sheep. Mr. Buttar is perhaps the only Scottish breeder who has ventured to cross the border and compete in the English show-yards. This he has done with not a little success, and Mr. Thomas Buttar, Jr., is recognized as one of the best judges of the breed in Great Britain. Canadians might do worse than pay these Scottish breeders a visit when in this country purchasing Shropshire rams. Mr. Miller has purchased a number of excellent sheep for exportation, and they will shortly leave for their destination now that the great Shropshire Show at Shrewsbury is over. This breed was so strongly represented at the Royal that two sets of judges were told off to award the prizes in the various classes. A foreign demand is a great incentive to the home-breeding of any class of stock.

When all is said, however, Border Leicesters, Blackfaces and Cheviots remain the great Scottish breeds of sheep. All others are valuable in their own place, but it is these, and these alone, which cover the territory of what is, strictly speaking, the pastoral districts of Scotland. There are two subordinate types or modifications of these three breeds: Half-breds, which are produced by crossing the Cheviot ewe with the Border Leicester ram; and Cross-breds, which are produced by crossing the Blackface ewe with the Border Leicester ram. These five types are by far the most generally diffused throughout Scotland. The habitat of the Blackfaces is, of course, the highest mountain ranges, and especially heath-covered hills. Cheviots can stand quite as much cold as the Blackfaces, and when wool was selling well, in many parts of Scotland Blackface stock had to make way for Cheviots. It was found, however, that especially in the west of Scotland, when there is a heavy rain-fall, the results of this policy in a succession of wet seasons were disastrous, and, wool receding in price, the Cheviot for the past ten or twelve years has been compelled to abandon most of his recently-acquired territory, which has been retaken by the Blackfaces. A Blackface ewe is a much more successful mother than a Cheviot ewe. She is a grand wrestler and fights well for her own band. In Scotland the Blackface occupies a position from which it never can be dislodged. One of the most remarkable chapters in Scottish agriculture is the history of the Cheviot occupation of Sutherland in the extreme North of Scotland. The Sutherland clearances fill many a sad page in the social history of this country, and one of their direct and immediate results was the stocking of these northern hills and valleys with the all-unconscious and beautiful Cheviot.

The Border Leicester fills, in the sheep world, the place occupied with so much credit by the Shorthorn in the bovine world. He is the great crossing agent in the production of commercial sheep, and hence the rams sell for more money than do the males of any other breed of sheep in this country. The great sales of the breed are held at Kelso in August, and the leading flock for many years has been that of Mertoun, owned by Lord Polwarth. As high as £155 have been paid for a Border Leicester shearing ram out of this flock, and for many years the top average at Kelso has been made by the Mertoun rams. There are many famous flocks in the south-eastern Border counties of Scotland, and a notable flock of remarkably healthy, strong sheep is found in the hands of Mr. John Twentyman, at Hawkkrigg House, Wrighton, Cumberland. Mr. W. S. Ferguson, Pictstonhill, has an excellent flock at Kinochry, in Forfarshire. The Earl of Dalhousie has another at Panmure in the same county; and in the North of Scotland, Mr. D. Cameron, Killen, Ross-shire, breeds grand, strong, sound sheep. At the recent show of the Royal Agricultural Society, the most successful flocks were those of the Right Hon. A. J. Balfour, M.P., of Whittinghame, Prestonkirk; Mr. G. Russell Tress, Whitters, St. Boswells; the Earl of Rosebery, Dalmeny; and Mr. Ridley, Shelford, Northumberland. SCOTLAND YET.

It is said that so great has been the increase in the consumption of horse meat for food in Germany that the United States Consul at Brunswick suggests the advisability of having American packers compete for the profits in this new industry. Fresh horse meat sells for seven cents a pound in Germany, and brings twelve cents a pound when smoked. The average price paid by a German butcher for a horse is \$35. After paying freight and other charges, this would not leave a very gilded margin for the United States horse producer, but it would put out of the road a few of the old street car superannuates.

FALL WHEAT.—Secure one or more new subscribers to the FARMER'S ADVOCATE, and get some of the Dawson Golden Chaff or Early White Leader wheat. See our announcement on another page.

Death of Donald Fraser.

[Lake Louise Farm, Emerson, Man.]

It is our painful duty to record in this issue the death of Mr. Donald Fraser, which took place on the 7th of July, at his home, Lake Louise Farm, near Emerson. His death was indirectly the result of an injury received last winter from the upsetting of his sleigh. Though the injury itself was not immediately serious, the suffering from it left him in a somewhat enfeebled condition, so that when he was attacked by pneumonia shortly afterward his naturally strong frame and splendid constitution struggled in vain against it.

Mr. Fraser was born in Inverness, Scotland, in 1829, and when 26 years of age, emigrated to Canada, settling at Ernestown, near Napanee, where he carried on stock-farming until, with his family, he came westward in 1881, and secured the large and valuable tract of land near Emerson which soon became widely-known as the Lake Louise Farm. There he, in company with his sons, began to farm extensively and also engaged in stock-raising, devoting special attention to pure-bred cattle, sheep and swine. In all these lines he had already a large experience, having been engaged in sheep-raising in the Old Country, and having been so successful and influential in Ontario that on his leaving that Province the Agricultural Associations of five counties (Lennox, Prince Edward, Hastings, Addington, and Frontenac) united in presenting him an address and a special gold medal in recognition of his valuable services in all departments of agriculture. In Manitoba he soon took a leading place in these departments, becoming especially noted for success in raising pure-bred Shorthorn cattle, Shropshire and Southdown sheep, and latterly Poland-China swine. In all these he was a large prize-winner at the Provincial Exhibition for several years past. Besides this, Mr. Fraser took a prominent part in advancing the interests of the various Associations which in this Province exist for improving methods and extending operations in all departments of farming and stock-raising, and his death is a very distinct loss to all these interests.

In private and public life Mr. Fraser was a man of sterling, upright character, of inflexible principle, and of straightforward manliness. He was for many years an elder in the Presbyterian church, and took a live and intelligent part in the deliberations of the various church courts.

He leaves a wife and family of three sons and three daughters to mourn his loss. The sons, W. W., and Archibald, were interested with their father in the farm, while the eldest, David, is engaged in business in the town of Virden. To the members of his family we extend our warmest sympathy in the great sorrow experienced by them, and gladly pay this poor tribute of respect to one who did such important and valuable work in his line here and elsewhere.

Western Stock Prospects Bright.

Mr. John Hallam, the well-known hide and wool merchant, of Toronto, has just returned from a business trip to the Canadian Northwest. Mr. Hallam has visited nearly all the ranching country, and informed our representative that the stock were looking better than he had ever before seen them; the season has been most favorable, the grass is good and prices for cattle, sheep and wool have ruled higher than last year, and in view of these encouraging conditions it is but natural for the ranchers to feel in much better spirits than for some time past. Mr. Hallam has this season secured the bulk of the wool clip, amounting to 377,000 lbs., and he states that the quality is, on the average, better than last, which we presume is in part at least attributable to the favorable weather during the past winter.

Mr. Hallam enjoyed his trip, and says the atmosphere of the Northwest is most exhilarating.

Dr. McEachren, chief veterinary officer, who has just made a tour of the Canadian Northwest, reports to the Department of Agriculture, Ottawa, that the cattle industry is in a most flourishing condition, (Gordon & Ironsides' purchases for export number some 10,000 head); horse-breeders are hopeful; large shipments at better prices going forward to Great Britain, France, and Belgium; the sheep industry is progressing very satisfactorily, and the crop prospects all over the country being most promising.

Sheep-Shearing Machine.

One very attractive feature at the late Royal Show of England was a "sheep-shearing machine," shown by the Newall-Cunningham Syndicate. It is adapted for flocks of from 200 to 1,500 sheep. It is simple in construction, and one man can easily take the moving parts out of the shear in fifteen seconds and replace them in thirty seconds, without the use of any tools. It is claimed for the machine that the sheep are shorn perfectly level; each man can shear from ten to fifteen per hour; about one half-pound extra wool is got off each sheep each season, and that the sheep are not cut.

AGENTS WANTED.—We want a good active agent in every township in Canada and the adjoining States, to secure new subscribers to the FARMER'S ADVOCATE. Farmers cannot spend a dollar in any other way that will give better returns.

"Stockman" on Fitting Shorthorns for Show.

SIR,—I have been a reader of the ADVOCATE for several years, and I get something good out of every issue. Your recent contributed articles upon fitting stock for the show ring are very practical and seasonable, and I am sure they would be eagerly read and re-read by many stockmen. As I have fitted a few Shorthorns for the show, I will just refer to Mr. Nicholson's splendid letter on that subject. Knowing Mr. Nicholson's career as an exhibitor, one cannot say that he does not understand his business, and, indeed, the article itself reveals the practical knowledge of the writer. Mr. Nicholson's ideas re selection coincide entirely with my own, and his course of feeding cannot but be good, because, when it is looked into, it comes so near a balanced ration, while it is extremely palatable, that the very best results should follow. I would, however, recommend a slight variation by adding a few handfuls of ground flax or old-process oil meal to the chop ration, for the reason that the oil it contains keeps the animals laxative, while, at the same time, it gives the skin a more velvety feel. Another change I would advise is to give one meal a day of peas, boiled into a soft mush. This, seasoned with salt, and among it sprinkled a little bran, is very much relished, and perfectly harmless no matter how much is eaten, and hearty calves will eat a lot after they are four months old. This food is half-digested when fed, if boiled in plenty of water while it is closely covered.

I was much surprised that Mr. Nicholson said nothing about keeping the animals' skins clean and in good order. According to my judgment they should be well-washed, at least once a month, with warm soft water and castile soap, to which has been added a little of McDougal's or Little's "dip." This keeps them from getting scurfy and itchy. I would always blanket with a woolen blanket while they are drying. I have found it good to lay a layer of clean, long oat straw between the animal and the blanket; this allows the steam to escape more readily. The card and brush should be used at least once a day. I like a whalebone or corn brush, followed by a softer one, followed by a flannel or chamois rubber, which has the effect of giving the hair a soft and oily feel, and also keeps it from fading. The care of the skin I regard as very important, as I have no doubt does Mr. Nicholson, but we take it for granted that it slipped his memory while preparing his article. Not only does it render the animals comfortable and contented, which is very important to best results in growth and flesh production, but it also gives them a larger, more even, and beautiful appearance, which often makes up for slight weakness that would look badly if the coat were patchy and starey. I have found a light application of sweet oil to add to the appearance and feel of a skin that is at all inclined to be harsh or dry, but plenty of rubbing with the cloth, sponge, or chamois rubber will almost always produce the desired effect.

Nothing has yet been said about polishing the horns. As every little addition to a fine finish helps, I would not neglect the horns, especially of the bulls, before going to the show. An old knife does very well to remove the roughest coating; this, followed by sandpaper, followed by chamois slightly oiled, will put on a nice bright and dressy finish. Others may have different methods of bringing out their animals in good form, but what Mr. Nicholson has written, together with the above suggestions, would seem to me to about fill the bill. STOCKMAN.

Whole vs. Crushed Oats and Cut Hay for Horses.

To test the relative merits of crushed vs. whole oats in feeding horses, one of the great London omnibus companies some years ago conducted an interesting experiment. Of the 6,000 horses in the company's employment one-half were fed on crushed oats and cut hay and straw and the other half on whole oats and hay. The ration allowed per day to each horse, according to the one system, was: crushed oats, 16 lbs., cut hay, 7½ lbs.; cut straw, 2½ lbs. The quantity allowed according to the old system was: whole oats, 19 lbs.; uncut hay, 13 lbs. A daily saving of 6 lbs. of food was thus effected, and this saving was not merely in the quantity, but in the value of the materials employed, for straw in the former case was substituted for hay in the latter. The advantage of one kind of feeding over the other was far more apparent when reduced to money value. The saving by using the crushed oats and cut hay was nearly 2½d per day for each horse, which was equal to £62 10s per day for the 6,000 horses. And this saving was accomplished without any sacrifice whatever; for all the drivers and those having charge of the horses agreed that the difference in the condition of the horses was decidedly in favor of those fed on crushed oats and cut hay and straw.

The editor of Hoard's Dairyman says that in his experience there is no more dangerous season for milk fever than June, when cows are left to calve on the pasture, and in condition to bring on the chill which precedes the fever. Quoting the article by "D. A.," published some time ago in these columns, he says: "A writer in the FARMER'S ADVOCATE talks very sensibly, we think, on this subject."

English Sheep and Wool Notes.

(BY T. B. HOLLINGS.)

TECHNICAL WOOL TERMS.

Perhaps a brief explanation of some of the terms employed by the wool buyers and valuers may be of interest and use to the less experienced and novices in the handling of wool. The word "staple" signifies the quality of the wool, according as it is long or short. Wool that is long in staple is called "combing," and is used by manufacturers and topmakers for combing purposes. Good combing wool must not only be long, but sound and firm in growth, and a long-stapled clip is not accounted a combing wool if it be "tender,"—that is, has a break in its growth, which causes a weakness in some parts, and causes it to be easily broken. In Merino wool, a combing staple is between two and three inches long, and there are often in Australian clips two classes—viz., first and second combing—when classed by an expert. "Clothing" means wool of shorter growth still. This class of wool is not put through the combing process, but is carded instead, and manufacturers often call it carding wool instead of clothing. This wool is used in making woollen cloths, and not worsted coatings. In Merino and other fine wools there are also first and second clothing, according to the degree of length and fineness of staple. "Quality."—Everybody with the smallest knowledge of sheep and wool knows the meaning of this term; quality signifying whether it be a fine-haired wool or a long, coarse fibre, commonly styled "cross-bred." "Dingy" is applied to wool that is dull and unsteady in color or stained with dry yolk. Nothing like a wool being bright and attractive in appearance for selling well; it is at once a temptation to a buyer. "Wasting" is used to express the condition of wool from very old sheep, or from sheep that have not grown a healthy fleece, which is sometimes matted, tender, and poorly-grown. "Condition" signifies the state in which the clip is sent to market. This is a most important element in determining the value a buyer will place upon the wool. A fleece impregnated with sheep dirt, filth of any kind, earth, and dust, will always mean a little price for the farmer, and then he says wool growing won't pay. The wonder to me would be if such-like clips would pay. "Skirty" wool show that there has been carelessness in skirting the shorn fleece, and locks and pieces and britch ends have been all rolled up together with the fleece. This is the wrong way to lead to the town of Independence, but the high road to the city of Nothing. "Stumpy" means a short staple with broad, thin top, generally seen in wool of old sheep; while on the other hand, "hogget" wool has pointed tips, and means the first fleece of a sheep that has not been shorn as a lamb. This is generally a fourteen-months clip, and Australian pastoralists always bale up these fleeces by themselves, and they are always offered in London and elsewhere as the first lot in the whole clip, and described as super-combing hoggets. These usually realize a cent more per pound than the remainder of the clip.

BUYING SHEEP.

One of the best men among sheep breeders offers to me ten hints on the above subject, and the following of them out in any flock will assuredly make itself advantageously felt upon any flock. Says he:—"It is easy to muddle the novice with a variety of advice; and to get away from the possibility of doing that, I wish to offer the following hints as the most valuable and concise that occur to me. First—Study your farm conditions and learn exactly what kind of sheep will thrive best upon it. Second—If you are not able to purchase even a small flock of pure-bred or high grade sheep, then put all you can advantageously in a pure-bred ram, and after that do the best you can in buying good ewes. Start right, even if upon a small scale. The sheep will rapidly increase. Third—In purchasing a ram, get one fully developed, strong in bone, straight shaped, and thoroughly typical of his breed and sex. I have always an intuitive liking for the lamb that will leave a group of his fellows in the field and boldly front you. Fourth—Do not purchase sheep that you have to take "on trust" for proper development. It is only the experienced breeder who can forecast development. Fifth—Never take an unthrifty sheep, even if it is cheap, with the expectation that it will become all right. Sixth—In selecting sheep, if possible, handle them so that you may know how much of their form is due to themselves, and how much to the shears. Seventh—Select as critically as you can to a chosen type. Uniformity is a cheap feature for you to buy, and yet a valuable one in the flock. Eighth—There is no sheep that embodies perfection in sheep qualities; judging between different sheep is a checking of weakness and a balancing of qualities. Be inclined towards that sheep that appears to be better every time it catches your eye. Ninth—The purchaser will find it to his interests to select from the field sheep and thereby shun those that have been fitted for show. Tenth—The best time to buy is usually in the autumn or fall. Provision may be made with the seller to have the ewes served by a ram of different breeding from the one you bought, and thereby you add another season's use to the ram of your own flock. Bear in mind that quality is the most important factor in determining quality."

MEDICINE VS. FEED.

Instead of thinking what nostrums or drugs you should keep in store for your sheep, think rather of improving your manner of feeding, and the quality offered, to secure perfect health, that there be no occasion to use medicine. This applies, too, to other stock on the farm. Remember that prevention is a sure winner,—cure is uncertain.

A CATECHISM.

How much wool "brass," as they say in Yorkshire, do you make in a year? Are your returns for wool and mutton commensurate with what you spend on the flock? What does your feed cost in a year? Have you any sheep that do not pay for their cost of keep? If so, give them notice to "flit" by sending them on to the butcher. Have you yet found out what system of feeding will give the best results with your sheep?

Care of Lambs After Weaning.

The weaning period is always a critical one with any animal, as unless necessary precautions are taken there is almost certain to be a stunt or receding in the young animal's growth. Lamb-fat lost is hard to regain.

Many of our most successful shepherds wean their lambs at about four months old. At that age, if given a good chance, they will feel sufficiently independent to keep them from fretting to their disadvantage. Lambs should, however, be taught to eat grain some time before weaning. If they have not been taught to eat they will stand around a trough of grain and bleat and grow thin. But if they are accustomed to feed and it is always at hand they will partake often and soon forget the attachment they had for their dams.

There is no field so suitable into which to turn newly-weaned lambs as a fresh clover patch, which, together with a feed of oats and bran, with a sprinkling of cracked peas or oilcake, will furnish the lambs with material upon which rapid growth

the heavier by 48 pounds. Again, while the sheep in pen 1 gained most at first, there was little increase from the 66th to the 80th day; whereas in the case of pens 2 and 3 there was a steady gain during this period.

At the end of 80 days, pen 1 had gained 656 pounds, at a cost of £8 18s. 6d.; pen 2 had gained 622 pounds, at a cost of £8 17s. 6d.; pen 3 had gained 704 pounds, at a cost of £7 17s. 6d. From this it is apparent that the increase of pen 1 over pen 2 was economically produced. On the other hand, pen 3 showed a still more economical result, and the best of all three lots.

FARM.

Raising New Breeds of Cereals.

In the April 1st number of the FARMER'S ADVOCATE we treated this subject under the following heads: "Cultivation," "Selection as Applied to Cross-breeds," "Selection as Applied to Old Breeds," "Spontaneous Variation," and "Artificial Crossing." We now propose to deal with the practice of "Cross Fertilization," as it has been carried on at Newton-le-Willows, Lancashire, Scotland.

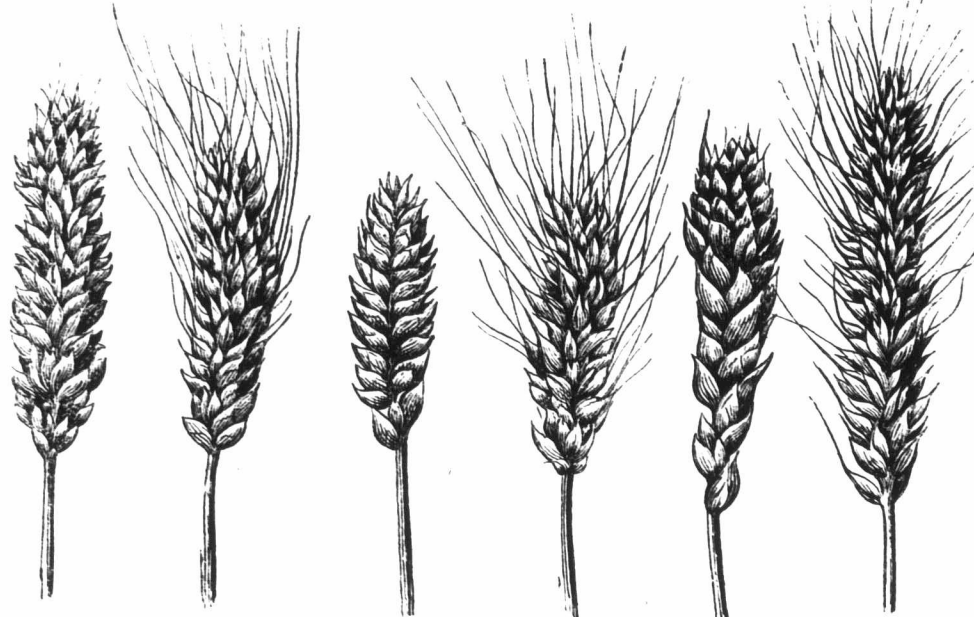
In the days of Aristotle, plants were regarded as destitute of sexuality. Later, some thinking men were of opinion that plants, like animals, might be of two sexes—male and female. In 1694 a professor of botany in Germany got rid of this surmise by finding from experiments that no seed capable of germination could be produced without the co-operation of pollen. In 1740 James Logan, Governor of Pennsylvania, by experimenting with Indian corn, found: 1. Cobs from which stamens and pollen had been removed were unfertilized. 2. On the cobs from which some of the stigmas (silks) had been removed, he found exactly as many grains of corn as he had left stigmas. 3. A young cob wrapped in muslin produced only empty husks.

unless by rare accident; because when the flower parts are in *receptive condition* they are completely enclosed within the two-valved husk. Self impregnation must, then, be the rule among cereals.

After the receptive condition has passed, and after the pollen has been sown on the stigma of the flower which bore it, the husk opens, not for the purpose of allowing entrance of extraneous pollen, but rather in order to get rid of the now useless and encumbering anthers.

Whenever self-fertilization occurs no extraneous matter has entered and no new character is imparted; as a result the progeny of cereals retains the individuality and repeats the peculiarities imparted by the plant which bore the flower. Fixity and want of sportive character confirm the view that the cereals in ordinary cultivation are self-fertilized and not crossed.

Cross-fertilization of Cereals.—The details of the process are as follows: The ear is taken as soon as it comes out of the sheath and all the seed vessels or spikelets are cut off, except one, two, or three. The mutilation of the ear assists considerably the future operations, and if more than one seed vessel is left on each ear they should be left as far apart as possible. An ear is now procured of the variety which it is intended to use as a male parent, and which if possible should be about from three to five days out of the sheath, while the ear which has been prepared and on which it is intended to operate should not be over two days out of the sheath, otherwise risk of self-fertilization will be run.



NO. 1.—SIX TYPES OF WHEAT FROM A COMPOSITE CROSS—ONE-HALF NATURAL SIZE.

will be made. They should also have a constant supply of fresh water and salt. Remember that sheep of any age like a change of run, even though the new field be not so good. They can soon be returned to their former clover field when they become restless. By the first of September a rape patch should be ready to turn into, which will complete the bill of fare, along with the clover field, until housing in the autumn is necessary.

Sheep Feeding Experiments.

A series of experiments were conducted at Woburn, England, in order to ascertain the relative advantage or disadvantage of feeding sheep heavily upon linseed cake and barley along with roots *ad libitum*. The sheep were divided in three pens. Pen 1 (20 sheep) were fed linseed cake and barley, equal proportions (double quantity). Pen 2 (20 sheep) were fed with equal parts of linseed cake and barley (single quantity). Pen 3 (20 sheep) fed with equal parts linseed cake and barley (single quantity), and hay chaff *ad libitum*. All the pens were allowed as much sliced roots—Swedes and mangels mixed—as they would eat.

Without going into the numerous tables and minute details, we give the conclusions drawn from the experiment, which are:

(1) "That in the case of sheep eating roots in the open, it pays better to fatten them steadily with a moderate amount of cake and grain than to fatten them off rapidly with a large amount of cake and grain."

(2) "That the addition of a small quantity of hay to cake and grain, given to sheep eating roots in the open, is both advantageous and economical, even when the selling price of hay is high."

Although the sheep in pen 1 looked very much more forward than the rest, yet when the pens were weighed at the end of 66 days' feeding, there was only 18 pounds difference between the total weights of pens 1 and 3, while when they were again weighed at the end of 80 days, feeding pen 3 was

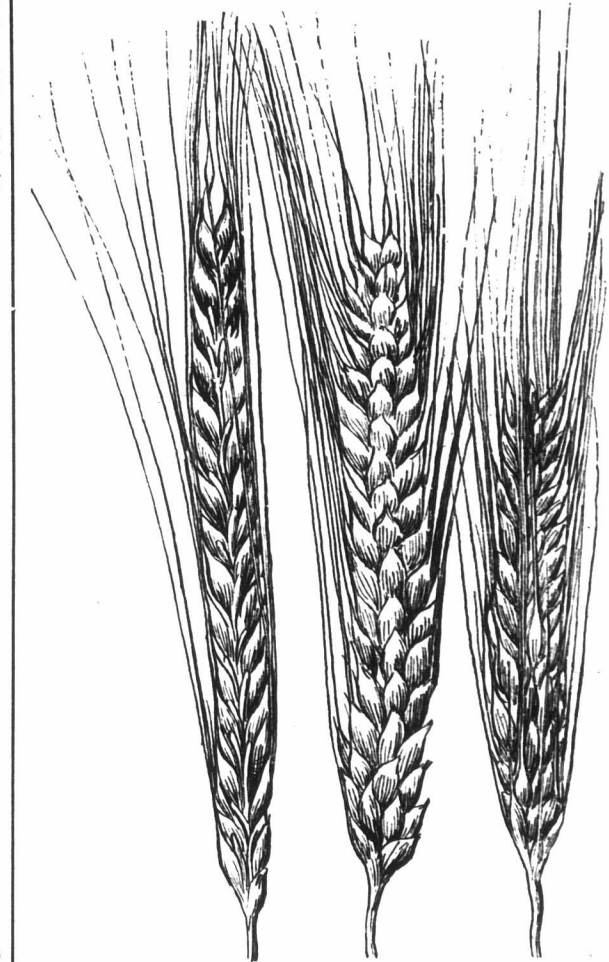
From the researches of these and other men it is found that for seed production in plant life the co-operation of male and female is absolutely necessary. Unless pollen impregnates the egg of the female, no embryo or seed can be produced. The suitable germination bed for the pollen is the stigma—a special outgrowth of the case which envelopes and encloses the ovule. When the pollen grain germinates it sends down a pipe or pollen tube containing the fertilizing matter or sperm into the ovule. Sperm from the pollen tube enters into and blends with the egg within the ovule; this blending of fertilizing material with the egg constitutes *fertilization*. The embryo is the young plant formed from the combined egg and sperm, and the resultant seed is the changed ovule containing dam and embryo.

The following parts essentially concerned in crossing are: *pollen*, producing the sire; *stamen*, producing the pollen; *ovule*, producing the dam; *pistil*, protecting the ovule and providing a germinating bed for pollen.

Self-fertilization of Cereals.—The flower of a cereal plant is composed of a tiny knob, to which are attached: 1. Two excessively minute scales—*lodicules*. 2. Three pollen-making organs—*stamens*. 3. An ovule protuberance, with a single ovule in its interior—*pistil*. The germinating bed for the pollen is the pair of feather-like outgrowths from the pistil. This flower is concealed by, and completely enclosed within, a husk composed of: 1. The valve of the husk below the flower—the *lower pale* or *fertile glume*. 2. The valve of the husk above the flower—the *upper pale*.

The parts especially concerned in grain production are: 1. The *sire* derived from the pollen. 2. The *dam* produced within the ovule.

In grasses and cereals, as a rule, both parents are derived not merely from the same plant and from the same ear, but from the self-same flower; for this reason the cereals are said to be *self-fertilized*. Extraneous pollen can find no entrance



NO. 2.—PARENT BARLEYS AND AN EVOLVED TYPE—ONE-HALF NATURAL SIZE.

As the process is one of great nicety, a pair of delicate forceps are necessary. The ear which it is intended to make the male parent is then taken and the spikelet gently opened by pressing the point of one of the fingers on the tips of the glumes and pale (chaff). The chaff scales having been thus opened, the anthers will be exposed to view. The slender filaments which the operator now takes hold of with the forceps and plucks out, are each laid on a sheet of paper, in order to be readily taken hold of again when required. The pollen dust retains its fertilizing properties for several days, so that although the female parent is not ripe enough for fecundation when the operation is performed, it becomes so very soon after, and long before the pollen dust becomes useless. The ear should now be securely tied to a stake and labelled with the names of both parents.

The pollen to be used is taken from a selected variety with suitable peculiarities. The selected pollen is applied when the stigma is in *receptive condition*, or, for certainty, even earlier; application of pollen to a stigma whose receptive stage has passed is mere waste of time, and can yield no result. When the process has been accomplished, an embryo plant is the result—embryo capable of developing an individual combining characters derived from the varieties used for its production; in after generations its progeny may even show new points of value possessed by neither parent. When two varieties are used the resultant is called a *simple cross*; when three or more varieties are blended by repeated crossing, the resultant is a *composite cross*.

The first product of a single-crossed grain is a plant often intermediate in character between the

components of the cross. This produces self-fertilized grains. The second generation is a crop of plants which seems to obey no law—which "sports" and varies in all directions; an example of which is shown in Fig. 1*, all of which were produced from a single wheat grain the third year of growth after crossing. Some of the progeny show increased and some diminished energy; some show advance and improvement; others, deterioration. The grains are again produced by self-fertilization. From this generation the breeder selects the best single plant for further growth. The *third generation* is yielded by grain taken from the best plants of the second generation. The crop is still sportive and variable as regards some of the progeny; but in some the reaction and disturbance may be subsiding. The grains are produced by self-fertilization. The best and most promising plant is again selected for further growth. The fourth, fifth, sixth, and successive generations are reared and selected till disturbance completely subsides, and till fixity of character is attained: a new cross-breed is the result. Any variations which still appear after the third generation are usually reversions.

Fig. 2 shows parent barleys and an evolved type. The parents here figured are Edel, to the left, and Chevalier, to the right of the plate. Other parents used in the evolution were: Manschurian, Golden Melon, Jewel, and Italian. The evolved type shows the following characters: ear elongated like Chevalier; six-rowed, as in Manschurian and Edel; beards partially dropping off at maturity, as in Jewel; grain large and of good quality, as in the two-rowed parents.

From this course of events it is evident that a commercial breeder can have almost as many new varieties as he chooses.

* The illustrations given are from a paper from which we quote, prepared by Prof. A. N. McAlpine, botanist to the Highland and Agricultural Society.

Winter Wheat--Varieties and Methods of Cultivation--Practical Reports.

The winter wheat plots on the Experimental Farm at Guelph, when visited by the writer, just before cutting, presented a most creditable appearance as a rule, though a few of them had not altogether survived the rigors of winter and spring. Early seeding gave by far the best results. This was particularly true of spring wheats. Among the latter Herrison's Bearded stands away ahead of all the others. It is a good milling wheat, has yielded about 30 bushels per acre, and weighs from 63 to 64 lbs. to the measured bushel.

Winter wheats, as a rule, were shorter in the straw than last year on the College Farm, but stood up and filled well, and were very free from rust. We noticed that the old Treadwell was a failure; but the Scott variety was fairly good. American Bronze has done fairly well, and the Surprise was good, as it usually is. Early Red Clawson was very good also, but its weak point is the straw being very liable to go down. Michigan Amber, an old sort, though noticed here for the first time this year, looked very well, as did Jones' Square Head, which stood the winter well. Early White Leader was scarcely as luxuriant on the Farm as we have noticed it elsewhere. Dawson's Golden Chaff was particularly fine, ranking at the top of the whole range of over 100 varieties that have been tested. We find from the records of the Experimental Union all over Ontario that it has given the largest yield of all the varieties tested in 1893 and 1894. It was also one of the least affected by rust, was one of the first to mature, produced the largest quantity of grain from 100 lbs. of straw, and its average yield over the Province was about 35 bushels. On the Experimental Farm plots it has averaged over 51 bushels per acre for three years.

In one very careful set of experiments the advantage of carefully selecting large and perfect grains for seed was very apparent.

On Mr. O'Brien's farm, near London, we noticed a promising 20-acre field of Amber Dye Mediterranean, a plump-headed, bearded wheat, of which he thinks highly. He had also Early Red Clawson and Golden Cross, but the latter was not so good as the others. We found a fine field of Dawson's Golden Chaff on the farm of Mr. E. M. Zavitz, Lobo, and another in the same locality, where it has been tested three years. In driving towards Delaware from Poplar Hill we saw an excellent field of Manchester, which is still a favorite with many. A few fields of Golden Cross or Volunteer were also observed. Mr. R. Gibson, of Delaware, was growing both Early White Leader and Dawson's Golden Chaff, the latter having rather stiffer straw, the former being a trifle longer both in straw and head. In our travels we have not seen larger or finer crops of wheat than on the Gibson farm. One of our staff found the Early White Leader doing well on Shore Bros' farm at White Oak, and noted that about Paris the Dawson Golden Chaff is very popular. In fact, it was there that Mr. Robt. Dawson, from whom it was named, found the first head of it in a field of Seneca Clawson wheat in 1881.

On the subject of varieties, methods of cultivation, etc., we have received the replies given below.

Our Inquiries re Fall Wheat.

1st. Has the crop done well this season, and if not, why?

2nd. On what soils, following what other crop, with what manuring, early or late sowing, and with what method of soil preparation, has it done best?

3rd. What varieties have you or your neighbors grown most generally with best results?

4th. What new sorts have been tried? What were their characteristics, their good and weak points?

KENT.

W. A. McGeachy.—In this section winter wheat was a poor crop this season. It will not average half a crop. The ice during the winter smothered it completely in spots. A week's heavy frost in late spring, followed by a severe drought, damaged it badly, and what was left was badly infested with weevil. It was best on clay. Our best crop was on clay and clay loam. It was a meadow which we ploughed up immediately after the hay was harvested. Barnyard manure was spread upon it, and this was worked over until about September 15th, when we drilled in the wheat. The varieties most grown around here are American Bronze and Manchester.

We tried the varieties sent out by the Experimental Farm in the fall of 1893, but they failed to pan out right and so we discarded them.

ELGIN.

Chas. C. Ford.—Wheat is fair, on the whole, but the ice remaining on it during winter destroyed it in some places, and the frost in May killed considerable, yet the crop in general is fair.

On gravelly and clay soils it has done best, with summer-fallowing the previous season and manured pretty freely when fallow was ploughed in May or early in June.

With regard to period of sowing, early sowing proved best.

The old reliable Manchester variety is the best; as it is a kind that has done so well in the past, it is more or less generally sown. Red Clawson and Scott prove very good also.

In regard to new varieties, there has not been many tried. Early White Leader and Golden Cross are very good, but usually too weak in the straw. Surprise has been tried with poor results, as it is too coarse in the straw.

LAMBTON, E. R.

Ellis F. Augustine.—Although wheat came through the winter in splendid condition, prospects are only for fifty per cent. of full crop. Main cause of failure: late spring frosts followed by long-continued drouth.

It has done best on loamy soils following barley, or upon summer-fallow, or turned clover sod. Manuring shows best results when applied to previous crop, or where wheat follows clover, when used to stimulate the clover as a renovating crop. The most promising prospects are from medium early sowing upon a fine but compact seed-bed, with seed sown in drills.

Democrat continues to give best general satisfaction, while Manchester is also much esteemed. Volunteer or Golden Cross has not come up to expectations.

MIDDLESEX, S. R.

G. W. Ferguson.—The winter wheat in this vicinity this season is generally light, not at all up to the average; of course there are exceptions—some on high, rich, loamy soil is fairly good; that on low land has suffered from the frost, and in all places from the dry weather.

As regards culture: it is becoming common now to plant beans instead of summer-fallowing, which is much better than sowing peas, as was so often done formerly, since it leaves the ground perfectly clean, while the pea field was a nursery for weeds. The wheat, too, seems to succeed about as well by this method as by summer-fallowing, and the bean crop pays for the cultivation.

I have not learned of any new varieties being grown in this neighborhood. Red Clawson, Democrat, Manchester, Golden Cross, etc., are the varieties mostly grown.

MIDDLESEX, S. R.

Richard Gibson, "Belvoir Stock Farm."—1. Not done well, through ice forming in winter and smothering it badly in places. Also rust has been bad in places.

2. After peas and clover, early sowing, early ploughing, so as to get a firm bottom, and surface frequently worked.

3. Manchester, Golden Cross, and Democrat.

4. White Leader, Dawson's Golden Chaff, and a local variety called Victor. I like the Leader for my soil: it grows a good quality of grain—straw bright and strong enough to carry the head. This is now my third year, and shall put in one-half of what I grow. Dawson's Golden Chaff will be the other half. This is first season that I have grown it, and I like it.

MIDDLESEX, N. R.

J. W. Johnson.—With regard to winter wheat-growing in this locality, with some it has been a success and with others a failure. Some fields were injured more by the late frosts than others, particularly low land that was not well-drained. The late frosts, no doubt, has been the principal cause of the shortage this year, as I believe a majority of the farmers put the crop in in good condition.

There are various ways of preparing the land for winter wheat, and the system to adopt would depend on the nature and condition of the soil. Two of the best pieces in this locality were grown

on oat stubble. The soil a clay loam, ploughed as soon as the oats were taken off, then harrowed and rolled, it received then a dressing of well-rotted stable manure, at the rate of fifteen loads to the acre, ploughed again lightly about the first of Sept.; the seed was drilled in on the tenth.

One piece was sown with Red Clawson, the other Democrat. Although these two pieces have made a good record, it must be remembered the land was well underdrained and in good condition; previous to the oat crop, being clover sod with the second crop ploughed down. Winter wheat can be grown with good success after corn, where the land has been well-manured and well-cultivated, and the corn crop taken off time enough for the wheat seeding, which should not be later than the 15th of Sept. The Democrat has given as good satisfaction as any variety that has ever been introduced into this locality, although the Red Clawson has improved rather than retrograded, but perhaps the season has been somewhat favorable to it, as it is inclined to grow heavy straw in a damp season.

MURON, S. R.

A. P. Ketchen.—Fall wheat promises, on the whole, to be rather a light crop, being unusually short in the straw, caused in part by the severe frost in spring, and in part by the extreme drouth which followed. The sample, however, promises to be good.

The best fields are clay loam, with a tendency to heavier clay. Summer-fallow gives the best crop, though I cannot say the most profitable. The best system of culture seems to be that which pulverizes the soil thoroughly to a good depth, yet leaves it firm and compact. Personally, I like to have the land so firm when sowing that it will carry the horses nicely.

On good soils Manchester gives about the best yields, though on poorer lands Democrat is still the favorite. Red Clawson is a very good wheat, but has a tendency to rust.

I know of no new varieties worthy of mention. Jones' Winter Fife, Canadian Velvet Chaff, Harvest Queen, and some others were tried here; but have fallen into disrepute.

BRUCE, E. R.

James Tolton, Walkerton.—Wheat came out of the winter and in the early spring looking exceedingly well; in fact, the prospects were never finer, but the May frosts damaging it in many cases 50 per cent.; after the frosts the long-continued drouth has injured it very materially, and the last ten days or two weeks many fields have rusted considerably, so at present appearance about a half crop is about all that may be looked for. Many fields will be cut by July 18th. Best fields I have seen are on clay loam, following a pea crop over sod that was clean and in good heart, and the few summer-fallows are also fair. Early sowing on properly-prepared fields and (if not rich) well-manured are the conditions necessary for a crop.

Garfield is the best I have seen; other varieties sown are American Bronze, Early Red Clawson, Democrat, and a little Jones' Early Fife, but I noticed this variety has rusted worse than Garfield.

No new varieties other than those named have been sown in our neighborhood.

BRANT, N. R.

R. S. Stephenson.—Fall wheat has been badly winter-killed here and also much injured by the late frost. The most promising fields suffered most.

All soils suffered from winter-killing.

The American Bronze seems to have given the best satisfaction in this vicinity, and seems well-adapted to the lighter soils. Red Clawson is a favorite with some, and White Clawson is also largely sown.

Among the new varieties, Genesee Giant is a promising wheat, but the straw seems rather brittle.

PERTH, S. R.

John Burns, Kirkton.—Generally speaking, the crop has done fairly well. The only places where it does not come up to a fair average is on bare fallow, or on undrained clay lands. The soil best adapted to fall wheat growing here is a limestone clay, or loamy clay, with porous subsoil or good artificial drainage, if the subsoil is retentive. No other way seems to give as good results as a pasture sod ploughed deeply and the manure worked in on the surface either with the gangplow or merely cultivated in with the seed when sowing. As a rule it is considered here that the first week in September is the best time to sow, and it is noticeable that September sowing, as a rule, gives better satisfaction than earlier.

Among varieties, Democrat has had the leading place, although a good many have been growing Golden Cross and early Red Clawson; but Democrat, I think, has proven itself to be the most reliable among those named, and certainly the most generally grown. In the newer varieties we have Dawson's Golden Chaff and American Bronze, both of which appear to give promise of being excellent varieties. In my own field the Bronze is, I think, the better of the two, having a longer straw, perfectly free from rust so far, and all together giving promise of the heaviest yield I have had for years. The Golden Chaff is growing in the same field and is considerably shorter in the straw and does not appear to carry as heavy a head as the Bronze. I consider the Bronze the most vigorous fall-grower I have ever had. It will, I think, be two or three days later in ripening than Golden Chaff, and consequently there is more danger of its suffering from rust than other sorts. All together, I judge both of these varieties to be

extra good, with the majority of good points slightly in favor of Bronze.

P. S.—Will be pleased at any time to give you any information that I can to make your excellent paper interesting.

OXFORD, S. R.

A. & G. Rice.—Fall wheat is thin and short in the straw caused by ice lying too long in winter and the drought. Prospects are half to three-quarters of a crop.

Fall wheat mostly follows barley, peas or sod, ploughed in July, with barnyard manure. There seems to be but little difference between early and late sowing, all has alike suffered from ice in winter. Early sowing generally is the best other years.

Surprise and Red Clawson are doing probably as well as any variety.

There have been few new varieties grown around here the last two years. No doubt so little attention has been paid to new varieties on account of the low price. Most of our farmers have fed their wheat the past two years.

OXFORD, N. R.

H. BOLLERT.—Fall wheat in this section is a fair crop; stands well in most fields, but is unusually short in the straw. The heads are of good size, and well filled with large plump grains. Some fields suffered through the ice laying on too long, which caused the wheat to rot.

The preparation of soil, or the soil itself (which, of course, is very similar in this section), does not seem to have made any material difference, excepting the bare fallow, which does not give as good results as pea ground or clover sod ploughed down and well-cultivated. Early sowing, such as the latter days of August or the first days of September, proves best, and, unless the land is well-manured, it is useless to sow wheat at all, for it will fail nine times out of ten.

Numerous varieties are grown, as Golden Cross, Early Red Clawson, Democrat, American Bronze, Mediterranean, Velvet Chaff, etc., but all are so alike that scarcely any difference can be noticed this season.

Introduced the Genesee Giant and Dawson's Golden Chaff last fall; the G. Giant stands well with very plump, thick, medium-sized heads, which contain six rows of grain, and I expect it to yield well. Dawson's G. Chaff I think will stand lighter soil than most other sorts; in the same fields, with the same preparation of soil, it made much ranker growth in the fall, which was also noticeable in the spring, but on account of this it suffered somewhat more from the severe May frosts, but it rapidly recovered, and now looks well, and will be ready to cut on July 23rd.

WELLINGTON, S. R.

James Bowman.—The crop in this vicinity is rather light in yield, quality and straw. It made a very good start, but the frost checked it so badly that when the extremely dry weather set in, it never seemed to recover fully. In Eramosa, in some places, it is a full crop but rather light sample. In Puslinch, reports are mostly gloomy, although some have good wheat, but not enough of it. For my part I have not seen a really good crop, but have heard that in Puslinch, where summer-fallow and pea stubble were tried side by side, the pea stubble has done best this season; in fact, the crop in this neighborhood is mostly sown on pea stubble, manured and ploughed, then a good seed bed prepared by harrowing. Some plough up sod and sow after one ploughing, others plough early, then, after sod is rotted, cross-plough and work up before sowing. The summer-fallow has left this neighborhood. I have not seen one in five years. Second-crop clover, ploughed in, makes a good mould for the wheat crop, but is not often used in that way here. Sowing is mostly done in the first half of September.

Dawson's Golden Chaff is used to some extent with good results, but it is nothing extra this year. Surprise is also grown; also Clawson, Garfield, Velvet Chaff, and Democrat.

WENTWORTH, N. R.

James McCormack.—The wheat will not be an average crop; I might say that it is more likely to be under a half crop in this county, though I think the sample will be good. It came through the winter all right, but the May frosts, followed by the continuous drouth, was very injurious to the crops generally. Those on light, gravelly soil suffered the most. On thin land one farmer reports having 40 acres and will not have his seed; others report a second growth, which will be cut for feed.

Summer-fallowing generally gave the best results, but is not much practiced now. Wheat after barley or peas does well, and farmers now plough up sod when in good heart and well-handled, which gives good results when early sown; but I think that fairly deep land has done the best this year.

The varieties have not changed much this last year or two; our Golden Cross stands with most of them. This year we tried a little Dawson, which looks well, but cannot tell the result till after threshing; but I think the Manchester is about the heaviest cropper, though some favor the Red Clawson and some hold to the old White Clawson. The Harvest Queen was much spoken of a year or two past, but I think that has blown over.

W. A. Cowie.—Fall wheat has been in places a failure, owing chiefly to early spring frosts, and in part to excessive hot and dry weather during the season. Crops of fall wheat in this locality that promised 40 bush. per acre will yield 18 or 20, and that of an inferior quality.

The wheat crop has done better on well-prepared fallow, and by late sowing, early sowing seeming more liable to frost of spring.

The varieties are numerous, Dawson and Early Red Clawson being the most extensively grown, Dawson proving the most successful. As to sorts of wheat, nearly all the late varieties have at some time or other been grown in this neighborhood, including Dawson, Early Red Clawson, Surprise, American Bronze, Genesee Giant; the principal drawback in the majority of these varieties being the great liability to rust, especially American Bronze.

PETERBOROUGH, E. R.

F. Birdsall.—Winter wheat has suffered in common with all crops by the drouth and frost, but not to the same extent. The sample is not extra good, and will weight light.

Wheat sown on summer-fallow, where well-manured, seems to have done best, closely followed by pea ground that had been manured. It seems to have stood the drouth on clay loam soils better than on other land. Early sowing in the latter end of August seems to have succeeded the best.

The Surprise wheat taken all round this part of the county has stood drouth and frost, and will yield better than any other variety. Velvet Chaff and several of the old varieties have been tried, but the Surprise has proved itself superior to them all.

NORTHUMBERLAND, E. R.

Alex. Hume.—There are some fields good, some fair and others poor, partly as it was generally sown on stubble, exposure and late sowing.

On summer-fallowing, or pea stubble, low, rich ground; early sown.

Surprise, Red and White Clawson and Velvet Chaff, quantities in order named. Surprise is not good, as a rule. Old Clawson is thought by many farmers to be as good as any. White Canadian Velvet Chaff I have seen is fairly good. American Bronze is sown west of us, but I cannot tell how it has done.

PRINCE EDWARD.

W. C. Huff.—The winter wheat crop is from fair to extra. Had it not been for the drought, wheat would have been an excellent crop generally, for it wintered well.

The largest yields were grown on summer-fallows ploughed three or more times, which also received an application of farm-yard manure, although some good crops were produced from pea and barley stubble ploughed twice and sown. Early sowing is decidedly the best, and as to soil, loam is superior.

The varieties are White Peare, Red Clawson, Manchester and Velvet Chaff, the first two are extra, the others fair; some of the difference may be attributed to the soil, locality or preparation.

Autumn Cultivation.

Every stubble field that is not seeded should be shallowly ploughed and harrowed as soon after being cleared as possible. While the single plow does best work, the gang or twin plow, if kept furnished with sharp shares, will do the work about as well and much more quickly. After showers, or while heavy dew is on the grain, the time cannot be better spent than at this work. At this time the ground has not become baked, which, if left a few weeks with stock running over it, will be almost unploughable in heavy clay if rain does not fall copiously. This is one of the most productive ways of exterminating weeds. It not only starts myriads of seeds to sprout and grow, but it cuts off Canadian, Sow thistles and other bad perennial weeds at a time that gives them the greatest set-back. Run the cultivator over the land a few times during the next six weeks, and then give it a good, deep and careful ploughing before winter, when the field will be ready for spring seeding.

DAIRY.

Pure Cultures in the Dairy.

The experimental dairy at the Dominion Farm, Ottawa, have made practical tests with several Cultures of bacteria used in ripening cream. The Cultures put under test were: (1) Zoffmann's pure Culture of lactic ferment; (2) Chr. Hanson's pure Culture of lactic ferment; (3) Central Experimental Farm Culture, and (4) ordinary buttermilk. No. 1 was manufactured in Denmark; its action upon milk and cream was to give it a flavor of sour whey. When the starter prepared from it was left standing for a short time the whey or water appeared on the surface. No. 2 was also prepared in Denmark. The starter prepared from it had a pleasant, clean, though somewhat weak flavor. No. 3 was prepared at the Dominion Experimental Dairy. A small quantity about two quarts of skimmed milk was heated to 245 Fahr. The temperature was maintained at that point for ten minutes, after which, and while exposed to the atmosphere of the butter-making room, it was cooled to 80 Fahr.; it was left in a close glass-stoppered bottle at the ordinary temperature of the dairy room, from 60 to 70 Fahr., for five days. It was then found to be coagulated and to possess a mild pure lactic acid flavor, which became more distinct after it had been kept in cold water at a temperature of 40 for three days. This was the Culture. As the flavor was such as was characteristic of cream from which fine-flavored butter had always been obtained, it was decided to prepare from it a fermentation starter for the

ripening of cream. The starter was prepared by heating a quantity of skim milk (equal to about ten per cent. of the quantity of cream to be ripened) to 150° Fahr. The temperature was maintained at that point for ten minutes, after which it was cooled to 80° Fahr. A portion of the Culture at the rate of ten per cent. of the quantity of skim milk was then added to it. This became the fermentation starter. It was left to ripen at a temperature not exceeding 80° Fahr. for twenty hours. When the flavor and odor were distinctly acid it was placed in cold water at a temperature of 40° Fahr., and kept cold in order to arrest further development of the ferment. The flavor was somewhat sharp and quite pure. The butter made from the cream which was ripened with it had a richer flavor and better keeping quality than that made from the others.

The conclusions arrived at by Prof. J. W. Robertson from the comparative tests are:—

(1) The flavor of butter is largely determined by the ferments (or bacteria) which develop in the milk or cream.

(2) The ferments which cause milk or cream to ripen are ordinarily introduced into them from the atmosphere, from the milk vessels, from the bodies of the cows, or from the clothing and persons of the milkers.

(3) Where no disease exists, and where no offensive odor is prevalent, the ferments which get into the milk and cream produce only odors and flavors which are agreeable in the butter.

(4) The atmosphere of a thoroughly clean dairy building contains ferments which get into all milk and cream exposed to it, and which are capable of imparting to the butter a flavor of high market value.

(5) The Culture of ferments obtained from that source—the Central Experimental Farm Culture—imparted a more valuable flavor to the butter than the pure Culture of lactic ferment from the Danish laboratories.

(6) The home-made Culture produced slightly more butter per pound of butter-fat, in slightly less time than when the other Cultures were used.

(7) Every buttermaker may make a Culture of ferments for the making of a fermentation starter of excellent quality, in his or her own butter-making room, if everything in and about it be kept scrupulously clean.

(8) The use of a fermentation starter of fine flavor imparts to the butter made from stable-fed cows, and from cows which have been milking for periods of more than six months, a flavor of high market value, which is not usually obtained otherwise.

The "Thistle" Milking-Machine.

The new "Thistle" milking-machine was shown at the recent English Royal. The one in operation was for milking ten cows at one time. A pipe ran along the shed over the stalls, and from this branches were conveyed between each pair of cows to which the apparatus was attached. The power was provided by a 2½-horse power engine standing at one end of the shed. Each milker consists of four india-rubber cups, which fit over the teats and are joined to a tube leading into the pail which stands beside the cow. The milk is received into a glass chamber at the top of the pail, and the suction-pipe also runs into this chamber. The action is described as "pulsating,"—imitating the act of a calf in sucking. The machine, to all appearance, did its work well and effectively, the cows being milked in about ten minutes without any sign of their being inconvenienced by the process. So says the Agricultural Gazette.

The agricultural correspondent of the Western Daily Press, Bristol, who is a practical farmer, in his notes on the Royal Show says of this milking-machine: "There seems to be only one draw-back, and that was that the cows were not stripped absolutely clean. This, I need scarcely add, has to be remedied by hand. Although considerable ingenuity is displayed, I don't think machinery will altogether take away the milkers' trade for some time to come."

APIARY.

Bee-Escapes.

BY JOHN MYERS.

As the time is approaching when the surplus honey will have to be removed from the hives, and as the profit to be derived from it is determined, in a great measure, by the amount of labor bestowed thereon, we should see to it that we have the most improved implements made, in order to lessen the labor as much as possible. The bee-escape, I think, is one of the greatest labor-savers, when taking off surplus honey, that has ever been invented.

There are a great many kinds of escapes made, but I think the Porter is the best and most complete, and I have tried nearly all of them. The Porter Escape, being very simple, is made of tin, and contains a pair of very sensitive springs, through which the bees can pass very easily one way, but when they try to return or go through the other way the spring closes, and the harder the bee tries to go through the more difficult it is for her to do so. I think one of the features that makes the Porter Escape more complete in its workings than any of the others is because it more nearly closes the connection between the bees in the super and those in the brood nest. The bees in the super have to con-

gregate in a cellar or cup before they can make any connection with those in the brood chamber, and then they have to travel through an enclosed passage way, which entirely separates them from the bees which are in the upper or lower stories.

When the bees in the upper story find themselves shut off from the queen and brood, their whole energies are bent on getting back to where the queen and brood are. The more completely they are shut off from those in the lower hive, the greater will be their effort to get to the other bees; while, on the other hand, if the connection between them is not so complete, they will be more tardy in leaving the super, thus taking a longer time to clear the super of bees. I have often put on a Porter Escape and had every bee out of the super in three hours, while nearly all the other kinds that I have tried would take fully double the time to get the bees out. In using bee-escapes care should be taken to avoid leaving them on the hives too long, as the bees, when crowded into the lower story seem to take a delight in chinking in pieces of comb between the tops of frames and the escape-board; of course, if more than bee-space is allowed between tops of frames and escape-board, it makes things worse; but they seem to have a great desire to do so even when the right bee-space is left between them. Now, just imagine, if you can, the ease and comfort there is in going to a hive and removing the whole of the top story with scarcely a bee in it to bother you, to what it was when we had to lift the combs out one by one and brush off the bees and place them in the comb bucket. Now you have only to lift off the top story and place it on the barrow and wheel it in to extract. No bees in the way to bother a person, and I believe one can take off and extract fully double the quantity of combs as he can in the old way. The bee-escape is one of those things that has come to stay. Of course, a person should have a quantity of them according to the number of colonies he has; not necessarily one for each hive, but enough so he can put them on in time to have all the bees out before he needs to take off the super. I like to have as many as I think I will want to extract in one day. The evening before, I go and slip them between the brood nests and supers, and then I can commence extracting as early as I like the next day; the bees having all night to leave the super. Of course, if there is any brood or a queen in the super, the bees will not go down and leave it.

Removing the Combs.

If it were not for the stings many more people would keep bees than do now. And without a knowledge of the work, and very careful manipulation, there is no more certain time of being stung than when removing the full combs. Mr. S. T. Pettit gives his method, in the Canadian Bee Journal, which agrees with our ideas of the work. This is the method he recommends:—First give a couple of smart whiffs of smoke in the entrance, then blow smoke smartly under the quilt and the bees will rush downwards, then remove the quilt or cloth and for a moment lift the bees down with smoke; now is the time to rush the combs out quickly and shake off what bees you can quickly and lean the combs against the back part of the hive or any other convenient thing, or place them in a light box for the purpose. Now keep working lively and as soon as the last card is out, drop in and adjust the empty combs and close up the hive. All this must be done before the reaction or return of the bees sets in and the bees are still in good humor, and their zeal for gathering honey is not decreased by the presence of those empty combs and work goes on as usual. The process of brushing the remaining bees from the combs is pleasant and easy, for by this time they feel lost and lonely, and they are in no mood for self-defence. Mr. Pettit goes on with this work in the robbing season. He places a robber cloth over the comb box, and just when commencing operations fills said box with smoke; this keeps the robbers at bay. At such seasons he has an assistant to keep the air over and about the hive pretty full of smoke.

The North American Bee-keepers' Convention at Toronto.

The convention of the North American Bee-keepers' Association will be held in the Normal School auditorium, Toronto, and will begin at 8 p. m., Sept. 1. The Hon. John Dryden, Minister of Agriculture, will give an address of welcome, and also probably President Mills, of the Ontario Agricultural College. Besides the Canadian speakers we expect many noted men from the United States, amongst them Thos. G. Newman; G. W. York, Chicago, Ills.; Dr. C. C. Miller, Marengo, Ills.; A. L. Root, E. R. Root, and J. T. Calvert, Medina, Ohio; Jas. Heddon, Dowagiac, Mich.; H. R. Bondman, East Townsend, Ohio; Capt. J. E. Hetherington, Cherry Valley, N. Y.; Hon. R. L. Taylor, Epeier, Mich.; G. M. Doolittle, Borodino, N. Y.; E. D. Stillson, York, Neb. The most of those mentioned above will take part in the programme, and among them are men who have as high as 1,000 colonies of bees. Any one is welcome to attend the meetings. It is desired that the Toronto convention be the best in the 27 years' history of the organization. Every bee-keeper able to attend should do so; over a hundred have already promised. A special session of the Ontario Bee-keepers' Ass'n will be held in conjunction with the above.

POULTRY.

Some Details of Incubator Management.

BY MRS. TILSON.

My incubator experience is not exhausted yet, nor will it be for some time. The eggs were first put haphazard in the machine, as some direct, imitating hens' nests, but were afterward all pointed one way, and I thus found, by actual trial, they turned easiest and most uniformly in second case. Two pointed ends coming together, have room to slip by each other and clog, whereas a point next a head cannot do so. A lady who had used the same incubator with good success, also placed the eggs all one way. Inquiry being made of a cold storage proprietor here, he said they put them in their racks haphazard, but he had sometimes trouble through eggs bunching up, as it were, and he should experiment with placing them precisely alike. Of course this does not apply to incubators where eggs simply rest on a cloth, etc., but to those where eggs lie between slats, in parallel rows, one deep. Our West Salem cold storage house belongs to the Richer system, and Mr. Richer holds the only patent I know of for turning eggs in Mass. His arrangement is much like those incubator methods wherever a rack, with room for play, turns eggs by moving back and forth. It is a digression, but I would like to say the cold storage house here tried part of their eggs unturned, packed in the customary and sweet basswood boxes, but those frequently turned in racks kept best. I picked my eggs, as for sitters, rejecting small specimens, because either from immature pullets or the run-out end of an old hen's clutch. Large eggs, I have found by experience, do not hatch as well; they are apt to be double-yelked, for one thing, and certainly do not turn as well in a rack. I put in one very thin-shelled egg, which the incubator did not break, as mother biddy certainly would. It hatched, but I do not know the chick, and should fear such eggs would hatch sooner than an average shell, or give some of those deformed chicks so often found in incubators. Because after several days' heat at 103°, infertile eggs come out little changed, many say they can be boiled and fed fowls. Others declare they are virtually stale eggs, and cause bowel complaint. I never enjoy any experiment at all likely to make sick birds, hence those eggs were buried. Where embryonic chicks die at every stage, it is evidently the fault of the eggs; where many perish about the same time it is probably the fault of the operator.

It is best to have one person running an incubator—on the old principle that "too many cooks spoil the broth." A certain man requested his pantaloons made shorter. Late and hurriedly every woman in his household, three in all, remembered, and, unknown to each other, acted upon his request. When he put on those trousers he thought time had turned backward in its flight, and they were trying to return him to knee breeches. So a lady friend, getting up in the morning and finding the temperature of her incubator too low, turned up the blaze. Her husband coming in before the thermometer had time to respond, turned the lamp a notch higher. Neither saw the other, nor soon revisited the machine, and those eggs were cooked. One gentleman, with quite a family, told me he kept his incubator under lock and key.

A thick and double-walled incubator, with air space between walls, of course suffers least from outside variations of temperature. The popular feature of top heat most resembles a sitting hen's position and heat. A hot-water machine may not respond so readily as a hot-air one, but probably remains unchanged longer. Some of the former kind make much of the fact that their tanks may be taken out, which does not seem absolutely necessary since copper is so durable and unlikely to leak. Some hot-water machines have the heat receiver end in a coil of pipe under the tank; said coil warms all portions of reservoir more evenly, and causes any part of the egg-chamber to vary little from every other part. But when the receiver simply expands, and does not continue in a coil, there is less danger of soot accumulating. I enquired of one manufacturer how the pipes could be cleaned, should anyone carelessly burn lamp too high, and he wrote me thus:—"Apply a good hand-bellows to either end of the tubing." Those eggs left unhatched by the machine I used were not confined to any particular section of the egg-chamber, but were scattered throughout. There is a coiled tubing under the reservoir. My machine had no self-regulator, nor did I care, because I have not yet met a person using such that could entirely trust it. Thermostats help, but are not sensitive enough, do not respond so quickly but that the harm may be done before they get ready to act. With too many makes the thermometer has a poor tottering standard, or none at all, and lies on the surface of the eggs, to be tipped over by every egg as it hatches or moves. We finally had to open the incubator so often to right the thermometer, unfortunately lowering the temperature every time, that my father invented a home-made but improved standard. A few makes have a small window in front of the thermometer, so there will not be that continual opening of outside door to look through the glass window inside, which opening must jar the eggs a trifle, and glare a great deal of light on the hatching chicks, especially when one goes with a lamp at night. Others object to the window because of its little constant stream of light, and those who have experimented find hatches are better in darkness than in light. But a small slide or curtain would open more softly than the whole outside front, as usually constructed.

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.]

Veterinary.

RED-COLORED URINE OF MARE.

W. H. M., Victoria Co., N. B.:—"I have a mare, seven years old, that, after drinking or work of any kind, passes very dark water of a reddish tinge. She does not want to make water more often than would seem natural, but will hold it until put in the stable. Can you tell me what is the cause and what is the cure?"

[It does not appear from your letter that anything is seriously amiss with the mare. It is quite natural for urine, under some circumstances, to be dark in color, especially if fed on heavy grain, such as oats, beans, peas, wheat, etc., and is due to what is known as an over-nitrogenous condition of the body. It is also quite common for some animals, especially horses, not to urinate until they stand on some bedding or straw in a stable, and will not perform this natural function until they are placed there. Read my article on the use of salt in the last number of the ADVOCATE. You might also give her the following alternative powders for a week:—Nitrate of potash, two ounces; sulphur, one ounce; resin, one ounce; aniseed, two ounces; salt, two ounces. To be well mixed and a tablespoonful given in the food every night.

DR. WM. MOLE, M.R.C.V.S., Toronto.]

Miscellaneous.

KILLING GRASSHOPPERS.

THOS. BURNLEY, Camlachie:—"Can you recommend anything to stop grasshoppers from eating cabbage, turnips and other roots?"

[Spray with Paris green and water in the proportion of two teaspoonfuls of the poison to two gallons of water. This is not strong enough to render the vegetables dangerous for consumption.—[Saunders. A mixture which has been successfully employed consists of arsenic, sugar, bran and water; the proportions being one part by weight of arsenic, one of sugar, and five of bran, to which is added a certain quantity of water. The arsenic and bran are first mixed together, then the sugar is dissolved in water and added to the bran and arsenic, after which a sufficient quantity of water is added to thoroughly wet the mixture. A sprinkling of this mixture is thrown upon the ground along the line of the rows and left to do its work. This method cannot be adopted where fowls are allowed to run.—[Weed. One pound of Paris green mixed with fifty of plaster dusted over the plants would have the desired effect. It would be well to have it done when there is dew on the leaves, as the powder will then stick better. The most convenient way of applying this powder is to make a bag of cheesecloth, or some such material which will let the powder through easily, and put about two pounds of powder in the bag, leaving enough slack at the top to allow it to be shaken freely.—[Fletcher.]

ALFALFA AND ORCHARD GRASS.

N. S., Nova Scotia:—"Would you kindly give in the ADVOCATE all you can about alfalfa. It does well in Montana and also in England. Also give something about orchard grass. Why are they not grown more in these Provinces? Is it from ignorance, or the idea of its not being likely to withstand Canadian winters?"

[Our issue of April 15th and July 15th, 1895, contained good articles on alfalfa or lucern. Orchard grass is one of the most popular grasses of Europe, and is well-known to many farmers of Canada and the Northern and Eastern States. It is a perennial of strong, rank growth, about three feet high. It is more highly esteemed and commended than any other grass by a large number of farmers in most countries,—a most decided proof of its great value and wonderful adaptation to many soils, climates and treatments. It will grow well on any soil containing sufficient clay and not holding too much water. If the land be too tenacious, drainage will remedy the soil; if worn out, a top-dressing of stable manure will give it a good send-off, and it will furnish several mowings in a single year. It grows well between 20 degrees and 48 degrees latitude. It must be lack of knowledge of the value of lucern and orchard grass which hinders their more general cultivation in the Maritime Provinces.]

MANGELS AND THE FROST.

A SUBSCRIBER, Amberley:—"The mangels in this section are very poor on account of the drouth. How would they do seeded in the autumn?"

[All mangels that were up this year where the May frost was at all heavy, were entirely destroyed and had to be re-sown. Fall-sown mangels would probably fare about the same, whether they sprouted in the fall or early spring.]

FEEDING.

W. H. STEWART, Tintern:—"The dry weather in our locality will necessitate my buying feed for cattle and horses. Please give method of finding out the different ingredients that food is made up of, viz.: albuminoids, fat, carbohydrates, and fibre; also how to figure out the nutritive ratio; so that a person may know which food to buy that will

keep his stock through the winter at the least cost for feeding value. As I have to feed straw, will it pay better to buy oilcake or cotton-seed meal instead of bran to balance the ration?"

[The U. S. Department of Agriculture issued Farmers' Bulletin No. 22, on the Feeding of Farm Animals, in February, 1895, which gives the minimum, maximum, and average composition of feeding stuffs from a large number of analyses, which bulletin will be sent to any address by applying to the Department of Agriculture, Washington, D. C., U. S. A. When the composition of a food is known, the nutritive ratio is determined by multiplying the digestible fat by 2.2, adding the product to the digestible carbohydrates, and dividing the sum by the digestible protein. That is, by making a ratio having for its first term the digestible protein, and for its second term the digestible carbohydrates plus 2.2 times the digestible fat. To illustrate, take wheat shorts: digestible fat, 3.83 x 2.2 = 8.426, plus digestible carbohydrates, 49.98 = 58.406. The digestible protein being 12.22, the nutritive ratio is 12.22 : 58.406, which, reduced to its simplest form, is 1 : 4.77. As straw is low in protein and fat, oilcake or cotton-seed meal is more economical to buy to supplement the straw than is bran, at the current prices of these products.]

LIVE STOCK MARKETS.

Toronto.

The market was a little better as regards shipment of cattle, Mr. Akin sending forward to the Old Country about 250 head, and 500 sheep of good quality. Many of them appeared to be Shropshire and Southdown crosses on long-wooled sheep.

The offerings were fairly good, embracing 68 loads, which included 1,061 sheep, 1,000 hogs, 85 calves, and a few milk cows.

The receipts for the week were 2,280 cattle, 1,263 sheep and lambs, 4,263 hogs. Butcher cattle were, perhaps, a little better than those noted in my last report, Mr. MacLellan paid 4c. per lb. for five cattle averaging 1,000 lbs. each.

Hogs.—Prices quoted to-day for best bacon hogs were from \$1.75 to \$5.00 per cwt., weighed off cars. Offerings were large, but all sold easily, with some demands not satisfied. Good lean hogs wanted, especially for bacon purposes. Thick fat hogs asked for; no inquiry for stores, only a few being taken by the cheese factories. Quite a variety were to be seen, including two or three Poland-China grades, with good long back and sides; some Tamworths and crosses; a very level lot with good, fleshy hams; all of these maintained their prices. There was some inquiry for breeding sows at 4c. to 4 1/2c. per lb. Fat hogs bring \$4.50 to \$4.70. A very fine lot of Yorkshire, white grade, fetched \$5.00. The market was firmer, and a rise of 50c. from my previous notation, with a prospect for further advance next week. Demand good for best bacon hogs of the long, lean, dairy-fed sort.

Some farmers spoke more hopefully to-day, and said the recent showings would help things greatly.

Now and then a few stall-fed cattle come in, and they are picked up immediately. The range of prices may be put down from 4 1/2c. to 4 3/4c. per lb. for good ones, with a prospect for higher prices. For butcher cattle this price still continues low; choice, \$3.50 to \$4 per cwt.

Hides.—There is a fair demand for hides; the receipts are small. Dealers are paying 8c. for green hides and selling cured at 9c.

Wool.—There is a good demand for all the wool offering, owing to increased export. There is a considerable quantity of wool passing through and if the present price is maintained the shipments will continue.

Hay.—There has been considerable activity and strength in the hay market this last week, and the feature has been the sharp advance in prices of \$1 to \$1.50 per ton. Many feeders have stored large quantities against emergencies. The volume of business transacted has been large; shipments being made to various Ontario points. No. 1 Ontario standard straight timothy is very scarce, and was asked for.

Wheat.—Only one load on offer; white selling at 82c.

Oats.—A slight rise; 300 bushels selling at 39c.

Hay.—Market steady to-day; only ten load of old selling at \$17 to \$18; new, \$11 to \$11.50. One choice lot fetched \$12.50.

Baled hay, No. 1, \$14; No. 2, \$12 to \$13.

Straw.—Three loads on offer; one lot sold at \$9.

Eggs.—In fair supply; demand good; price steady; 10c. to 12c. warranted strictly fresh-laid.

Mill feed is in good demand. City mills quote car lots at \$17 to \$18. Some bran was offered at \$12.50.

Poultry.—Chickens, 50c. to 60c. per pair. Ducks, 60c. to 70c., large size.

Prices range as tabulated:—

Table listing prices for various livestock and commodities such as Milk and springers, Butchers' choice, Hogs, Eggs, Butter, Poultry, Ducks, Wheat, Oats, Hay, Straw, Hides, and Wool.

Montreal.

Trade for the past two weeks has been decidedly against drovers, and there is no doubt but many of them have dropped no little money. Owing to the steady drop in values experienced in Toronto, due to the drought, many drovers, who do not make a practice of it, have sent their cattle on east, preferring to do so rather than take the price offered. This has led to our market being overstocked and coupled with the indifference shown by butchers to take anything unless at rock-bottom prices, has caused cattle to sell at the lowest figure obtained so far this season. Another thing militating against drovers has been the presence of a large number of Manitoba cattle on the market, and from the evident reluctance of both buyers and sellers to quote figures, there is no doubt but that some sellers received a "roust."

There has been no choice export cattle offered for some time; therefore no estimate is of value; quite a few small lots of the best butcher cattle have been taken to finish space, however, for which a high as 4 1/2c. per lb. was paid, but this was an outside figure, and has rarely been reached during the past fortnight. Good butchers' cattle can now be had at 3 1/2c. down to 3c. per lb., culls and common stock running down under 2c. in some instances. Choice fat sheep for shipping meet a good demand at 3c. per lb., with few offerings. Butchers' stock as low as 2c. Spring lambs are also meeting with a good demand, from \$2 to \$3.75 each being realized.

Calves for some time past have met a good steady trade, the offerings being pretty well absorbed at from \$7 to \$10 for choice, \$3 to \$6 medium.

Live hogs continue to advance and contracts have been made for this week at \$5.15 per cwt. off cars, for useful, long, lean bacon hogs; thick fats from 15c. to 20c. per cwt. less.

The offerings for local use have been about 1,000 cattle, 600 to 800 sheep and lambs, and 400 to 500 calves weekly. For export, shipments continue firm; the exports for the two weeks being 6,969 cattle, 12,307 sheep and 1,047 hogs.

East Buffalo Stock Letter.

Sheep and Lambs.—The market has been the lowest ever known at these yards. Receipts have been beyond expectations; in fact, the heaviest ever known at this season of the year. This free marketing of stuff is largely attributed to the dry weather prevailing largely in Michigan, Ohio and Indiana. Fully two-thirds of the offerings is trash, what is selling at ruinously low prices, and some of it is so poor in quality that it cannot be sold at all. We are likely to feel the effect of this free marketing later on, and we believe that those who can take advantage of the situation will profit by so doing. Good sheep and lambs are scarce, and anything that has fat and quality will find ready sale at fair prices. The export trade has been very light. The few that did sell went at \$3.50 to \$3.75, while the good to choice handy weight sheep were all the way from 2c. to 3c. It took good culls to bring 1c. per pound, and the trashy stuff was peddled out by the head, averaging from 50c. to 75c. per hundred. The lamb trade was much slower than the sheep trade, and much more unsatisfactory. It took the very primest lambs to bring 6c. per pound, and there was a very light demand for them at that. Good bunches sold from \$3.50 to \$4.00, and common and cull grades went from 2c. to 3c. per pound. It is not likely that there will be any improvement to speak of for nearly a week. Buyers here are all overstocked, and the same seems to be the case at all large points east of us.

Hogs.—The market has declined a little, and the decline at the Western points has been about 30c. per hundred. How far this break will continue remains to be seen; yet there is one thing that we have maintained all along, and that is unless we get an improvement in the demand for the product which is piled up in the cellars, we are not likely to have any higher prices. There has been no sign of improvement in the demand as yet, and until that comes we believe that prices of hogs will fluctuate and that the market is more likely to tend downward than upward. Prime heavy grades selling here to-day (July 29) at \$5.40, and the best York weights \$5.50 to \$5.55. Dairy hogs selling about \$5.25 for good weights. The market closed rather flat with a very light demand for the latter kind.

Cattle.—The market is practically in the same condition as it was two weeks ago. If anything, nice, handy butcher cattle, or nice, handy cows and heifers have been selling about 25c. higher, yet the good cattle generally are not selling any better than they were a few days ago. The European markets do not offer much encouragement for buyers of export grades, and taking it all in all the outlook is not any too good. We do not believe that values in general are going any lower, and we would not be surprised to see nice, handy steers, suitable for butcher or shipping purposes, or cows and heifers of good quality, sell for better prices within the next thirty or sixty days. There is a large proportion of common and cull stuff coming to market. Prime to fancy steers selling from \$5.25 to \$5.60; good ripe 1,000 to 1,200-lb. steers, from \$4.60 to \$4.80; fair to good steers, 1,000 to 1,100 lbs., \$3.60 to \$4; good to prime heifers, from \$3.50 to \$4.50; fair to good cows, \$2.25 to \$2.50; common cows, \$1.50 to \$1.75. Milkers and springers, bulls, oxen, etc., selling at about the same prices. ERICK BROS.

Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.)

Extreme top prices now, compared with two weeks and one and two years ago:—

Table comparing current prices with two weeks ago and one and two years ago for various livestock categories like CATTLE, SHEEP, and HOGS.

Chicago live stock receipts for the year so far compare with several previous years as follows:—

Table comparing live stock receipts for the year so far with previous years (1894, 1893, 1892) for Cattle, Hogs, and Sheep.

It will be noticed that cattle are running behind quite strongly, while hogs are largely ahead of last year, and sheep are surprising everybody by being larger than ever before for a like period.

Following were some recent sales of distillery cattle: The Globe Distillery had 15 stags on the market that averaged 1,360 lbs. at \$4.75, and 85 steers that averaged 1,319 lbs. at \$3.60. The Atlas Distillery marketed 79 head of cattle to-day; 38 head, averaging 1,290 lbs., at \$5.50; and 41 head, averaging 1,303 lbs., at \$5.50.

In the main, the corn-fed cattle coming to market are of very poor quality.

On one day recently cattle sales included rough 1,450-lb. steers at \$4.50; tidy, fat, 1,100-lb. cattle at \$5.25; distillery steers, 1,339 to 1,376 lbs. at \$5.10 to \$5.60; Montana grass cattle, 300 of them, averaging 1,376 lbs., at \$4.70; double wintered Texans, 1,308 lbs., \$4.40; meal-fed, 1,089-lb. Texans, \$4.50; "through" grass Texans, \$3.25 to \$3.75.

On the London and Liverpool cattle markets, best American steers sold at 12c. against 9 1/2c. a year ago, and 12 1/2c. per lb., sinking the offer, two years ago.

Several cattlemen expressed the opinion that good beef cattle will sell well during the next six weeks or so.

There is quite a demand for stock cattle and feeders, but it is not so good as it would be if the grass and hay crop were not so deficient.

Ten cars of 223-lb. Oregon wheat-fed hogs sold at \$3.40. The owner ships one or two trains of hogs a month to the East, and says the surplus there is considerably larger than the Portland, Tacoma, Seattle and Spokane butchers can use, and that Chicago prices, therefore, govern the local markets. He says those cities bought from the East last year 500 cars to meet the demand, and that butchers there ought to do something to save the country from paying freight two ways half across the continent on what meat is needed in the Pacific Northwest.

The Pacific Northwest is destined to reap important benefits from increased trade relations with China, Japan, and Russia.

The recent boom in the price of hogs seemed to stir up quite a little run of hogs, the quality of which was very good. The hog-raisers evidently have been finding it cheaper to feed corn than to sell light hogs lately, and for that reason it is argued that the quality will be good right along during the summer.

There was a tremendous spurt in the demand for light hogs lately, and 170-lb. stock sold at a premium of 20c. over the best 350-lb. hogs. The fresh meat demand, and the fact that the provision market is so low, explains that fact. Just at present the market for provisions and hog products generally is very badly "out of line" with the prices for hogs.

The cash demand for provisions has improved a little; hog receipts have become very small. But stocks kept large and every one seems content to let the market take care of itself. Packers are sold up well and the only important buying will be when their cash demand springs up.

The corn prospects were never better at this season. Conditions have been so favorable for a fortnight, it is assumed now nothing can harm the crop except frost; and that, if cold weather does not overtake it, the yield will be the largest ever harvested.

There is a big demand in the country for young hogs to fatten on the old corn left over from last year.

The foreign demand for horses is very good, and prices are good for the season. The demand is chiefly for good 1,300 to 1,700-lb. chunks. Following are the latest Chicago prices for horses in the auction ring:—

Table showing Chicago prices for horses in the auction ring, categorized by description and price ranges.

An Illinois horse-buyer who has been very successful in buying and shipping horses from this country, says he finds the best method to put up bill-posters in a country town stating that he will be there on a certain day to buy horses. He says it takes less time than to visit the farmers; he can make his purchases at more uniform prices, and usually to better advantage, as farmers who take horses to town to sell would rather make some concession than to lead them back home.

The sheep market is in fair shape. The following were among the transactions on one day: Some good, light weight sheep, 86 lbs., sold at \$4.30; yearlings, 106 lbs., at \$4.60; medium to good sheep, \$3 to \$4; 1,739 Texans, 83 lbs., \$3.60. Lambs sold at \$3 to \$5.40, chiefly \$4.75 to \$5.15.

In the meat shops of towns in New Mexico and Arizona, the visitor from the East is apt to notice that the dressed carcasses of sheep have a tuft of wool still attached to the head and tail. This is left by the butcher to assure the customer that it is mutton and not goat flesh they are buying, for in those territories many flocks of goats are reared and pastured by the small Mexican ranchmen, to be killed for food for the poorer natives. Roast or stewed kid, with Chili pepper-sauce, is an esteemed dinner dish at the tables of many well-to-do Spanish and Spanish-American citizens.

The range cattle are coming to market in splendid condition, and the ranges of the Northwest and of Texas also never were in finer shape. With prime Western range cattle selling at \$4.70 for "natives" and \$4.40 for double wintered Texans, rangemen feel in good spirits.

SHOWS AND SHOWING.

Toronto Industrial Fair.

Never before were entries for the Toronto Industrial Exhibition as numerous and extensive so early in the season as is the case this year. Already the entire ground floor of the Main Building has been taken up, and there is not very much space left in the galleries. The interior of the building has been completely rearranged, with a view to increase the space for exhibitors and to increase the artistic effect of the general display. Some highly-tasteful and well-arranged designs will be on view, as exhibitors this season are paying more attention to displaying their goods in an attractive manner.

Machinery Hall, the Music Pavilion, and the Implement, Stove, Carriage and Bicycle Buildings are all taken up, and will be crowded to their fullest extent.

So many applications were made for space in the Music Pavilion that the management were compelled to effect a rearrangement whereby the space originally allotted to some firms was curtailed. There were eleven firms represented in this department last year; in the coming Fair there will be sixteen.

In live stock, as previously intimated, there will be a splendid showing, particularly in the choicer breeds of horses and cattle. The representation of Jerseys and Ayrshires will be large, and the entries in Thoroughbred Horses and Carriage and Saddle horses include some of the most celebrated stables in this country, and not a few representatives of the United States. Horse and cattle men, who have visited the grounds lately, express their satisfaction with the improvements in the way of grading, drainage, etc., in connection with this department. The improved condition of the speeding track will secure many additional entries for the popular running and trotting races.

The programme of special attractions includes many taking novelties, the most important feature being the thrilling military and fireworks pageant, "The Relief of Lucknow," with 500 performers, concluding with a magnificent fireworks spectacle.

MISCELLANEOUS.

Cutting Horse Food.

A veterinarian who has had the supervision of hundreds of Old London horses of all classes, maintains that no horse, whatever his size, can possibly consume more than 40 lbs. of food per diem (if even so much), say 20 lbs. of hay and 20 lbs. of corn, a common allowance for brewers' dray horses. A large portion of this even is wasted. The teams of large coal and brewer companies are out for a long time during the day, and often as much as one-half their daily supply is eaten out of nose-bags, out of which about one-fifth of the food contained in these wasteful but necessary receptacles becomes spilt and spoiled. Bus horses, who only eat when in the stable, are allowed from 30 lbs. to 32 lbs. of mixed hay and corn, and even then there is considerable waste in the manger, but what they eat is found all-sufficient to keep them in prime condition with proper care and good stable management.

Mr. Herbert Gardner, President of the British Board of Agriculture under the late Rosebery Government, has been made a peer.

MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES,—

Although I had always heard a great deal about the picturesqueness of the St. Lawrence, I was by no means prepared for the great beauty of that favored waterway to Montreal. A large party of us took the boat at Hamilton, some to remain over at intermediate points and others to go straight on and join the ocean steamer for England; in this way prolonging their journey by water three days. We stopped at the "Queen City" long enough to see something of our friends, who met us at the wharf, and take a run up into the City in search of "bargains." Eaton's was of course the great centre of attraction, and, having purchased one or two necessary articles and not a few unnecessary ones, "because they were so cheap," we repaired to the basement of the store for ice cream, of which they gave us a most generous share for five cents. Then as the captain had informed us we were to leave at "six sharp," we returned to the "Hamilton," not a moment too soon, as they were just about to draw in the gangway. The bell for tea rang shortly after, and though we all declared we were not hungry, we certainly managed to do ample justice to a very good tea. I think the meals on the "Hamilton" are excellent, considering how cheap the fare is; a return ticket from Hamilton to Montreal costing \$16, including berth and meals. After tea we all went up and sat in the bow of the boat and managed to pass the time pleasantly enough, reading till we could no longer see, and then chattering away at a desperate rate. We remained on deck till midnight, when we reached Cobourg. Having watched a solitary passenger land there on a very dark wharf, we unanimously decided it was time to turn in.

Next morning, when we came on deck again we found ourselves at Trenton; we would have had plenty of time to go and explore the neighborhood there had we felt so disposed, but we were all too hungry to do anything but wish for breakfast; neither the most amusing book nor the most interesting conversation diverted our thoughts in the slightest from the much-longed for meal, and when the bell at last did ring, we hurried off more like a pack of famished hounds than hungry "humans."

Belleville, Northport, Deseronto and Picton were all passed before noon; to the latter place the "Hamilton" seemed much attached, and more than an hour's delay was caused before we could get off again. The water is so much lower this year—lower than it has been for forty years, I was told on good authority,—that the most careful steering is necessary in order to avoid the many shallow places. We next passed Glenora, and Bath shortly after, and then we pursued the even tenor of our way with no further stoppages till we reached Kingston. We would like to have explored the "Limestone City," but our time there was too short; the detention at Picton had made us an hour or so late, and the captain was anxious to make up time. As we approached Gananoque, numerous lovely islands appear in sight, their size and shape as varied as their color and foliage. We seemed to pass them too quickly to appreciate the romantic beauty of our surroundings. The captain told us the names of many of the islands, and legends in connection with them. On one, rather larger than the rest, an Indian family had lived,—father, mother and daughter, the latter a very pretty little savage. A young Englishman, having seen her paddling down the river in her canoe one day, fell desperately in love with the pretty Leetah, and eventually—much to the horror of his friends—married her. It did not take him long to find out what a mistake he had made, and at last he resolved to leave her forever, and return to England, taking his little daughter with him. This he shortly after did, and poor deserted Leetah died of a broken heart. The ghost of the lovely Indian girl is still supposed to appear periodically, paddling around in her canoe, lamenting for her husband and child. On another, "Refugee Island," some criminal, escaped from justice, had taken refuge, and managed to remain in concealment there till both he and his crimes were forgotten.

MINNIE MAY.

Vacation Time.

The grammars and the spellers, The pencils and the slates, The books that hold the fractions, And the books that tell the dates, The crayons and the blackboards, And the maps upon the wall, Must all be glad together, For they won't be used till fall.

They've had to work like beavers To help the children learn; And if they want a little rest, It surely is their turn. They shut their leaves with pleasure, The dear old lesson books, And the crayons and the blackboards Put on delighted looks.

So, children, just remember, When you are gone away, Your poor old slates and pencils Are keeping holiday. The grammars and the spellers Are as proud as proud can be When the boys forsake the school-room, And the teacher turns the key.

Margaret E. Sumner.

THE QUIET HOUR.

"Intercessory Prayer."

"Pray for my soul. More things are wrought by prayer Than this world dreams of. Wherefore, let thy voice Rise like a fountain for me night and day. For what are men better than sheep or goats That nourish a blind life within the brain, If, knowing God, they lift not hands of prayer Both for themselves and those who call them friend? For so the whole round earth is every way Bound by gold chains about the feet of God."

The Spouse in the Canticles, who represents the Church, cries to the heavenly Bridegroom: "Set me as a seal upon thine heart." Christ answers this prayer by interceding for each of His people in Heaven, by bearing upon His heart the wants, trials, troubles, sins, of each, and by pleading for each the merits of His most precious Death and Passion. In the seventeenth chapter of St. John's Gospel, which contains the great high-priestly prayer of Our Lord, we find Him commencing this office of Intercession. "I pray for them," says He of His disciples. The Intercession then commenced; but it has been continuing ever since; it embraces not the Apostles only, but every soul of the redeemed. Of this Intercession the breastplate of the Jewish high priest supplies a beautiful figure. In the breastplate there were twelve precious stones, arranged in four rows of three, upon each of which was written the name of one of the twelve tribes. The breastplate, when worn, would rest upon the priest's heart,—would rise and sink with every palpitation of the breast. When he appeared before God in his full sacerdotal attire, there would be the twelve names upon his heart, indicative of his love and care for the whole people of Israel. The names upon the high priest's breastplate betoken the individuality of Christ's Intercession for His people. Not a sparrow is forgotten before God. And not a single want or woe of a single soul is forgotten by the God-man when He intercedes. The Intercession of the great High Priest for the whole Church is ever rising, like a cloud of fragrant incense, to the Throne of Grace. And it should be our ambition to throw, each one for himself, our little grain of incense into His censor. The prayer, which is offered by the Head in Heaven for the whole Body, should be re-echoed by the members here on earth.

By undue and overstrained self-inspection the mind is apt to become morbid and depressed. A man may become a valetudinarian in religion, full of himself, his symptoms, his ailments, the delicacy of his moral health; and valetudinarians are always a plague, not only to themselves, but to everybody connected with them. One tonic adapted to remedy this desponding, timid, nervous state of mind, is an active sympathy, such as comes out in intercessory prayer, with the wants and trials of others, a sympathy based upon that precept of the holy Apostles, "Look not every man on his own things, but every man also on the things of others."

If the Lord's Prayer is to be the great model of Prayer, as it surely is, how much intercession ought not our prayers to contain! This extraordinary Prayer is so constructed that it is impossible to use it without praying for all other Christians as well as ourselves. Intercession, instead of being a clause added on to it, is woven into its very texture. Break off the minutest fragment you please, and you will find intercession in it. When we pray for others, we usually add some paragraphs at the close of our ordinary prayers, distinct from them. But in the model Prayer, the intercession and the petitions for self interpenetrate one another; the petitioner never employs the singular number. A wonderful contrivance, indeed, by which the Author secures a more important end than we perhaps are apt to think of. The Prayer, it must be remembered, was given as a kind of watchword for Christians. Now, this sign or watchword must necessarily have Love woven into its very texture; for what was the appointed note whereby the world was to know disciples of Jesus from those who were not His disciples? His own words answer that question very pointedly: "By this shall all men know that ye are my disciples, if ye have love one to another." Then in the very watchword of the disciples there must be Love. And this could not be more strikingly contrived than by drawing up the watchword in such terms that no man could use it as a prayer for himself without at the same time interceding for his brother Christians. And yet there is perhaps no part of devotion which good Christians more systematically neglect. May it not be said that commonly even devout persons feel very little interest in any intercessions, except such as touch their own immediate circle of family and friends? While, perhaps, there are some who, of set purpose, hug a sort of spiritual selfishness, and would not hesitate to avow that for them the personal question of their own salvation is indeed the whole of religion.

Some, no doubt, shrink from intercessory prayer, under a feeling that, as coming from them, it would be presumptuous. "What am I, that I should plead the cause of others?—I, who have so much to ask for myself, and who have no native right to ask at all. Or how can I think that prayers from me, like those from righteous Abraham, can win anything from God for my brethren?" The feeling is mistaken in its application. In the first place, what God expressly commands us to do, it can never be a presumption to do. Next, as regards the imagined feebleness of our prayers for others, we must inquire how far it may possibly

resolve itself into a half-sceptical question as to the efficacy of Prayer altogether. Then, we should remember that our prayers do not stand alone, but that in offering them we co-operate with the whole Church, and, above all, with Christ, the Head of the Church.

(TO BE CONTINUED.)

Intercession.

Some one is praying for me to-night; Some one kneels at a holy shrine; In the quiet gleam of a taper's light Two cheeks with starting tears are bright, And a name that is uttered is mine.

Some one is praying for me I know; Ah! hard was the battle I strove to win, Sharp was the onset, bitter the blow, That drained life's fountain and laid me low, And heavy my weight of sin.

Some one is praying for me this night; In an earthly temple he kneels alone; Some one wrestles with words of might That a heart so black may be washed and white, And his word mounts up to the throne.

The sound of the Angelus heard in the air; The strain of the choir in a sainted tower, The song of a child untouched by care, Are not so sweet as the peace of prayer That comes to my spirit this hour.

Some one on earth and One on high For a passing soul with pierced hands pleads; This night of battle, when I must die, Is bright as a pageant of victory With its trumpets and neighing of steeds.

THE CHILDREN'S CORNER.

A prize will be given in January for the best short original fairy tale. The writer must not be more than sixteen years of age. Send the stories, with name, age, and address of writer, to Cousin Dorothy, FARMER'S ADVOCATE, London, Ont.

An Unexpected Messenger.

(Continued from page 285.)

The evening wore on, and when the children's bedtime came she took down her husband's well-worn Bible, her comfort in trouble, and read a few verses; then they all knelt while she asked God's blessing on them, praying that her boy might be kept from temptation and brought safely home. As she tucked her in bed, May coughed several times, and Mrs. Service said anxiously, "I do not like that cough, May; you are so subject to croup."

She was about to retire when May gave two or three choking coughs, then suddenly sprang up, crying, "Oh, mamma, mamma!" Mrs. Service was at her side in a moment. "Mamma, I am choking here," she said, putting her hand to her chest. Her mother hurriedly prepared medicine, but without effect, and at last, frightened, she went to the window and raised the blind. Seeing a light in a neighbor's window, she roused Bertha. "Run in to Mrs. Waldy's and ask them to bring the doctor, quick, May has the croup." She bent over the child, doing all in her power, but every moment her breath came harder. Bertha soon returned with Mrs. Waldy and the kind old doctor, who bent over the child anxiously; but the terrible disease was destined to prove fatal, and at last he said, "I cannot do any more."

Mrs. Service held her child's head in her arms, watching her sufferings with a white face, until at last her agony ceased, and she laid the golden head back on the pillow. Her baby was gone. Bertha threw herself into her mother's arms and sobbed herself to sleep. When all had gone and the house was quiet, she drew down the blinds and sat down to wait for Arthur. As the young people neared home, seeing a light, one said to Arthur, "Is anything wrong? What is the light doing so late?" "I don't know," he answered, and as they drove up he bid all a hurried good-night, and entered the house.

When Mrs. Service heard the bells she rose. "Oh, how can I tell him," she moaned; "it will break his heart." Controlling herself by a powerful effort, she sat down again as Arthur entered.

"Why, mother, why are you up so late; is anything wrong?" "May has been very sick," she answered. "What was the matter—croup?" he added quickly. "Is she better?" "Yes, she is better now," she answered. A suspicion of the truth began to dawn upon him. "Mother, tell me," he said, huskily. "My poor boy, can you bear it? She took the croup very bad about ten o'clock, and when the doctor came he could not save her."

He covered his face with his hands, but presently said, "Where is she?" She pointed to the room, and going in, Arthur closed the door and threw himself down by the silent form of his darling, who a few hours ago was playing so happily with her doll.

His heart smote him as he remembered how she had stretched up her little arms to be kissed and he had refused; she would never be held in his arms again, and he would never hear her merry, ringing laugh, or the patter of her little feet.

Mrs. Service softly entered the room as he rose to his feet. "Mother," he said, "could you have saved her if I had been here to bring help?" "No," said she. "Did she speak?" he asked again. "She said: 'Kiss Arthur and tell him to be good.'"

There was a long silence as they stood looking at their darling; then he said, "Mother, I have gone wrong; I have been wild and caused you a great deal of anxiety. I know you did not want me to go to-night; but I did not break my pledge,

Please God, I will do as May said; I will be good. The thought of our lost darling will help me on. Her pure, innocent little life shall not be in vain. And he kept his word.

K. J. WEBSTER, Lansdowne, Ont.

I have only received five letters during the last fortnight. Two were from sisters. These two letters were almost exactly alike; in fact, one is copied nearly word for word from the other. I do not expect anything very clever from children; but please try to be original. There is a letter from Portage la Prairie, Man., and a story from a little girl of nine years old living in Illinois—the first I have received from the States. Here is a story by Florence Carr, aged twelve. She also lives in Portage la Prairie.

Honesty Is the Best Policy.

A Quaker in England kept a grocery store, and among the articles for sale was bacon. Very soon he missed a large portion of the bacon and wondered where it went to. He guessed that it was being stolen, so he set himself to watch one night by the door of the cellar where the bacon was kept. After awhile he saw two men creeping silently along on the ground towards the cellar window; they opened it noiselessly, and one got in. Meanwhile the Quaker had come up behind the man who expected to take up the bacon. Turning around, the man caught sight of him and ran away, leaving the Quaker to take up the bacon as it was handed him. When he had brought up four hams the Quaker said, "Have you enough?" "Oh, no," was the answer, "let me have two or three more." "All right." But when the man got out of the cellar who should it be but John, the Quaker's servant. Imagine his consternation when he was confronted by his master. John refused to take the bacon, saying in a shamefaced way, "I—I don't deserve it." "But you shall take it," answered the Quaker, "because if you hadn't needed it you would not, I'm sure, have attempted to steal it."

One more letter, from A. M. Salkeld, is worth printing; but it will have to be kept over until next issue. I am always glad to get your letters, so please write again to your old friend—

COUSIN DOROTHY.

THE SOCIAL CORNER.

Under this heading, communications relating to the home or any subject of interest will be published and questions answered.

MINNIE MAY.

"MADGE."—To start clematis, bend down a young shoot and bury a piece of it in the earth without cutting it. It will generally strike root at the covered part and start an independent growth, when it may be severed from the parent stem. Roses root rapidly if treated in the same manner, which process is termed by gardeners, "layering."

M. M.

"HESTER B."—To make a very nice variety of mustard pickle, take two quarts of young cucumbers, two quarts of small round onions, a large cauliflower divided into proper-sized pieces, and a few chopped green peppers. Soak all together in a brine made of one cupful of salt in one gallon of water; scald slightly in this and drain thoroughly. Mix a cup of flour, a half-cupful of ground mustard and a tablespoonful of tumeric into a paste with a little vinegar; add a cupful of sugar and vinegar, enough to make two quarts. Boil and stir constantly until the mixture thickens, then add the prepared vegetables, and just allow them to come to a boil, then bottle for use.

M. M.

"PHLOX."—Table cloths and napkins are in much better taste hand-hemmed than machine-sewed; pure white damask is the prettiest.

M. M.

"AMATEUR GARDENER."—I learn from a floral journal that the best time to start cuttings of fuchsia is just when the wood is beginning to ripen. If taken earlier they are liable to damp off; if later they grow but slowly and do not make a good growth. They will start at any season, provided the wood is of the proper hardness, but spring and fall are most favorable. Garden loam, sand and compost, in equal proportions, make a suitable soil, but unless you have perfect drainage you will not be successful with them. Fuchsias require a partially-shaded situation during the summer.

M. M.

"MADCAP VIOLET."—You are early thinking about your supply of autumn leaves. The following is a very effective method of preserving them: Warm a flatiron moderately hot, and rub over with spermaceti and apply lightly to each leaf. A little practice will enable you to determine the right amount to use and also the proper heat.

Ferns may also be treated in this way, but should be gathered early, as they are not so pretty when they become older.

M. M.

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

That mischievous cousin of yours told you last month that if Uncle Tom had been around he'd have been preaching a sermon on the danger of making a mis-step in anything in life, and that remark has set me thinking. Not that I wish to "preach" at any time, but just to have a pleasant chat with you all, and if we can introduce a moral into our conversation, why so much the better.

One of our great poets has said that there are "tongues in trees, books in the running brooks, and sermons in stones." Who ever heard the trees speaking, you ask? Or read a story in the water of the brook; or a sermon off a stone? But pause awhile and think. Did you never, when looking at the sparkling, purling water of the brooklet, wonder where it came from, whose hearts its soft murmurs had already cheered, what fair flowers it had kissed on its way to your farm, and whither it was speeding so tirelessly as it sang this merry song:

"I chatter, chatter as I flow
To join the brimming river,
For men may come and men may go,
But I go on forever!"

And did not wonderful fancies crowd around you, casting about you, as it were, a sweet enchantment, and telling you of other barefooted lads and lassies who waded the shallow depths; of the soft-eyed cattle that nibbled the luscious grasses by the margin, or gratefully stood knee-deep in the cooling waters of this self-same stream? Oh, yes, quite often, you say, but we only imagined all that—we did not read it in the brook. Ah! there you mistake; true, there are no printed words, but the brook suggested all those thoughts, and that was its manner of speaking to you. As for trees having tongues, do we not all hear them whispering when the soft zephyrs play in their branches; we may interpret them if we will.

Early one spring I sowed some flower-seeds in boxes in the house, and, after giving them water for a few days, I noticed very minute specks of green peeping through the earth, and in some cases lifting lumps of clay several times larger than themselves. Such tiny, frail things they were, I marvelled how they could force their way upward, and in answer came this thought: It is not mere strength, but resolute will and increasing effort that accomplishes great deeds. Then, when the little seedlings increased in size, I noticed that they all leaned towards the window, and I turned the boxes, but the next day the same sight met my view—every tiny plant had its face turned resolutely to the sunlight, and I could not help thinking that from those helpless-looking leaves we might learn a wholesome lesson, namely this, that although we may be turned by adverse circumstances from the path we desire to travel, although obstacles may arise before us, we can surmount them all by determined effort, or at least, like the seedlings, we can always turn our eyes to the light.

Such is the tale the beauties of nature tell my dear nephews and nieces, for their tenderest whispers are reserved for the ears of youth.

Truly—

"It is better to weave in the web of life
A bright and a golden filling,
And to do God's will with ready hearts
And hands that are swift and willing,
Than to tear the beautiful slender threads
Of our curious lives asunder,
And then blame Heaven for the tangled ends,
And sit and grieve and wonder."

And thus I hope you all will do, looking ever at the bright side meanwhile.

Your loving old— UNCLE TOM.

Puzzles.

1—ACROSTIC.

A city on the Danube; an Italian river; a great metropolis; a city in Bavaria; a city in Portugal; the ancient capital of the world; a forest celebrated by Shakespeare; a French city famed for silks. The initials form the name of a favorite residence of Her Majesty the Queen.

2—ANIMALS ENIGMATICALLY EXPRESSED.

- 1. What a story-teller continually does.
2. A Hindoo gentleman, and the beginning of a negative.
3. A participle signifying the reverse of went, and a consonant.
4. To endure.

3—RIDDLE.

I went to the barn and got it; after I got it I looked for it, and the more I looked for it the less I liked it; so I brought it home in my hand because I could not find it.

Answers to Puzzles in July 1st Advocate.

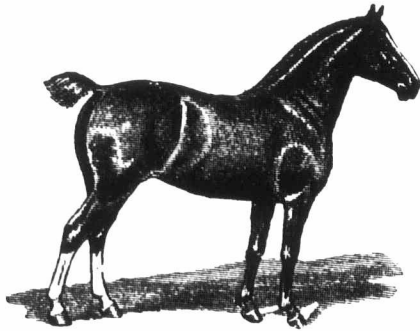
- 1. Horse-man. 2. Court-ship. 3. Corn-sack. 4. How-do you-do.

Good Reason.

Teasing friend: "What makes that new baby at your house cry so much, Tommy?" Tommy, indignantly: "It don't cry so much; and, any way, if all your teeth was out, and your hair off, and your legs so weak you couldn't even stand on them, I fancy you'd feel like crying yourself!"

A lady, passing along a narrow alley, meets a tipsy man reeling from side to side. She does her best to avoid him, crossing rapidly from one side of the alley to the other, but in vain. "Ah, my lady," he hiccups, "so you have been taking a little drop too much, have you?"

HORACE N. CROSSLEY,
PROPRIETOR OF THE
SANDY BAY STOCK FARM,
Importer and breeder of
SHIRES, HACKNEYS, AND COLLIE DOGS.



The above stud, though only commenced in 1890, has achieved unparalleled success at all the leading Canadian shows, such as Montreal, Toronto and London, also at the CHICAGO WORLD'S FAIR. The most notable in this stud are, the Shire horse Bravo II, 12835, winner of first at Toronto, Montreal and London, and also beating all Clydes at the latter show in the sweepstakes. Hackney, Fireworks No. 3992, winner at Chicago, Toronto and London. Shires and Hackneys always on hand for sale. For further particulars apply to the Proprietor, ROSSEAU, Muskoka.

VALENTINE FICHT,
MAPLE LEAF FARM,
ORIEL, ONT.,

Breeder of Scotch Shorthorns, Clydesdale, and Shire Horses; Cotswold and Shropshire Sheep; Yorkshire Hogs. Young stock for sale at hard times prices. Young bulls supplied in carload lots.

7-1 y om Write for particulars.

DO YOU WANT A GOOD FARM

Improved or unimproved, along the line of the Man. and Northwestern Railway, near Neepawa, Basswood, Newdale, or Strathclair stations? Can give you good selection and easy terms to actual settlers. Correspondence invited. Address, 8-1-7-om D. H. HARRISON, Neepawa, Manitoba.

SPECIAL OFFERINGS AT REDUCED RATES

—TO THOSE WHO WISH TO—
DOUBLE THE BUTTER YIELD OF THEIR HERDS.

6 Jersey bull calves, 2 to 4 months old, bred entirely for GREAT BUTTER YIELD.

Sired by bulls whose dams make 17 1/2 to 26 3/4 lbs. Butter a Week.

As my fall cows gave an unusual number of bull calves, I have decided to place them within reach of all who want an extra bull for next summer, viz.: \$60 to \$80 each, registered, and express prepaid by me to their destination. MRS. E. M. JONES, Box 324, Brockville, Ont., Can. Mrs. Jones' great book, Dairying for Profit, 30c. by mail. Address, ROBT. Y. BROWN, Agent, Box 324, Brockville, Ontario, Canada. 8-y-om

FOR SALE—Shorthorns: A fine 18-months' old Bull; Heifers giving milk and younger ones. Also Fruit Farm, at Clarkson, 16 miles west of Toronto. Fifty acres of land, good house and outbuildings, 425 apple trees, 500 pear trees and other fruit. Possession immediately. Apply to C. G. DAVIS, Freeman P.O., Ontario. 17-1 y om

THOS. PUGH & SONS,

Breeders of Shorthorn Cattle and Shropshire Sheep of No. 1 quality. Young stock for sale at moderate prices. Write us or come and see our stock. WHITEVALE P.O. Locust Hill Station, C.P.R. Pickering, G.T.R. 15-1 L-0

WRITE US NOW

—IF YOU WANT A BARGAIN IN—
REC. AYRSHIRE CATTLE, RED TAMWORTH and DURQC-JERSEY PIGS.

Too many for winter, and selling very cheap. CALDWELL BROS., 22-y-0 Briery Bank Farm, Orchard P. O., Ont.

THE FRENCH HERO WHEAT

(Originated by A. McInnes, of this city).

A bearded wheat of superior merit; very hardy, good stiff straw; fine red, plump berry, and fully one week earlier than Manchester. One of the best general purpose wheats in cultivation, and as a milling variety it has no equal.

Price, \$2.00 per bushel

bags included with one bush, and over, by express or freight at purchaser's expense. Address,

GEORGE J. GRIFFIN & CO.,

Seed Merchants,
London, Ontario.

Mention this paper.

LARGE LUMPS OF
Rock Salt

laid in the pasture fields will keep your cattle healthy this warm weather. They judge for themselves how much to take. Rain does not wash it away. 400 lbs. or over at 50c. per 100. Cash with order. Toronto Salt Works, 128 Adelaide Street East, Toronto, Ont. 5-L-0



SOLD BY ALL GROCERS 6c THE TWIN BAR

DORSET-HORN AND SHROPSHIRE SHEEP

TO ALL INTERESTED: The County of Brant, the home of the Farmers' Binder Twine Company, has been paralyzed with a prolonged drought.

JOSEPH STRATFORD, 14-a-om Brantford, Ont. FOR SALE.

As I am retiring from farming, I offer for sale ten head of good milking Shorthorns at rock bottom prices—three good milking cows, three two-year-old heifers, three yearling heifers, and one good yearling bull.

ROBT. GARNHAM, 12-d-o Guysboro P. O., Ont.

R. RIVERS & SON, Springhill Farm, Walkerton, breeders of Short-horn Cattle and Berkshire Swine. We can supply a carload of good Shorthorn heifers in calf at very reasonable figures; also some ever nice young Berkshire Sows and young pigs for sale.

AMPLE SHADE STOCK FARM. SHORTHORNS and LEICESTERS. We have some excellent show-yard timber (sure winners) coming forward for the fall fairs. Inspection invited. E. GAUNT & SONS, St. Helens, Ont. 13-1-y-om

FOR SALE. A choice lot of Shorthorns—bulls and heifers—of good quality and of the most approved breeding. Show animals a specialty. The accompanying-ingredient represents Fair Queen 2nd, the foundation of my herd. Her produce offered for sale. Come and see us, or write for particulars. JOHN MORGAN & SONS, 21-y-om KERWOOD, ONT.

SIMMONS & QUIRIE. Shorthorn Cattle, Berkshire Swine—Money-making Sorts. The matchless bull, ROYAL SAXON = 10537 = (by Imp. Excelsior), 1st at Toronto, 1894, heads the herd, with BARMPTON M. = 18240 =, by Barmpton Hero = 324 =, in reserve. Female representatives of the celebrated Mina, Strathallan, Golden Drop and Mysie families. The Berkshires are choice, prize-winning stock. Easy to feed, quick to sell. STOCK FOR SALE. C. M. SIMMONS, Ivan P.O., Ont. 1-1-y-om JAMES QUIRIE, Delaware, Ont.

Threshermen!

THIS STYLE ON SKIDS OR WHEELS.

ALL "WHITE THRESHING ENGINES" ARE GUARANTEED TO GIVE SATISFACTION. THE MOST DURABLE. EVERY ENGINE TESTED. ALL SIZES. SUITABLE FOR CREAMERIES, FACTORIES OF ALL KINDS, BRICK YARDS AND SAW MILLS.

GEORGE WHITE & SONS, London, - Ontario.



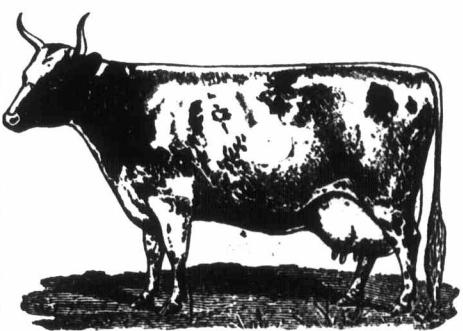
EXECUTORS' SALE

Of an excellent two-hundred-acre farm in the Township of McGillivray, and a fifty-acre farm in Stephen Township. The executors and beneficiaries, under the will of the late John Donaldson, will offer for sale by PUBLIC AUCTION, at MONROE'S HOTEL, in the VILLAGE of ALSA CRAIG, on THURSDAY, AUGUST 15TH, 1895, at the hour of two o'clock in the afternoon, the following very valuable premises, that is to say:—I. Lots number 30 and 31 in the fourth concession, McGillivray Township, Middlesex County, containing two hundred acres, more or less.

Dated at Ailsa Craig this twenty-second day of July, A. D. 1895. 15-a-om

GREAT DISPERSION SALE

OF IMPORTED AND HOME-BRED AYRSHIRE CATTLE. DAVID MORTON & SONS will sell by Public Auction on WEDNESDAY, AUGUST 28TH, their entire herd of Thoroughbred Ayrshire Cattle, consisting of over 50 head of the choicest Ayrshires ever offered for sale in Canada.



GEO. ANDREW, Auctioneer, or DAVID MORTON & SONS, Props., Hamilton, Ont. 15-b-om

LARGE SALE OF THOROUGHbred STOCK

One of the Greatest Stock Sales that has ever taken place in this Country. MR. J. N. GREENSHIELDS, Proprietor of the Ingleigh Grange Farm, and Mr. A. McCALLUM, of Sprucehill Dairy Farm, have decided to hold a joint sale on Mr. Greenshields' farm (which comprises over 800 acres) about the FIRST of OCTOBER, date to be announced later, when they will offer an immense herd of pure-bred Ayrshire and Guernsey Cattle, Shropshire Sheep and Yorkshire Swine of all ages and both sexes.



T. D. McCALLUM, Manager, Danville, Quebec. 9-y-om

SHORTHORNS.

I have FOR SALE two Shorthorn heifers and two bull calves of fine breeding, fine colors, fine form and carriage, in fine condition, at fine cut prices. Also one or two cows. D. ALEXANDER, BRIGDEN, Lambton Co., Ont. 5-y-o

HAWTHORN HERD

of DEEP MILKING SHORTHORNS. FOR SALE—Young Heifers in calf, and Heifer Calves. The Golden Drop bull, Golden Nugget = 148 =, by imp. General Booth = 6365 =, (54353), at head of herd. WM. GRAINGER & SON, Londesboro, Ont. 13-y-om

Shorthorns, Shropshires, and Berkshires.

Having rented one of my farms, I will sell at very much reduced prices five young cows due to calve Sept. to Dec.; 40 ewes, one to four years old; my (imp.) Bradburn stock ram (first prize winner in England); 16 yearling rams and a choice lot of lambs; four sows, due to farrow in Sept. and Oct.; one boar, 12 months old, and six litters of spring pigs. All registered. 15-y-om. W. G. PETTIT, FREEMAN P.O. BURLINGTON ST'W. G.T.R.

CARGILL HERD OF SHORTHORNS.

Stock from imp. bulls and imp. and home-bred cows. Catalogue now in printer's hands. Send for one. H. CARGILL & SON, CARGILL, ONT. 11-y-om

SPRING BROOK STOCK FARM.—Holstein-Friesian Cattle, Improved Yorkshire and Tamworth Swine. Bargains in Holsteins; special in calves. Stock of all ages for sale; best strains. Great choice in Tamworths. Ask at once for prices. A. C. HALLMAN, New Dundee, Waterloo Co., Ont. 7-1-y-om

HOLSTEINS AND YORKSHIRES.

None but the best are kept at BROCKHOLME FARM, ANCASTER, ONT. R. S. STEVENSON, Proprietor. Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry. Yorkshires all recorded. 13-1-y-om

DAIRYMEN, ATTENTION!

We want to see you at the FAIRS Toronto, London, Ottawa, Etc. We intend to exhibit a carload of our High-testing Holsteins, and can show you something interesting. SEEING IS BELIEVING.—We want you to see, we know the result. Young stock for sale of the great milk and butter families whose dams CAN WIN, both male and female. Also a few choice Registered Poland-China Pigs. A. & G. RICE, Currie's Crossing, Ont. 19-1-y-om

I NOW OFFER FOR SALE 6 YEARLING DAUGHTERS

OF Colanthus Abbekerk (whose five nearest female ancestors average 28 lbs. 14 ozs. of butter in seven days), safely in calf to Bonnie Queen's 3rd, Pieterje Netherland, the richest-bred bull of his age in this country. Who will have them at hard-times prices? I have not yet seen their equal. Also young cows and calves for sale at any time. Write for description and prices. H. BOLLERT, 3-1-y-om Cassel, Ontario.

MAPLE HILL HOLSTEIN-FRIESIANS.

Have you the blood of the great butter cows, DeKof 2nd, Empress Josephine 3rd, Mechthilde and Pauline Paul, in your herd? If not, why not? The demand for this blood exceeds the supply. Speak at once if you want some of it. 11-y-om G. W. CLEMONS, St. George, Ont.

Western Fair, London, Sept. 12th to 21st 1895.

CANADA'S FAVORITE LIVE STOCK AND AGRICULTURAL EXHIBITION.

Established 1868. Incorporated 1887. The Greatest Live Stock Market in Canada. MAKE YOUR ENTRIES EARLY. Entries in Live Stock Classes close September 12th. Speeding contests, September 5th. All other Departments, September 5th. A large number of Special Attractions have been arranged for, including an immense Wild East Show 50 Arabs, Turks, Syrians, Bedouins, and "Women of the Turkish Palace," with their horses, camels, and donkey. Balloonist fired from a Cannon while 3,000 feet high. Trained Animals, etc., etc.

SPECIAL RAILWAY AND EXPRESS RATES FROM ALL POINTS.

For Prize Lists, Programmes, and other information, apply to CAPT. A. W. PORTE, President. THOS. A. BROWNE, Secretary.

STOCK GOSSIP.

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

F. Bonnycastle & Sons, Campbellford, Ont., write:—"We have just bought a very fine bull calf from Mr. Arthur Johnston, of Greenwood. He is from a Duchess of Gloster cow, by Imp. Duke of Lavender, from extra good milking stock on the side of both sire and dam. It is well worth anyone's while to go and see Mr. Johnston's Shorthorns. We have sold a lot of young pigs, but still have a few good ones left."

The American Shropshire Sheep Association have provided ribbons for special prizes offered by that Association this year. These ribbons are very handsome, costing the Association nearly \$1 each. They will be forwarded to the secretaries of each of the fairs where the above Association offers special prizes. This Association also pays the expenses of expert judges named by it for judging at the fairs where they offer special prizes.

A. & G. Rice, Currie's, Ont., report:—"Though, like the rest of the country, we have had to contend against the drought and flies, we are pleased to be able to report, all our Holsteins in fine condition, and have had a splendid crop of calves, and they are still coming. We intend to again exhibit a carload from our herd at the principal fairs, and we want all lovers of a good cow to call upon us at our stalls. We can show you cows that have milked as high as 84 lbs. 10 oz. in twenty-six hours in a public test; three-year-olds that have milked 51 lbs.; two-year-olds that can milk 45 lbs. to 50 lbs.; yearlings whose dams have milked as high as 70 lbs. milk, 3 lbs. butter, in twenty-four hours, at five years old in a public test. Remember, our records are beyond question. Our stock are bred from great ones, and are great themselves. This is the kind of stock you need. We hope to meet many old friends and make many new ones at the fairs. Remember, our bull is a great prize winner, taking second at the World's Fair and many firsts. We have also young Sir Paul Dekol Clothide, who unites the blood of three of the greatest milk and butter cows the world has produced."

MR. W. E. WRIGHT'S SHROPSHIRE.
Close to Glanworth station is the farm of Mr. W. E. Wright, who has been following the breeding of Shropshires the last few years past. The flock now contains some eighty head of very good quality. The breeding ewes comprise selections from such English flocks as R. Bach, Dawes, Thonger, Butlers, Sheldon, Mr. Brownley, and their descendants. This year's lambs are from a grandson of the noted stock ram Wool Merchant and Brownley ewe, and are of nice quality and covering, a few being sired by Columbia, a ram owned by Mr. Wm. H. Beattie, Wilton Grove. Some very nice lambs indeed were being fitted in the pens for exhibition purposes; also four very nice shearing ewes, and a couple of shearing rams. One of the shearing ewes we considered very nice indeed, and properly mated would make an exceptionally fine show pair, and no doubt Mr. Wright will be out again this year in good form as usual.

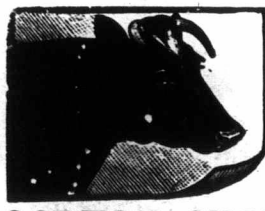
THE THISTLE HA HERD OF SCOTCH SHORTHORNS AND SHROPSHIRE.
A short run out of Toronto, on the C. P. R., through varying scenery and fine agricultural lands, we arrived at Claremont, then a drive of about three miles brought us to the stock farm of Messrs. John Miller & Sons, where very extensive breeding operations are carried on in Scotch Shorthorns and high-class Shropshire sheep. The stock kept at this farm are so well and favorably known throughout Canada and the United States that it is almost unnecessary to enlarge on their many merits. The well-earned trophies won in the past by representatives from the flocks and herds of this firm at the leading fairs is sufficient evidence of the high quality of the stock.

The Shorthorns at present comprise some seventy or eighty head, and contain animals of the famous Strathallan, Lydia, Jilt and Astarte families. Many of the younger cows of the herd are the produce of the famous bull Vice-Consul (60112). The imported bull, Sittytton Stamp, bred by Mr. Duthie, now heads the herd, and is a model animal throughout; and the young stock seen of his production proclaim him to be an exceptionally good sire, and when a herd is composed of such choice animals as Lavina (imp.), bred by Mr. Duthie, Scotland; Cleopatra (imp.); Miss Isaac (imp.), bred by S. Campbell, Kinellar, Scotland; Merry Maud, by General Booth; 2nd Golden Crest; Lydia 5th and Lydia 6th, by Vice-Consul; Grand Duchess (imp.), bred by Wm. Duthie, and many others equally good, and mated with a bull of such excellent points as Sittytton Stamp, it is easy to understand why it is the young stock possess such grand quality and are such ready sellers.

Shropshires.—The flock of Shropshires comprise something over two hundred head. The ewes are all imported from the best English flocks, and this season's crop of lambs are sired by imported Williams and Mansell rams, and are of nice quality. A number of good shearling rams were seen, which should be ready sellers, and also some exceptionally good show lambs. Mr. Robert Miller was in England at the time of our visit, and had already purchased a number of Royal winners of the Shropshire, Oxford, Southdown and Cotswold breeds; also a number of Welsh ponies, which have already been bred to some extent at Thistle Ha. The e desirous of full particulars regarding the Thistle Ha Shorthorns should send to Messrs. Miller for a catalogue, which will be cheerfully forwarded.

BOOK TABLE.

We have just received for addition to our library of live-stock records, from Mr. Mortimer Levering, Secretary, a copy of Volume X. of the American Shropshire Sheep Record, which is uniform in binding and general style with those previously issued. The frontispiece consists of a group of Shropshires at Crystal Spring Farm, the property of C. Hills & Son, Delaware, Ohio. It contains the pedigrees of ewes and rams from No. 57,055 to 69,620, together with list of owners, breeders and importers, index to ewes, list of members, number of sheep owned by breeders named in this volume, number of sheep reported and officers of the Association, index to rams and transfers. We can congratulate Mr. Levering and his fellow officers upon the continued large dimension and handsome appearance of the Shropshire Record.



W. C. EDWARDS AND CO'Y
IMPORTERS AND BREEDERS.

PINE GROVE STOCK FARM,
Rockland, Ont.

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 & Heifers of the most approved Scotch families.
JOS. W. BARNETT, Manager.

ELMHURST STOCK AND DAIRY FARM
CLARENCE, ONT.

Shorthorns, Shropshires and Berkshires

Our flock is from the choicest English flocks, headed by the ram sent out by Mr. Thos. Dyke; also milking Shorthorns, with imported bull Pioneer at the head of the herd.
HENRY SMITH, Manager.



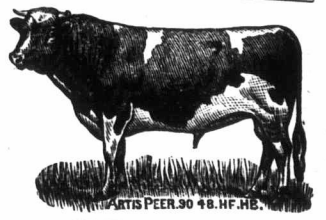
Laurentian Stock AND Dairy Farm
NORTH NATION MILLS, P. Q.

Ayrshires, Jerseys and Berkshires.

Imported Emperor at the head of a grand lot of imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires.
7-1-y

SUNNYSIDE HOLSTEIN-FRIESIANS

Choice animals, either sex, all ages, for sale at any time. Correspondence solicited. Address



McDUFFEE & BUTTERS, Stanstead, P. Q.
16-7-om

GEM HOLSTEIN HERD

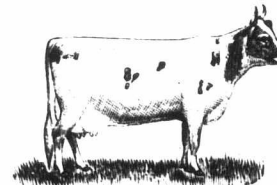
STOCK FOR SALE BY
ELLIS BROTHERS,
BEDFORD PARK P.O., ONT.

Three miles north of Toronto, on Yonge Street. Electric cars pass our gate. Inspection invited. Correspondence solicited.
7-y-om

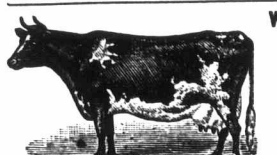
The GLEN STOCK FARM AYRSHIRES

We have 6 young Bulls that will be fit for service in the Spring. They are good individuals, are well bred, and will be sold on reasonable terms.
We have also a number of imported and home-bred Shropshire Ewes and Ewe Lambs for sale at very low prices.
7-y-om

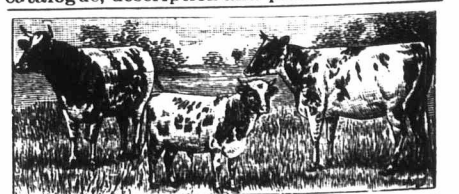
WHITESIDE BROS., Innerkip, Ont.



JOHN NEWMAN & SONS, Box 221, Lachine, Quebec, 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, or to compete in any show ring; also yearlings, bull calves and heifers of all ages, descended from imported cows. Will sell at prices to suit the times. Write or come and see our stock.
15-1-y-o



WM. BUTLER & SON,
Dorham Centre, Ont., breeder of Guernseys and Ayrshire Cattle; also Chester White and Duroc Jersey Swine. Our cattle have been selected with care from the best of milking strains, and we will now offer for sale a grand Guernsey Bull, fit for service, the winner of first in Toronto, Belleville and Ottawa; also one Ayrshire and one Jersey Bull Calf. The dam of the latter tested 8.20. Both are fashionable colors. For the next thirty days we will allow 25% discount off price in order to reduce our stock of swine to make room for exhibition stock. Choice young stock from imported and sweepstake herds. Write for catalogue, description and price list.
7-y-om



**Champion Dairy Herd of Ayrshires at various government tests. Prize winners at the World's Columbian Exposition, Chicago. Write MESSRS. ROBERTSON & NESS, Howick, Que.
19-y-om**

AYRSHIRES!

Young Bulls for sale—four 2-year-olds, two 1-year-olds, 12 under six months. One of the two-year-olds is Leonard Meadows, 1st prize at Chicago. He is sire of most of the calves. Also Berkshire Pigs and Shropshire Sheep. Prices to suit the times.

J. YULL & SONS,
8-2-f-om Meadows Farm, Carleton Place.

GLEN ROUGE JERSEYS

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

ADVERTISE IN THE ADVOCATE

THE Great Live Stock and Agricultural Show of the Dominion!

CANADA'S GREAT INDUSTRIAL FAIR TORONTO, September 2nd to 14th, 1895.

INCREASED PRIZES AND IMPROVED ACCOMMODATION.
ENTRIES CLOSE AUGUST 10th.

For Prize Lists and Entry Forms drop a Post Card to the Manager at Toronto.

Greater and better Attractions than ever before.

There is more to see at THE GREAT TORONTO FAIR than all others put together, and it is within easy reach of all.
Cheap Excursions on all Railways.

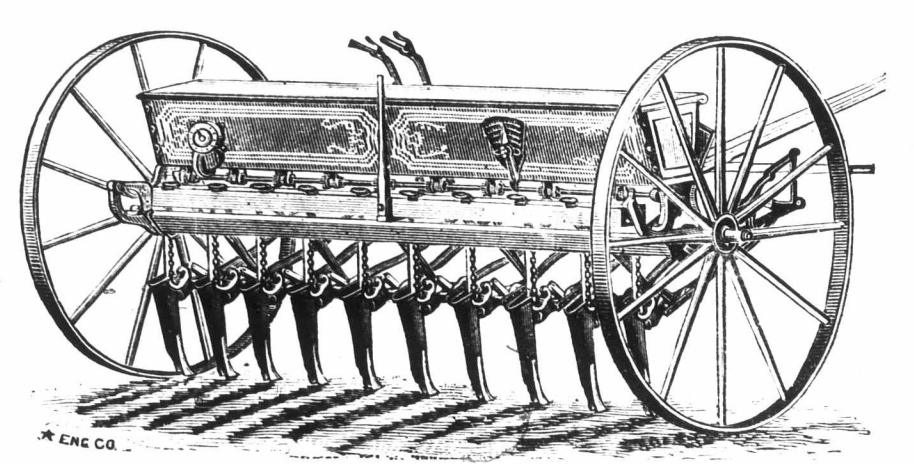
If you wish to keep posted in your business, you should attend one of the Great Fairs every year, and it will pay you to go to the best.

Make this the occasion of your annual holiday, and take in the Toronto Fair.

Visitors are coming from all parts of the Continent.

JOHN J. WITHROW, 13-d-o President.
H. J. HILL, Manager, Toronto.

Steel Hoosier Drill



YOU never make a mistake when you purchase a Steel Hoosier Drill. Over 30,000 Canadian Farmers have already endorsed your choice. If you have doubts ask your neighbor about the Hoosier.

NOXON BROS. MFG. CO., L'd.
15-b-o **INGERSOLL, ONT.**

JERSEYS, STANDARD BRED HORSES.

Choicely bred Stoke-Pogus and St. Lambert Jerseys. Standard bred and Road Horses for sale. DR. E. P. BALL, 17-1-y-om Rock Island, Que.

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

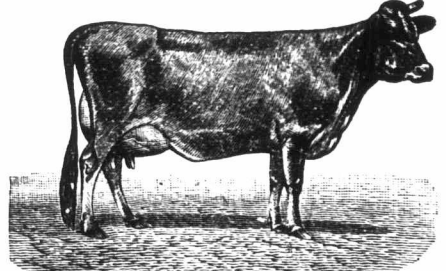
ARKLAN STOCK FARM

(Adjoining the Town of Carleton Place.) JERSEY CATTLE Herd headed by Carlo of Glen Duart 15037, A. J. C. C., champion Jersey bull whenever exhibited. Young stock from prize-winning animals for sale, out of deep-milking strains. Correspondence solicited and inspection invited. A. C. BURGESS, Carleton Place, 7-y-om Ontario.

Pure St. Lamberts

YOUNG BULLS fit for service, and bull calves sired by Jolie of St. Lambert 3rd's Son, 29731, and Lady Fawn of St. Anne's Son, 25703. The get of these two bulls have swept everything before them at the Toronto, London, Ottawa and Quebec Shows of 1893-4. Dams of the young bulls are daughters and granddaughters of Jolie of St. L. and Lady Fawn of St. A. Farmers! If you wish to double the butter yield of your herd, buy a pure St. Lambert Jersey bull. The St. Lamberts, for size, constitution, and wonderful production of milk and butter, lead all other strains known. PRICES VERY LOW. Apply to W. A. REBURN, 20-y-om St. Anne de Bellevue, P.Q.

Apply to W. A. REBURN, 20-y-om St. Anne de Bellevue, P.Q.



WHO WANTS JERSEYS?—I have for sale 3 registered heifers in calf, due to calve from August to December; 3 heifer calves; one yearling bull; 2 bull calves. All solid color, richly bred, fine individuals, at reasonable prices. For particulars and prices, address 8-y-om J. C. SNELL, Edmonton, Ont. R.R. Station, Brampton, G.T.R. and C.P.R.

JERSEY-CATTLE Of the heaviest milking strains. One of the largest herds in Canada; bred closely to the great dairy cow at Chicago, also the famous two-year-old. Sires of both were sold from this herd. Also Welsh Blood Ponies for ladies' and children's driving. Stock for sale always on hand. GEO. SMITH & SON, Grimsby, Ontario. 3-y-om

Jersey Bull Calf for Sale, Cheap. A beautiful grandson of One Hundred Per Cent. Registered A. J. C. C. Also Chester White Boars. F. BIRDSALL & SON, 11-1-y-om Birdsall P. O., Ont.

Ingleside Herefords!

ANXIETY 4th = = = AND = = = THE GROVE 3rd. LARGEST HERD IN CANADA. Extra lot of young bulls for sale. H. D. SMITH, Ingleside Farm, 17-1-y-om Station, 2 1/2 miles. COMPTON, QUE. C. C. & G. F. CLEVELAND 17-1-y-om (L. Goodhue & Co., Mfgs. Leather Belting) BREEDERS AND IMPORTERS OF Durham Cattle, Standard Bred Horses, Chester White Swine. Young Stock for Sale. Address—C. C. & G. F. CLEVELAND, Greenlands Stock Farm, Danville, Que. 12-1-y-om

Fertilizers containing a high percentage of potash produce the largest yields and best quality of Wheat, Rye, Barley, Oats, and all winter crops. Send for our pamphlets on the use of potash on the farm. They are sent free. It will cost you nothing to read them, and they will save you dollars. Address, GERMAN KALI WORKS, 93 Nassau Street, New York.

BELL PIANOS AND BELL ORGANS SUPERIOR IN Tone, Quality, Construction and Finish. Full description to be found in our Catalogues. Mailed free on application to THE BELL ORGAN and PIANO CO. (Ltd.) Guelph, Ontario. 5-1-y-om

WM. J. RUDD, Eden Mills, Fairview Stock Farm, breeder of Choice Devon Cattle, Cotswold and Suffolk Sheep, Berkshire Pigs, and Plymouth Poultry. Young stock of the above, and of the best quality, always on hand. I can also furnish a carload of Cotswolds, shearing rams and ewes of the choicest quality. Write me for particulars. Shipping—G.T.R. and C.P.R., Guelph. 13-1-y-om

GUERNSEYS This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Imported Bull Benefit, son of Vice-Pres. Morton's famous butter cow Bienfaitrice 4th, heads the herd. Address: SYDNEY FISHER, 17-1-y-om Alva Farm, Knowlton, P.Q.

GUERNSEYS Having two stock bulls, will sell either of them; grand stock getters; first-class animals. YORKSHIRES. Boars fit for service; sows in farrow, and a grand lot of spring pigs. W. H. & C. H. McNish, 20-y-om LYNN, ONT. JOHN A. MCGILLIVRAY, Jerseydale Farm, Uxbridge, Ont., Midland Div. G. T. R., Importer and breeder of Dorset Horned Sheep 19-1-y-om

SHROPSHIRE FOR SALE—A number of choice imp. breeding ewes, from noted English flocks, also home-bred shearing rams and ewes. This season's crop of lambs are a choice lot. Correspondence solicited. Mention Advocate 15-1-f-o W. E. WRIGHT, Glanworth, Ont.

MAPLETON STOCK FARM. A carload of PURE-BRED OXFORD-DOWN YEARLING RAMS. A few young ewes, also ram and ewe lambs for fall trade. 5-1-y-om HERBERT WRIGHT, Box 47, Guelph, Ont.

OXFORD-DOWN SHEEP Rams and ewes of all ages for sale. "Singles or trios (not akir) or in carload lots. Prices to suit the times. Nothing but "Royal winning rams" used. Won many honors at "World's Fair." Won highest honors through Canada. Stock rams a specialty. All registered. Railway and Telegraph. Guelph: Railway and Telephone. Twice winner Arkell. HENRY ARKELL, over all breeds. 9-1-y-om Arkell P. O., Ont.

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CANCER ON THE LIP CURED BY AYER'S Sarsaparilla

"I consulted doctors who prescribed for me, but to no purpose. I suffered in agony seven long years. Finally, I began taking Ayer's Sarsaparilla. In a week or two I noticed a decided improvement. Encouraged by this result, I persevered, until in a month or so the sore began to heal, and, after using the Sarsaparilla for six months, the last trace of the cancer disappeared." JAMES E. NICHOLSON, Florenceville, N. B.

Ayer's The Only Sarsaparilla Admitted at the World's Fair. AYER'S PILLS Regulate the Bowels.

To Smokers

To meet the wishes of their customers The Geo. E. Tuckett & Son Co., Ltd., Hamilton, Ont., have placed upon the market

A Combination Plug of



This supplies a long-felt want, giving the consumer one 20-cent plug, or a 10-cent piece, or a 5-cent piece of the famous "T & B" brand of pure Virginia Tobacco. 5-y-om The tin tag "T & B" is on every piece.

NOTICES.

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

The farm to be sold by public auction on 15th August, at Ailsa Craig, by A. W. Smith, Maple Lodge, and A. Hotson, Ailsa Craig, executors of the will of the late Jno. Donaldson, is certainly one of the most desirable 30-acre farms in Western Ontario—is admirably adapted for a stock farm, so well-watered, the land so good, and the buildings and situation so suitable, and the timber land is almost uncultured.

Electricity and the bicycle are working a revolution in the transportation of the public. The smooth wire fence having the locked uprights is working a revolution in fencing which, without some such patented contrivance, would have been a serious problem before this in countries such as our own, where timber is getting scarce and dear. The Canada Fence Co., London, Ont., manufacture a really good article, which will hold stock; will not rot down nor slash and carve animals if they come against it. It is also cheap and neat. Their exhibits at the coming Toronto, London, Ottawa and other leading fairs will be interesting and instructive to visitors who have owned fences.

The Locked Wire Fence manufactured by the Ingersoll firm has established for itself a name and reputation for which no one selling or using it need make any apology. It is strong, handsome enough for a city lawn, takes up very little room, therefore does not harbor weeds and rubbish. It does not hold the snow. While every quality that a fence needs belongs to the Locked Wire Fence. Remember that those old rails back at the far end of the lot are only fit for summer firewood; they will cause trouble as long as depended upon to hold stock. Save pound fees, quarrels, wasted grain and sleepless nights, by putting up a safe, cheap and neat fence. See advertisement in the issue, and look out for the Ingersoll Locked Wire Fence Co.'s exhibit at the leading fairs this autumn.

Poultry raising has kept pace with the many other pursuits with regard to improved facilities by invention. It is not many years since the "Glass Hen" Hatching Chickens by the Toronto Industrial, indeed it was a much-talked-of curiosity. Now, these improved "Glass Hens," or Incubators and Brooders, are being made so perfect that to raise chickens to any extent without them is away behind the times. Before purchasing, however, it is well to investigate a little, so that the best may be secured. J. E. Meyers, Kossuth, Ont., will soon have his illustrated circular ready for distribution. His Wyandottes, Silver and White, and White Javas, are fine, and his Mammoth Pekin Ducks are immense fowls. Mr. Meyers in writing says: "I am well pleased with my return from ad. so far in your paper. I sold eggs as far east as P. E. Island, Nova Scotia, and New Brunswick. My Incubators and Brooders are giving excellent satisfaction."

HOW TO GET "SUNLIGHT" BOOKS. Send twelve "Sunlight" Soap wrappers to Lever Bros. (Ltd.), 43 Scott St., Toronto, who will send post-paid a paper-covered book, 160 pages. By leaving the ends of the parcel open, it will go for one cent postage. Remember "Sunlight" now sells at six cents per twin bar.

IMPORTANT TO THRESHERS. A wise thresher will not start the season's work with a set of poor belts, as they not only worry the patience of the thrasher by continually giving way, but much custom will be lost if the machine and all hands have to be stopped two or three times every half day to repair belts. There is nothing so provoking to a farmer as to have all his threshing hands idle from a paltry cause. To be using an old, unsafe drive belt is dangerous, because if a break occurs while in full speed someone is likely to be injured. Stanley Mills & Co., Hamilton, Ont., make a specialty of endless and cut rubber belting. They also sell cylinder teeth for all machines at a reasonable rate. It is safe to patronize this firm, as they are reliable. See their advertisement.

Child-Saving Work.

Any person desiring to adopt a Canadian child, will hear of some very suitable cases by writing Rev. C. W. Watch, Brighton, Ontario, who has several children placed in his care for adoption into good Christian homes. He has some bright little boys of three and under—Canadian children, who are deserving of good homes. Persons applying will please send name and address of their pastor. Ministers and others knowing of orphan or destitute children in need of assistance, Mr. Watch will be pleased to correspond with and advise in the matter. Financial aid and clothing, in behalf of orphan and destitute children, will be appreciated and applied as the donor desires.

Canadian Fairs.

Table listing Canadian fairs with dates and locations: Stanstead, Que. Aug. 21st and 22nd; Sherbrooke, Que. Sept. 2nd to 7th; Kingston, Ont. Sept. 2nd to 7th; Toronto, Ont. Sept. 2nd to 11th; Montreal, Que. Sept. 12th to 21st; London, Ont. Sept. 12th to 21st; Owen Sound, Ont. Sept. 17th to 19th; Guelph, Ont. Sept. 17th to 19th; Whitby, Ont. Sept. 17th to 19th; Belleville, Ont. Sept. 17th to 20th; Renfrew, Ont. Sept. 19th and 20th; Ottawa, Ont. Sept. 20th to 29th; Peterborough, Ont. Sept. 23rd to 29th; St. Catharines, Ont. Sept. 23rd to 25th; Collingwood, Ont. Sept. 24th to 27th; St. John, N. B. Sept. 24th to Oct. 1th; Chatham, Ont. Sept. 24th to 26th; Grillia, Ont. Sept. 24th to 26th; Woodstock, Ont. Sept. 25th and 26th; Lindsay, Ont. Sept. 25th to 27th; Stratford, Ont. Sept. 26th and 27th; Brampton, Ont. Sept. 26th and 27th; Paris, Ont. Oct. 1st and 2nd; Walkerton, Ont. Oct. 1st to 3rd; Goderich, Ont. Oct. 2nd to 4th; Markham, Ont. Oct. 2nd and 3rd; Ridge town, Ont. Oct. 3rd and 4th; Tillamook, Ont. Oct. 3rd and 4th; Simcoe, Ont. Oct. 3rd and 4th.

STOCK GOSSIP.

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

Dr. F. C. Grenside, V. S., well and favorably known throughout Ontario, having been for some years professor of veterinary science at the Agricultural College, Guelph, has recently appointed manager of the Belwood stud owned by Mr. S. S. Howland, New York.

Mr. James Smith, Maple Lodge, Ont., writes us under date of July 23rd: "Our stock are doing exceedingly well, considering the shortage of pasture and ravages of grasshoppers. The young stock, comprising Shorthorns, Berkshires, and Leicesters, are numerous and particularly fine. The young bulls are exceptionally good this year." We may add that if the above were not the case at Maple Lodge we would wonder why, as there are few herds and flocks as judiciously bred and cared for as those of James Smith.

The best are none too good! Therefore anyone looking for Ayrshires would do well to notice in this issue what David Morton & Sons, of Hamilton, Ont., have to sell on August 23rd. Among the herd are a number of prize winners ready to go out and capture more laurels. These are business cattle that will give a lot of rich milk till they reach a good old age, and then put on a nice covering of juicy beef at a profit to the feeder. Ayrshires are easily kept. Remember that if you have any notion of buying, just say so to the auctioneer or proprietors, and your railroad fare will cost you nothing.

Our Scottish correspondent writes:—"I formed one of the crowd which thronged the yard of the old homestead at Warlaby when Mr. John Thornton practically dispersed the Warlaby herd of Booth Shorthorns as now constituted. Patrons of the breed were present from long distances, including gentlemen from France, South America, Canada, New Zealand, and nearly all the ends of the earth. Many members of the nobility mustered, and when the day was done forty-eight Booth Shorthorns had been sold for £6,496 7s., or £135 6s. 10d. each; not a large sum when compared with the prices raging during the feverish days of the seventies, but a great advance on any average realized since the cloud of depression settled on agriculture. No doubt Shorthorns are the breed best known in Canada, but there has been a greater inclination for the Cruickshank type than for any other. Canada may almost be said to have made the Cruickshank Shorthorn; she certainly has always been its faithful patron. Personally, I am neither Booth, Bates nor Cruickshank. It is conceivable that fanciers of all three may lose their heads and make themselves ridiculous by buying for pedigree only without regard to individual merit and excellence. The safety of the Aberdeen Shorthorn in the past has been that less of the fancy element has been bred in it than in any of the other families, but when buyers become enthusiastic about an animal because it has five top crosses of Cruickshank blood, they are running the fancy notion pretty close, and by persisting in that course may come a cropper just as the Bates men have done. The Warlaby sale may be the first event in a revival of cattle breeding in this country. The stock were of a healthy, breeding-like character, combining great substance with not a little quality. The most noticeable defect in the cattle as a whole was insufficient development of the hindquarters. They were wonderfully developed in front—full of substance and carrying great wealth of flesh over the fore ribs. This, no doubt, helped to make their deficiencies behind more apparent, but when all is said it would not be easy to find so many cattle in one herd exhibiting such a limited number of faults. The quality of the Warlaby stock has undoubtedly improved greatly under Mr. W. C. Booth's management since 1878, when Mr. T. C. Booth died. In-and-in-breeding had been carried to an excess by all Shorthorn breeders except Cruickshank and his followers; and what Mr. Booth had to do was to introduce outcrosses of allied rather than alien blood. This he successfully accomplished—the Pol-warth bull, Windsor Royal, and Lord Broughton and King Stephen having all been successfully mated with the matrons at Warlaby. Seven heifers by Windsor Royal made the fine average of £197 8s. apiece, and four bulls, £97 18s. 3d. apiece. Three of the produce of Lord Broughton made £201 apiece, and an equal number of the produce of King Stephen made £199 10s. each. The highest individual price made during the day was 360 gs., paid by the Frenchman, M. de Clercq, for Lady Magdalen Riby, a red-roan about ten months old, very true to character and full of quality. She was eagerly competed for by several of the best buyers in the country, including Mr. J. Collynie, but the Frenchman was a good stayer and held out to the very last. This was a daughter of Windsor Royal, and another daughter of the same sire, Lady Salina Studley, was bought by Mr. Henry Williams, Harrogate, at 230 gs. She was calved in October, 1893. For the white cow, Lady Clementine Studley, by King Stephen, and calved in 1891, Mr. Graham, of Edengrove, paid 225 gs. These figures will indicate pretty clearly the tone of this memorable sale, and the prices realized are not likely to be eclipsed for some time to come."

MR. THOS. PUGH & SONS' SHORTHORNS AND SHROPSHIRE.

Convenient to Locust Hill station, C. P. R., and Pickering, G. T. R., is the farm of Mr. Thos. Pugh & Sons. A large flock of Shropshires are kept, numbering about two hundred head, the foundation stock being from the well-known flocks of Mansell, Bowen-Jones, and Everell, and ram used on the flock have been the pick of the Hon. Mr. Dryden's flock, with the exception of the present stock ram, which is of Mr. Hagar's breeding, Ottawa. Some lambs of very nice quality were seen, and a number of yearling rams, which should come in useful for the Western trade.

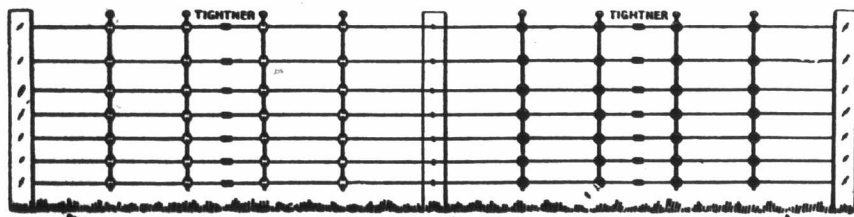
The Shorthorns comprise some twenty head, and combine the blood of Bates, Cruickshank, and Booth cattle. Mr. Pugh claims the cows to be rich milkers, and at the same time easy feeders, one cow having tested as high as 51 per cent. butter-fat. The young stock are mostly sired by Local Member, a son of the noted bull Vice-Consul. The young bull, Whitevale Vic-tor, is at the head of the herd. He is from a Delilah cow and by Local Member, a very nice red animal, which will no doubt prove a good sire.

Lardepsia

would be a more appropriate name for that common cause of suffering—dyspepsia—because most cases of dyspepsia can be traced to food cooked with lard. Let **COTTOLENE** take the place of lard in your kitchen and good health will take the place of Dyspepsia. Try it. Every tin of the genuine **COTTOLENE** bears this trade mark—steer's head in cotton-plant wreath.



Made only by
The N. K. Fairbank Company,
Wellington and Ann Sts., MONTREAL.



No better wire fence built than the Casey Diamond Grip. Just the thing for farmers—neat, strong and durable. Will last a lifetime, barring accidents. Uses only straight wires with so little depression as not to cause the galvanize to crack or peel. If there is a dealer who wants something better to handle than he's had, try it. We also supply the Double Lock Wire Fence, which is claimed by some to be second to none, the lateral wire of which, as well as the upright stay, being crimped at joints. Our agents build either on premises. Agents wanted everywhere in Canada, to whom sole territory will be allotted. County and Township Rights for sale. Our Gas Pipe Frame Gate takes the lead. Patented January 23rd, 1893. See our exhibit at all the leading fairs—Toronto, London, Ottawa, Kingston, etc.
CANADA FENCE COMPANY, Corner Bathurst and Clarence Sts., London, Ontario.
17-y-om

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UPRIGHT and HORIZONTAL. Stationary, Portable & Semi-Portable

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UNEXCELLED in Simplicity, Effective Working Qualities and Durability. GUARANTEED TO GIVE FULL POWER CLAIMED AND TO BE AS REPRESENTED. Over 2,000 in successful operation. It will pay you to write us before buying. Pamphlet free. A fair supply of second-hand and re-built engines at moderate prices.

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Use :- Queenston :- Cement

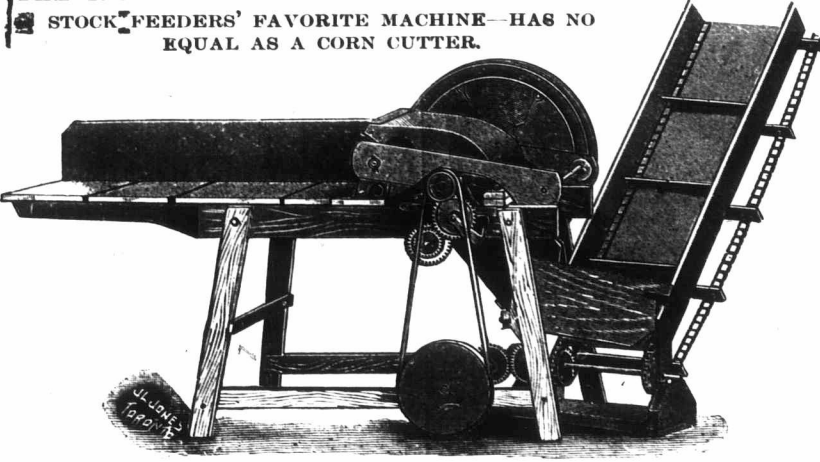
FOR BUILDING CONCRETE OR OTHER WALLS, Cisterns, Stable Floors, Hog Troughs, &c.

Write for Prices and Particulars. When parties use our goods, when necessary we will send a skilled man, at our own cost, to give instructions how to build. FARMERS can thus build their walls and save half the cost.

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THE RIPPER FEED AND ENSILAGE CUTTER

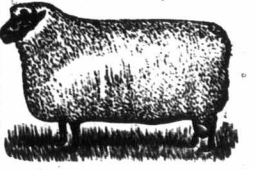
STOCK FEEDERS' FAVORITE MACHINE—HAS NO EQUAL AS A CORN CUTTER.



Also Manufacture Disc Harrows, Riding Plows, and Tread Powers, etc.
THOM'S IMPLEMENT WORKS
Established 1875. WATFORD, ONT. 13-a-0

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Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited. 5-1-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.

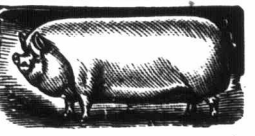
The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"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

SHEEP BREEDERS' ASSOCIATIONS. American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Sec., Lafayette, Indiana. 3-1-y-om

YORKSHIRE PIGS Of the best type and breeding. Large quantities for sale at all seasons. **J. M. HURLEY & SON** Belleville, Ont. Box 442. 17-1-y-om



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 akin. Correspondence solicited. 11-1-y-om



BREEDERS OF Large Improved Yorkshire Pigs. A choice assortment of Yorkshires, all sizes and ages, ready for sale now. They are good ones. Only first-class stock shipped to order. **Markham Herd Farm, at Locust Hill Station, 17-y-om JNO. PICK & SONS.**

LARGE IMPROVED WHITE YORKSHIRES AND ENGLISH BERKSHIRES

Now ready, boars fit for service; young sows ready to mate, and sows in farrow. Prices reasonable. Pairs supplied not akin. Apply to **WILLIAM GOODGER & SON,** 11-y-0 Box 160, Woodstock, Ont.



A specialty of **Large White Yorkshire Swine.**

Over 250 pigs of different ages on hand of the most desirable type. Quality of stock guaranteed as described. All stock delivered free of express charges. **J. E. BRETHOUR, Burford, Brant Co., Ont.** 3-y-om

ASHTON G RANGE 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. **WM. TAIT, St. Laurent, near Montreal.** 7-1-y-om



MAPLE LODGE STOCK FARM

We have a grand lot of young Berkshire Pigs for sale now. Can supply pairs not akin. 9-1-y-om

JAMES S. SMITH, Maple Lodge P. O., Ont.

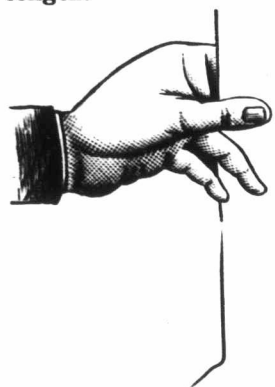
Premiums! Premiums! Premiums!

PREPARE FOR SEEDING! **NOW** is the time to secure **NEW** and **CHOICE WINTER WHEATS** by obtaining new subscribers for the **FARMER'S ADVOCATE**, the foremost Agricultural Paper in America for the practical farmer. For the benefit of our readers we have secured a quantity of two new and most successful Winter Wheats.

Dawson's Golden Chaff and Early White Leader.

DAWSON'S GOLDEN CHAFF has topped a list of 42 varieties grown at the Guelph Experiment Station for the past three years, yielding 18 bushels per acre more than the average of 80 varieties tested. In co-operative experiments by the Experimental Union all over Ontario in 1893 and 1894, it gave **THE LARGEST YIELD**, and was **MOST POPULAR**, out of eleven varieties tested, thus proving its general adaptability. Average yield per acre at Guelph, 51 bushels; over Ontario, 35. It is a bald wheat, white, golden straw of medium length.

EARLY WHITE LEADER.—A newer and most promising sort. At the Guelph Experiment Station it gave the largest yield (43.6 bushels per acre) out of eight varieties grown for the first time in 1893; average yield on 81 farms throughout Ontario, about 30 bushels. (The general average of all winter wheat throughout Ontario, as reported by the Bureau of Industries, was less than 20 bushels.) **Early White Leader** has again done well this year. It has a long straw, stands well, long bald heads, white chaff, and has beautiful white grain.



How to Start Growing these Heavy Yielding New Varieties.

We will give 20 lbs. of either variety for the name of one (1) new subscriber to the **FARMER'S ADVOCATE** accompanied by \$1 cash; or, 50 lbs. for two (2) new subscribers and \$2; each additional new subscriber, 25 lbs. more. First-class cotton bags in all cases 20 cents each extra. Wheat sent by Express or Freight as desired, F. O. B.

AGENTS WANTED IN EVERY TOWNSHIP to canvass for the **FARMER'S ADVOCATE**, on commission or salary. Others have done handsomely; **SO CAN YOU**. Write for terms and free sample copy. **BE FIRST IN THE FIELD** and secure the first and largest harvest.

Address: **THE WM. WELD CO. (Ltd.)**, London, Ont.

WANTED!
A large number of one-year-old Pullets. Name breed, number for sale, and lowest cash price. Address,
The W. A. FREEMAN CO. (Ltd.), Hamilton, Ont.
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USE
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LIQUID
SHEEP DIP
NON POISONOUS
KILLS TICKS, LICE AND ALL INSECTS
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IF you want excellent returns write for particulars of our
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We manufacture a full line of pumping and geared Windmills, and the greatest variety of Pumps of any firm in Canada. Our Haymaker Car and Patent Steel Track is leading them all, and our prices are made to suit the times.
ONTARIO WIND ENGINE & PUMP CO.,
9-y-om 367 Spadina Ave., TORONTO, ONT.

FOR SALE!
All kinds of TREES, VINES, SHRUBS, PLANTS, etc., etc. Pruning, etc., done, and practical instructions given in pruning grape vines, etc., by the original and only public practical instructor in the pruning of the grape from the Atlantic to Pacific.
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AGRICULTURAL COLLEGE

The Ontario Agricultural College will re-open on the 1st OCTOBER. Full courses of Lectures, with practical instruction in Agriculture, Live Stock, Dairying, Poultry, Bee-keeping, Veterinary Science, Chemistry, Geology, Botany, Entomology, Bacteriology, English, Mathematics, Book-keeping, and Political Economy.
Send for Circular, giving terms of admission, course of study, cost, etc.

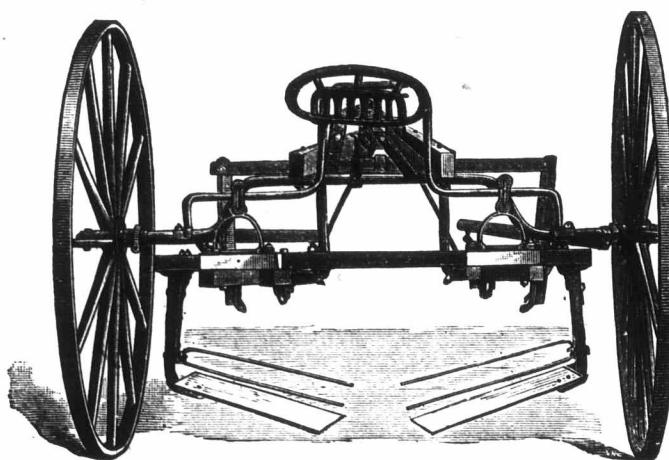
JAS. MILLS, M. A., President,

Guelph, July 6th, 1895.

14-c-o

Guelph, Ont.

NEW AMERICAN WITH BEAN HARVESTER ATTACHMENT.



The Bean Harvester is an attachment which is easily put on to the New American Harrow and Cultivator after removing the sections. It puts two rows of beans at once, leaving them in a perfect windrow, and harvesting from 12 to 18 acres a day. This machine is indispensable to bean-growers, and is highly recommended by all who have seen it. As a harrow its work is perfect; the teeth have reversible points and can be locked down or allowed to float. It also has special points made expressly for killing thistles. As a cultivator the New American has no equal; it cultivates perfectly all crops planted in rows, and with the Extension Arms two rows of beans can be cultivated at once. We sell the New American, either as a cultivator or bean harvester. If you have one of the machines you can obtain the attachments for making the other at a small expense.

Knives can be Locked in any Desired Position.

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CHEAPER THAN HOMESTEADING.

320 acres, in Municipality of Clanwilliam, Manitoba; E. 1/4 16, 17, 17 W. Splendid for stock; plenty of hay, timber, and good water; about 17 miles north-east of Minnedosa, Man.

Buildings thereon cost about \$2,000. Possession at any time will be granted; \$1,000 cash will purchase this improved farm. May consider any offer with different payment. Apply to

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4th Provincial Exhibition
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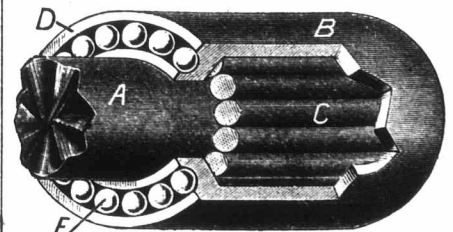
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Galvanized Towers and Wheels

The Best in America.

IDEAL SPRAY PUMP,

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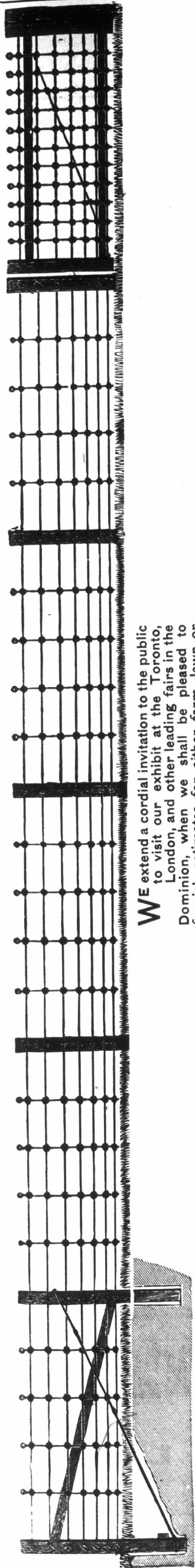
The Ideal Power Mill,

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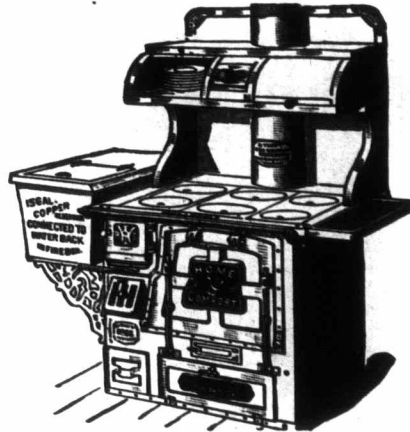
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STOCK GOSSIP.

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

The celebrated Shire stallion, Lincolnshire Lad II, 2365, the property of Fred. Crisp, died recently at the White House Stud, New Southgate. He was foaled in 1872, and sired many noted winners. At the Darlington Royal, out of the twenty animals to which money prizes were awarded fifteen belonged to the Lincolnshire Lad family.

HORSE BREEDING AT MAPLEWOOD.

A few years ago Mr. F. C. Stevens, with characteristic enterprise, established at Attica, N. Y., a few miles out of Buffalo, the Maplewood herd of Holstein-Friesian cattle, one of the largest and, beyond peradventure, unsurpassed in many respects by any other "black and white" herd in the world, as their triumphant show-yard career demonstrated. Latterly, however, he has turned his attention to Hackney horses, and bids fair to duplicate in that branch of live stock breeding the successes which he achieved in cattle rearing. The writer once had the pleasure of visiting "Maplewood," which is a magnificent farm, well adapted for the purpose to which it is now devoted. To begin with, Mr. Stevens secured from Messrs. E. Beith & Co., Bowman'sville, Ont., the prize-winning stallion Ottawa, and the mare Winnifred. Since then he commissioned Mr. F. S. Peer, of Mount Morris, N. Y., to make a selection of Hackneys and other horse stock for him in England. The Hackneys brought over consist of Langton Performer, by Garton Duke of Connaught, dam Fusee 2nd, by Matchless of Ludesborough, and several mares. Langton Performer is a dark chestnut, 15.23, with four white feet. He is three years old. He won first as a two-year-old at the great Yorkshire show, and second at London in 1885. As a three-year-old he stood second to Rosedor (whom he defeated at the great Yorkshire show) for the junior champion prize. The New York Rider and Driver states that Mr. Peer preferred him to the first prize horse, which is equivalent to saying that he considers him the best Hackney stallion in England. The mares consist of Mischief, by Matchless of Ludesborough; Modest, by Chocolate, Jr., with a stallion foal at foot by Ganymede, the champion Hackney stallion of England in '94 and '95. Lady Danegelt, a two-year-old daughter of Danegelt and Lady Sutton, by Chocolate, Jr., dam Sweetbriar, by Donkey. The dam of Lady Danegelt is Garton Duchess of Connaught, full sister to Garton Duke of Connaught, the sire of Langton Performer. The Welsh ponies (seven) were selected in the mountains of North Wales, and are of the true Welsh type. Mr. Peer also selected in the Shetland Islands six Shetland ponies, four of them (mares) for Mr. Stevens, and two (a stallion and a mare) for Mr. Allan Appar, of New York.

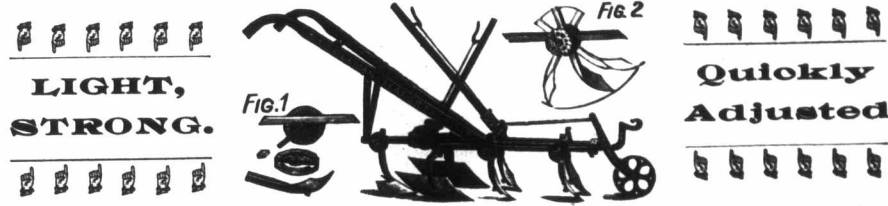
WOODROFFE DAIRY AND STOCK FARM.

Some four miles west of Ottawa, and most beautifully located on the banks of the River Ottawa, is Woodroffe Dairy and Stock Farm, the property of J. G. Clark, on which are bred a good class of Clydesdales, Ayrshires, and Improved Large Yorkshires. The farm consists of 300 acres (100 acres of which is rented), and is exceptionally well adapted to the dairy business. The well-appointed stables, beautiful pastures, and the large herd of sleek, well-kept, pure-bred and high-grade Ayrshires, make a visit at Woodroffe a pleasant remembrance, and a few hours inspecting stables, stock, and farm, will be found time both pleasantly and profitably spent by anyone interested in a well-regulated stock and dairy farm. The herd consists of some seventy-five head of choice pure-bred and high-grade Ayrshires, from which Mr. Clark supplies Ottawa customers. At the head of the herd is the stock bull Gallant Chief (8916), being also used on the herd this season. He was bred by Jas. Rae Shirruffs, Clarence, Ont., and was sired by Pendleton (3222), his dam being Ayr Lass, an excellent milking cow. Gallant Chief is an exceptionally fine young bull, and he is a fine sire of families noted for their production at the pail. Queen 508, by Clansman 327, dam Model 403, we considered an exceptionally good representation of the breed, and we were informed that she is a remarkably good performer at the pail. Her daughter, Fairy 1028, by Highland Laddie 467, dark red and white, very like her mother, is a beautiful heifer, and should mature into something good. Other members of the herd are also well worthy of mention, if space would permit. Among the young stock are many promising heifers, and the herd in general is of an excellent type. Mr. Clark has been quietly building up a pure-bred herd of choice quality, and has had no trouble to dispose of his surplus stock at very remunerative figures.

After looking through the Ayrshires we were next shown the imported Yorkshire swine, an even, well-modeled lot throughout. The foundation stock was purchased from Green Bros., of Innerkip, and as Mr. Clark is conveniently situated to the Experimental Farm, he has been able to take advantage of using such choice stock as Snowdon 1031 and Kinicroft Giant 424. The present herd boar is Champion 1928, by Kinicroft Giant 424, dam Surprise 1985. Champion was selected from the first prize litter at the Ottawa exhibition last fall. The sow Ottawa Queen 1850, bred by Joseph Fletcher, Oxford Mills, by Isaleigh King 1159, dam Simple 875, is a very even, deep-bodied sow, with well-sprung ribs, thick, well-fleshed hams, and standing on short, well-placed legs. She was suckling a fine litter of young pigs at the time of our visit, by Kinicroft Giant, Juno 1700 in the next pen is also a sow of much quality and individual merit, nursing a litter of little beauties about seven weeks old, also by Kinicroft Giant. Surprise 1985, by Favorito 3rd 178 (imported in dam), dam Matron 2nd 129, a rather large sow of model Yorkshire type, was nursing a litter of strong youngsters by Wallace 1071. This sow was the dam of the first prize litter of 1894 at Ottawa. Mr. Clark has three fine young sows left of last fall litters, and also some choice young boars fit for service.

Clydesdale horses have also been bred on this farm for some years past. Independence 385, one of the brood mares, is an animal of excellent bone and fine conformation, with very good action, weighing over 1,700 lbs. Kate 64, another fine mare with foal at foot, was seen. These two mares have produced some half dozen very promising young colts.

The MODEL SCUFFLER!



LIGHT, STRONG.

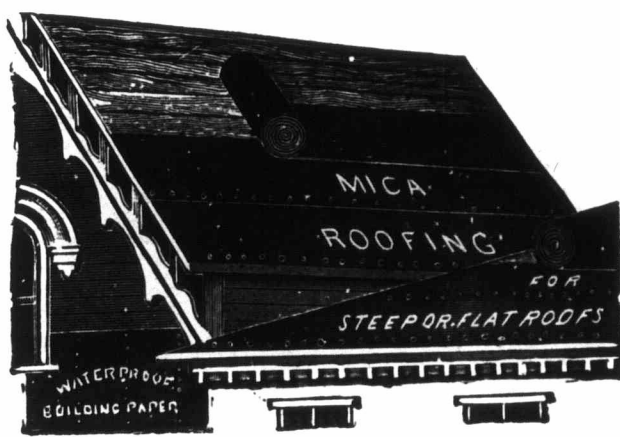
Quickly Adjusted

We aim to make an implement which will adjust itself to all the varying conditions of soil in the quickest possible manner, and with the least manipulation. We accomplish this by our new patented SHANK FASTENER OR CLAMP. The change is made by loosening one nut half a turn, by which operation the point can be shifted to any conceivable position. This Scuffler is, what many of our customers have already called it, "A WORLD BEATER." It is strong, durable, and of the best material and workmanship. If your local agent does not supply you, write direct to the estate of

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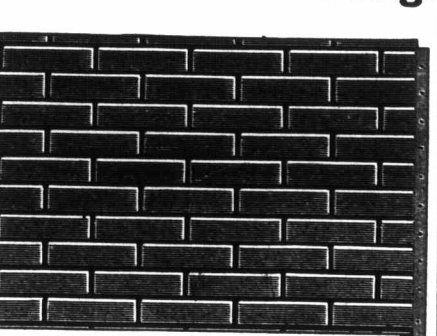
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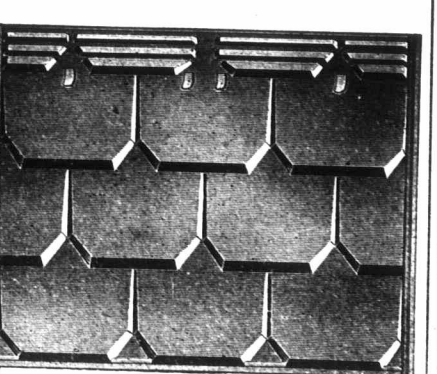


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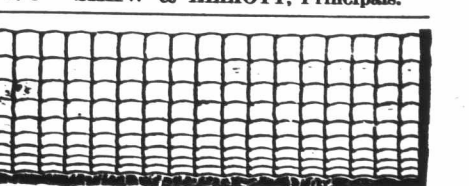
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