

MANITOBA AND WESTERN EDITION

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXIX.

LONDON, ONT., AND WINNIPEG, MAN., JUNE 20, 1894.

No. 360



A FAMOUS BROWN SWISS COW.

See page 288.

Prof. Robertson has ascertained that by churning sweet cream at 46 degrees temperature all the butterfat can be recovered; but it takes about 30 minutes longer to do the churning. Ripened cream he churns at from 54 to 55 degrees in summer and from 58 to 60 degrees in winter.

It has been demonstrated by practical experiments that 100 pounds of sand will absorb 25 pounds of water; 100 pounds loam, 40 pounds; 100 pounds clay loam, 50 pounds; 100 pounds clay, 70 pounds. This explains why some soils always appear dryer than others, why some soils will stand a drought so much better than others, and why, after a shower, some soils become like a thick paste, while others are only comparatively damp.

The new appropriation bill for the maintenance of the Agricultural Department of the United States carries a total of \$2,240,000, being nearly \$100,000 less than for the current year. The Bureau of Animal Industry is to receive \$500,000, and tuberculosis is added to the list of diseases of animals, to prevent the spread of which the Secretary of Agriculture is authorized to use any part of the sum. The sum of \$10,000 is set apart for the purpose of making inquiries in regard to the system of road management throughout the United States.

The resignation of Prof. C. V. Riley, Ph. D., for many years head of the Bureau of Entomology at Washington, when made public some weeks ago, created much surprise. In a letter to the public Dr. Riley states that this action was due to a regard for the wishes of his family, for the sake of his health and for his peace of mind. He states that he can never lose his interest in the subject of entomology, and relieved of the drudgery connected with office work, he hopes, in connection with the honorary curatorship of the Department of Insects in the U. S. National Museum, to be able to do some long-contemplated work of a purely scientific character.

The well-known writer on economic subjects, Mr. Edward Atkinson, has a somewhat remarkable paper in the May number of *The Forum*, on the subject of *The True Meaning of Farm Mortgage Statistics*, from which we take the following extracts:—"There are within the United States 4,564,641 separate farms, averaging about 137 acres each, of which, in the Eastern, Middle, Western and Pacific States, 80 per cent. are occupied and managed by their owners. Far more than half these farms are free of any mortgage whatever. The rest are mortgaged for far less than half their value. Only about one-third of the area of the United States (exclusive of Alaska) or, in all, 623,000,000 acres are occupied, assessed and valued as farm property. This is divided up as follows:—There are 1,300,000 farms under fifty acres, nearly the same number between 50 and 100 acres, 2,000,000 between 100 and 500, and 31,500 over 1,000 acres. During the last ten census years—1880-1890—the mortgage indebtedness has increased 156 per cent. on all these farms. But the production of grain has only increased 43 per cent. The national debt was decreased in almost the same proportion as the mortgages were increased, viz., 157 per cent."

Central Institute Convention.

Preparations for the annual convention of the Manitoba Central Farmers' Institute, to be held at Brandon, July 17, 18 and 19, are progressing very favorably, and everything points to a most successful and well attended meeting.

That great good is being done by the Institutes no one now doubts, and the Central Institute, through the able Secretary, Mr. Leech, has already accomplished much, but yet, we believe, is only at the threshold of its work, and we hope to see delegates from every local institute in the Province meet at Brandon on July 17th.

The list of those who are expected to address the convention is not at this writing complete, but we hope, in our next issue, to publish a full programme. Among those who have already consented to deliver addresses are: Hon. Thos. Greenway, Minister of Agriculture; The Rev. Dr. Bryce, who will take up Agricultural Education; Prof. Jas. Robertson, Dairy Commissioner; F. W. Hodson, London, Editor of the *FARMER'S ADVOCATE*; Dr. Rutherford, M.P.P. for Portage la Prairie, who will represent the Veterinary Association; Jas. Fisher, M.P.P. for Russell; Jas. Fleming, Whitewater; Dr. Harrison, Neepawa; Messrs. Elden, Bedford, Struthers, and others.

An opportunity will be afforded on the last day to visit the Experimental Farm, which is well worth a trip to Brandon any time, even if there were no Institute convention.

The Brown Swiss Cattle.

Though only about one-twelfth the size of the Province of Ontario, the little European Republic of Switzerland has exported in a single year as much as over 1,800,000 lbs. of butter, over 25,500,000 lbs. of condensed milk and over 57,000,000 lbs. of cheese, some 17 different kinds of the latter, exported to most of the civilized countries of the world, being manufactured. Besides this, large numbers of cattle for breeding and other purposes are exported. The milch cows of Switzerland number over half a million, belonging chiefly to two distinct breeds, which in certain essential qualities are unsurpassed, if equaled, by any other bovine races in Europe. One of these is the "Spotted" race (Berner Spotted), Simmenthal or Saanenthal cattle, and the other the Brown Schwyzer race, bred for many centuries in the Cantons of Schwytzer, Uri and Zug, and in fact they have spread through the whole mountain region of Switzerland. This breed is the best known and most largely exported of the two pure breeds of the Swiss cattle. Briefly put, their leading characteristics are:

- 1st. Good milking qualities.
- 2nd. Perfectly mild disposition.
- 3rd. Adaptability to most climates, localities and foods.
- 4th. Its beauty of form and color.

After making most careful investigations, U. S. Consuls in Switzerland agree in reporting that a good Brown Swiss cow will average for 365 days in the year not less than 10 quarts of milk daily, and that on grass and hay alone. This is not an exceptional rate resulting from special care and special feeding, but the average of thousands of cows taken from whole herds. For example, the 6,000 cows (ordinary animals of the breed) supplying the Anglo-Swiss Milk Condensing Co., at Cham, yield on an average 9½ quarts in the milking season, but choice herds average far more than that. She is a large, plump cow, averaging from 1,200 to 1,400 lbs. in weight. The percentage of fat in the milk ranges from 3.3 to 4.5, so that not only is the quantity large, but the quality excellent. Experienced Canadian breeders at the World's Fair last year were most favorably impressed with the appearance of the exhibit of these cattle.

Our front page illustration in this issue is of a well-known imported Brown Swiss cow, but the artist and the photographer have not done her justice by any means. Further reference to her is made in the following sketch concerning this breed, written for the *ADVOCATE* by Mr. N. S. Fish, Gorton, Conn., Secretary of the Brown Swiss Cattle Breeders' Association of the United States:—

"The Brown Swiss cattle, which are attracting much inquiry at this time, are a large-sized animal of fine form and proportions; color from light to dark chestnut-brown or mouse color; white spots are not often seen except on the bag or under the belly occasionally; horns rather short and waxy, with black tips; nose, black, surrounded with a mealy-colored band, sometimes running up the sides of the face; black switch, hoofs and tongue; hind legs noticeably straight. They have a healthy, vigorous constitution, are gentle and hearty, not over dainty feeders, yielding generous returns for care and feed. They endure cold, having a fine silky, thick coat of hair, and are persistent milkers, frequently giving milk up to calving. The Brown Swiss cattle in America are mostly from the famous Canton of Schwytz, where they are kept in summer on the mountains Rhigi and in the valleys in winter. Having been thus raised, they are inured to cold and storms, are not subject to disease, and it is said there has never been known a case of pleuro-pneumonia in Brown Swiss cattle. They have fine well-shaped udders, good-sized teats and are extremely even in appearance, and for crossing give as good results as can be desired. The surplus in Switzerland are in demand to improve the cattle in Germany, Italy and France. In some of the dairies for infants they use them in preference to all other breeds. In the report of a dairy for infants, in Dresden, Dr. Chalbans says:—"In selecting cows for an infant's cow stable we must look for especially healthy cows, and an excellent quality of milk," and, concludes his report, "The healthiest breeds of cattle are the mountain breeds, and above and before all we name the Brown Swiss cattle as strong and thoroughly sound, and totally free from all pleuro-pneumonia." At the International Show of Paris, 1873, every Swiss cow exhibited bore away a prize in competition with exhibits from Holland, England, Denmark and other famous cattle countries. There have been several importations into the United States of small lots. The number registered in the Herd Record for America is now about 1,600, and they are owned in almost every State and some in Mexico. They stand the climate well in all sections. They are particularly adapted for butter-making, the cream globules being large, churn easily and quickly. When properly handled the butter is of good color, fine nutty flavor, delicate and sweet to the taste. The milk has a rich, sweet taste, and for selling for family use will give the

best of satisfaction. There was a cow shown at the Fat Stock Show, at Chicago, in November, 1891, which in an official trial gave in three days 245 lbs. of milk, containing by the Babcock test 9.32 lbs. of fat. The first day her yield was 81.5 lbs. of milk, containing 3.25 lbs. of fat, and was the greatest yield of fat ever recorded in any official test from any breed up to that time, so far as I can learn. A record of another Brown Swiss cow (not official) shows a yield of 88,304 lbs. of milk in ten years. She made in one year 610½ lbs. of butter. Another from Oct. 15 to June 15 gave 9,207 lbs. of milk. The last named cow gave 50½ lbs. of milk, January 23, 1894, with good farm care and feed. [A portrait of this cow appears in our illustration.] The calves are large and strong, sometimes weighing at birth 110 lbs. They grow and mature rapidly. Cows weigh from 1,100 to 1,200 lbs. and some 1,600 lbs. And for working oxen, they are easy to train, learn quickly, are strong and very fast walkers. The grades show the Swiss blood, and make beef of the best quality—heavy in the back, loin and hams. All breeders agree that no breed show more good points than the Brown Swiss cattle."

Timely Notes for June—No. 2.

CASTRATING COLTS.

It is now a mooted question as to whether it pays to let colts go entire until a year old, and run the extra risk incurred in the operation at that age, or to castrate them at three or four months old, when following their dams. Many veterinarians desire to operate on them at the younger age, as the operation is easier and safer, and, of course, their reputation would suffer if a large percentage of the colts died. But, on the other hand, the colt that is left entire until he is a year, or even two years, old, obtains a fine crest, and is generally a thicker and stronger beast, and, I am inclined to think, would prove a more lasting horse. He may be a little less docile, but even this I doubt, and until I can hear better reasons for early castration, I mean to let them go until at least a year old.

REARING CALVES.

The most economical way I have come across yet is to let the calves have new milk for a week, then half new and half skim for two weeks more, then skim milk alone for two months more, and as soon as possible let them follow the cows at pasture, letting them have the skim milk until nearly three months, when, if the grass is good, they can do well without it, and they will be able to feed pigs, etc. Always feed the milk warm and quite sweet. But this way will not make the best calves. It saves a lot of work, and that, of course, means money, but does not make the best cattle. The best way I have yet seen was one practised by a Mr. McKay, in Rossmere. He kept his calves (all got by a pure white Shorthorn bull) in the stable all the first summer, each tied in its own place, well bedded, and cool and comfortable. They were fed skim milk, with some crushed flaxseed, with plenty of hay and water. They were not annoyed by flies, and were the finest lot of calves I have ever seen together, reared without new milk. So sleek, so big and so thrifty, and, taking into consideration the extra value of the calves, I fancy they were really cheaper reared than by any skimming process. But they would be more trouble when turned out with the cows as yearlings than if they had been allowed to follow the cows as calves.

HERDING VERSUS FENCING, ETC.

In many districts now it is considerably cheaper to pay a herd boy to look after the cattle of a few neighbors than it is to fence in all the crops of the same men. A boy can be hired now for \$5 or \$6 per month, and can easily look after a hundred cattle. The cost of paying and boarding him, divided between three or four neighbors, is a mere nothing—not a quarter the interest on the cost of the fencing required to keep those cattle out of the crops. Besides, the cows are brought home regularly, and there are no milkings lost.

GENERAL.

Go to the nearest dairy meeting, and take a fair sample of milk with you. Don't take a little off the top of the can and try to make your neighbors believe you have cows that give 10% milk.—[Ed.—To obtain "a fair" sample, either from individual cow or herd, thoroughly mix the night and morning's milk together, and immediately draw off sample; a teacup full is plenty.]

Castrate those young calves and pigs at two to three weeks old.

Walter Wellman says the Belgian draft dogs can pull 1,000 pounds each on good roads. Can you not utilize some of those useless dogs you have round your place, and make them work for their board. It is generally the poor man has the most dogs, so it should be only right to make them work. You wouldn't feed a useless man, why should you feed so many worse than useless dogs?

INVICTA.

Patrons' Candidates.

The Patrons of Industry have nominated Wm. Postlethwaite, a well-known farmer, living near Brandon, for that constituency of the House of Commons, and Grand President Chas. Braithwaite for Marquette. Both conventions were well attended and the nominees heartily received.

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THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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

- 1. The Farmer's Advocate is published on the fifth and twentieth of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada. 2. Terms of Subscription—\$1.00 per year in advance: \$1.25 if in arrears; sample copy free. European subscription, 6s. or \$1.50. New subscriptions can commence with any month. 3. Advertising Rates—Single insertion, 15 cents per line. Contract rates furnished on application. 4. Discontinuances—Remember that the publisher must be notified by letter or post card when a subscriber wishes his paper stopped. All arrears must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given. 5. The Law is, that all subscribers to newspapers are held responsible until all arrears are paid, and their paper ordered to be discontinued. 6. Remittances should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible. 7. The Advocate is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law. 8. Always give the Name of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done. 9. The Date on your Label shows to what time your subscription is paid. 10. Subscribers failing to receive their paper promptly and regularly will confer a favor by reporting the fact at once. 11. We invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage. 12. Replies to circulars and letters of enquiry sent from this office will not be paid for as provided above. 13. No anonymous communications or enquiries will receive attention. 14. Letters intended for publication should be written on one side of the paper only. 15. All communications in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper. Address—

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Manitoba Crop Report.

The crop report of the Manitoba Government for the season, up to June 1st, shows a slight increase in the area sown to wheat, 1,010,186 this year, against 1,008,640 in 1893. Oats showed an increase of 25,000 acres, there being 413,686 acres in this cereal this year, while 119,528 acres of barley are sown—also a slight increase. Other grains and roots showed some increase. Every section of the Province reports a shortage of rain during the latter part of May, which has been intensified by the terrible heat and drought of the first eight days of June.

The Horn Fly.

The horn fly pest is already very bad in some localities. When the flies are at their worst, it has been found necessary to spray cattle with the ordinary kerosene emulsion every two days. Prof. Fletcher, of the Experimental Farm, Ottawa, has found that Tanner's oil, containing some carbolic acid, or oil of tar, is more lasting in its effects, but takes longer to apply and requires much greater labor. Train oil or fish oil alone, or train oil or lard, with a little sulphur, oil of tar or carbolic acid added, will keep the flies away for five or six days.

Our Common Schools and Farmers.

Continued from page 223.

Let us look at this matter from the standpoint of evolution. Nature, when raising the anthropoid from the animal,—in other words, in creating man—made changes at three points: she enlarged the frontal brain, modified the mouth and throat to make articulate speech possible, and transformed the forefeet into hands. At these three points education should be applied. That is, our schools should aim not simply at brain culture, but at speech culture and hand culture. With such a reckoning, we are brought to the need of music, and the use of tools as well as books. I would give one-half of each day to the books; the other half to music, and play, and work. But do not let this manual culture be confined to mechanical tools alone, but also to farm tools. I hope to live to see every schoolhouse in the country set in a plot of land for comparative horticulture. The Germans and English are beginning to feel the need of this change, and are considering the project of establishing school gradens or incipient farms. Mr. Sewell read recently, before the British Association, at Newcastle-on-Tyne, a paper in which he outlined a school botanical garden. This is, of course, not a new thing on some parts of the Continent. I see no reason why the garden and garden tools may not constitute a part of the furnishing for manual culture. Gardening and horticulture train the hand, and these industries need the trained hand. If you expect your children to love such work, let them learn to do it in connection with and as a part of study and play. No child should ever have a breach made between play and work. It seems very probable that, when manual training is conjoined with a study of the sciences, there will be no further need of compulsory educational laws.

While I would not have everything done for the brain, I would not have anything done with the simple end of utility, as applied to the back and stomach. Yet the highest art and the highest utility coincide. Drawing, or the free use of the pencil, is in reality not an ornamental part of education, but a most practical part. It enters into half of our commonest industries. The young person more often has need of the pencil than of the pen, in winning his way. Old things pass away. I do not object to teaching penmanship, but I aver that four-fifths of the culture in this direction is superfluous, while drawing, which is set aside as an accomplishment, is in most demand for material as well as intellectual progress. We must reverse matters, and teach drawing, at all events; penmanship afterwards. So I would teach geology at all hazards, and geography afterwards. It is more important that a boy know the land he lives on, and what he can do with it, than that he should know the chief cities of Burmah and Japan. That is, I would apply educative force to the brain, but not to the brain only; I would teach the hands to draw and to work, and the voice the sweet art of music and the fine art of conversation.

It is equally important that our readjustment of the common school shall enable us to make farming profitable. The study of horticulture and biology will also aid materially in this direction. But there is quite as much advantage in chemistry and in farm economics. Farming will pay when it is done understandingly, intelligently, lovingly, with a knowledge of the forces we deal with and the things we handle. At present the bugs understand us better than we do them. They have little to learn, but that they have learned well. I keep an ant colony on one of my lawns to show occasionally to my boys and to visitors. How much more intelligently, economically, neatly, and with how much more attention to sanitation, these creatures farm it than men do! They have no mortgages. They keep cows, but their stables are models of neatness. But my hired men are almost sure to be machines, and are far from models of thrift and economy and neatness. They do not love the farm; they do not, with a few exceptions, work intelligently; they abhor experimental farming.

Wilson Flagg says in his book about trees: "When I am journeying through the country, and behold the rocky hills, sometimes for miles in extent, entirely bare of trees, affording too little sustenance to support even whortleberries, I am informed by the older inhabitants that, in their childhood, these hills were covered with forests. The woods were cut down, and there was nothing left to prevent the soil from being washed down into the valleys. Now nothing remains to support a new growth of trees." I care not in which direction you turn, American farming has to account for its depression by its methods. You have never seen a case of failure, where there were no heavy doctor's bills, but you could put your finger on a removable cause. Our hop speculators are a sample. When they make money on hops, it is at the expense of every other crop in the way of manure and labor. When there is a large margin in their favor, they buy fast horses and pianos, smoke cigars and cultivate other wasteful habits. When the market drops from one dollar a pound to five cents, the auctioneer sells the pianos and horses for one-tenth value, and the farmer who sought only money, and had no love for, or knowledge of, the land, and the things of the land, joins the westward caravan, or hangs himself. I said to a friend, of good judgment: "Take your pencil, and make an estimate of the loss in one way and another of

farm produce. We figured the absolute loss, first and last, of bad culture, bad handling, and general lack of intelligent method and economy, at one-half. I truly believe one-half the production of American lands is lost through ill-directed education. Our apple crop is more than half lost, and this is pretty surely true of all other fruits, except, perhaps, small fruit, which cannot be grown at all except with special attention. The plum trees, over large areas of the Northern States, have been cut down, or ought to be, to get rid of black-knot. The cherry trees were also assailed fifty years ago, and gradually eliminated by the same disease. The curculio spoils yearly tens of thousands of bushels of both these fruits. Remedy, more knowledge of entomology and of tree life itself. Give that, and the snap and backbone will be found. The farmer is rarely a lazy man; his trouble is, he does not know his enemies, or how to fight them. He does not know his friends from his foes in the insect world, and is as likely to destroy the former as the latter. I hired a peripatetic Yankee for two months. He had a common school education, but he did not know granite from conglomerate, and undertook to spray tent caterpillars for codlin moths. Unfortunately, he, like many more farmers, despised any knowledge that did not come along as heredity. One-third of the apple trees of Central New York were ruined within the last five years by the tent caterpillar—not only the fruit, but the trees. The invasion was enormous; but the fight was an open one. The worms came out ahead; the fittest always survive. Last winter I negotiated for five tons of hay of a dairyman. It was so full of wild carrot and Canada thistles that I accepted but the first load. We cannot afford to pay for hoeing the weeds out that will be seeded in by such manure. Such hay decreases the owner's milk product one-half, and by and by the weeds will whip him off his land.

I have an acre of flowers for our own pleasure; although, as a rule, these might add largely to the income of small fruit-growers. But we may as well grow our luxuries, if we have cultivated tastes, as to buy them. There is more real pleasure in hollyhocks than in fast horses, if you are educated to understand them. A young lady full of common and high school wisdom visited my grounds and found immense pleasure for a couple of hours. Then, looking over the superb valley, through the rich and rare trees, she said: "But it must be terribly lonely here." "Ah," I said, "that is so, if you have no friends here, or acquaintances. You do not know these elms, and lindens, and magnolias—they are strangers; but to me they are companions. No, we are not lonely here." But, with all my gardens of berries and lawns of flowers, I let my neighbors' bees carry off my honey until last summer—which was poor policy. A man should know how to gather all his crops, from the honey in his raspberry flower to the berries themselves. Then, he should know how to grow each crop to the best advantage. Then, he should know how to handle them all economically. Then he should have so large a variety of crops that he will not seriously be embarrassed by the loss of one, or two, or even three each year. Farming in the West is mostly speculative; so is much in the East. It is a venture of all a man's prosperity on one or two crops. If the market go down, or the crops fail, the farmer is as badly off as a sheared lamb in Wall street. He has nothing to do but to growl at capitalists, who are doing precisely what he tried to do and failed. So when we come to estimate the farm trouble, we cannot leave out the lack of knowledge about insects and about manures.

There really is no reason why the tide that for a century has set toward cities should not be reversed. To some extent it is now being reversed. The literary and mercantile classes began some time since a hegira into suburban homes; and the mechanics are now following them. This, of course, is not to make farmers of them, but it is to give them a taste for land and land culture. Mr. Hubert, in a capital volume on "Liberty and a Living," pictures the possibilities before a city journalist. If a taste for the country can be cultivated, and with rural life can be joined a fair share of refining influences and the comforts of art and music, as well as pure air and exercise, we are on the road to a reconstructed agricultural sentiment. Mr. Hubert shows us admirably that we can get all the good there is in a city, and have our work tell at the hub while we live at the end of the spokes. He says: "People talk of the inspiration of the crowd—the electrical effect of numbers. I can see but little of this in our American cities." The suburban life of our larger cities has, for the past five years, enormously widened out. To hasten the further reaction, so that agriculture in the twentieth century shall be once more the leading division of American industry, is a matter of political and social importance. When this is accomplished we shall have filled the hopes of our founders, and made the Republic what Jefferson believed to be possible.

But how, you say, can this revolution be wrought? By what possible means can we secure for our common schools teachers equipped to teach geology, chemistry, biology, and physics? When the demand comes, we shall surely have the supply? But let us not make the mistake of supposing these to be more abstruse or difficult studies than geography, arithmetic, and grammar. Rightly taught, these latter are far the most difficult and advanced. They belong only with older pupils. The former sciences are simpler and more fundamental. They

deal with everyday questions and things near at hand. The only trouble in science is with the nomenclature. Science as entomology, for instance, deals with butterflies and bugs—just what children naturally take to. Science as botany deals with flowers, fruits, roots, trees—just what all children like. Science as geology deals with the dirt and stones and brook beds—just what children love. Science as chemistry pulls things to pieces and reconstructs; as physics, it plays with sunbeams. This is not at all abstruse. *We want just as little as possible to do with books while educating a child.* But I am not enthusiastic enough to believe we can work a revolution of this nature in a day, or in a year. We must first see our need. The end will be that we shall not allow a school in the land to be under the care of any but Normal graduates. Drawing and music are a part of hand culture and voice culture, and you can just as easily equip teachers for such studies as for those which you now have. I have said there should be a school garden about each schoolhouse. Why not also telegraphic and telephonic connection with every simple country school? This also, and much more, will come, making the common schoolhouse the centre of the district, rather than a neglected, desolate hovel by the wayside.

This subject is of intense and growing importance, and cannot have the go-by. *As we educate, so we are.* If we are not educating farmers, farmers we shall not have. No social change ever took place, for better or for worse, that was not the result of preceding educative influences. It is possible for a system of education to become entirely foreign to the age in which it is in practice. Vam-berry, after one of his masterly descriptions of the learned institutions of Khiva and Bokhara, says: "The richly endowed colleges of these cities are visited by hundreds of students from India, Afghanistan, and Chinese Turkestan. Great diligence is displayed in study; but only in grammar, rhetoric, and history, while mechanics and sciences are considered superfluous. After fifty years of Russian occupation they regard with freezing indifference machinery, railways, and modern manufactures. Only a vast upheaval of the educational foundations could transform this people. As the schools are, so are the people. We have quite passed the point where we can rest contented with schools that simply inform their pupils. We must have a national aim, a national system, for a national end. Certainly the farmer must insist that the tendency of the school shall not be to take his children from the farm, unsettle the home instinct, unfit them to be happy agriculturists, and turn them over in a ceaseless tide into shopkeepers and traders.

Supplementary to the changes I have emphasized in common school education, is it not possible to make farm life recipient in a high degree of the advantages of University Extension? This, the latest stage in the evolution of educational methods, proposes in brief to carry the advantages of higher education to those who cannot go to the university to get it. It is an enlarged "Chautauqua," and while not yet a clearly defined system, it has in it an optimism concerning popular culture never before conceived. In this county of New York State, Oneida, we have a County Farmers' Club. During the winter the professors of Hamilton College have delivered a course of lectures before the club and its friends, on the following and kindred topics: "Political Economy and its Bearings on Farm Life," "Biology in its Relations to Farmers," "The Geology of Central New York"—considering soils and water courses; "Farmers' Libraries and Home Culture."

These eminently practical subjects bring the college and the farmer into close relation. It is projected to carry the plan forward much more thoroughly, and inaugurate courses with abundant laboratory and probably field work. For a very large part of the country, something of this sort is possible. In all ways we should aim to make the farm the brightest and most intellectual home; we should carry there what we have concentrated in cities and towns. We are at the dawn of a distributive age. Electricity will, as a power, be easily carried to a distance. It also carries knowledge everywhere at a trifling cost. I do not despair of even seeing our farm homes connected with university laboratories in such a manner that the whole work may be reported; in other words, so that the professor, if he have common sense, may address instructively an audience scattered over a whole township or county. But at present the one practical and all-important point is to have in our common schools a curriculum of study that will make our children acquainted with land and what is on the land; an education that unfolds the nature of soils, and the wonders of life in and on the soils; and while bewitching them with the everlasting unfoldings of such studies, makes it possible for them to master their foes, and receive the benefits of insect, bird and plant friends. This done, no occupation can compare with farming for its charms and advantages.

Tuberculosis in Wisconsin.

At the Wisconsin Agricultural Experiment Station, Madison, last winter, one of the cows in the station herd was noticed to be running down in flesh rapidly. Dr. Russel, bacteriologist, and Dr. Clark, veterinarian, began an investigation, and 25 out of 30 cows responded to the tuberculin test. Up to date some 25 have been slaughtered, and 26 of them showed tubercular consumption of the lungs, several cases being very bad.

Chatty Stock Letter from the States.

FROM OUR CHICAGO CORRESPONDENT.

Best 1,400 to 1,700-lb. bullocks sold at \$5.10, being 70c. higher than a fortnight ago and only 40c. to 50c. lower than a year ago; best Texas steers, \$4.45, against \$4.75 twelve months ago; distillery cattle, \$4.25 to \$4.75, against \$4.90 to \$5.10 a year ago; heavy hogs, \$4.90, against \$5 two weeks ago and \$7 a year ago.

During the past half-month the situation in the cattle market has materially improved, especially from the sellers' point of view. Indeed, though prices are higher, buyers seem to be better satisfied, as the higher prices denote a healthier and more desirable state of the general trade. An old cattle buyer assures the writer that as a rule he would sooner do business when values were high than when they were depressed. However, the position of the market, with reference to light and heavy cattle, has shifted, and now the ripe, heavy heaves are commanding the premiums they merit. The distillery cattle feeders are moving out a good many cattle, at \$4.25 to \$4.50.

A well-known member of the so-called "big four," who bought a big lot of Canadian stillers two years ago, and lost so much on them, recently contracted a lot of Kentucky stillers. The first half was delivered, but the second half he claimed lacked quality, and he claimed a reduction in price. The owners, however, who knew as well as he that the market had gone up since the deal was made, were very anxious to take the cattle back. As soon as the buyer learned that they were up to his favorite little game, he at once decided that the cattle were good enough to pass.

Some 1,545-lb. distillery bulls sold at \$3.65 to an exporter; a lot of 1,250 to 1,400-lb. distillery steers sold at \$4.55 to \$4.75, with some 1,200-lb. glucose-fed steers, at \$3.80.

Texas cattle are selling well, and are coming to market more freely. A lot of 1,153 lb. steers, which sold at \$4.45, had been run on grass and fed 6 lbs. of cottonseed meal per head per day. Grass cattle are not yet fat enough to be good beef, but they are improving rapidly.

Horses are selling nearly as well as other live stock. The receipts show over 7,000 more horses sold this year than in 1893, up to the first of June, at the Union Stock Yards. Late offerings were principally drivers and 1,200-lb. chunks, the latter selling up to \$115, and drivers from \$70 to \$225, according to quality and action. The demand for saddlers is quite light.

Best sheep, \$6.50, or 35c. lower than a fortnight and 65c. lower than a year ago. Lambs, same as two weeks ago, and \$2.00 per 100 lbs. lower than a year ago. Following is an abstract of one day's business in the sheep house:—Receipts, 8,000 head; a great many spring lambs sold at \$3 to \$4, and some down to \$2.75. Included in the receipts were 1,632 head of 122-lb. Western sheep, which were contracted to an exporter at \$4.75. An extra prime bunch of 120-lb. Western sheep sold to an exporter at \$4.50, and 417, averaging 113 lbs., at \$4.25; choice 100-lb. Indiana sheep sold for \$4.40; medium sheep sold at \$3 to \$4, and common stuff at \$1 to \$2.50. Lambs ranged from \$2.75 to \$5.10.

The death of Jacob May, formerly of New York, but for years cattle buyer for Armour, removes another well-known cattle man.

The question of a location for the Annual Fat Stock Show is again being discussed. There is dissatisfaction with the Stock Yards site, as not being central enough.

Pointers in Pig-raising.

BY C. J. WRIGHT, DIXVILLE, QUE.

Never overfeed a sow with rich heat-producing foods, which have a tendency to cause fever and dry up the milk flow, thus stunting the growth of the young pigs. For the first week feed house-slops and bran, sparingly, after this time you can feed as heavy as you like.

In order to be healthy, young pigs must have plenty of exercise. Another important point in pig-raising is to provide a dry, clean bed; otherwise they are likely to die of thumps, cold or rheumatism.

As soon as the pigs are four weeks old, commence to prepare them for weaning by feeding them in a trough within reach of the little pigs at all times, but inaccessible to the sow. Increase the feed gradually, and by the time they are eight weeks old they will be eating sufficient, so that they can be weaned without checking their growth in the least.

The Right Hon. Mr. Chaplin, British Minister of Agriculture under the late Salisbury Government, recently delivered an address in Edinburgh, upon which the Scottish Farmer comments as follows:—"Mr. Chaplin's frank, outspoken utterance will have done much to deal its death-blow to any revival of Protectionist views in agricultural circles. His statement proves clearly that Protection is not merely an impolitic cry, but a strictly illogical and unfounded remedy. The most prosperous period agriculture ever passed through in this country was that following the adoption of the Free Trade principles—a period extending for about twenty-five years; and during the succeeding term Protectionist as well as Free Trade countries have suffered from agricultural depression. The conclusion, therefore, seems natural that whatever else may have caused the melancholy state of our chief industry, it was not and could not be Free Trade."

Shorthorns, Present and Past—Dorsets on the Move.

I have lately succeeded in purchasing for Senator Cochran fifty Shorthorn bulls for his Northwest ranch. They were a good lot, and ought to make their mark, as they will be employed with a lot of good cows, steers from which have averaged \$40 per head in Montreal, clear of expenses. The Senator once owned the most valuable Bates herd ever in the Dominion, and what is of as much importance, made the most money out of them. Tenth Dutchess Airtes and her four daughters cost something like \$30,000. I am speaking from memory, and it has to go back many years. They and produce realized over \$150,000 when sold. Then we must not forget Duchess 97, imported from England at a cost of 1,000 guineas, as she became such a noted matron being dam of 1st and 2nd Dukes of Hillhurst. This sale of 97, by Capt. Gunter, for 1,000 guineas, was so much commented upon at the time by Bates breeders that it was mainly instrumental in my getting Bride of the Vale from Tom Booth at the same figure. This was at the time of the Wars of the Roses—or Booth and Bates. Feeling ran so high that a Booth breeder would not attend a Bates sale, and if rural breeders happened to meet at a mutual friend's house, it was under protest. But I am rambling; these old associations carry me away. How gratifying it is to know that the man who held and owned both the best Bates and Booth in Canada, and probably the best on the continent, with one exception, and also made the most money out of them, still has faith in the sort, and that, while his contemporaneous breeders of any note are all either dead or gone out of the business, he still sticks to the breed, and buys bulls for breeding steers. Not much romance here—but strict business; and had some of the meters had the same faith that he has, they would have been breeding to-day.

I also wish to note that I have purchased for the Hillhurst branch of same firm, the entire flock of Dorsets from Mr. T. W. Hector; they are indeed a good lot, and what surprised me most was the condition, considering the pasture. While Springfield is a most romantic spot, and must be eventually valuable for building sites, overlooking, as it does, the Credit River, the banks being nicely wooded with pine, whose fragrance was particularly noticeable by one to whom a pine is almost a curiosity, all these attractions are scarcely what one would look for on a sheep farm; hence my surprise at the condition.

The rams are thin, compared to what they were at Chicago, but there are seven imported ewes that I doubt can be duplicated on this continent. Though, of course, not as fat as when at Chicago, they impress one quite as much; the gloss and glare, the spangles and the ringsmaster's crack of the whip, are wanting, but the outline is there; the same performers, but in deshabille. I sincerely hope they may do well and give satisfaction.

RICHARD GIBSON, Delaware.

The Fall Show.

BY R. E. KING.

The Fall Show was instituted with the hope of introducing improved methods of farming, by means of prices offered for the best agricultural products.

"Is it fulfilling its mission, and what benefits, if any, are to be derived from the inspection of the exhibits?" has been made the subject of this paper.

We find that, as a rule, most people avow that what they attend the fall shows for is to see the "folks and the fun," not going with the expectation of learning methods which would benefit them financially. There must be a reason for this. True, they will see examples of good stock, but they are viewed as curiosities or as something helping to supply amusement. Such questions as, What methods of feeding and breeding were followed in order to achieve the results obtained, together with the profit resulting from growing animals of the type shown? are unattainable. In fact, it is generally conceded that the majority of show animals are not produced at a profit, the truth being that the exhibits are not intended to be educational, but are shown as a means of advertisement for the owner.

It does not require a money grant from the Government to tell any farmer that plenty of feed and care bestowed upon an animal will produce one that is superior to those which have lacked a sufficiency of either or both, yet this is about the extent of the knowledge to be derived from attending the average show. What particular combinations of food, with cost of same, together with methods of feeding, how cared for, as regards stabling, pasturage and watering? These and many of the questions which would be of assistance to the visitor in reducing the cost and increasing the quality of his cattle, sheep and pigs, as the case might be, he has no means of learning. The same is true of the cereal department, where may be seen a bushel or two of, say peas, of which there are several bags, one of which has received first prize. Why it has done so we are left to judge for ourselves. Then, what do we find are the conditions which entitle it to the distinction of being placed first?

1st. Freedom from dirt, which is the result of careful work with the fanning mill. 2nd. Evenness of size attained by passing over two sieves, one taking out the large, the other the small grains. 3rd. Large size for the kind, brought about by screening

a great amount for the sake of getting a little for show. 4th. Evenness of type, which is often obtained by patient hand-picking.

There is scarcely a bin of grain in the country but that from which a prize bushel may be gotten by careful cleaning and patient picking. Then, what is to be learned by viewing the cereal exhibit? We find attached to the exhibit a ticket bearing: 1st. The name of the agricultural society. 2nd. The name of the department under which the exhibit is placed. 3rd. Name of cereal (to enlighten the farmer). 4th. Number of exhibit.

That is what we learn. What we do not know is: The name of the variety, name of exhibitor, how cleaned, time and manner of harvesting, cultivation, time of sowing, manner of sowing, preparation of seed bed, previous cropping, manuring, yield per acre, quality of straw, profit, etc., etc. In fact, those things which would be and are of value to the producer are apparently carefully hidden.

We have to change with changing circumstances. Years ago, when the practice of holding an agricultural exhibition was instituted, the meagre information to be derived from simply inspecting the exhibits was sufficient. Farming has become more of a science, while the manner of conducting exhibitions has stood still as far as agricultural products are concerned. It is not now enough to know *what* the result of labor has produced, but we want to know *how* results are attained. For instance, when the farms were new and the soil still possessed its virgin fertility, all that was necessary to know was that a certain person had grown fine potatoes or pumpkins, and his neighbors, by procuring seed, could hope to achieve like results. But now, when the virgin fertility is no longer to be depended on, when climatic conditions have more influence than of yore, when we have no crop that is free from insect pests or fungoid growths, the fall agricultural exhibition fails to meet the requirements. It is behind the needs of the times; it is dead, and in its place we have the fall "show," and the more show and less agriculture, the greater the success.

Now and then some agricultural writer will bemoan the degeneration which has taken place, and call on the directors to expel the horse trot, baby shows, beauty shows, pig races, turkey and chicken, goose and duck races, cheap Johns, fakirs, side-shows, balloon ascensions, etc., etc. But it can not be done. The more nonsense the better the show, is the experience, and no good show resists the tendency. The majority of those who engineer these shows are the hotel-keepers and business men of the towns where they are held, who expend the legislative grant for the encouragement of agriculture. Of course, they may be of advantage to the breeder of fancy stock, as an advertisement, but I appeal to experience to prove that the great mass of the farmers are not benefited in the least.

The question is, can there not be devised some means whereby the Fair may be made to answer the needs of the times, and make it what it was intended to be, viz., an educator? The change would have to be radical, indeed. We would want the exhibitor to show *how* such results had been obtained, and not, as now, merely *what* had been done. And unless they are improved along the lines indicated, we think that we are justified in saying that the grant should be discontinued altogether; much less increased.

The Present and Future of Wheat.

BY ROBERT WEMYSS, REABURN, MAN.

It is probably a bold, nay, a hazardous experiment, for any one dogmatically to venture an opinion on the future range of prices for wheat. The past and present we know, but, unlike experience in some other matters, they offer no solution of the future problem so vital to the agriculturists' interests. As with every other product, supply and demand must regulate prices, and the engrossing question is what the former is likely to be relatively to the latter, of which a fairly accurate estimate can be made. There are not wanting those on the other side of the boundary line who argue that the demonetization of silver has been an important factor in the reduction of grain prices. This is a question which we cannot enter upon here, further than to say that silver, like any other metal, is subject to the laws of supply and demand, and, writing in general terms, it is the financial standing and credit of any nation issuing silver coinage bearing the national stamp that fixes the value as currency when redeemable in gold. Our republican neighbors have been so long a law unto themselves, and so inflated by the marvellous growth and expansion of their nation, that they desire to be a law unto other nations, but bi-metalism must prove a failure in any one country unless adopted by others. They are now reaping the fruit they sowed the seed of in the Sherman Act, the evils of which shall be felt in many years yet to come.

The low prices arising from the enormous production of 1892 have not been without their compensatory advantages, for, however beneficial to the consumers and disastrous to the producers, they have been eye-openers, and have awakened the farmers to the absurdity of jealous isolation, the advantage of combination, and the stern necessity of being able to supply all their wants at natural prices, and not at prices artificially inflated by a protective tariff. To sell at ruinously low prices and to be forced to bonus other industries is to burn the candle at both ends at the same time,

which may realize the idea of a short life, but not a merry or prosperous one. We are not of those who believe that the prices of wheat must of necessity rise to a higher level, even the level of previous years, but we do believe that present prices are lower than are likely to continue, for the simple reason that producers cannot on the average afford to toil, sow, and reap, for 45 to 50 cents per bushel. Farmers must have a fair margin over cost equally with other producers or manufacturers, and although the smaller and more needy may, probably must, make wheat their staple, yet the more independent will cease to grow it, or doing so only for stock feeding purposes. In this way the supply for human food would be gradually curtailed, and prices take a higher level.

Many opinions have been ventured regarding the probable future of wheat, one of the favorite theories of optimists being based on the United States becoming importers instead of exporters of breadstuffs. It may be so, but it must not be overlooked that higher prices will induce higher culture and greater yields in the States, and also stimulate production in all the wheat-growing countries of the world. The New England States show this, particularly where many farms, abandoned because of their run down condition and sold at sacrifice prices, are now, under higher culture and more generous treatment, repaying the purchasers well for their outlay in manures, and more scientific methods. In Britain, and more particularly in Scotland, where the lands have been cultivated for centuries, and where agriculture is pursued with much scientific knowledge and enterprise, the yield per acre of cereals and roots is, on the average, greater than in Canada or the States. This is chiefly due to the system of rotation of crops, heavy manuring, drainage where necessary, and careful culture. The productive capacity of much of the land, both in Canada and the United States, has not yet been reached.

If the world's power of production is looked at, we see Russia, already an enormous producer, pushing a railway through Siberia, a country whose climate is somewhat similar to that of Manitoba, and with a large area of land capable of growing a magnificent sample of wheat. With the increase of transport facilities the production will no doubt be greatly extended. Turn to India, already a large and yearly increasing factor in the world's supplies—we find a large area yet to develop in the Punjab, the Northwest Provinces, and in Oudh, and whose power of production can scarcely be estimated, so great must it be in the future. Egypt, too, goes on steadily increasing, and with the new irrigation system now to be carried out, may yet rival India. Burmah is capable of raising almost unlimited quantity; while the Argentine Republic, which a few years ago scarcely figured as a factor in the wheat markets of the world, is becoming one of the largest sources of supply. What the effect of the development of British Africa upon the food products may be, remains to be seen, but there is every reason to believe that its capabilities for growing cereals equals, if not exceeds India. Its population, free from the trammels of "caste," adapts itself more readily to steady, persevering labor under the superintendence of white leaders. In some divisions or zones the climate and soils are particularly favorable for growing wheat, maize and millet.

Too little importance has been attached to the article of maize, or Indian corn, as a factor in the prices of wheat, and the tendency has been to reckon wheat as its own competitor only, which necessarily to a large extent is so. It must, however, be borne in mind that whatever forms a food staple and satisfies the wants of mankind, is an opposing force to higher prices in other food cereals. Maize is a food product of the greatest importance for man and beast, being not only highly nutritious but agreeable to the palate, at the same time very wholesome, probably even more so than wheaten flour as now manufactured. Mixed with other flour or fine meals it makes excellent bread, and even now forms the staple food of the lower classes in many countries. The higher the prices of wheaten flour, therefore, the larger the consumption of other and cheaper food products.

Everything, we believe, point to moderate prices being the normal condition of wheat, and while war on a large scale or failure of European or American harvests may temporarily raise them, it would be unsafe for the farmers to speculate on those factors. In Manitoba we have to keep in view that when wheat is selling in the British markets, at say 25 shillings sterling a quarter (eight bushels), the purchaser here can only afford to pay from 42 to 45 cents per 60 pounds; that is, he pays the British price, deducting freights, insurance, shrinkage, and other charges for placing it on London, Liverpool, or Glasgow markets. The conclusion, then, from what has been advanced, is that the days of 80 to 90 cents for wheat are likely to be only occasionally; \$1, a very doubtful quantity, while a moderate, but living price, is probably to be the average. Mr. Van Horne's figure of \$2, even with the qualifications he attached to it, is too absurd for even serious consideration. If intended in other than jest, it shows a lamentably low opinion of the intelligence of the farmers. It did not even serve the purpose of the traditional red herring to draw the scent off the trail of high freight rates. Farmers must study not only how best to increase their receipts, but—with their incomes reduced one-half—in expending them, how not only to get the best value, but a fair one. An almost

unanimous demand has gone forth from this Province for tariff reform, and unless granted, the settlement of the Northwest must be indefinitely delayed. Immigration is not likely to seek a country where to many natural disadvantages the Federal Government loads agriculture with artificial ones. The best class of immigrants to cultivate is men of moderate capitals, the sons of farmers in Scotland and England, who can bring with them from £500 to £1,000 sterling. This class has as yet been scarcely touched, and even if so, could not be induced to come when they know that so large a percentage of their capital and incomes is absorbed either in taxation or in forced contributions to uphold protected industries. At Ottawa the farce has been gone through of bringing in a budget with a few reductions made, but now that the Government has kept the promise to the ear, they are sedulously replacing the duties on most of the articles off which they were taken. Farmers are not merely interested in purchasing agriculture implements, but in hundreds of other things, the duties on which range from 20 to 100 per cent. At a low calculation, on the average, the farmers of Manitoba and workmen contribute \$75 to \$100 each in taxation annually.

Manitoba and the Northwest are passing through times calculated to try the best, but who can doubt that better are ahead, and the lessons learnt in adversity are not without their uses. If industry, economy, prudence, and a dread of debt are the fruits of past experience, much will have been gained. Farmers must learn to make haste slowly, making solid the foundation, and expanding only when the means of doing so are within themselves. Too much has been generally attempted on limited means; too much put upon the risk of crops, and it is among those that the greatest distress has prevailed. The farmer with a limited area of crop will find it more profitable to invest in cows than in a self-binder, trusting either to his neighbor to cut for him, or himself using a scythe, as was done by the early settlers, both in Ontario and Manitoba. Cows and sows are profitable stock, yielding a handsome return and increase, while self-binders are expensive at the beginning, annually deteriorating, and, if bought on credit, an annual anxiety as to interest and payments.

Artesian Wells.

BY WM. SHARP, 184 HAMBURG AVE., TORONTO.

The Artesian Well derives its name from the Province of Artois, in France, where the first flowing wells were procured by drilling. The term artesian well includes any well drilled, whether for water, oil or gas. The oil industry in Pennsylvania, Ohio and West Virginia has been where the drilling of wells and all the necessary tools have been brought to the greatest perfection in the last twenty-five years. Formerly it took from three months to six months to drill a well five to six hundred feet deep; now a well will be drilled three thousand feet in from sixty to ninety days. A practical driller of Pennsylvania a few years ago saw the necessity of having a portable drilling outfit that would be efficient to drill to a depth of 500 feet, and be mounted on wheels. Such is the machine used by the principal men who make a business of drilling wells for water in the United States. There have been a few of them manufactured in Canada, but owing to the fact that the parties who bought them had no previous experience in drilling, "water-well drilling" in Ontario has not been the success that it is destined to be in the near future.

Another cause that has injured the reputation of the artesian well is the number of wells in sections of the country where the rock has been found near the surface. A well would be dug to the rock, then a small hole drilled until a flow of water was reached, if the distance was not too great, as the horse-power machines used were not capable of drilling to a greater depth than one hundred feet. As there was nothing in such wells to prevent the sediment from getting into the small drilled hole, it was only a question of time until the hole was filled up altogether, thus shutting out the water.

A well that is properly drilled and cased with casing the same as used by the oil operators of the United States never fills up. A well can be procured almost under any circumstances that will give an abundant supply of pure water, as the casing thoroughly excludes all surface water. When a layer of gravel is reached with the desired water, or the rock is found, the casing is discontinued. The size of hole drilled is usually 5 1/2 in. in diameter. A few of the advantages of the drilled well are:—

- 1st. The well is small and affords no room for stagnant water.
- 2nd. A stream having been struck which flows through the well constantly, it never needs cleaning.
- 3rd. When the surface water or any particular stream that is undesired is properly cased off, we get nothing but pure water from the rocks below.
- 4th. It is most reliable in dry weather, since it does not depend on a seep or wet weather stream.
- 5th. It may be drilled through any kind of rock, no matter how hard, or through any depth of quicksand.
- 6th. There is no danger man, or beast, or child will fall in the well.
- 7th. Being straight and narrow, the pump will be held straight and firm, therefore last longer and work better than in an open well.
- 8th. It may be put down through a vein of coal or other minerals, shutting off the water entirely therefrom and get good water from below.

9th. The casing prevents rats, mice, worms and everything of the kind from getting into the well, while it is impossible to keep them out of "the dug" well.

10th. A well can be drilled to any depth required and all surface and impure water cased off, and pure, healthy water procured from the gravel or rock below.

11th. In a great many cases a flowing well is procured, having all the advantages of the living spring.

Hard Times—Their Cause and Their Cure.

READ BY G. M. YEOMANS BEFORE A MEETING OF THE PATRONS OF INDUSTRY, ALEXANDER, MAN.

There are many great causes of hard times—many apparently unavoidable and insurmountable. But there is one cause that has been the destruction of many hopes—the reasonable hopes of many honest, sober, hard-tolling, intelligent and worthy families, and for which each of us have the certain remedy within ourselves, if we only apply it at the proper time. This cause can be spelled with four letters; and the cure can be stated in four short words. But to simply give you this cause of hard times and my remedy, you would probably never give it a second thought. So I must try to illustrate from my own experience in Manitoba through the hardest kind of hard times, as well as the best kind of good times, and I may say just here the best times are, on the whole, the most dangerous. If any of you think I have never passed through hard times in my twenty-one years here, and have never been tempted to draw on my credit, let me show you differently by some of my own experiences.

Our drive from Mount Forest to Owen Sound, or from Fargo to Winnipeg or from Winnipeg to Burnside, was not in a Pulman, nor even a second-class car. A ride on top of a freight car would have been a rest and pleasure trip compared with that forty-day prairie schooner excursion, with oxen as motive power, which we took in 1873. About Dominion Day we got on our homestead. Our shanty was without a table or a chair or a bed for more than a year, and we ate the bread of carefulness from tin dishes.

I must give you a few of many samples of our economical management in those early days to avoid debt—*d-e-b-t*, DEBT!—the greatest cause of hard times and other troubles.

First, was the great labor and difficulty in getting a place to live in, without using up all my means and getting behind. To get the material for that shanty, I yoked up my oxen, great big wild Texas stampeders, which I worked three years with before I had cash to buy my first horse. I drove twenty miles with those cattle and brought a load of green poplar within a mile of home before my troubles began. Here I had to pass through a wet piece of bush which was swarming ten feet deep with big blood-thirsty mosquitoes. My oxen got mad. Perhaps I didn't. Anyway, between us we ran, full gallop, foul of a big green stump, which took the reach and tongue out of my wagon. After taking in the situation, I went back to a neighbor's and borrowed his wagon. By the time I got back, and had the lumber reloaded, my bulls had blood and thunder on the brain. I might have known better than let go their heads. But I was not well up in ox-punching then; so I got on my load and yelled, haw! at the oxen. Well, they did haw! Slap, bang, smash! on top of the very next big stump, and out came the tongue of my neighbor's wagon, and the oxen lit out for home. For the next few hours I was not certain sure whether I was alive and awake, or whether I was in some horrible nightmare. I was really in hopes I might waken up and find everything all right. In time, I got that shanty up and mended those wagons myself. But our troubles were not fully begun. In those days, near the bush, mosquitoes were always "on tap" in millions. Then the grasshoppers came and cleaned us out for two seasons. But I found then, as I have found many times since, that "pay as you go" was the true balm for hard times. Times are hard now—dreadfully hard and discouraging. But, only for one thing, they would be as nothing compared with those grasshopper seasons. Then we lacked many common necessities, but we found that people could live on prairie chickens and rabbits and a little salt, and could keep warm in clothing of moleskin and deerskins, but when the struggle was over we had no burden of debt.

Now, times are hard and disheartening because of the burden of debt. Then, we were poor, but free from debt. This load of debt may sink one and all of us, good and bad, toilers and idlers, honest men and sharpers; "for if our next crop fails"—? The remedy is—PAY AS YOU GO.

People have been living from one to five years ahead of their cash. While the Bible, economy and common sense teach us to "Owe no man anything," and even the instincts of animal and insect life teach us to store up a supply for a coming day, our nation, our Dominion, our Province, our counties and cities, our municipalities and school districts, and even our churches, have been getting half a generation ahead of their cash, and breaking this law of nature and God.

"Owe no man anything" is a text some great philanthropist might take up and preach with good effect from every church steeple.

Did you ever think or try to think what Manitoba owes—Dominion, Provincial, municipal, school, individually, etc., etc.? It will figure \$30,000,000 at least. If we stopped now, interest to meet on \$30,000,000 would alone make times very different from twenty years ago, when Manitoba did not owe one cent, and 4% duty on imports was all the taxes we had to pay. But individual debts are what I am after especially. Individual indebtedness is a burden we have placed upon ourselves more directly, and is now pressing us most severely, and each one knows how much that is, and how it was created. Each of you may think and say it could not have been avoided. Many of my old neighbors thought so, too—even laughed at my slow ox-cart way and limited crop. Cutting hay with a scythe looked slow, but was not as slow as it looked, and my crop was always "all my own." I resolved that pay as you go was the safe, sure, honest way, if slow, and I stood by it first, last and always.

There were many temptations then, and always to push ahead and get land, stock, implements, buildings, and hundreds of things to keep ahead in the race. And there are many struggles and privations to endure to save money out of small crops to have cash to pay as you go. But pay-as-you-go is the sure way, and the only sure way to get them, and I tried it and proved it, and now I feel doubly assured I was right.

If the general practice in Manitoba from the first had been "pay as you go," instead of bankruptcy starting us in the face to-day, we would be wealthy and prosperous. Let me give you a few of my savings in one year. In 1878 I bought, at Portage la Prairie, a binder, a mower, a seeder, a rake and two plows at the cash prices:—

Name.	Cash Price.	Time Price.
Best Harris Mower.....	\$ 75 00	Int. to be added to \$ 110 00
Osburn Blader.....	250 00	" " " " 340 00
Monitor Seeder.....	85 00	" " " " 110 00
Horse Rake.....	30 00	" " " " 45 00
Best Steel Beam J.I.C. Plows.....	25 00	" " " " 40 00

Probably if all had paid cash and no margin was required for bad debts, the cash price would have been lower still. Following our system of credit for twenty-one years, do you now wonder at hard times.

Now, if debt is the great cause of our hard times, which I, for one, have no doubt about, I must point out a few of the ways this affects the prudent, as well as the improvident.

As all have to be taxed, especially the cash buyer, to make good losses from bad debts, and hosts of "dead beats" are living on the credit of prompt payers. During a general depression all require money, many must sell, and very few have money to buy. The consequence is estate, real and personal, is worth less than one-quarter what it would otherwise be.

In Dominion, Provincial, County, and every other management, there is a disposition to push ahead with great improvements, and leave our children and those coming after us to foot the bill and reap the benefits. My opinion is, it would be a great blessing if benefits, and bills, and forefathers of debt could all be planted in the same grave. However it may be with nations or communities, farmers above all others should pay as they go, for safety, for profit, for comfort, and everything else. It is hard to get rid of old debts, but if once clear it is much cheaper and much more independent to pay as you go than to drag, and beg, and cringe a year or more behind.

In conclusion, I will say, get rid of debt and you will be near the end of hard times, and if all farmers could and would pay as they go, Manitoba's greatest troubles would be ended.

Grasshoppers, frost, drought and hail are serious things. But all of them together cannot equal this bottomless maelstrom into which we have piloted our beautiful Province. Manitoba is all right yet, and is one of the fairest spots on the face of this earth for an industrious, prudent, poor man to live happily, independently, healthfully, and in every way comfortably, with a certainty of getting up. But pay as you go is the *only* way to get there.

Summer and Fall Fairs of 1894.

Brandon, Man., July 11, 12 and 13.
 Calgary, July 16 to 19.
 Portage la Prairie, Man., July 19 and 20.
 Winnipeg Industrial, July 23 to 28.
 Meadow Lea, Oct. 2.
 Pilot Mound, Man., Oct. 2 and 3.
 Springfield, Man., Oct. 3 and 4.
 Souris, Man., Oct. 3 and 4.
 Killarney, Oct. 4 and 5.
 Gartmore, Man., Oct. 4.
 Manitou, Man., Oct. 4 and 5.
 Minnedosa, Man., Oct. 5.
 Virden, Oct. 5 and 6.
 Buldur, Oct. 5 and 6.
 Wapella, Oct. 9.
 Neepawa, Oct. 10 and 11.
 Regina, Oct. 9 and 10.
 Russell, Oct. 10.
 Oak Lake, Oct. 11 and 12.
 Secretaries are requested to send in dates of fairs to the FARMER'S ADVOCATE.

The Work of the Dominion Dairy Commissioner.

As outlined a few years ago, the work of the Dominion Dairy Commissioner, Prof. Jas. W. Robertson, and his department, has been of a three-fold character:

1st. To extend co-operative dairying into those portions of Canada that seemed well adapted for it. 2nd. To bring the product of all up to a uniform standard of excellence. 3rd. To develop winter dairying. Operations are still adjusted to this general plan.

The work is all directed from the commissioners' headquarters at the Central Experimental Farm, Ottawa, where a great deal of experimenting is done relating directly or indirectly to dairy husbandry. Special investigations are being conducted in cream ripening, both as to the agent (ferments) in developing flavor and the degree. In hog fattening, as an adjunct of dairying, various feeding tests are going on, a mixture of ground rye, barley, wheat and bran soaked, giving the best results. Feeding experiments with cross-bred hogs and grades are also being conducted. Last year twenty-eight cows were successfully fed on the produce of forty acres, with the exception of some bedding and grain borrowed from the farm proper, but this was almost offset with a considerable quantity of silage left over. This year it is expected that thirty cows will be maintained on the forty acres, which was made up as follows: Twenty acres corn and beans, four acres sunflowers, four acres roots, eight acres mixed cereals and four acres pasture. An effort will be made, we might say incidentally, to establish as a Canadian industry the production of sunflower oil and cake. An immense quantity of dairy literature is circulated from Ottawa.

MANITOBA AND THE NORTHWEST.

The Dairy Commissioner has two travelling dairies at work in the Prairie Province and the Territories, planned to visit about sixty places, spending two days at each. Two men accompany each with a separator, tester and complete butter-making outfit. The whole operation is exemplified; addresses given and questions answered. The meetings have been well attended, farmers coming as far as thirty miles in some cases. Messrs. J. A. Ruddick and Geo. Taylor are in charge of one and J. B. McEwen and L. A. Zufelt of the other. A dairy station has been established at Moosejaw, N. W. T., which, after a little help at the outset, will become a self-sustaining and profitable farmers' enterprise, just as has been the case in other provinces. Next year it is expected to have in operation four large creameries, under the Commissioner's direction, at suitable points on the C. P. R., the latter co-operating in the project.

PRINCE EDWARD ISLAND.

Mr. T. J. Dillon is in charge of the work under the Dairy Commissioner on this Island, where 17 dairy stations, two of them devoted to butter and the rest to cheesemaking, are running. Excepting the one at New Perth, they were all built and equipped by farmers themselves. Two of the factories are using the Babcock to divide the proceeds with the patrons. As showing how agriculture has been awakened on the Island, it is only necessary to mention that in 1890 there was but 10 acres of corn grown, while this year there are 5,000! In all three Maritime Provinces several silos have been constructed and all are giving good satisfaction.

NOVA SCOTIA.

There are now some 28 or 30 cheese factories in operation and several creameries. A number of new ones were started this season, the industry having received a great impetus. Mr. James Hopkins is in charge of the Experimental Dairy at Nappan, which early in the season was run for two weeks as a school for buttermakers specially, in addition to the regular work.

NEW BRUNSWICK.

Winter dairying was carried on at the Dairy Station at Sussex and some 30 makers were present for a couple of weeks receiving instructions, Messrs. Hopkins, Hubbard and Zufelt composing the staff. A travelling dairy is now at work, in charge of Messrs. Peters and Hubbard, who expect to visit about 70 places. Their plan will be similar to that carried on in the Northwest. The Dairy Commissioners' visit to the Maritime Provinces this month will awaken fresh enthusiasm.

QUEBEC.

A well-equipped dairy school, with a strong staff, was carried on at St. Hyacinth during the past winter, when no less than 268 students took a course in cheese and buttermaking, milk testing and the practical management of dairy farms. There was also a special course for the inspectors of dairy syndicates. Buttermaking will be carried on at the St. Hyacinth station this summer. Quebec has now some 800 cheese factories and about 130 creameries. The quality of the output of dairy products has greatly improved.

ONTARIO.

Operations in the Province are now confined mainly to developing winter dairying. Ontario has some 50 creameries and over 850 cheese factories in operation.

When, in addition to the above, the splendid work carried on by various Provincial Governments, through their Dairy Associations, and their travelling dairies, cheese instructors, etc., and such institutions as the Dairy School at Guelph, Ont., is all taken into consideration, that Canada should take front rank as a great dairy country is not to be wondered at.

The Travelling Dairies.

AT BRANDON.

The Travelling Dairy outfit under the management of Mr. J. A. Ruddick, of the Dominion Dairy staff, held the opening meeting of the summer series at Brandon, May 29th and 30th.

The meetings were well attended at every session, upward of 200 farmers and their wives attending, and they were most satisfactory in every particular.

The arrangements made by the Brandon Farmers' Institute for the use of the Council Chamber of the City Hall, as well as for the bountiful supply of milk and cream, were most satisfactory.

Mr. Ruddick, who, by the way, is one of the most skilled instructors on the continent, having had large experience in both cheese and buttermaking, conducts the meeting in a conversational style, and "talks" about the composition of milk, the processes of separation, ripening and churning the cream, working, salting, printing and shipping the butter, telling the why and the wherefore in the most simple and instructive manner, while his assistant, Mr. George Taylor, an expert buttermaker from the Central Experimental Farm, Ottawa, carries out, in the most improved method, each operation.

A considerable quantity of milk was run through the separator (an No. 8 Alexandra being the one employed) on the first day, and the cream set to ripen, and churned the following day. Many present never having seen a centrifugal cream separator in operation before, were very much interested. The Babcock tester was also employed to ascertain the percentage of butterfat in the many samples of milk brought in, some being very rich, Mr. Jas. Henderson having a sample of milk from a Jersey cow that showed 6 per cent. butterfat; Mr. Doran, a sample from his famous dairy herd, testing 5 per cent., while some samples brought over by Mr. Bedford tested as follows: From Holstein cow, 3.4 per cent.; Ayrshire, 3.8 per cent., and a grade Jersey, 4.3 per cent. Samples of skim and buttermilk were also tested.

At the conclusion of the meetings, there being some fourteen pounds of gilt edge butter on hand, it was resolved by the Institute to donate it to the Brandon Hospital, where, no doubt, it was thoroughly appreciated by the patients there.

Prof. Robertson dropped in for a short time on the second day, on his way back to Ottawa, and delivered a most interesting address on the advantages of mixed farming generally, and dairy farming in particular, over the present too prevalent system of exclusive wheat growing, showing that in growing wheat we were in direct competition with the cheapest labor in the world, that of India, Russia, Egypt, etc., while in dairy products we only came in competition with the most skillful labor of Great Britain, Germany and the Northern European countries, and United States and Australia; and that while grain had gone down in value from 30 to 40 per cent. within the past ten years, the cash value of butter and cheese had not gone down, although the production had increased enormously.

In referring to freight rates, he said that it cost one-half the value of a bushel of wheat to take it to market, while it only took one-tenth the value of a tub of butter. He also showed the advantage of dairying over grain growing, in that the keeping of stock provided profitable labor for twelve instead of three months of the year, and that by returning in manure to the land what the crops took out, we could produce large yields of better wheat, and run less risks from frost. (From three to five tons of manure per acre he recommended in preference to fifteen or twenty, as is the custom in Ontario.) He also said one ton of wheat exhausted the soil more than 400 tons of butter. As in his address before the Winnipeg Board of Trade, he said he expected the Dominion dairy instructors would stay right with the work in Manitoba and the Territories till dairying was one of, if not the leading industry of the Northwest, and that he now had much more faith in this country than he had four years ago, because he thought we were getting over the wheat fever.

CARBERRY.

It is expected that Carberry is to have one of the creameries to be established under the management of Dominion Dairy Commissioner Robertson, with funds provided by the Canadian Pacific Railroad Company. The Professor was unavoidably unable to stop off at Carberry, being obliged to hurry back to Ottawa on Departmental business.

AT RESTON.

"A bigger and more enthusiastic meeting even than the Brandon one," is the report we get of the Travelling Dairy meeting at Reston. About half the number were ladies, and needless to say all were delighted with the instruction given by the experts. Mr. Ruddick says: "I have been engaged in some sort of itinerant work in dairying for a good many years, but I don't think I ever met people who appeared to be more teachable and anxious to learn." Much interest was manifest in the testing of milk samples, and a good point was brought out when the skim milk from deep cans set in ice showed only three per cent. of fat, while that from cans set in water only showed six and seven per cent. of fat. The skim milk from the separator showed only a trace of fat. There is considerable talk of forming a cheese or butter factory at this point, and it is only a matter of a short time when one will be established.

AT WAWANESA.

The local Travelling Dairy, under the management of Mr. John Hettle, M. P. P., and Mr. Herbeson as expert buttermaker, "opened fire" at Wawanesa on June 2nd, and had a capital meeting; a similar programme to that laid out for the Dominion dairies is being followed.

AT SOURIS.

A very successful meeting was held at Souris. Mr. Crisp, Secretary of the Farmers' Institute, had made excellent arrangements, and the large audience were most enthusiastic. At the close of the meeting a lively discussion took place on the advisability of establishing a butter factory, and all present were in favor of the project, Mr. Ruddick being able to give much serviceable advice.

AT BROADVIEW.

A representative of the ADVOCATE was present at the Broadview meeting, which was most successful, there being a large turnout of farmers and their wives, all of whom took a lively interest in the separating, churning, testing, etc., and all were thoroughly pleased with the courteous manner in which Mr. McEwan answered all questions put to him. An equally successful meeting was held at

WOLSELEY.

where excellent arrangements had been made by Mr. Levi Thompson, Secretary of the Farmers' Institute, and great interest was manifested by all present. Mr. McEwan is thoroughly qualified in the science of buttermaking, and imparts information in a simple and pleasing manner, sustaining the interest throughout the meetings.

Ventilating the Cow Stable.

One of the most important results, perhaps, of the present tuberculosis investigations, is the attention now being given to the ventilation of cattle stables. Ventilation, commonly understood, means a little square box running from near the ceiling out through the roof, made in no particular proportion to the size of building or the number of animals kept in the building; and we have always been taught that cattle must be kept warm, the nearer summer heat the better, if we desire to have the cow return the best results from the food consumed. To accomplish this, we have endeavored to build air-tight stables for wintering our cattle in. In a climate such as we have in the Northwest, stables, especially cattle stables, warmly built and illy ventilated, become coated with frost inside, the moisture of the atmosphere condensing on the cold, outer walls during cold snaps, which melts and runs off when the weather turns milder, thus making the air very damp.

The writer has seen many stables in Manitoba with no ventilators whatever, or so small and filled with frost that they were useless, into which cattle were packed like herrings in a barrel, doors closed (and hermetically sealed) in the evening, and when opened next morning everything would be steaming, the cattle having undergone a regular Turkish sweat-bath; then these cattle are turned out to go maybe half a mile to drink ice-water out of an ice-hole and then take shelter on the lee side of a wire fence, and have a few forkfuls of straw thrown over for them to feed on, to wait there till evening to be again put in for another sweating.

Now, these cattle, though always poor in flesh, seem to be "hardy," and little complaint is made of tuberculosis or other diseases among them, probably because any of them becoming affected die almost immediately, and thus are quickly removed from the danger of spreading the malady; whereas, in stables where more attention is paid to sanitation and the ordinary comforts of the cow, subjects having tuberculosis may linger on for years unknown to the owner, and are all the while disseminating the disease to others.

But to get back to ventilation. The modern city house, with its furnace and hot and cold air pipes, can be ventilated almost to perfection, the cold air taken in fresh from outside, passed through the heating chamber of the furnace, and, when warmed, carried into every room of the house. But just how to manage this in a stable, and especially in stables built very roughly and cheaply, as most of our stables must of necessity be for some years to come, is the problem.

Well, first of all, we must understand that the carbonic acid gas—that poisonous gas which has been exhaled from the lungs of the animals, and which we wish to get rid of—is heavier than pure air, and consequently settles to the floor, so that our ventilators must start near the floor to carry off the foul gases, and the supply of fresh cold air which we bring in should be distributed over the cattle near the ceiling so that it may become warm before coming in contact with them.

The best plan we have yet seen to obtain these results is to place the foul-air shafts where they will most likely take away the air breathed out by the cattle, and starting about 18 inches from the floor, running out through the roof, the fresh air to be let in through a number of small openings in the outer wall, near the floor, and carried in shafts up along the wall to the ceiling, so that the air in the shafts may get warmed and thus create an upward current.

This is a most important subject, and we shall be glad to hear from any who think they have successfully solved the ventilation and heating of the cattle stables.

Essays on Noxious Weeds.

As before mentioned in these columns, the Minister of Agriculture of Manitoba offered prizes of \$25, \$15 and \$10 for the best essays on "Noxious Weeds, and the best means of eradicating them." In all, forty-seven essays were received for competition. These came from almost every part of the Province, showing that intelligent farmers everywhere are becoming alive to the importance of subduing the weed pests and preventing the spread of them into new districts.

Among the number were very many of great merit, and the committee to whom was delegated the work of awarding the prizes had a much heavier job than they had anticipated. The committee consisted of James Elder, Virden, President of the Central Farmers' Institute; Dr. Rutherford, V. S., and M. P. P. for Portage la Prairie, and George H. Greig, FARMER'S ADVOCATE, Winnipeg. Before entering upon the work, they had all the names cut off the essays and numbers attached so that the authors were entirely unknown to any of the judges. It is the intention of the Government to publish the prize essays, along with a summary of the most valuable points contained in them, or any of the other essays, in bulletin form. [This work has been left with Mr. Elder, than whom no more capable person could be found, as he not only has a thorough practical knowledge of the weed subject, but also of the farmers, for whom the booklet is being prepared.]

Cuts illustrating the various weeds will also be included in the pamphlet, which will be of great assistance in identifying them.

This bulletin should be in the hands of every farmer in the Province, as there is no book published on weeds that is of any account in this country. Had the writer been possessed of the information now obtainable in this bulletin, when he began farming in Manitoba fifteen years ago, it would have saved him a vast amount of labor and money which was vainly spent trying to fight "French weed" and other more easily exterminated weeds.

The names of those who wrote the successful essays are:—

- No. 13—Edmund Drury, Rapid City, 1st prize.
- No. 6—W. T. Shipley, Wavy Bank, 2nd prize.
- No. 12—Richard Waugh, of the "Nor-West Farmer," Winnipeg, 3rd prize.
- No. 10—Robt. Fisher, Oakbank, very highly commended.
- No. 21—D. F. Wilson, Brandon, highly commended.
- No. 16—H. C. Robey, Brandon, commended.

The following report explains itself:—

The Hon. the Minister of Agriculture:
SIR,—We, the members of the Committee appointed to examine the essay on "Noxious Weeds" asked for by your Department, have the honor to report that we have examined the said essays, forty-seven in number, and would beg leave to state that we have placed them as follows:—1st prize essay, marked No. 13; 2nd, No. 6; 3rd, No. 12. Very highly commended, No. 10; highly commended, No. 21; commended, No. 16.

We would also respectfully suggest that in addition to the publication of the prize essays a summary of the useful points contained either in them or in the papers of the less successful competitors, or which may be condensed from other reliable authorities on the subject at issue, should be carefully prepared by some practical and competent person or persons, and published in the bulletin which it is proposed to issue. We are also of the opinion that the distribution of plates, as natural as possible, of the various weed pests, especially of the French weed and Russian thistle, would be of great assistance in enabling farmers to recognize the plants on their first appearance in a new neighborhood.

We would take the liberty, in view of the importance of the question to the agricultural interests of the country, of pressing upon your Department the necessity of compelling the municipalities to immediately appoint inspectors, and to see that the duties of the said inspectors are faithfully and intelligently performed.

We cannot refrain from congratulating you on the very successful nature of the results obtained by your offer of prizes for essays on noxious weeds. The large number and the very superior standard of the papers received show that much interest is being taken in the subject, and that the more wide-awake of our farmers are fully alive to the importance of keeping our weed pests in check.

[Signed] JAMES ELDER,
J. G. RUTHERFORD,
GEO. H. GREIG.

Farmer's Advocate Special Prize.

It has always been the object of the FARMER'S ADVOCATE to encourage in every way in its power the breeding of good stock, and, for that purpose, we are offering a handsome sweepstakes premium at the Brandon Summer Fair. A very handsome mantel clock, valued at \$20.00, has been selected, upon which a silver plate will be placed bearing the inscription. It will be presented to the sweepstakes herd, consisting of bull and three females, any age, the property of the exhibitor, and will be open to competition for all beef breeds of cattle. Many of the best herds of pure-bred cattle are within easy reach of Brandon, and we trust this premium will be keenly competed for. This premium may be seen in the window of Mr. W. W. Matthews, Jeweller, 552 Main St., Winnipeg.

Annual Report of the Dairymen's and Creameries Associations for Ontario.

BY SECRETARY WHEATON.

No other publication of the Department of Agriculture for Ontario is more widely read or more highly appreciated by the farming community than the annual reports of the Dairymen's and Creameries Associations of the Province of Ontario. This report for 1893 has lately been issued, and is now being distributed to those entitled to copies. It includes a verbal report of the addresses delivered at the Annual Convention of the Dairymen's Association of Eastern Ontario, the Dairymen's Association of Western Ontario, and the Ontario Creameries Association, and a synopsis of the work carried on by these organizations during the year. It contains 240 pages of spicy and interesting reading matter, filled with the latest thoughts and the newest ideas on all the important and necessary features of dairying in Ontario.

Owing to the increased interest in dairy matters in the Province, these reports will be of more value to the farming community. The reports for 1893 are, on the whole, more valuable than many previous ones, from the fact that at one or two of the annual conventions more enthusiasm was aroused, more interest taken in the proceedings, and more beneficial discussion brought out than at any former gathering. The proceedings of the Western Association alone continued for three days, and comprised seven sessions of from 2½ to 3½ hours each, thus affording time for the discussion of all the varied phases of dairying. There is no better means of getting into a small compass practical information on many subjects than a convention of this kind. Speakers are always prepared to do their best and give information in the best form and in the smallest space, while the discussion is always terse and to the point.

Among the prominent agriculturists, dairymen and scientists who delivered addresses at these conventions are Hon. Jno. Dryden, Hon. Thos. Ballantyne, Jno. Gould, Esq., Ohio; Dr. Van Slyke, Geneva, N. Y.; John Boyd, Chicago; Professors Robertson, Fletcher and Shutt, of the Central Experimental Farm, Ottawa; Prof. Dean, O. A. C., Guelph; O. C. James, M. A., Deputy Minister of Agriculture, Toronto; D. Derbyshire, Brockville; D. M. MacPherson, Lancaster; J. S. Pearce, London, and a number of other practical men.

The addresses of these men, who are skilled in their own particular lines, serve to make this report of special value to every dairy farmer as a practical text-book on all branches of dairying, and also as a book of reference to which he can refer for information on any particular portion of dairy farming.

PAYING FOR MILK BY THE PERCENTAGE OF BUTTERFAT.

The system of paying for milk at cheese factories by the percentage of butterfat is taken up in all its bearings, and conclusive evidence furnished to prove that it is the only correct and just method of paying for milk supplied to a cheese or butter factory. The following are a few extracts bearing on this subject:—

Dr. Van Slyke—"All cheese factories have, until recently, paid for milk according to weight alone, and at present this is the almost universal method. Each patron receives, by this method, the same amount of money for each hundred pounds of milk delivered at the factory at any given time. This method is based upon the assumption that, for the purpose of cheesemaking, milk is milk; that all kinds of normal milk are of equal value for cheese production; that one hundred pounds of one patron's milk will make just the same amount of cheese as one hundred pounds of every other patron's milk. The old method can be fair only in case the foregoing assumption be true. Now, is it true that one hundred pounds of one herd's milk will make just the same amount of cheese as one hundred pounds of the milk of every other herd? We can answer the question by saying that in our investigation we have found normal milk, one hundred pounds of which made 8.25 pounds of cheese; and, again, we have found normal milk, one hundred pounds of which made 14.25 pounds of cheese. Here is a difference of six pounds of green cheese for one hundred pounds of milk, and between these extreme limits we have found all gradations. No more figures need be presented to show that milk varies greatly in its cheese-producing value, and, hence, it is not true that one hundred pounds of one patron's milk will make just the same amount of cheese as one hundred pounds of every other patron's milk. The old method of paying for milk is, therefore, founded on a false basis, and it is eminently unfair to pay the same price for one hundred pounds of milk, regardless of the amount of cheese that can be made from the milk."

Prof. Robertson—"I am glad, indeed, to know that the work of Dr. Van Slyke agrees almost mathematically with the work we have been carrying on for the past two years. The work we have been carrying on is not so thorough, from a chemist's standpoint, but it is almost as large, from a cheese-maker's standpoint, and the results agree almost identically in establishing that the cheese-making quality of milk is in proportion to the butterfat."

Prof. Dean—"The last argument is that, paying by this test, patrons are not likely to be accused wrongfully of tampering with their milk. If the new system did nothing more than this, it would

be well worth all the trouble and expense. If a man is once accused of skimming or watering his milk, that accusation stands as an everlasting disgrace upon him and his family. To avoid any chance of accusing an innocent man wrongfully would be worth all the trouble and expense of the new method."

D. M. MacPherson—"This Babcock test is one of the greatest improvements in our factories. It enables us to make better cheese and more cheese for a given quantity of milk."

A. T. Bell, Tavistock—"I am satisfied that what we want now more than any one thing is to have the milk well cared for, so that it will arrive at the factory in the best possible condition; not that we have arrived at perfection in the art of making cheese, by any means, but I believe we are nearer that goal than the patrons are in caring for their milk; and I do not know of any surer way of reaching that desired point than by adopting the system of paying according to quality. It is the testimony of all cheesemakers where this system has been adopted."

Inspector Millar—"When I inspected the cheese I found a vast improvement in the quality. I attribute a good deal of this improvement in the quality of the cheese to the introduction of this system of paying for milk. It also has a tendency to induce the patrons to feed their cows more liberally, give them better care, and in return they will receive larger profits."

WINTER DAIRYING.

This subject is treated in a systematic and practical manner by a number of speakers.

Prof. Robertson—"This winter dairying embraces the whole round of farm activity. From May to the beginning of the following October, cheese and buttermaking, and then from the end of October till the following May, buttermaking exclusively,—winter dairying and summer dairying; these include the whole round of dairy farming; and if the farmer will look after these things, keep his cows well, and then make a product of the very best kind, co-operating with his neighbors, he will find himself, through dairying, a richer man, a stronger man and a better man. Winter dairying will do more for the material welfare of the farmers than anything of which I have knowledge. It will result in making a people socially happy, and so well up in making money out of their business that they can leave their children better equipped to fight life's battles than they themselves were left. When we have winter dairying generally adopted, and, through corn ensilage, horse beans and sunflowers, are getting the largest possible yield of the richest milk per acre as well as per cow, we will have harnessed the very sun of the heavens as the chief workman in our business, with ourselves as competent managers. Without the winter dairy, the farmer feeds one-third more stock for the same return. By sending the milk to the winter dairy, therefore, you not only receive more money for the cows you keep, but you are able to keep more cows. Doing the work at home, if the farmer attempts to increase the number of his cows, he imposes more work on the women folk than they can well take care of. The men on our farms work too hard in the summer and not hard enough in the winter. Our women work too hard in the summer, and then try to get rested by doubling the work in the winter."

Mr. James Whitton, Wellman's Corners—"Now, I claim it is the extra care that the cow gets which accounts for this; and we want to go on with winter dairying. I received last year from Prof. Robertson a cheque, for my share, of \$193 for eight cows, besides their skimmed milk, which I claim netted me \$75. I had eight pigs in the pens. Say they were gaining about one pound a day, as pork sold for \$6 per cwt. last winter. My cows last winter just cost me eight and a-half cents per day to feed. Consequently, I had a pound of butter for two and a-half cents. Now, if one of you can make cheese cheaper than that, I would like to hear it. I can give you a rough idea of what we took from these eight cows in 1892: Cash from cheese factory, \$505; by products, \$80—that is the sale of calves and the profit and whey; cash from creamery, \$193; by products, \$75—in all, \$855; cost of feeding these cows, \$294. That leaves a net profit of \$70.75 per cow."

J. A. Ruddick—"But now, when they find that by feeding a little extra and keeping the cow in good condition by proper care and attention, they can get from 95c. to \$1.10 a hundred for the milk, and have skim milk besides, and get ready cash for it instead of taking their butter to the store to be mixed with other makes, they are giving fuller attention to winter buttermaking. One of our patrons thought that the skim milk returned to him from the creamery paid him for the extra amount of feed which he gave to his cows for the winter time, and, if so, then he had his butter for the trouble of milking his cows and taking the milk to the factory."

D. M. MacPherson—"It makes a big difference in the profit of dairying whether you are working for the cows or the cows are working for you. We find in the best experience that the cows are working for us six or eight months in the year, and for the rest of the year we are working for them. We must harness the cows and use them every day. The cow can produce for ten months in the year. I make them work even when they are not producing milk, for I feed them so that they are improving their condition and thus preparing themselves to produce better results than they otherwise would do."

SELECTION, FEEDING AND CARING FOR DAIRY COWS.

The experience of a number of practical men is given on the selection, feeding and caring for dairy cows, so as to realize the most profit:—

Jno. Gould, Ohio—"Without trenching on what I am to say this evening, I may say that our winter dairy is becoming even more profitable than our summer dairy, because of our success with the silo. I am convinced that a man can keep his cows cheaper in the winter than in the summer. I figure it out this way: We can raise eighteen tons of good ensilage to the acre; it costs \$8 for the labor of raising an acre of corn, and \$4 to put it into the silo. Each acre will keep two and a-half cows seven months, or \$12 for the roughage for 2½ cattle, outside of the cost of the land. Let us say that interest on land and the taxes are \$2.70 an acre, a total of \$15 for the roughage for 2½ cows for seven months. If that is not cheaper than pasturing on grass, my mathematics are at fault. A cow eats more with her feet than she does with her mouth in our summer pastures. Our ration for our winter milkers is 50 pounds of ensilage a day, 5 pounds of wheat shorts, and 5 pounds of mixed hay. We have not succeeded in getting cows to eat much more than that. What does this cost us? Fifty pounds of ensilage will cost a little less than three cents. You may say I figure at cost. How else are you going to figure? What is the market price of ensilage? If there is no market, I have no right to charge it to my cattle at more than cost of production. Five pounds of wheat and shorts costs me four cents. But I must qualify that. We raise oats and swap them for the mill feed. Why? Because I find that with ensilage a hundred pounds of wheat shorts is worth as much to me as a hundred pounds of oats, and a hundred pounds of oats will buy a hundred and fifty pounds of mill feed, and so I have one-half more fertility to go back on the land. Five pounds of clover hay costs with us two cents. Call it 8½ or even 9 cents in round numbers for the ration of each cow. What are these cows doing on this ration? All the cows that we had milking last Monday had been in milk since last September or October. The average yield for the whole dairy was 28 pounds of milk per head per day. I sell that milk for \$1.40 net per 100 pounds at the door. That comes very close to 40 cents each for the cows, as against a daily cost for feed of 8½ cents. Then there is the fertility that goes back to the farm. I get all mixed up when I come to charging for crop, and then for fertility which is used to raise another crop. But the fertility is there, let it be worth more or less. That is my experience with the silo, and I thank you for your kind attention."

"It is now conceded, we believe, that the environments that we place about a cow in the way that we feed her, and care for her, are equal in importance to the breeding, for breed as we may, if there is not feeding and care to correspond, there will be a failure of the other; for, look at the matter as we may, the food is the source of all profitable returns from the dairy, and even food must have an ally in the form of stables and sanitary conditions of high order, or there will be a wastage of food material, or demand for extra supplies of nutriment to make good a demand that could have been met quite as well and far more inexpensively with well-quoted stable environments."

Prof. Shutt—"Of all the coarse, bulky fodders, corn gives us the largest amount of real cattle food per acre. The figures to prove this you will find in the report of this Association for 1891. They were deduced from the careful field experiments and analysis made at the Central Experimental Farm. Moreover, the corn crop is one that can be produced cheaply: it is more or less a sure crop; it is one that cleans the land—all very important matters. These are among the chief reasons why I so warmly recommend the growth of Indian corn to all who keep cows."

POINTS IN DAIRY AND FARM PRACTICE.

Hon. John Dryden—"What was the reason for this falling off? Undoubtedly, it was the tremendous drought which affected the whole Province, but more especially the Western section. Mr. Gould has told us of his friend whose cows never knew there was a drought. That is what is wanted: we must make provision for such unfavorable season. The dairyman, more than any other farmer, can provide for these special circumstances. There is no doubt he has his business more directly under control than any others of us. The man growing a crop of grain may work hard and exercise the greatest skill, and bring his crop nearly to the point of perfection, only to have it swept away by a storm. But the dairyman is not thus affected, and our people ought to be taught how to provide in advance for difficulties which may arise."

Prof. Fletcher—"The horn-fly is a new insect, which was introduced into the Eastern States five or six years ago. This is only the second year since it first appeared in Canada, but it has increased and spread so quickly that it has produced great consternation among cattle owners. The frequent assertion that the flies or the maggots have caused the death of cattle by boring into the horns, head or body, is entirely inaccurate: the whole injury is due to the bites of the fly. However, the irritation from this cause is in many cases so great that animals fall off rapidly, both in flesh and yield of milk."

D. M. MacPherson—"Farming can be made to pay. Some who are called the best young men of our country—brilliant, talented men, with strong

ambitions—looking into the future, see no prospect for them on the farm, and they leave us for a foreign land, and there, very often, they make their mark. But if there was a prospect of a good return for labor employed on the farm, these young men would remain on the farm, and would assist in the development of our country as a whole. Farming can be made to pay even with hired help. In fact, the farmers of our country are working too hard—that is, they work too much with their hands and not enough with their brains. Competition today has its best rewards for brain-work, not for hand-work. In the days when the forest had to be felled, the strong man was the great man. But today the great man is the man of intellect, the man who understands nature's laws, and can so apply those laws as to benefit himself and those about him, and the country at large.

In addition to these subjects, there is also abundance of good, practical, definite information on the best practices in modern cheesemaking, the handling and caring for milk for cheese factories, the best methods of making fine butter, and of operating summer creameries. In fact, a comprehensive and systematic reading of the report will furnish every dairyman with the means of carrying on any branch of dairying in the most intelligent, skillful and systematic manner, and by putting into practice the valuable hints and information received, he will be better able to make the greatest amount of profit out of the business. If time and space permitted, extracts from the addresses of other prominent speakers might be given here with profit and advantage. But as space will not permit, we can only impress upon every dairy farmer and agriculturist in the Province the necessity of a careful perusal of these reports. These reports are mailed free to the members of the associations named in them, and other kindred organizations. It will pay every farmer to identify himself with some of these associations, in order to ensure getting this report, or in some way put himself in a position to receive one.

QUESTIONS AND ANSWERS.

Legal.

SUBSCRIBER, Deloraine, Man.:—"1. Under the Exemption Act three horses are allowed; must these all be working horses or would two work horses and a year-old colt be allowed? 2. Does the Exemption Act include a buggy?"

1. Three horses are allowed only in case they are used by the judgment debtor in earning his living. If the colt is not used it would not be exempt. 2. The tools, agricultural implements and necessities used by the judgment debtor in the practice of his trade, profession, or occupation, to the value of \$500, are exempt. This would not include a buggy, unless under such circumstances as would render the buggy a necessary for the judgment debtor in the practice of his trade, profession or occupation.

A SUBSCRIBER, Moosomin.:—"A has a permit for hay on a section of H. B. C. Can A stop B's cattle from grazing on it?"

Yes. SUBSCRIBER, Portage la Prairie.:—"A friend of mine in 1890 bought of the Bell Organ Company, through one of their agents, an organ for \$135, giving six straight notes for the amount. Five of the notes were taken up, the last maturing in April, 1892. A payment was made on this last fall, 1893. Since then the company have demanded security for the balance, or in default have hinted that they would take the organ from her. My friend does not remember signing any agreement or lease whatever—only the notes. 1. Is this note still collectable? If so, what can they do? Can they take back the organ? 2. What terms do these companies usually sell upon?"

1. It is very likely that the notes given were the ordinary lien notes, and therefore the company can take back the organ if default is made in payment of any one of them. The note is still collectable. 2. The company takes every precaution to secure payment of the whole of the purchase price to themselves, and lien notes are a most effectual way of doing so.

MINNEDOSA.:—"A owes B for wages and cannot get wages paid. A removed from the district two years ago and left a colt in charge of a neighbor to keep for him. Can B claim the colt without taking legal steps? B has written A several times, offering to take the colt as part payment, but cannot get an answer."

No; legal proceedings must be taken.

E. WIGREEN, Sidney, Man.:—"A lets B break 100 acres of prairie for the first year's crop. B, in consideration for a sum of money, gives C the right to put in the crop. C tries to let the breaking, but fails to do so, consequently the breaking has not been put into crop after the lapse of a year. When is A entitled to take possession of the said breaking; i. e., when does the privilege given to B expire, so as to enable A to get said breaking into condition for a crop for himself? As B and C have failed to crop said breaking, can B or C legally hold breaking over for another year?"

So far as we can see from the statement of facts, A has nothing whatever to do with C. As to the lease to B, we presume that it is a proper lease, and that it is for more than one year. If so, then B can hold the land for the term provided for in the lease,

subject to the terms of the lease as to re-entry by A, etc. If B's term has expired, of course A can at once enter on the land. In any event A will have an action against B for damages if he fails to keep his contract.

NEMO.:—"I rent a house and two acres in Kildonan for one year, rent payable monthly, agreement verbal. After being on place short time, landlord informs me that he is going to build cottage on land for his own occupancy. I protest and object to his building at all, as I rented house and land. 1. Can he build a house under these circumstances? 2. Can I force him to remove building? 3. Can he force me to pay rent, and does his action break agreement? 4. Can he compel me to pay rent for a year, or can I leave at my pleasure?"

1. No; you can prevent him. He has no right to enter upon the land for such a purpose. 2. No; if he has got it built. 3. No; the rent is suspended and he cannot recover it, but his action does not break the agreement in other respects. You must keep the place and keep it in repair. 4. No; he cannot compel you to pay any rent since the time he first began to build, but you have no right to leave. Besides not paying rent, you have another remedy, however. You can bring an action against him for damages if you have actually suffered any.

Veterinary.

STOMACH STAGGERS IN PIGS.

G. O. PATON.:—"Can you give me any information as to the cause of death in my young pigs? Two days ago I lost three—two about six months old, the other about two. When first I noticed them they appeared to turn slowly in a circle, with unsteady gait; an inclination when near a fence or other obstacle to force their way, and press their heads against any obstacle; heads pendant; very difficult and quick breathing toward the end; in a state of partial coma. They had been pastured on grass, and fed liberally on crushed wheat, cooked in water. They were not in the least constive, nor the reverse."

Stomach staggers, or gorged stomach, is a disease when we get an impaction of the stomach with solid food, and, in consequence of this, the muscular coat of the stomach ceases to contract on its contents, causing death from apoplexy. It is caused by over-feeding in young animals or too stimulating food. The actual congestion results from imperfect mastication, and the bolting of bulky food, more especially food liable to undergo fermentation, such as cooked food, musty hay, ripe vetch, clover, or any green food. Wheat and barley in young animals very often leads to a fatal result. The disease is not contagious, and a post mortem examination would reveal the stomach and intestines filled with partially digested food.

GARGET.

JOHN CARTER.:—"I have a Holstein cow, three years old, calved one week. I cannot get any milk from front teats. I have tried different things for taking down swelling, but the lumps, about the size of peas, are still there, preventing the milk from flowing. What can be done to remove these lumps?"

Mammitis—Inflammation of the Udder.—This disease is known as Garget, Long Plough and a variety of others—is inflammation of the udder. Sometimes it comes on immediately after calving, caused by a too plethoric state of the system at the time of calving. These glands being very large, and intended by nature to secrete a considerable amount of milk for the nourishment of the calf, renders them very liable to attack of this complaint.

The symptoms are increased heat of the udder, attended with redness of the skin, which becomes hard and nodulated or lumpy. Upon attempting to draw the teats, instead of milk, a thin yellowish fluid will be obtained in the commencement of the attack, afterward small lumps, or, as we term, flocculi, come down, showing that an acid secretion has been formed, and the milk has been separated into curds and whey.

Treatment.—Fomentations of warm water must be applied to the bag and constantly persevered with, and the udder must be kept free from milk by allowing the calf to suck, and by continually drawing with the hand. Apply some stimulating liniment with a good amount of hand rubbing. With regard to internal medicines, give one pound of Epsom salts and one ounce of ginger, dissolved in hot gruel, and give when cool.

It is needless to say that serious affection of this gland should never be treated except by a qualified veterinary surgeon, for should the above means fail to arrest the inflammation, mortification quickly ensues, and a hard scurvyous state of the udder takes place, forming a very troublesome form of this disease. DR. MOLE, M. R. C. V. S., Toronto.

CASTRATION.

SUBSCRIBER, Killarney.:—"What is the best age to castrate a colt? Some say while the colt is sucking; others, at a year old; others at two years old."

If the colt is well developed, and in good health, one year old is the best time to castrate. To castrate a sucking colt may, to some extent, stunt its growth, and, at that age, the testicles, in many cases, have not descended to the scrotum. If the colt's crest is not well developed, it might be advisable not to perform the operation till it is two years old. In this country (Manitoba) the best time to castrate colts is the period between May 10 and June 10. W. A. DUNBAR, V. S., Winnipeg.

ACTINOMYCOSIS.

OLD SUBSCRIBER, Springbank.:—"I have two or three steers with lump in side of jaw; noticed first one four or five months ago; was undecided what it was, as it has never appeared in any of my cattle before. Could it be cured now, and, if so, how would I treat them?"

The disease is probably actinomycosis, commonly called "lumpy jaw." The treatment consists in the administration of drachm doses of the iodide of potassium, morning and evening, for two or three weeks. If the animals refuse to take the medicine in bran mash, give it as a drench in a pint of water. W. A. DUNBAR, V. S.

LIVER TROUBLE.

JAS. BLACK, Woodroyd, Man.:—"I had a four-year-old heifer die a few days ago, about three weeks from calving. On opening her to try to discover the cause of death, between the hide and the flesh there was a large quantity of a yellow frothy matter; when pressed, exuded a quantity of what appeared clear water, and all the external portion of the intestines were covered with a like substance. The lungs appeared to be in quite a normal condition, but the liver seemed to be unhealthy, so tender you could with ease put your finger through it. It was of a light blue color. She never showed any sign of sickness, always eating well, but for some time appeared to be getting weaker daily until she got too weak to get up, then in about three days she died. Will you please say what the complaint and what the best treatment. I may state that for the last four years we have been flooded with water in this district, and a number of cattle have died, apparently from the same complaint."

Your description of the case, including post mortem appearances, is too limited to warrant us in giving a decided opinion regarding the true nature of the disease.

Diseases of the liver, both acute and chronic, are frequently met with among cattle, especially in milch cows. A superabundance of stimulating food, insufficient exercise and bad ventilation are the most common causes of liver disorders. Congestion of the liver (hyperaemia) may exist for some time without attracting attention, as the appetite may not be perceptibly affected, and the only signs would be a little dulness and more or less constipation. Congestion, if not relieved, results either in inflammation of the organ (hepatitis) or the biliary disease called jaundice. The condition of your cow's liver would indicate that it had been softened by inflammatory action. The treatment of inflammation of the liver should consist of the application of a smart cantharidine blister to the right side of the abdomen, and the bowels acted upon by the following purgative:—Sulphate of magnesia, one pound; fluid extract of taraxicum, six drachms; ginger, two drachms; dissolve in one quart of hot ale; add half a pint of syrup and give in one dose. After the purgative has freely acted, give morning and evening a quart of gruel, for a week; hydrochlorate of ammonia, four drachms; fluid extract of taraxicum, three drachms. If the bowels should become torpid after the purgative has acted, their action should be assisted by administering injections of warm water and raw linseed oil per rectum. Feed moderately on roots and sloppy, easily-digested food. W. A. DUNBAR, V. S.

FURTHER PARTICULARS REQUIRED.

ENQUIRER, Blake, Man.:—"I have a horse six years old, that is troubled with his water, especially in spring. I gave him sweet nitre and saltpeter regularly. Is there any cure?"

There are so many ailments of the horse ascribed to "some trouble with his water," when there is really nothing wrong with the urinary apparatus, that, unless you describe the symptoms more fully, we cannot form a correct diagnosis of the case, and, therefore, would not be justified in prescribing a remedy. W. A. DUNBAR, V. S.

JAS. BARBOUR, Balmoral, Man.:—"My two sows got off their feed while weaning their second litter of pigs; about three weeks ago lost the power of their hind legs, and don't seem to get better. They feed all right; kept in a dry, warm house; fed on chopped barley and bran, scalded; also roots, now and again. Please name disease, cause, and cure?"

The lack of power in your sows' legs may be the result of too heavy feeding on nutritious and stimulating food, or the ailment may be of a rheumatic nature. If the sows are not pregnant, give each of them the following dose of purgative medicine:—Epsom salts, five ounces; calomel, fifteen grains; dissolve in a pint of very thin gruel, and give in one dose. Twenty-four hours after giving the purgative, give every day, for eight days, in sweetened gruel, iodide of potassium, forty grains; nux vomica pulv, fifteen grains. W. A. DUNBAR, V. S.

Miscellaneous.

The following inquiry from "Subscriber" Wawanesa, should receive the careful consideration of manufacturers of the articles for which he inquires. We would refer "Subscriber" to the stacker illustrated in the June 5th issue of the FARMER'S ADVOCATE as being cheap, simple of construction, and an extremely likely-looking arrangement. But maybe some of our readers can help him out. Question:—"Please let me know, through your paper, if any

hay-forks are made in this country, or sold by agents, that will work out-doors; also the best plan for fixing up, and the probable cost of same?"

E. J. H. CARNDUFF:—"1. Should the following parts of agricultural implements be oiled while at work:—The chain and cog gears of binders, the bearings of land rollers, and seeders, and plow coulters? 2. How many hens should be allowed to a rooster? 3. What is the cost of well-bred Plymouth Rock rooster, and where could I get one?"

1. It is not generally best to oil large chains and cog gears, especially where there is any sand in the soil. Regular shaft bearings should be oiled, and these are generally provided with oil-cups. On sandy soils, exposed bearings would cut out faster if oiled than if left alone, as the oil collects so much dust. Judgment must be used for individual cases. 2. From 10 to 25. 3. Consult our advertisers.

A SUBSCRIBER, Pilot Mound:—"Can you let me know, through your paper, where I can get sale for wool."

[See our advertising columns.]

Poultry Keeping as a Business.

BY JOHN J. LENTON.

In establishing any business of a commercial nature, it is of great importance that the right locality be chosen. First determine which branch of the business offers the greatest inducements, viz., the production of eggs, early chickens for broilers, or dressed poultry for market. In the vicinity of large cities and towns, the first two are by far the most profitable, as there is always a very strong demand for these. For dressed poultry for the general market, the locality is not so important. In practical poultry farming, all three branches will naturally follow in order during each season. A good locality where there is a firm market for all branches promises the best trade. The first essential requisite to success in poultry-keeping is

A GOOD HOUSE.

It should be adapted especially for the branch of the business for which it is to occupy the owner's attention. The very frequent mistake made by nearly all beginners and amateurs is that of building without regard to ventilation, or inside conveniences in caring for the fowls. In constructing our poultry houses the first point to be considered is economy in all of the details, not only in cost of the materials and the constructing of the house, but in the arrangements, so as to save both labor and time in the daily care of the flock. Too often these very essential points are lost sight of, and right here is the very place that decides the results of the net profit or loss.

Next in order is

CONVENIENCE.

Too much care cannot be paid to this particular at the very start. Practical poultry farming is a business made up of small items, which of necessity takes valuable time and skilled labor to perform; so we must be impressed with the importance of making all arrangements in and about our poultry house of the most convenient shape. We must remember, in the construction of the roosts, nests, feed boxes, etc., to have them placed beside the main walks of the house, to be readily removed and quickly replaced at the time of cleaning and lime-washing the interior, as time is money. To have an economic house we must have a convenient, labor-saving one, especially so as regards the grain bins, the vegetable pits, and the water supply, which should come from a capacious cistern and be drawn by an inside pump. Of course a commodious shed will be attached to one of the houses, to be used as a work shop, a feed room, a store house for coops, etc. A stove or range should here be set up for boiler use, to heat water and cook food, vegetables, etc.

Turkey Culture.

BY E. JOHNSTON.

The raising of turkeys on any farm within reasonable distance of a good market is a profitable side issue of farming. Turkey culture solves the problem of the wife's or daughter's pin money better than almost any other occupation open to them, with a smaller outlay and quick returns. Yet the many who begin with great expectations, through inexperience, fail, and have not the persistence necessary to work out success through failure. The object of this article is to furnish beginners a few instructions, which, sensibly applied, will save them some mistakes and consequent disappointments.

It has been my experience that the best way to start is to buy a trio of good birds of the preferred variety. The first expense is greater, but the money comes back the first year in the greater number marketed. And it pays to start with good stock. Among the several varieties, I prefer the Mammoth Bronze, on account of their disposition to pull down the scales when it comes time to fat and sell. The toms of this sort, when six months old will weigh from eighteen to twenty pounds; the hens from ten to thirteen. A three-year-old tom often tips the scales at forty-five or fifty pounds, but as the old birds grow ugly, and as

turkeys deteriorate by inbreeding quicker than any other class of fowls, it is not best to keep them beyond this age. If one's neighbors raise turkeys also, to choose a distinctively different breed will be a great aid in separating the flocks when they get together, as they almost surely will if at large, and avoiding any disputes over ownership. The White Holland is good under such circumstances. If this cannot be done, there are leg bands sold for marking, which are useful but rather expensive; or a system of clipping the wing feathers slightly may be adopted, though this disqualifies the birds for exhibition purposes. Strict watch must be kept on the hens when they begin to lay, for they are very secretive, and often wander to quite a distance to hide their nests. The first eggs should be set under hens (common fowls), not over nine each. The hen turkey will lay from thirteen to fifteen eggs, then stop a few days and begin again. Let her set on the last clutch. The eggs set under hens should be so managed as to hatch at about the same time, then one mother will do for two broods or more. Thirty days being the period of incubation, hens that are good, faithful sitters are much to be preferred as incubators.

If possible, let the hen turkey sit where she has made her nest, as she does not, generally, bear removal well. Her food must not be neglected, for she is so faithful that she will almost starve before she will leave her nest to seek it. Only one person should visit her, and that person should be very quiet and gentle in every movement, that the hen may become tame and easily handled when she "comes off." The turkey retains enough of its wild habits to always hatch best when allowed to sit on the ground, and if turkey eggs are given to common hens in nest boxes, fill the boxes half full of earth and put a little chopped straw on it.

When the little fellows are hatched trouble begins. They are very tender and require careful looking after until they are six weeks or two months old. Movable coops on sod ground are preferable, and should be surrounded by yards fenced off with boards a foot high. The coops and yards are to be changed as the soil becomes foul. The coops should be roomy and have good roofs, for the little turks are to be confined in them during wet weather. When they are strong enough to fly out of the yards, the mother may be given her liberty and allowed to lead her flock about after the dew is off, and in dry weather. Young turkeys must not get wet—nothing will thin their ranks so quickly, as being out in a shower or getting drabbed in wet grass. As soon as the common hens show a disposition to discard their families it is well to put the broods all together in charge of the hen turkeys, and that the young may be accustomed to each other they should be cooped near together. Whatever provision is made for housing the young, look out for the tom, for he has a way of killing them that is very unfatherly and particularly exasperating.

The newly-hatched turks will not eat much for a couple of days. They should have a little egg custard before them (which may be made of stale eggs if they are on hand), or crackers or bread and milk—not made sloppy, however—to teach them to eat. Then the curd from sour milk comes in good, and in a few days cracked corn partly boiled is stirred into the curd, with a pinch of pepper in rainy weather. They are particularly fond of green onion tops, cut fine, and sweet milk is given for drink. They should be fed five times a day for the first two weeks, as their growth is so rapid they need constant supplies of food, but only what they will eat up clean should be given at one feed. When they are three weeks old a corn-bread moistened in milk, or a bread of mixed cornmeal, coarse flour and bran, takes the place of curd, and they are fed three times a day. Never feed raw meal, unless you want dead chicks. When a month old give wheat screenings and cracked corn scalded. As soon as they are past the danger point, or six or seven weeks old, they can be left pretty much to themselves, after their breakfast of boiled potatoes, made thick with bran or meal, but should be fed every night a grain ration to induce them to come home at night.

The first year I kept turkeys I wore out my temper and a pair of shoes chasing after them. Then I decided they roved by nature, and let them do so. By feeding at night they were prompt in coming to the roost. Always count them every night. If any are missing, hunt them up. I have always allowed mine to roost on trees, or under an open shed, as they chose, and most of them take to the trees. But I always market the flock at Thanksgiving, and after that those I keep over are caught and put in a large henhouse by themselves, which is not too tight and with high roosts. I keep over a tom and about six hens. I prefer a two-year-old tom and year-old hens, as they lay better, earlier and give more eggs, and, as I work for an early market, the quicker I can get them hatched and growing the better the results. Do not be content with an average of less than fifteen pounds. Change your male bird every other year, at the very least. This is some trouble and expense, but turkeys will not bear inbreeding to any extent. Allow not over ten hens to one male. Unless you are going into the business quite extensively, five or six hens are enough to keep over. Keep the best birds.

You can safely calculate, one year with another, on a loss of twelve per cent. of all that are hatched. Sometimes they seem to "turn up their toes" out of sheer perversity. When this is the case lice will

usually prove to be the cause of the trouble, and especially on those hatched under common hens. Insect powder should be freely used on the hens and in the nests; and if lice are found on the young turks, grease their heads, under the wings and round the vent, remembering that too much will prove as bad as the lice.

One must make up his or her mind to constant care and a good deal of hard work for a couple of months. One "forgot" may undo all the labor that has gone before. And neglect is the prime factor in failure. The turks get soaked in a sudden shower, or go half a day without food at the critical age, and die off as if they had the plague. But I have raised \$125 worth of turkeys, at an expense for food of \$98; I do not count my time and the countless steps I took, because if I had not chased after turkeys I should have trotted after something else, and I felt well repaid with \$80 in my pocket—after paying the little helper, to whom I said, "Run for the turks, dear; its going to rain!" so many times, and paying for the grain fed. I had every bushel of the latter measured out to me with scrupulous exactness, because of a conviction on the part of my other half that "the blamed turkeys would eat more grain than they'd ever pay for." And aside from the cash, there was a solid satisfaction in saying "I told you so!"

Lest any one be too envious of my success, I will say it was only after four years' experience I made the above record. The first year I cleared five dollars, and never worked so hard in my life. It made me sick to hear anyone say "turkey," and I am sure I should never have tried it again but for the pitying silence of the man of the house, who meant to be very considerate, but to my disposition was peculiarly exasperating. I made up my mind I could raise turkeys "after I got the hang of it," and now find the work—not easy, by any means, but fairly remunerative; and a plump roll of greenbacks on market day makes one forget past discomforts.

Teaching Agriculture.

At the last monthly meeting of the Advisory Board of Education, held in Winnipeg, on 30th of May, the Rev. Dr. Bryce presented the following report on the teaching of agriculture in the schools of the Province.

The committee appointed to consider the introduction of the study of agriculture in the schools find that the opinion of the Province seems largely in favor of this introduction, as evidenced by:—1. The unanimous resolution of the Legislature to that effect. 2. The repeated representations on the subject made by the Manitoba Central Farmers' Institute. 3. The views obtained by members of the committee from prominent farmers and others in the Province. Accordingly, the committee recommends:

1. That a short course be adopted for use in the Third Reader classes of the Public schools, consisting of simple descriptions of the best known plants of Manitoba, of the wild fruits of Manitoba, of the useful farm plants adapted to the Province, of the commoner hurtful weeds, and also of the native trees of the Province. For this class it is suggested that short talks be introduced on the subject of trees and garden culture. It is recommended also that practical teaching in the gathering and preserving of wild flowers, and also in the planting of and care of trees in the school grounds and about the houses of the pupils, be given in this class.

2. That a course be also adopted for Fourth Book classes, of easy lessons in agriculture. In the opinion of your committee, this should include a short course of simple experimental science, practically and very cheaply illustrated, to enable pupils to know the main facts as to air, water, and the more frequently occurring elements in the soil, embracing also plant growth, preparing of the prairie for the seed, the principles of drainage, tillage of the soil, the enemies of the crop, such as weeds, plant diseases, insects, frost, gophers and birds; description of the animals of the farm, as well as something of dairying and tree-planting.

3. In the opinion of your committee, these subjects, if properly taught, will be intensely interesting to the pupils, and if added so as to give, say, two lessons a week during the years of the Third and Fourth Reader classes, will give a somewhat complete course of nature study, most useful to all classes of pupils, and suitable to our conditions as an agricultural province.

4. Your committee is of the opinion that the teaching in these subjects should be practical, and free from technicalities, for its members are entirely opposed to the memorizing of mere formal proposition, dry details and dreary commonplaces, which only tend to make nature study repulsive, and so, worse than useless.

5. Your committee are fully aware that success or failure in this matter almost entirely depends on the fitness and earnestness of the teachers, also recommend that practical study of this course be introduced in the Provincial Normal School, the third-class Normal School and Teachers' Institutes; and that the Department of Education be requested to make adequate provision for such instruction.

6. Your committee also recommends that application be made to the Central Farmers' Institute as to the establishing of, say, \$100 worth of prizes, to be distributed annually to those pupils of the Public schools who pass the best examinations in the course laid down by the Advisory Board.



A Curate's Temptation.

(Continued from page 226.)

III.

In his own room once more, Oswald took out the purse, and examined its exterior carefully. Then he opened it, and turned its contents out on the table. His head swam as he saw the unusual glitter of gold; and with amazement he counted the coins. Five sovereigns, two half-sovereigns, and a total of sixteen shillings in silver. He surveyed the treasure with startled eyes, and murmured: "It is a fortune; such a sum would tide us over our present difficulties, and with Edith strong again, I could once more try for work." Then he pushed the money from him, crying: "I will not be tempted; I will not imperil my soul; I will return it!" He half turned, as if to carry his purpose into instant execution, but suddenly remembered he had no means of tracing the owner. As the thought occurred to him, he once more examined the purse, but, despite himself, he could not help feeling relieved when he found neither name nor address. "Stay! In his hurry he has overlooked the ticket pocket. What is in it?" He drew it out, and in astonishment reads—"Mr. George Morley, 59 Burton-crescent, W. C."

"What!" he cried. "This is indeed miraculous. My father's friend, the man who owed so much to him. Surely the hand of the Almighty is in all this! I will go to him. He will help me for my father's sake. Ah! but will he? Did I not write to him some months ago? Did I not open my soul to him, and yet he has not even deigned to reply to me. Alas! my last hope is dead. Doubtless he will take his money and let me and my darlings starve. Yet no, by Heaven! it shall not be. For myself I care nothing, but they shall not suffer. Let the sin and its consequences be mine, and mine alone; I will keep what God has given into my hand." He paced the room excitedly, still dragged first this way and then that, by conflicting emotions, till he was roused by the entrance of his landlady.

She paused as she noticed the strange, stern look on the curate's face. Then, standing by the open door, said: "I'm mortal sorry to trouble you, Mr. Campion; I'm sure I grieve me sorely to think of your good lady ill up-stairs, but I am in great straits myself, and if I don't get some money I'm sure I don't know what will become of us."

The young man looked at the woman gravely as he answered: "You have been more than kind to us, Mrs. Martin; you have helped us when you were ill able to do so, and, believe me, I am not ungrateful. Is your present need so very great?"

"Indeed it is, sir. You know I'm a widow with no one to help me, and now the baker says he won't leave any more bread without the money; and the landlord has just called for the rent, and declares he'll distract to-morrow."

"I owe you £2, Mrs. Martin. Will that be sufficient for your wants?" said Campion quietly.

"Oh, yes, indeed, sir, more than enough," answered the woman, her face brightening.

"God be merciful to me, and pardon my sin!" said the curate to himself. "I cannot let this woman and her little ones suffer on my account—the temptation is too great."

Then aloud: "Take your money, Mrs. Martin; there is plenty on the table."

As his landlady stepped forward, he turned to the window so that she could not see his face, for he feared that his emotion would betray itself.

"Oh, thank you, sir," said Mrs. Martin, as she picked up the coins. "I'm truly glad to see you with so much—as much for you and your dear wife's sake as for my own. Then, as he did not speak, she withdrew quietly.

Campion turned from the window, trembling violently. "Thus," he cried, "are my fetters forged. Now, there is no escape! Then he added, bitterly, "I am fit to be neither saint nor sinner. As I have fallen, at least let me face my crime like a man. If I have lost my soul, I will take its price as my reward, and behave like a man, not like a weak-minded boy."

He gathered up the money, and without waiting to give himself time for further reflection, ran up-stairs to his wife's bedroom.

The girl was awake, and received him with a look of love. She noticed at once his excited face, and, gently drawing him towards her, said: "Have you had good fortune, dear?"

"Yes," he replied, cheerfully. "Indeed, I have. See here!" and he showed her the hand full of gold and silver.

The girl's face flushed with pleasure. Not for a moment did any possible suspicion of his honesty enter her mind. She trusted him to the fullest extent, and was too weak to question how he had become possessed of so much.

She kissed his face as he bent over her, and murmured: "I am so thankful, Oswald; now I can go to sleep comfortably; to-morrow you shall tell me all about your wonderful good luck."

Someone tapped gently at the door. The nurse came over to him, and whispered: "You are wanted, sir." He arose quietly, and with one fond glance at his sleeping wife, descended the stairs. Then he underwent a sudden revulsion of feeling. He pictured to himself that the police were waiting for him, to charge him with theft. Before his mind rose a vision of his denunciation by the owner of the lost purse, and in a state of nervous agitation he laid his hand on the handle of the sitting-room door.

IV.

As the curate paused irresolutely at the door, Mrs. Martin handed him a card; but his head swam so much that, in the dull light, he in vain tried to read. Mastering his emotion, he flung open the door, and with the pasteboard still in his hand, entered the room. He stopped, and almost staggered back, as he saw a short, stout gentleman standing with his back to the fire. Instinctively he recognized the owner of the purse, and an intense horror took possession of him. His crime had found him out full soon, and with the desperation of despair, he advanced like a culprit to his doom. But as the mist cleared from his eyes, he saw that his visitor's face did not bear the look of an avenging Nemesis. His mouth was parted with a genial smile, and the soft eyes shone with good humor.

The stranger sprang forward, as he saw the curate, and grasping the young man's hands in his, said, in a voice quivering with excitement: "My young friend, I am delighted to find you at last. Believe me, this is a happy meeting to me."

Dumbfounded at his unexpected reception, Campion was silent for a moment; then he exclaimed in a stiff manner, the better to conceal his agitation: "Sir, I am at a disadvantage. I have not the pleasure of your acquaintance."

"What?" said the other, in surprise. "You have my card in your hand.—Do you not recognize the name? I am George Morley, your father's friend."

"True, true," murmured the curate, absently; "but what has that to do with me?"

"Surely you are not well. What has it to do with you? I intend it shall have a great deal to do with you. Besides, did you not write and confide in me?"

"Yes, but that is long ago. You did not answer my letter."

"Now, look here, young man, don't be ready to take umbrage. Your letter only reached me two weeks ago, when I returned from the continent. You gave me your address at Middlethorpe, and a nice hunt I've had to find you. I went down there at once, but your late rector couldn't tell me your

present place of residence. I've been looking for you ever since, and had almost given up in despair, when, not an hour ago, I luckily thought of Pearson; he knows all the parsons, and, by a curious coincidence, he said you had only left him; in fact, your card was still on his desk; so I came on at once.

"Did Mr. Pearson tell you why I had called on him, and how he received me?"

"I don't remember that he said anything special; but he mentioned that you were looking for work, though I don't know whether that's quite a correct word to use with respect to a clergyman's duties."

"And why have you sought me out now?" asked Campion, huskily, his intense feeling making him brusque and almost discourteous.

"Oh, look here, Campion," said Morley, rising, "your whys and wherefores are getting too much for me. Don't you know your father helped me very materially in my early days, and now I want to do something to repay the debt."

"And how can you tell that his son deserves your assistance?" Then, springing to his feet, he cried: "I cannot, dare not, tell you why, but you shall not help me; I am unworthy of his hands and goodness in anguish. If I had but waited!" he thought. "Had I but resisted temptation for one short hour, all would have been well, and I should have been an honest man. Now, I can never hold up my head again."

Morley stood looking at the young man for a moment in silence, then he gently approached him, and laying his hand on his shoulder, said kindly: "Campion, for your father's sake, you must let me help you. Whatever wrong you have done, or think you have done, need not affect the question. You are overwrought, and doubtless exaggerate matters. But, be that as it may, whether your fault is real or imaginary, it is not against me." Campion once more sprang from his chair, and facing his visitor, cried out, as though the words were rung from him by torture: "You! Yes, it is against you and God, that I have sinned. Did you not lose your purse to-day?"

"Yes, I did; but how do you know that?"

"I saw you drop it. I picked it up. I that you imagined honest and upright, have stolen your money and paid my debts with it."

"But you did not know whom it belonged to?"

"I did. Your card was in the purse."

"I see," said the curate, almost with relief. Now you appreciate the true character of the man you offer to assist. Go, call in the police, and give me up to justice."

Morley's face became overcast, and a look of deep sorrow settled upon it. He sat in silence for a few moments, that seemed an age to the man cowering before him. Then he said, in an authoritative, yet kind voice: "Campion, I am an old man, and your father's friend. I beseech of you to look on me as standing in his place, and tell me all about this sad affair. Do not seek either to condemn or excuse yourself, but tell me as simply and as straightforwardly as though you were speaking of another."

Thus abjured, the young man described in detail the doings of the day, in a voice often broken by his agitation. He did not seek to palliate his offence, but his narrative showed how circumstances had combined to urge him to dishonesty.

The elder man listened to him attentively, but in silence. Then, as he concluded, he took his hands in his and said: "My poor friend, your tale has greatly moved me. Believe me, the money is of no importance to me, but I dare not ask you to look lightly on your sin. You use the hard term *ask* for your sin, but I do not think it is that. I am not a lawyer, but I imagine that the law has a milder term for such offences. However that may be, now, more than ever, I claim my right to help you. If you accept my assistance, a useful career is before you, and your error will serve as an incentive to future work. Then I ask you to think of your young wife and helpless child. Surely they appeal strongly to you to take the help I offer you."

"You heap coals of fire on my head," murmured the young man, in broken accents.

The two men sat talking far into the evening, and when Morley rose to leave, he had gained his point. The curate had learnt the lesson, that oftentimes appears so hard to believe, that if God is willing to forgive, it is meet that man should forgive, if fully and freely offered.

The Rev. Oswald Campion is now a well-known preacher. He holds an important living in the south of England, and his preaching has drawn a large congregation around him. It is not his eloquence or rhetorical display that effects his hearers, for he speaks in simple language, as an erring man to fellow-men liable to fall into temptation, and the sincerity of his words none can dispute. His early error has impressed his soul, and he never tires of preaching the doctrines of mercy and forgiveness.

Nobody Else.

Two little hands so careful and brisk,
Putting the tea things away,
While mother is resting awhile in her chair,
For she has been busy all day,
And the dear little fingers are working for love,
Although they are tender and wee:
"I'll do it so nice," she says to herself—
"There's nobody else, you see."

Two little feet just scampered up-stairs,
For papa will quickly be here;
And his shoes must be ready and warm by the fire
That is burning so bright and so clear.
Then she must climb on a chair to keep watch—
"He cannot come in without me."
When mother is tired, I open the door—
"There's nobody else, you see."

Two little arms around papa's dear neck,
And a soft downy cheek 'gainst his own;
For out of the nest, so cosy and bright,
The little one's mother has flown.
She brushes the tear drops away, as she thinks:
"Now he has no one but me."
I mustn't give way; that would make him so sad—
And there's nobody else, you see."

Two little tears on the pillow, unshed,
Dropped from the two pretty eyes;
Two little arms stretching out in the dark,
Two little faint sobbing cries.
"Papa forgot I was always waked up
When he whispered good-night to me;
O, mother come back, just to kiss me in bed—
There's nobody else, you see."

Little true heart, if mother can look
Out from her home in the skies,
She will not pass to her haven of rest,
While the tears dim her little one's eyes.
If God has shed sorrow around us just now,
Yet His sunshine is ever to be!
And He is the comfort for every one's pain—
There's nobody else, you see.

—Marry Hodges.

Well Put.

A woman is like the pins she uses. She generally has a head of her own and a point to carry, and she will make herself useful and shine wherever you put her. But get her crooked, and somebody is going to get hurt; and if she loses her head, she is worthless.

THE QUIET HOUR.

God's Appointments.

This thing on which thy heart was set, this thing that cannot be,
This weary, disappointing day, that dawns, my friend, for thee—
Be comforted; God knoweth best, the God whose name is love,
Whose tender care is evermore our passing lives above,
He sends thee disappointment! Well, then, take it from His hand,
Shall God's appointment seem less good than what thyself had planned!

"Twas in thy mind to go abroad. He bids thee stay at home!
Oh! happy home: thrice happy if to it thy guest He come.
'Twas in thy mind thy friend to see. The Lord says, "Nay, not yet."
Be confident; the meeting time thy Lord will not forget.

'Twas in thy mind to work for Him. His will is, "Child! sit still!"
And surely 'tis thy blessedness to mind the Master's will.
Accept thy disappointment, friend, thy gift from God's own hand;
Shall God's appointment seem less good than what thyself had planned!

So day by day, and step by step, sustain thy falling strength
From strength to strength, indeed, go on through all the journey's length,
God bids thee tarry now and then, forbear the weak complaint;
God's leisure brings the weary rest, and cordial gives the faint.

God bids thee labor, and the place is thick with thorn and briar,
But He will share the hardest task, until He calls thee higher,
So take each disappointment, friend; 'tis at thy Lord's command!
Shall God's appointment seem less good than what thyself had planned!

—Margaret E. Sangster.

"The truth comes to us more and more the longer we live, that on what field or in what uniform, or with what arms we do our duty, matters very little, or even what our duty is, great or small, splendid or obscure. Only to find our duty certainly, and somewhere, somehow to do it faithfully, makes us good, strong, happy and useful men; and tames our lives into some feeble echo of the life of God."

Relaxation.

Work when you work, but when the measure of one's duty is done, then thoroughly relax. There is as much virtue in refreshing soul and body by yielding up all responsibility and care as there is in the courageous meeting of active obligations. When we have done our best, and worked to the limit of our capabilities, then we should rest upon the law of life, and, with the faith of a little child, feel assured the Father is all good, and what is, or must be, is best.

If we faithfully do our duty, and repose in peace upon the will of the Father for results, we may have the freedom from anxiety that gives each moment of rest thorough relaxation and pleasure. New strength then flows to us abundantly for the sustaining of the next obligation duty places in our path. It is thus we conserve our energies and are faithful servants in the required hours of service. One can exhaust more force in an hour's unnecessary fretting than would enable him to do a day's work. It is the useless worrying that ages, and robs mature life of its beauty and power.

Fretting and worrying never turned a wheel or brought sustaining help to any crisis. We are but children in the arms of the Infinite Father, and rebellion breaks our powers upon the wheel of the law, but does not change the turning of the wheel. In harmony with the law, we are carried onward and upward. Resistance is our own destruction.

That which we cannot make or break is not our care. When our daily duty is done to the best of our cheerful ability, we must rest in heart and brain, in soul and body, and feel that the wisdom that produced the marvel of life has a crown for its brave fulfillment. Thus petty trials are forgotten, and great ones dignified.

Mites.

There are some people who get weary of life's work and become disheartened because they are kept all the time doing little things. They see here and there a man or woman doing great things, and their lives seem very unimportant in comparison. They long to be doing great deeds. They think God does not care much for the little they do. To all such the blessed Master says: "He that is faithful in that which is least," is the faithful man. Whoever does his lowly, humble work well and faithfully, day by day, and hour by hour, is pleasing God just as well as he who does great things. And nothing is small in God's sight which is done for love of Him.

Great men came far with their wealthy offerings for the temple treasury. There were gifts of gold and gifts of silver. The very smallest offering that day was the gift of the poor widow who came, sandal-shod, wearing tattered garments, and bearing on her face the stamp of hard, grinding poverty. Her gift was so small that it would hardly be counted among the great gold and silver coins that were poured into the treasury.

But Jesus sat by and watched how men cast in, and He said that she had done more than they all. Her gift pleased Him most.

MINNIE MAY'S DEPARTMENT.

Chats Upon the Porch—1.

"You women who live in the city have so much—lectures and concerts, theatres and parties, books and people, and—chances. We have nothing." Bella uttered the plaint as we sat upon the porch, after the early tea.

"Nothing?" queried the city woman.

"Oh, well," we have food and clothing, shelter, and a certain amount of kindly family affection, of course—but we haven't opportunities."

"For what?" asked her listener.

"For culture, and daintiness, and the cultivation of friendship."

There was silence for a few moments while the evening sounds drifted toward them:—of cluckings in the poultry-yard, a faint 'moo' from the barn, the shrill, full chirp of the field cricket, and the slow creaking of a wagon along the road.

"Are you sure that you have nothing beyond the essentials you have mentioned?" inquired the city woman.

Belle opened her eyes widely. "You see for yourself," she said, "In the morning we are busy with housework and the dairy; after dinner we sew, or tend the garden; after tea, there is the milking,—and then we are tired, and there is nothing left but bed. It is our daily round."

The city woman looked toward the sunset. "You have that," she said, with a gesture sweeping out toward the horizon. "You have those hills and woods and that great stretch of fields, for your outlook every hour of your day."

"But they are always the same," protested Belle.

"They are never the same," answered her friend. Their beauty varies with every hour, and every passing cloud. From your doorway and window you behold fairer pictures than any art gallery can give. Oh! you want to live in a city house, having doors that open upon stone pavements, and windows that look upon dead brick walls or back sheds, before you can properly appreciate the full sweep of sky and hill and field that is about here."

"But an outlook is not a means of 'culture,'" protested Belle, gloomily.

"Isn't it?" queried the city woman, laughingly. "We who are of the city, coming into view of such a landscape, deem it a mighty means of grace. It is the easiest thing in the world to grow irritable and nervous and worn; shut between brick walls. But out here—why, one can send all one's weaknesses and irritations tossing over those green fields or among the hill tops, and grow rested and stilled in the sunshine and sweetness."

"And, then, for music," she continued. "You have the birds, singing as they never sing in the city; and the frogs,—now don't laugh, for we city folks really like to hear their evening chorus—the field cricket and all the hum of insect life; and softer still is the rustle of the tree boughs, the whisperings of the grain, and the little, low stir of the pasture greenness. Your days and nights are filled with a music that we never hear. Your concerts are held in pure atmosphere, your singers are ever in tune—and the admission is free."

"Which is why we do not appreciate them," asserted Belle's brother, in undertone.

"Again, you have a leisure that we have not," pursued the city woman. "Perhaps not in the busiest seasons, but certainly during many months of the year. Time to sew, to make neighborly visitings, to take long hours of sleep; and leisure is also a means of grace to a woman; for we need time in which to pay attention to little daintinesses of person and dress, of manners and ways. It takes a woman time to be dainty and gracious, fresh and sweet. A tired woman is always an irritable and ungracious woman. We who are of the city are often driven from one duty to another, from one engagement to another. We are at the mercy of a city full of people, and between postman and agent, home duties and social life, we are often utterly unable to withdraw into the stillness and repose so necessary for spiritual growth; and that may be yours every day, if you choose."

"But we want something to fill the leisure," said Belle.

"Yes," answered her friend. "You want thoughts,—high thoughts—and these will come chiefly from observation and from books, carefully read. You women of the country do not read enough."

"Books give new views to life
And teach us how to live."

"You want books to teach you to see, and books to teach you to hear; you want your eyes opened to this beauty of field and hill, and ears made attentive to nature's sweet sounds. You starve yourselves in the midst of plenty; you remain dwarfs when you might be giants."

Belle looked up from her seat upon the porch steps.

"If we were to read and study, if we took books and papers,—and tried—do you really think we could grow as cultured as city folks?" she asked.

"As cultured city folks!" corrected the woman, smiling. "A city contains rougher classes than ever the country produces. Yes, I am quite certain

that country life should be an aid rather than a bar to growth of spirit, as we know it is to the body. Strong bodies and generous souls are born of country living. We recruit the city ranks from the country. Our nation's foremost men come from the fields and hills—for only there can they take time and find pure air in which to grow."

"My little friend,"—and the woman of the city turned with tender look towards the brown-eyed girl—"believe this above all else, that growth must be from within; that neither city opportunities nor country freedom can give to us that knowledge that we are not ready to receive. Let none say, 'Lo here or lo there, for the kingdom of God is within us.'"

"But how shall we cultivate the kingdom?" queried Belle, timidly.

"Live always up to the best that is in you—don't poke too much at the roots; keep in the sunshine; keep clear of drought, and you'll grow," answered the city woman, with her gentle smile.

MINNIE MAY.

DEAR MINNIE MAY:—

"Seeing that article in the ADVOCATE, regarding 'How to Cook Husbands,' I think it would be a good thing for you to offer a prize for 'How to Cook Wives,' as many of the male tribe don't seem to know the proper way to go about it.

I remain,

Yours truly,

A VERY MUCH INTERESTED READER."

Beverly, Man.

The article referred to appeared in April 15th issue, and as the question raised by our correspondent is an interesting one, we will be pleased to hear from any of our readers, on the subject of "How to Cook Wives." Those holding old and tried recipes for the same will be conferring a benefit upon inexperienced cooks by sending in these recipes for publication. Address:—

MINNIE MAY,

Office of the FARMER'S ADVOCATE.

Recipes.

BEEF LOAF.

Take 3½ pounds of beef, chopped very fine—round steak is best; 2 well-beaten eggs, 6 small crackers rolled fine, 1 cup sweet milk, a piece of butter size of an egg; salt, pepper and sage to taste. Mix well, press into a bread tin, cover with a tin, and bake 2½ hours, occasionally basting with butter and hot water.

SCALLOPED POTATOES.

Four large, cold, boiled potatoes, peeled and sliced; 2 tablespoons butter, 1 pint hot milk, 2 tablespoons flour. Melt butter and add hot milk and flour; when thick, add salt, pepper and parsley. Put a layer of mixture in bottom of baking dish, then a layer of potato, and so on, milk coming last. Cover with cracker crumbs and bake 15 minutes.

LAYER CAKE.

One cup sugar, 2 eggs well beaten, ¼ cup butter, ½ small cup milk, 1½ cups flour, 2 teaspoons baking powder. Bake in three tins.

CHOCOLATE CREAM FILLING.

Five tablespoons of grated chocolate, enough cream or milk to wet it, 1 cup sugar, 1 egg, 1 teaspoon vanilla flavoring. Stir the ingredients over the fire until thoroughly mixed, having beaten the egg well before adding; then add the flavoring after it is removed from the fire.

STRAWBERRY SHORTCAKE.

For this dish use 1½ quarts of strawberries, 1 cupful sugar, 1 pint flour, 1½ teaspoonfuls of baking powder, ½ teaspoonful salt, 2 tablespoonfuls of sugar, ½ of a cupful of butter and a scant ½ cupful of milk. Slightly mash the berries and sprinkle over them 1 cupful of sugar. Measure 1 pint of flour after it is sifted. Add to it 1½ teaspoonfuls of baking powder, 2 tablespoonfuls of sugar and ½ teaspoonful of salt; then sift again. Rub into the flour ½ of a cupful of butter. Mix it with a scant ½ cupful of milk. Butter well a Washington pie plate, place the dough upon it, smooth, and press it evenly into the plate with a spoon. Should the dough stick to the spoon, dip a clean spoon in flour and smooth with it. Bake in a quick oven until done—about twelve or fifteen minutes. Remove it to a china plate. Split the cake carefully with a sharp knife. Butter the lower half well and cover with a part of the mashed berries. Place the upper half of the cake on this, the crust side on the berries. Butter this and cover it with the remainder of the fruit. Before serving, heap whipped cream over it, and you have a dish fit for a king.

In the frequent enumeration in our literary journals of striking short poems, it is strange that no one has included Charles Henry Webb's "Revenge":

Revenge is a naked sword—
It has neither hilt nor guard.
Wouldst thou wield this brand of the Lord?
Is thy grasp, then, firm and hard?"

But the closer thy clutch of the blade,
The deadlier blow thou wouldst deal;
Deeper wound in thy hand is made—
It is thy blood reddens the steel.

And when thou has dealt the blow—
When the blade from thy hand is flown—
Instead of the heart of the foe,
Thou mayest find it sheathed in thine own!

Sound philosophy, as well as good poetry, in the above!

UNCLE TOM'S DEPARTMENT.

Puzzles.

PRIZE PUZZLE.

1—RIDDLE.

Never straight you see me.
Yet I'm not awry;
My favorite habitation is
Up in the sunny sky.
Soft and sweet my nature
Unto you may seem,
Yet the fondest words I turn
Into weapons keen.

ADA ARMAND.

2—SQUARE WORD.

My FIRST is "a play," in verse or in prose,
My SECOND is "taxes," as everyone knows,
My THIRD is a book we all study at school,
My FOURTH is "a measure of fish from a pool,"
My FIFTH is "an item in any man's favor."
I can't find a rhyme, so I'll cease from my labor.

H. D. PICKETT.

3—CHARADE.

I've got a feeling within my heart
For to do a puzzle great,
But strive as I may this feeling to meet,
I feel I'm FIRST SECOND to perform the feat.

Now, if I was clever and TOTAL like F. B.,
I should be LAST to do it;
But FIRST being built in that style,
I'll quit, before I rue it.

HENRY REEVE.

4—RIDDLE.

A title have I, and good education—
More than some people—no overation;
I'm a medium of teaching good manners and art,
And in the schoolboy's studies I play a great part.
Philosophers, poets, principals, teachers and youths,
All delight to emerge in the midst of my truths;
But the queerest thing about me, and absurd,
Is that, though I tell many things, I can't speak a word.

THOS. W. BANKS.

5—ENIGMA.

A circle I am—you'll think then I'm nought;
You never in your life were more out in a thought,
For whether I'm made of wood, iron or gold,
A circle more precious man's eyes can't behold.
Yet those best informed are said to declare
I am but a name for vexation and care;
Yet let not this knowledge, dear friends, much distress ye;
I think I can promise you'll never possess me.

Answers to May 15th Puzzles.

1—Sin.
2—P U L P
O T A L G I A
L E A S E R
I
T I N D S O R I
A
I O M P R E N D I U M
I N A I D A T I O N
A G G R E G A T I O N
N U T
S U R R E P T I T I O N
Parliament.
3—There-in.

Corpulency and Its Treatment—How to Get Thin.

The Vegetarian says:—"It is very foolish for persons to live on lean beef and water to reduce obesity, because this is merely starvation; and, though they will certainly reduce their obesity by this method, they will also reduce their strength and bring down their constitution. A simple diet of brown bread and fruits will reduce obesity far better than any nostrum, and the good of this diet is that it will invigorate the body and keep up the strength. Of course the diet should be accompanied with proper exercise—walking is the most suitable for fat people, because in it the whole body is exercised, and not one set of muscles at the expense of another. When the dishes are not unduly elaborate, people do not eat too much; when the diet is plain and simple, they will take what they want. Rich and elaborate cookery causes persons to eat more than is good for them, and brings on undue obesity and many other disorders. Of course all fat people tell you they are small eaters, but whatever they do eat they eat more than is necessary to keep them in health and strength, and the extra is packed on as fat that they do not want. Persons should not try to reduce themselves to emaciation; they should have sufficient fat on their bodies to round off their angles and prevent their bones staring people in the face. Fat persons have always a better time of it when they take ill, because if they cannot eat for a day or two their system is supported by their fat, and they will often live through an illness that would kill a thin person. So, although persons should not be so fat that they would be unwieldy or unable to perform their daily duties, they should not use unnatural methods to make themselves thin. If any person finds himself getting too stout he has only to reduce his meals, to eat less at each meal, and to let himself be always hungry for his meals, and to take regular daily exercise."—The Journal of Hygiene.

Wise Knowledge and Wise Ignorance.

As the mind of man is so limited in its ability to receive and retain, there must be a continual selection going on between what to know and what to refrain from knowing. The wise man has discovered that of the vast amount of truths and facts and wonders and ideas with which the universe is teeming, only a small fraction can by any possibility be his; and his intelligence has no more important task to perform than that of deciding not only what to choose, but what to refuse. Thus, wherever there is a wise knowledge there is also a wise and necessary ignorance.

ROYAL GROWN SOAP

HAS NO EQUAL!

Beautiful Picture for 25 Wrappers.

ROYAL SOAP CO'Y,
Winnipeg.

52-y-m

MAPLE GROVE FARM

ROSSER, - MANITOBA.

WALTER JAMES & SONS

BREEDERS OF

SHORTHORN CATTLE

Bates and Cruick shanks).

Correspondence invited. Quite a few yearling grade cattle for sale cheap.

JOHN G. BARRON, Carberry, Man.

FOR SALE... 2 Fine... Shorthorn Bulls

16 months old, sired by Barrington Waterloo, from pure-bred cows. Also a few good heifers.

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DAVID MARWOOD, PROPRIETOR, Treherne, Manitoba.

BREEDER OF Holstein Cattle and Improved Large Yorkshire and Red Tamworth Swine.

MAPLE GROVE HERD

HOLSTEIN-FRIESIANS

The Prize-Winners of the West. Females of all ages, also young bulls for sale at bottom prices.

Also Breed Improved Large Yorkshire Pigs.

STEEL BROS. BREEDERS of AYRSHIRE CATTLE

Choice Young Stock For Sale.

D. FRASER & SONS, Emerson, Manitoba,

Breeder and importer of Durham Cattle, Shropshire and Southdown Sheep, and Pure-Bred Poland-China Pigs a specialty.

2 THOROUGHBRED JERSEY BULLS FOR SALE.

Of the Celebrated St. Lambert Family. One is 2 years old, the other 3 months. Reason for selling is to avoid in-breeding.

M. B. V. MILLIDGE, St. John's, WINNIPEG.

11-17-m

Bronze Turkeys, Mammoth Pekin Ducks, Barred Plymouth Rocks, White and Laced Wyandottes.

Turkeys—Young tom, 29 lbs., 11 months old; hens, 19 to 22 lbs.; \$3 per 10 eggs. White Wyandottes—Cockerel "Windsor White," score 94; hens, 94 to 96; \$2 per 13 eggs. Plymouth Rocks—Cockerel "Hero," 93; points; hens, 91 to 93; \$2 per 13 eggs. Yard No. 2—All good Hens and Pitkin Cockerel; \$1.50 for 13 eggs. Pekin Ducks, 10 to 11 lbs.; eggs, \$1 (10 eggs). Hard-times prices. Write and send cash. Orders filled promptly. A few choice birds for sale.

61-y-m

M. MAW, Winnipeg, Man.

REGISTERED IMP. LARGE YORKSHIRE PIGS

I send out nothing but the best. Made a clean sweep in thoroughbred pigs last fall at Fort QuAppelle, Indian Head and Regina fairs. Prices low. Address,

B. WOOLHOUSE, Loon Creek, N. W. T. 67-m

IMPROVED LARGE YORKSHIRES

Now for sale, a number of fine spring pigs of either sex, at very reasonable prices; also one good boar, last fall's pig. Pedigrees guaranteed. Write or call and see our stock.

R. J. MITCHELL, Polson Avenue, - Winnipeg, Man., 61-y-m

Berkshire Pigs

Bronze Turkeys and Plymouth Rocks.

HENSALL FARM

Shropshires and Berkshires.

JAS. ELDER, Virden, Man. Young pigs for sale. As the proprietor intends going into dairying, he will sell off the lot of Shrops sheep. Some are imported.

Shropshire Sheep, Ohio Imp. Chester Whites and Large Yorkshires

At half price, from such sows as Lincoln Lass 5th (418), imported in dam; her dam, Lady Duckering imp. (419), being first at World's Fair, Glasgow Imp. (13), 1st at Toronto and 2nd at World's Fair, 1884, sire of my young sows. Did not compete at Pilot Mound. My breeding sow gained 5 firsts and 2 seconds, and boar 1st at Winnipeg Industrial last July. No culls shipped. Stock guaranteed as described.

J. A. S. MACMILLAN, Box 183, Brandon, Man., - IMPORTER AND BREEDER OF - PURE-BRED SHROPSHIRE SHEEP.

My stock of Breeding Ewes consists of two hundred selected from the best flocks in England. The pen of shearing Ewes that won the champion prize over all England were out of a flock of forty that I bought from Mrs. Barr, of Odonts Hall. My rams are by the same sire as the Champion Ram, and out of ewes sisters of the dam of the Champion. I have spared neither time nor money to put together the best flock of sheep I could buy in England, and for size, quality of wool and uniformity of character, cannot be surpassed. Ram Lambs and Ewes for sale at moderate prices.

PETER ARKELL, Teeswater, Breeder & Imp. of Registered Oxford-Down Sheep. 22-yom

McCLURE'S POULTRY YARDS

White Leghorns and Light Brahmas.

GET OUR CATALOGUE AND PRICE LIST FOR 1894.

63-m J. McCLURE, 448 Carey-St., Winnipeg.

BOUNDARY : ST. : POULTRY : YARDS.

Single Comb Brown Leghorns won 6 prizes; 3 firsts at Winnipeg Industrial, 1891, '92, and '93, also 1st on Breeding Pen at the Manitoba Poultry Show, 1894. The 1st prize cockerel and pullet were also from my stock. Eggs—S. C. B. Leghorns \$2 per 13 " Pekin Ducks 2 " 11 " I. Brahma 2 " 13 One P. Rock Cockerel 4 Orders promptly attended personally. No circular. Send stamp. Address, A. WILLIAMS, Boundary St., WINNIPEG, MAN. 67-y-m

Reid's Poultry Yards

Golden Wyandottes, White Wyandottes, Black Minorcas, Black-Red Game, Light Brahmas and Barred Plymouth Rocks.

EGGS IN SEASON. Send stamp for catalogue. THOS. REID, 293 Lizzie St., WINNIPEG 11.

FORT ROUGE POULTRY YARDS

Eggs for Hatching From Barred and White Plymouth Rocks, Silver, Gold and White Wyandottes, Light Brahmas, Langshans, Bronze Turkeys and Pekin Ducks. Eggs after June 10th, \$1 per setting. A few choice birds and rabbits for sale. Write S. LING, Proprietor, Winnipeg, Man. 10-y-m

E-G-G-S

FROM CHOICE: LIGHT BRAHMAS

EXCLUSIVELY Only \$2 per 13.

Orders booked and filled in turn as received. WM. BRAMMALL, 375 Jarvis Ave., WINNIPEG. 66-1-m

AT WINNIPEG INDUSTRIAL EXHIBITION and Brandon Fair, I will have a quantity of this year's hatched chicks for sale. The stock they are bred from are undoubtedly as good as any in America, and some of my birds I am breeding from took first prize at the World's Fair, Chicago. In September and October next I shall be prepared to furnish breeding cockerels, pairs, trios or breeding pens of twenty varieties, that will breed to suit you, from \$2 to \$10 each. The progeny of prize-winning birds. Northern breeders take notice and get new blood in your stock from high scoring birds near home. To meet the demand for my birds and eggs called for through my advertisement in the Farmer's Advocate, I am now building another small hen house, which will have 48 breeding pens in it for the different varieties of birds. In addition to this, I am also extending my brooding house to the capacity of 10,000 chicks, ducklings, goslings and poults. To my many old and new patrons and friends, and those that have not been added to my list, I would just like to say a word. If quality of stock is what you look for; if saving of money is any item to you; if you appreciate fair and honest treatment, give me a trial order, either small or large. It will receive prompt attention, for it is to my old patrons I owe my success in the poultry business for the many orders received from your hands. I have now in my employ an experienced breeder of twenty years, formerly manager of the Atlantic Poultry and Capon Yards. Eggs at half price for the next ten days. Write for what you want.—AUSTIN POULTRY FARM, Austin, Manitoba. A. E. SMITH, Manager; WM. JONES, Prop. 63-y-m

THE BEST STOCK! THE BEST WORK!
HARNESS
Lowest Prices. Terms Cash.
PEIRCE'S HARNESS MANUFACTORY
278 James St., Winnipeg, Man.
CHEAPEST HOUSE IN MANITOBA.

FLEMING'S GOPHER POISON.

50c. a Bottle, 6 Bottles for \$2.50. Is now universally used. No farmer can afford to be without it.

FLEMING & SONS, Brandon, Man.

BEAUBIER HOUSE, PAYNE & CO., Proprietors.

Brandon, - Manitoba. TERMS: \$1.00 PER DAY.

This is one of the best Hotels, and guests are always made comfortable. Farmers and the public will find it satisfactory in every particular.

50,000.

50,000 MANITOBA MAPLES FOR SALE. A way down cheap for cash, also a good supply of Currants, Raspberries and Rhubarb (all Manitoba grown). Send for prices.

CALDWELL & CO., Virden Nurseries, VIRDEN, MAN.

NOTICES.

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

As if the record—which has proven to thousands that Ayer's Sarsaparilla cures—was not enough, the World's Fair Committee bestowed upon this most excellent blood-purifier the distinguished honor of being the only preparation of the kind not belonging to the class entitled patent medicines, secret nostrums, and experiments. Ayer's was the only Sarsaparilla admitted at the Fair.

OUR BOOK TABLE.

"Country Roads."—From Mr. Isaac B. Potter, 33 Park Row, New York, Secretary of the New York State Road Improvement Association, we are in receipt of the first number of "Potter's Good Roads Library," the volumes of which are issued bi-monthly at 50 cents per year. In brief, it is a graphically illustrated little hand book showing why country roads should be made better, and how to make them so. "A good road," says Mr. Potter, "is a splendid investment. It raises the value of every acre, saves distance to market, saves time, wagons, horseflesh, harness, makes larger loads possible, lessens the burden, making it possible to haul two tons to market with the same power that now leaves one ton stuck in the mire. It brings people closer together, drives away gloom, makes neighbors of hermits, discounts farm mortgages, and brings joy and contentment to every community." The farm produce hauled to market in the United States in one year aggregates 152,000,000 tons, the cost of hauling which may be decreased at an extremely low estimate by 10 cents per ton, thus effecting a saving of \$15,000,000 in one year. The first chapter deals with the general question of good roads v. bad roads; the second, with road drainage; the third, improving the surface by the use of road machines; fourth, cross drains and culverts; fifth, bridges. Chapters two and three, we may say, appear to be very much in accord with the position taken by the Farmer's Advocate, and one of its contributors in our issue of May 15th. Too much information on the road question cannot be circulated, and Mr. Potter is doing a grand work in that direction.

We wish to draw special attention to the advertisement of the Farmer's Magnet Wood Furnace in this issue. For a long time there has been a demand for a wood-burning furnace, easy to regulate, a powerful heater, and one in which the various parts would be durable and capable of being thoroughly cleaned without disturbing any of the pipes. All the above good qualities have been successfully combined in the above-named furnace. Owing to the fact that wood fuel deposits a large amount of soot along the pipes, it will be readily perceived that the question of ease in cleaning has always been an important problem. In the Magnet Furnace, as manufactured by the McClary Manufacturing Co., London, this is accomplished by openings in the furnace front, into which a brush can be introduced and the pipes thoroughly cleaned with ease, the deposit falling back into the ash pit. This furnace is exceptionally heavy in all its parts, and has met with the approval of all who have tested it. A farmer can make his house comfortable from cellar to garret with one of these fixtures, more cheaply, and with much less labor, than he can do with stoves. The fire is easily retained over night. The company will be pleased to furnish information and full particulars on application to their agencies at either London, Toronto, Montreal, Winnipeg or Vancouver.

HALL'S LIVERY FEED & SALE STABLE. FIRST-CLASS in every particular. Portage La Prairie, MAN. 67-y-m

IT PAYS TO ADVERTISE

FARMER'S ADVOCATE

HOME MAGAZINE.

If you have anything to sell, : : SEND AN ADVERTISEMENT to

The William Weld Company

WINNIPEG, MANITOBA.

Leading Agricultural Journal

of the Dominion.

STOCK GOSSIP.

22 in writing to advertisers please mention the Farmer's Advocate.

PROLIFIC BERKSHIRES - PREMIUM OF ONE HUNDRED DOLLARS OFFERED BY W. E. SPICER, HARVARD, NEBRASKA.

The undersigned claims for the Berkshire breed that the sows are prolific breeders and good sucklers, and that early maturity and profit in feeding are marked characteristics of the breed, while the superior excellence in the quality of the pork of a Berkshire is unquestioned. As an advocate of the claim that the large breed of Berkshires meet all the demands of the breeder and feeder of swine for profit, and the wants of the most critical packer and consumer of pork products for incomparable quality, the following premium is offered for the Berkshire sow whose litter of pigs exceeds in weight at one hundred days after farrow that of any of her competitors. The premium will consist of a boar and two sow pigs of my own breeding, that could not be purchased at private sale for one hundred dollars cash. Conditions-1st. The competing animals must be recorded in the American Berkshire Record, and be the property of the competitor. 2nd. That early notice of intention to compete for said premium must be filed with the Secretary of the American Berkshire Association, Col. Charles F. Mills, Springfield, Illinois. 3rd. That three disinterested and reputable parties shall weigh the sow and pigs one hundred days after farrow, and that said parties shall certify to the weight of the sow and each of the pigs in said litter. 4th. That each competitor shall file with his entry a statement of the method of feeding and caring for the sow prior to farrow, and the attention and character of rations given the sow and pigs from date of farrow until the expiration of the one hundred day test. 5th. The above premium is offered for the purpose of developing data of the greatest value to swine breeders, and while the exact weight of food used during the one hundred day test is not required, competitors are earnestly requested to keep accurate account of the weight, and report each kind of food consumed daily by the sow and her litter of pigs during the continuance of the test. 6th. Entries on the form prescribed by the American Berkshire Association must be filed with the Secretary of said organization for the above premium as soon as each test is completed, and no entries will be received later than December 31, 1894. 7th. The award will be made by three disinterested and reputable parties, to be selected by the Secretary of the United States Department of Agriculture, Washington, D.C., and on receipt of the report of said committee in the office of the American Berkshire Association the premium will be awarded and the pigs shipped to the successful competitor. W. E. SPICER.

THE BEST HAM - PREMIUM OF ONE HUNDRED DOLLARS OFFERED BY A. J. LOVEJOY, ROSCOE, ILL.

The Berkshire Ham is recognized throughout the world as the standard to which the breeder, feeder and dealer endeavors to attain in the production of the most highly flavored, delicious and palatable article of food prepared for delighting and stimulating the appetite of man. The art of breeding a hog that will furnish the feeder the best foundation for the development of a lean, tender, firm and juicy ham, has been attained by a comparatively few of the many thousand farmers engaged in this business. The feeder who has given the matter of providing a ration for the production of the best quality of well-marbled ham, of fine toothsome grain and excellence in flavor, is the rare exception. The man who has mastered the science of selecting the best quality of ham and curing the same in such an artistic manner as to improve the flavor, retain the juicy quality characteristic of the most tender and palatable ham, and add to the color and aroma that makes the plate containing the delightful morsel of food a most appetizing gem of art, can render his day and generation no better service than by widely advertising said information. For the purpose of directing the attention of the breeder, feeder and dealer in Berkshire pork products to the great importance of attaining a more general and higher degree of excellence in the production and preparation of the best quality of Berkshire ham, the undersigned offers a premium for the best ham exhibited by a Berkshire breeder residing in the United States or the Provinces of Ontario or Quebec, Canada. The premium will consist of a boar and two sow pigs of my own breeding, that could not be purchased at private sale for one hundred dollars in cash. Conditions-1st. That the ham entered in competition for the above prize must be from a pure-bred and recorded Berkshire barrow. 2nd. That early notice of intention to compete for said premium must be filed with the Secretary of the American Berkshire Association, Col. Charles F. Mills, Springfield, Illinois. 3rd. That each competitor shall file with his entry a full and complete statement of the method of feeding the barrow, and detailed information concerning the preparation, curing and handling of the ham from slaughter to the date of shipment of the ham to the committee on awards. 4th. The above premium is offered for the purpose of developing data of the greatest value to swine breeders and dealers in pork products, and while the exact weight and variety of the rations fed the barrow for this competition is not required, competitors are earnestly requested to keep accurate account of the weight and report each kind of food consumed by the barrow prior to killing. 5th. Entries on the form prescribed by the American Berkshire Association must be filed for the above premium with the Secretary of the Association prior to December 31, 1894. 6th. The time and place for competition in each State will be announced, so as to give ample time for the curing of the ham and completing arrangements for the State competition. 7th. The selection of the best ham from each State to compete for this International premium will be made by three disinterested and reputable residents of the respective States. The ham selected by the State Committee will then be forwarded to the International Jury of Awards for the final competition. On receipt of the report of said committee at the office of the American Berkshire Association, the premium will be awarded and the pigs shipped to the successful competitor. A. J. LOVEJOY.

Immediately on receiving notices of the above prizes, we at once wrote Mr. Chas. F.

GRAPPLE HAY FORKS. Double Harpoon Hay Forks. Single Harpoon Hay Forks. Iron Well Pumps. Iron Pipe Force Pumps. Hay Bailing Wire. Barbed Wire. Binding Twine. BEST QUALITY. J. H. ASHDOWN, - WINNIPEG. 60-2-y-m

BIGGER, BRIGHTER AND BETTER THAN EVER!

THE WEEKLY TRIBUNE

FOR 1894

Recently enlarged and greatly improved. Eighty-four columns of matter each issue. Recognized as the great family newspaper of Manitoba and the Northwest. Publishes Talmage's Sermons. \$1 per annum.

THE TRIBUNE PUBLISHING COMPANY, WINNIPEG, MAN. 14-y-m

ESTABLISHED 1879.

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DRY GOODS

Ladies' and Gents' Furnishings always on hand. A full and varied stock of Staple and Fancy Goods. Orders by letter and in person from our country friends given special attention. We have everything in stock to suit the farming community. Our stock will be found complete, and in prices cannot be undersold. WILLIAM BELL, 288 MAIN ST. 30-y-m

BUCKLE PRINTING COMPANY

146 Princess Street (Opposite Market), WINNIPEG, - MANITOBA. 66-y-m

1894 BRANDON'S GREAT FUR AND CLOTHING EMPORIUM (THE LARGEST WEST OF WINNIPEG.) Furs repaired and relined, men's and boys' suits, odd pants, leather jackets, gloves and mitts, gents' furnishings, etc. Get prices before purchasing elsewhere. JOHN T. SOMERVILLE. 58-y-m

JERSEY CATTLE FOR SALE

Bred for butter. G. sons and g. daughters of "Massena," the greatest cow of her age in the world, -8,000 lbs. milk and 654 lbs. butter in her 16th year; also stock from "Signal of Belvedere," whose dam made 20 lbs. 6 ozs. butter in one week on second calf. Also stock from the greatest living prize bull, Canada's Sir George, whose dam made 26 1/2 lbs. butter a week and 57 lbs. milk a day. Splendid bulls, six months old and registered, \$100 each.

MRS. E. M. JONES, Brookville, 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

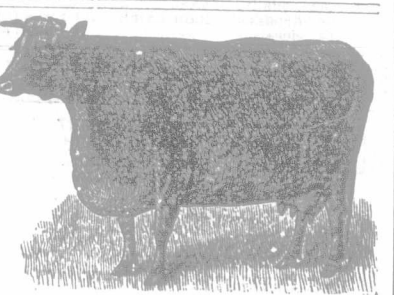
JOHN E. SMITH, Beresford Stock Farm,

Has now, in the CITY OF BRANDON, at his new Stock Emporium,

SHORTHORN, CALLOWAY and HEREFORD BULLS, also COWS and HEIFERS of THESE BREEDS.

CLYDESDALE STALLIONS, MARES AND FILLIES, LARGE WHITE YORKSHIRE PIGS and OXFORD-DOWN SHEEP.

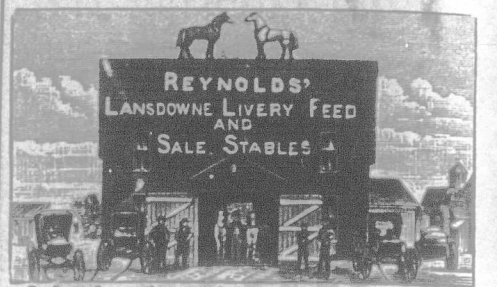
Prices low and terms easy. Write or wire. J. E. SMITH. 61 k-m Box 274, BRANDON, MAN.



ISALEIGH GRANGE FARM, DANVILLE, P. Q.

SOLD AGAIN! Three of the four Guernsey bulls advertised by us are sold and delivered. We still have one more, the 3rd prize calf at the World's Fair, now fourteen months old - a dandy. Lowest price, \$200.

IMPROVED YORKSHIRES. - We claim to have the longest, deepest and most typical large Yorkshire in America, and the reason is we have paid more money and imported more pigs from the best flocks in England than any two Yorkshire breeders on the continent. Orders booked now for spring pigs. Two very handsome COLLIE BITCHES, seven months old, \$10 each. Address, J. Y. ORMSBY, Manager. 9-y-om



REYNOLDS' LANSLOWNE LIVERY FEED AND SALE STABLES. Orders by wire or letter promptly attended to. Trains will be met if advised on N.P., C.P. or G.N.W.C. railroads. Horses for sale. T. W. REYNOLDS, Prop., Oak Lake, Man., P. O. Box 25 64-1-y-m

S. A. COXE, Veterinarian, DENTISTRY AND SURGERY SPECIALTIES. Office and Infirmary: 58-2-y-13 BEAUBIE STABLES, BRANDON, MAN.

NORTHERN PACIFIC R.R.

TIME TABLE - Taking effect Monday, March 5, 1894.

Table with columns: READ UP, NORTH BOUND, READ DOWN, SOUTH BOUND, STATIONS, Freight No. 103, St. Paul Ex. No. 107, Miles from Winnipeg, St. Paul Ex. No. 108, Freight No. 104. Includes stations like Winnipeg, Portage Junction, St. Norbert, Cartier, St. Agathe, Union Point, Silver Plains, Morris, St. Jean, Letellier, Emerson, Pembina, Grand Forks, Winnipeg Junction, Duluth, Minneapolis, St. Paul, Chicago.

MORRIS-BRANDON BRANCH.

Table with columns: READ UP, EAST BOUND, READ DOWN, WEST BOUND, STATIONS, Ft. No. 130, Mon. Wed. and Friday, Ex. No. 128, Tu., Thu. & Saturday, Miles from Morris, Ex. No. 127, Mon. Wed. and Friday, Ft. No. 129, Tu., Thu. & Saturday. Includes stations like Winnipeg, Morris, Lowe Farm, Myrtle, Roland, Rosebank, Miami, Deerwood, Altamont, Somerset, Swan Lake, Indian Springs, Maricapolis, Greenway, Baldur, Belmont, Hilton, Ashdown, Wawanesa, Elliotts, Rounthwaite, Martinville, Brandon.

PORTAGE LA PRAIRIE BRANCH.

Table with columns: WEST BOUND, Mixed No. 143, Monday, Wednesday and Friday, Miles from Winnipeg, STATIONS, EAST BOUND, Mixed No. 144, Monday, Wednesday and Friday. Includes stations like Winnipeg, Portage Junction, St. Charles, Headingly, White Plains, Eustace, Oakville, Portage la Prairie.

Stations marked * have no agent. Freight must be prepaid. Numbers 107 and 108 have through Pullman vestibled Drawing Room Sleeping Cars between Winnipeg and St. Paul and Minneapolis. Also Palace Dining Cars. Close connection at Chicago with eastern lines. Connection at Winnipeg Junction with trains to and from the Pacific coast. For rates and full information concerning connections with other lines, etc., apply to any agent of the company, or CHAS. S. FEE, H. SWINFORD G.P. & T.A., St. Paul. Gen. Agt., Winnipeg. H. J. BELCH, Ticket Agent, 486 Main Street, Winnipeg.

ADVERTISE IN THE ADVOCATE

WANTS.

One insertion of six lines in this column, \$1; three insertions, \$2.50, in advance. Contracts not made for more than three consecutive insertions.

PURCHASER for Farm (160 acres) near to city of Winnipeg; will sell on very liberal terms. Apply Box 214, Winnipeg.

TO SELL Pure-bred Shropshire Ram Lamb of first-class breeding and a good one. Address, D. W. McIVOR care Farmer's Advocate, Winnipeg.

W. A. DUNBAR VETERINARY SURGEON, 15 1/2 Jemima St., - - Winnipeg.

Communications by letter or telegraph promptly attended to TELEPHONE 56. 25-2-y-m

BRANTFORD



STEEL WIND-MILLS With Internal Gear.

STEEL TOWERS-IRON PUMPS WATER-TANKS-PIPING, ETC.

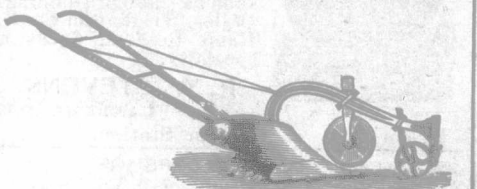
The IDEAL J.E. Sectional Power Mill is a Wonder. Send for circulars, and mention this paper.



BRANTFORD CAN. COCKSHUTT PLOW CO. (Ltd.), Winnipeg, Man., Agents for Manitoba and N. W. T. 4-y-om

COCKSHUTT PLOWS

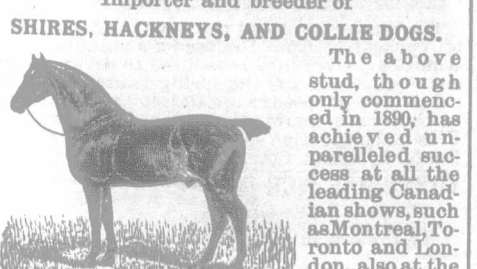
THE STANDARD PLOWS FOR THE NORTHWEST.



Our new Combination Breaker and Stubble Plow leads all competitors. We claim superiority in cleaning qualities and ease of draft.

HORACE N. CROSSLEY, PROPRIETOR OF THE SANDY BAY STOCK FARM, Importer and breeder of

SHIRES, HACKNEYS, AND COLLIE DOGS.



The most notable in this stud are the Shire horse Bravo II, 12335, winner of first at Toronto, Montreal and London, and also beating all Clydes at the latter show in the sweepstakes.

CLYDESDALES & HACKNEYS

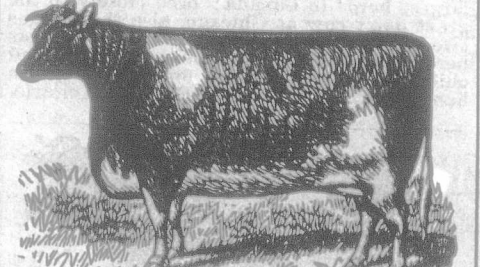


We have a few choice, young stallions that will be sold away down. Also a number of superior fillies bred in the most popular lines, in foal to our sweepstakes winner, Grandeur.

D. & O. SORBY, - GUELPH, ONT. 6-2-y-om

ROBERT NESS, WOODSIDE FARM, Importer & Breeder of Yorkshire Coachers, French Coachers, Clydesdales, Shetlands and Ayrshire Cattle. Prices to suit the times. Robert Ness, Woodside Farm, Howlock P.O., P.Q. 5-y-om

ARTHUR JOHNSTON, Greenwood, Ont.



GRAND YOUNG BULLS. Offers for sale at very moderate prices, a number of exceedingly good young bulls fit for immediate service, and a number of excellent young cows and heifers, all fit to show at leading exhibitions.

A. J. C. SHAW & SONS, Thamesville Breeder of Shorthorn Cattle (Daisy Chief -13674- heads the herd), Cleveland Bay Horses, Berkshire Pigs and Cotswold Sheep.

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

Deep Milking Shorthorns

WM. GRAINGER, Lonsdale, Ont., offers for sale some exceedingly good cows and heifers. (Fair Maid of Hullett 2nd, now at test at Chicago, is only a fair specimen.) Dams made thirty pounds of butter in seven days.

Craigieburn Stock Farm (25 miles N. E. of Toronto, G. T. R.) FOR SALE. Two splendid roans and one red bull fit for service this spring. Got by imp. Guardian and good Scotch-bred cows. A few choice heifers, grand daughters of the celebrated American hero Abbotburn. Prices right and correspondence promptly answered. 2-2-y-om GEO. A. BRODIE, Bethesda, Ont.

IMPORTED SHORTHORNS. D. D. WILSON, Ingleside Farm, SEAFORTH, Ont. IMPORTER AND BREEDER OF SCOTCH SHORTHORNS.

Imported stock from the herds of Wm. Duthie and W. S. Marr for sale; also Canadian-bred from imported bulls and out of imported dams.

SHORTHORNS.

We have seven bulls from twelve to fourteen months old, from our best sires and dams, of choicest Scotch breeding, that, for hair, color, size, feeding qualities, constitution, general style and character, cannot be equalled, and we will sell them low. Also some show heifers for sale.

JOHN MILLER & SONS, Brougham, 12-2-y Ontario.

SHORTHORNS, SHROPSHIRE AND BERKSHIRES

Choice young stock of all the above breeds always on hand, and for sale at reasonable prices.

W. G. PETTIT, 13-y-om Freeman P. O., Burlington Stn., G. T. R.

WESTRUTHER PARK

Herd of Bates Shorthorns, consisting of Oxford Barrington, Waterloo, Gwynne, Darlington, and other families, has outgrown the place and must be reduced in numbers. Four yearling bulls and a number of females for sale, at lowest prices and on liberal terms. Farm a mile from the station. JOHN IDINGTON, Stratford. 24-y-om

MAPLE LODGE STOCK FARM. We have a few excellent young Shorthorn Bulls for sale yet, and some nice young Berkshire ready to ship. JAS. S. SMITH, Maple Lodge P. O., Ont. 5-2-y-om

SHORTHORNS, BERKSHIRES, Shropshires, Plymouth Rocks & Bronze Turkeys. Write me for prices on the above. I have a grand litter of Berkshire Pigs now ready for sale. H. CRISHOLM, Montrose Farm, Paris, Ont. 18-2-y

SHORTHORN BULLS Sired by imp. Prince Royal, and from dams with all imported crosses, also cows and heifers. J. & G. TAYLOR, Rockwood P.O. & Station. 6-2-y-om Farm close to station.

CRUICKSHANK SHORTHORNS of the Duchess of Gloster family. A few straight-bred young bulls and heifers by imp. Duke of Laverder. THOS. ALLEN & BROS., OSHAWA, ONT. 8-2-y-om

SCOTCH-BRED SHORTHORNS FOR SALE

6 Choice Young Bulls And the Imported Cruickshank Bull ABERDEEN HERO, Their sire. Also some nice Young Heifers, From one year old up. Prices to suit times. 20-2-y-om SHORE BROS., White Oak.

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Imported Bull Benefit, son of Vice-Prod. Morton's famous butter cow Bientalrice 4th, heads the herd. Address: SYDNEY FISHER, Alva Farm, Knowlton, P.Q. 16-2-y-om

WANTED TO PURCHASE. PURE KERRY BULLS AND HEIFERS ADDRESS-D. McEachran, 19-c-om Montreal, Que., Canada.

CHOICE HOLSTEINS FOR SALE

I have a few very nice pure-bred registered Bulls and Heifers for sale at very reasonable figures. Write, or come and see me. JOHN A. LINE, Sherwood, Ont. 6-2-y-om

HOLSTEIN BULLS FOR SALE.

Three extra fine bulls from 12 to 14 months old, sired by McMaster, whose dam had a record of 86 lbs. of milk per day; write for prices. WM. SEEBING, Seebingville, Ont. 10-2-c-om

SUNNYSIDE HOLSTEIN-FRIESIANS

Choice animals, either sex, all ages, for sale at any time. Correspondence solicited. Address McDUFFEE & BUTTERS, Stanstead, P.Q. 16-7-y-om

HOLSTEIN BULL CALVES

Dropped in February and March, if taken before three weeks old, AT \$15 EACH.

If required to register them, purchaser to pay registration fee.

F. A. FOLGER,

Box 578, Rideau Stock Farm, KINGSTON, 4-2-f-om ONTARIO

HOLSTEIN-FRIESIANS AND TAMWORTH FIGS.

Four very superior young bulls for sale, ready for service. Prize winners at the Industrial. Sired by our prize-winning bulls and out of rich-bred dams. Other stock of all ages for sale. Bargains to quick buyers. Place your order with us for choice Tamworth imp. and Canadian bred Pigs of best quality, bred of prize-winning stock.

A. C. HALLMAN & CO. New Dundee, Waterloo Co., Ont. Shipping Stations: Petersburg, G. T. R., and Ayr, C. P. R. Send for catalogue. 12-2-y-om

MAPLE HILL HOLSTEIN-FRIESIANS.

The fine yearling bull Netherland Consul, a son of the silver medal bull Netherland Statesman's Cornelius, and the great cow Polianthus imp., that gave 13160 lbs. milk in a year at two years old, now for sale. He should go to head a herd. G. W. CLEMENS, ST. GEORGE, ONT. 12-y-om

PURE-BRED HOLSTEIN BULLS FOR SALE

A few choice, one-year-old Holstein Bulls for sale, at reasonable prices CROIL & McCULLOUGH, Aultsville. 12-b-om

STOCK GOSSIP.

Mills, Springfield, Ill., Secretary of the American Berkshire Association, asking if Canadian breeders would be allowed to compete for these pigs. The following letter was received in reply: Your esteemed favor received in reference to the premium offered for 'Prolific Berkshires' and the 'Best Ham.' Canadian breeders are most cordially invited to compete for said premiums. The publication of the premium, as proposed by you, will be fully appreciated by the Berkshire breeders of Canada and the United States, also by the American Berkshire Association. Yours truly, CHARLES F. MILLS.

Notice the new advertisement, offering two Jersey bulls for sale, in this issue. Mr. Valancey E. Fuller, formerly of Canada, is now manager of a Jersey herd at Lowell, Mass., owned by Mr. C. I. Hood, a number of whose cattle were recently destroyed by fire.

Mr. Mortimer Levering, Lafayette, Ind., the talented and popular Secretary of the American Shropshire Registry Association, is now in England inspecting the flocks of British breeders.

E. Gaunt & Sons, Lucknow, report the following sales: One cow, Vanuna 6th, to E. A. Christie, Utica, Ont.; the sixteen months' old bull, Banker, to J. A. McKenzie, Tiverton; and a heifer to T. Patterson, Gravenhurst.

We have just received from the editor, Mr. C. S. Stephenson, 76 St. Gabriel street, Montreal, a copy of the second volume of the Canadian Ayrshire Herd Book. Copies of this work can be obtained from Mr. Stephenson. Price, \$2.00. It seems to us a mistake has been made in binding an important book of reference like this in paper covers.

Mr. J. G. Carter, Stevenage, Man., has succeeded in securing a premium for getting subscribers for the ADVOCATE. The premium he has worked so well for is a Poland-China boar pig, and we are supplying the pig from the herd of Messrs. D. Fraser & Sons, 'Lake Louise,' Emerson, who has probably the finest herd of this breed in the Province.

We called recently upon Mr. J. G. Barron, of Carberry. His herd of Shorthorns are doing nicely, and the young bull, Topsman -17847- imported last spring from the celebrated herd of Messrs. Russell, of Richmond Hill, Ont., is turning out even better than Mr. Barron expected, and is no discredit to the World's Fair winning herd from which he came, nor to his sire, the well-known Stanley -7949-. We expect to see him 'cut a dash' at the Industrial this year.

Mr. Robert Lang, whose beautiful show herd was so much admired at the Industrial two years ago, has now a snug herd of very excellent Shorthorns. His Berkshires are also well and widely known, and as both the above herds will likely be seen at the Winnipeg Industrial, we refrain from more extended notice just now. Another breeder, who is quietly establishing a herd of fine cattle, is Mr. D. McFarlane, his favorite, however, being Polled-Angus, of which he has some fine specimens—three head imported from Scotland. Mr. McFarlane is a brother of the well-known breeder of Polled-Angus cattle at _____, Ontario.

A representative of the FARMER'S ADVOCATE, while at Oak Lake recently, paid a visit to the leading live stock men of the district. Mr. Thos. Speers, formerly of Bradford, and well-known among Shorthorn breeders as the last owner of that grand old bull, Hair Apparent, who has left some fine stock in the Speers herd. He has now at the head of his herd Royal Don (64717), imported by Arthur Johnston, Greenwood, Ont., and bred by A. Campbell, Kennell, Scotland. This youngster has developed wonderfully since coming West a year ago, and is one of the bulls of the Province. The red heifer, Rose of Dunmore, also purchased from Arthur Johnston, is an exceedingly promising young thing. Besides his fine Shorthorn herd, Mr. Speers has a number of first-class Berkshire pigs. See his advertisement in another column.

Mr. Young, the Holstein breeder, of Emerson, writes as follows: "I beg leave to report the sale of two more bulls since I last wrote you. This makes five bulls that I have sold recently. I might add that these sales were largely due to my advertisement in your paper. The ADVOCATE must have an immense circulation, for I have got enquiries from British Columbia, also from Mexico. The McDougall Orphanage, Morley, N. W. T., got a splendid youngster, seven months old, sired by Poma 3rd's Clothid, my diploma bull, and dam Tempest 3rd, who is a daughter of my great show cow, Tempest. This calf weighed the day he was seven months old 685 lbs. I will give you a short extract of letter I received from Mr. Butler, the principal of the Orphanage and Industrial School: 'The bull arrived yesterday morning in good shape. I am pleased with your selection, and can find no fault in bull.' This is a sample of the letters that I invariably get from my customers. The other calf I shipped a few days ago to Mr. John N. Bell, of Whitewater. I have not heard from Mr. Bell yet, but I feel sure that he will be equally well pleased. His bull is sired by Tempest's Captain Columbus, also out of the cow Tempest; dam of calf is Catrina 5th, Aggie, one of my best cows. I feel quite safe in predicting that this bull will be the sire of some very fine dairy cows, as he is backed on all sides by great producing dams."

WANT A WATCH?

We sell as low as we can. We have too many. Want the cash.

A. DAYKIN, REGINA.

NOTICES.

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

The annual meeting of the American South-down Breeders' Association, without transaction of business, adjourned from May 30, 1894, to July 4, 1894, at 2 o'clock p. m., in the Illinois National Bank, Springfield, Illinois.

The midsummer exhibition and race meeting, to be held at Calgary for four days from July 16th to 19th, under the auspices of the Calgary Agricultural Society, promises to be successful again this year. Six thousand dollars are offered in purses and prizes.

THE SAWYER-MASSEY CO.

A few days ago one of our staff had the pleasure of going through the extensive works of the Sawyer-Massey Co., Hamilton, Ont. This firm make a specialty of manufacturing portable and traction engines for burning either coal, wood or straw. What is called the "Locomotive Traction Engine," very simple in construction and strongly built, is, as might be expected, attracting a great deal of attention. All the boilers for Manitoba and the North-west are covered with asbestos, hair, wood and Russian iron, in order to retain the heat in extreme cold weather. Leaving the engine store-houses, the visitor finds of special interest the buildings in which separators are stored. A large number of their standard Peerless Separators of various sizes were noticed, also Monitor separators and clover mills, for which we may say there was a very great demand last season. As the ideas, and in fact the requirements of threshermen, vary in different parts of the country, the output has to be varied accordingly. What may be a satisfactory threshing outfit in Ontario or Eastern Canada, for example, would not "fill the bill" in the Prairie Province. Hence, the Sawyer-Massey Co. do not confine their attention to the threshers above mentioned. A new machine, embracing several special features of excellence, said to be very popular, is the Rusher. There are also the Eclipse and Columbian separators, both of which are especially adapted for farmers' own use, or those who only require small, light running machines. Where engines are not required, the firm are prepared to supply their customers with horse-powers of the Pitts pattern, varying in size from two to twelve horse-power. A complete line of attachments, both for engines and separators, are always kept in stock. The attention of our readers is directed to the new advertisement of the firm in this issue.

LIVE STOCK REPORT—WORLD'S COLUMBIAN EXPOSITION.

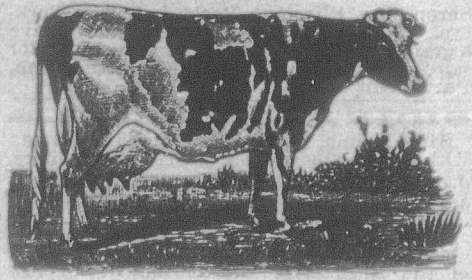
This office is in receipt of the final report of the National Live Stock Association, by its executive committee of eighteen. This committee was appointed by the various live stock and agricultural associations of the United States to represent the live stock industry before the World's Columbian Commission. The report makes a very handsome volume, and will be greatly prized by all having exhibits of live stock at the World's Columbian Exposition. The report contains handsome portraits of Director-General Davis, Chief Buchanan and Chief Clerk Mills and other prominent officials connected with the live stock exhibit to the number of twenty. About forty illustrations of the sweepstakes and first prize winners add much to the attraction of the volume. The volume contains handsome views of the grand Gateway to the Live Stock Exhibit of the World's Columbian Exposition, the exterior and interior views of the Live Stock Pavilion, ground plan of the show ring in the Live Stock Pavilion and the elevation of one of the barns provided for the Columbian Live Stock Show. The first six Columbian awards in each ring are given in the classes for horses, cattle, sheep and swine. In addition to the above items of general interest to the Columbian exhibitors of live stock, the report contains the full proceedings of the several meetings of the committee of eighteen, at which the classification of prizes, the rules, etc., were adopted by the live stock organizations prior to their presentation to the Columbian Commission. The report was compiled by Col. Charles F. Mills, the Chief Clerk of the Live Stock Department of the World's Columbian Exposition, and is published by the National Live Stock Association, Hon. J. H. Pickett, 510 East Monroe street, Springfield, Illinois, the Treasurer of the National Live Stock Association, has the distribution of the very limited edition of this valuable report, which should find its way into the home of every live stock breeder in the United States and Canada.

The American Clydesdale Association has reason for congratulations on the continued liberal patronage that has been given this progressive organization. The breeders of Clydesdale horses have always been noted for their enthusiasm, which was fused into a white heat by the incomparable exhibit of Clydesdale stallions and mares made at the World's Columbian Exposition. The general depression in business, that has so nearly paralyzed the trade in improved stock, has evidently not had the effect of discouraging the breeders of Clydesdale horses. Volume eight of the American Clydesdale Stud Book, we learn, will close early in June, with the full number of pedigrees, which announcement will doubtless be a surprise to some breeders who expected that the usual number of registrations would not be filed for months after the regular time. Breeders of Clydesdale horses have had little or no competition from importers during the past few years, and from present prospects, the home demand for stallions of this breed is likely to be supplied by the proprietors of the studs residing in Canada and United States.

The sentiment prevails quite generally among leading breeders of Clydesdale horses, that an improvement in the demand for stallions and mares may soon be expected. It is predicted that the breeders who retain their best bred and most promising colts can confidently count on better prices and a more active demand when the next season opens. Clydesdale breeders confidently assert that there is no more staple product of the farm than the Clydesdale horse, and that the demand for the same will be active with the first indication of the rising tendency in the general business of the country. Breeders who desire to have their stallions recorded in volume eight of the American Clydesdale Stud Book will serve their interest by filing applications for entry without delay, with the secretary, Col. Charles F. Mills, Springfield, Illinois.

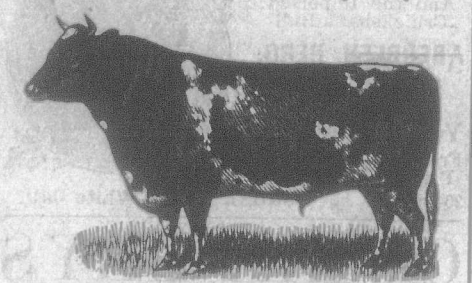
THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESLIANS.

SMITH BROS., Credit Valley Stock Farm, CHURCHVILLE, PEEL COUNTY, ONT., (24 miles west of Toronto).



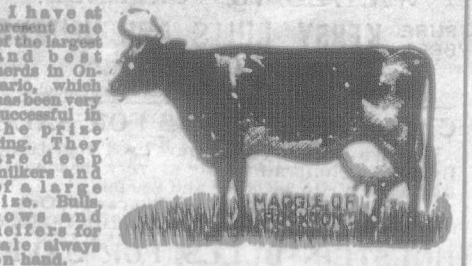
This is the place to get stock of best quality at reasonable prices. We have seventy-five head, including prize-takers; best strains, cows and heifers, with large milk and butter records, young bulls of superior quality. Send for catalogue. 8-2-y-om

DOMINION PRIZE HERD OF AYRSHIRES



We have the oldest established, largest and best herd of Ayrshires in Canada. Choice young stock for sale at liberal prices. Satisfaction guaranteed. **JAMES DRUMMOND & SONS, Petite Cote, Montreal, P.Q.** 8-2-y-om

Prize-Winning AYRSHIRES FOR SALE.



I have at present one of the largest and best herds in Ontario, which has been very successful in the prize ring. They are deep milkers and of a large size. Bulls, cows and heifers for sale always on hand. **JAS. McCORMICK & SON, ROCKTON, ONT.** 2-2-y-om

FOR SALE
2 EXTRA GOOD AYRSHIRE BULL
Calves, nearly ready for service; one out of Second Prize Cow at World's Fair, the other out of Cow that took two Second Prizes at Montreal; sire Hamilton Chief out of one of Messrs. D. Morton & Sons' best Imported Cows, by Imported Bull Royal Chief; also some Poland-China Boar Pigs.
W. M. & J. C. SMITH, FAIRFIELD PLAINS, ONT. 2-2-y-om

THE GLEN STOCK FARM

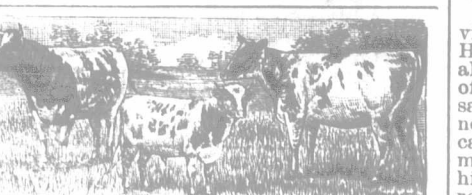
AYRSHIRES
—AND—
BERKSHIRES.
A few good Ayrshire bull calves and heifers, Berkshire boars and sows. For particulars write
Whiteside Bros., INNERKIP, ONT. 7-y-om

J. YULL & SONS, Meadowside Farm, Ontario

Carleton Place, Ontario
Our herd is composed of seventy-five head. Leonard Meadowside—1428—first prize at World's Fair, heads the herd. Cows of the deepest milking strain, having won several medals at provincial tests. Shropshire sheep and Berkshire pigs. Young stock of both sexes for sale. Visitors welcome met at train. Give us a call. 7-y-om

A. M'CALLUM & SON, Sprucehill Farm, Danville, Que.

Pure-Bred Ayrshires & 6-f-om Berkshire Pigs.



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

ADVERTISE IN THE ADVOCATE

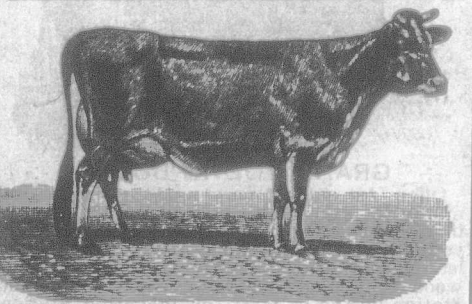
GLEN ROUGE JERSEYS

WILLIAM ROLPH, Markham, Ont., offers Twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 19-y-om

JERSEYHURST FARM, LOCUST HILL, Ont. **ROBERT RESSOR, importer and breeder of A. J. C. C. Jerseys** of the choicest breeding, with the bull Jay St. Lambert 32313 at the head of the herd. Stock of all ages on hand and for sale. 16-2-y-om

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, Grimshy, Ontario.** 8-y-om



Jersey Cows, Heifers and Calves, registered and High Grades, rich breeding and good colors. Our motto, "Individual merit by inheritance." Economy of production and value of product. Pedigrees written in butter. Come and see, or address
J. C. SNELL, EDMONTON, ONT. 8-y-om

FOR HEREFORDS

WRITE TO
F. A. FLEMING, 5-y-om Weston, Ont.

Ingleside :-: Herefords.

ANXIETY 4th and THE GROVE 3rd Strains, Prize Winners for '94!

SPECIAL OFFERING OF CHOICE YOUNG BULLS, Registered calves of '94, \$40 to \$60 a piece. Also a very promising bull 21 months old. Address:—**E. D. SMITH, Ingleside Farm, COMPTON, Que.** 18-2-y-om

1881—SHROPSHIRES—1881

My flock is established since 1881. All my ewes are imported and selected in person from the most noted English flocks. A choice lot of shearlings and lambs sired by a Brauburn ram. Write for prices to
JAMES COOPER, KIPPEN, ONT. 14-2-y-om

FOR SALE. SHROPSHIRE RAMS (Registered)

—AND—
SHORTHORN BULLS (Registered)

Also a few females. Apply to
C. HARLESTON IRVING, "Bonshaw Farm," NEWMARKET, P.O. Box 288 10-2-y-om

SHROPSHIRES - FOR - SALE

My whole flock of 60 head of Imported Rams and Ewes, a few home-bred Shearling Rams, and a choice lot of lambs of both sexes. Also a choice lot of young Yorkshire Pigs.
T. H. MEDCRAFT, Sparta, Ont. 19-y-om

IMPORTED SHROPSHIRE EWES

And their lambs for sale by ear lots; also a very choice Shorthorn Bull calf, ten months old.
W. S. HAWKSHAW, Glanworth P.O., Ont. 7 miles south of London. 7-11-om

SHROPSHIRES.

Foreign buyers are invited to visit the Wolf's Head Flock, as there is always a good selection of ewes and rams for sale, and we handle none but the best, and can supply select specimens for breeding or exhibition purposes, and residing in the centre of the Shropshire Sheep Breeding District buyers are assisted in selecting from other flocks. Write for prices or visit us before going elsewhere. Visitors met by appointment at Baschurch Station, G. W. R. Address—**J. & T. THONGER, Wolf's Head Farm, Nesscliff, Baschurch, Shrewsbury, Eng.** Telegram: Thonger Nesscliff. 2-2-y-om

BEAM - HOUSE - SHROPSHIRES

This is the Home of the Blue Bloods.

WM. THOMAS offers for sale Rams and Ewes from his famous flock, which has sent so many winners to our leading shows, and here also was bred Mr. A. O. Fox's noted ram "Blue Blood Yet," which so ably piloted Mr. Fox's flock of Shropshires at the World's Fair. Wm. Thomas will have several grand shearling rams for sale this next season, sired by his grand old sheep "Blue Blood," and also a grand lot of shearling rams by other noted sires; also about 150 splendid shearling ewes to select from. Foreign buyers always welcome. If not able to come and select for yourselves, write and obtain prices from **WM. THOMAS, The Beam House, Montford Bridge, Salop.** Railway Station: Baschurch, G. W. R. 2-2-y-om



HENRY ARKELL, Arkell P. O., Ont.

Importer and breeder of Oxford down sheep, winner of nine prizes out of ten entries at World's Fair. Fifty rams and ewes for sale, both imported and Canadian-bred; 100 ram and ewe lambs for 1894, from Royal and World's Fair winning rams. Prices reasonable. Guelph, G. T. R.; Arkell, Twelvemiler, over all breeds. C. P. R.; Telegraph, Guelph; Telephone, Arkell. 7-1-y-om

Imported OXFORD AND SUFFOLK SHEEP

—CONSISTING OF—
120 EWES & RAMS

Selected with great care to combine size, quality and pedigree.

FROM THE BEST ENGLISH FLOCKS

PRICES REASONABLE. Write and come and see my flock.

W. B. COCKBURN, Greenhouse Farm, Aberfoyle, Ontario.

Imported and Home-bred LINCOLNS

The first Royal winner, Royal Chester, at the head of the flock. Ewes from the best English flocks, such as those of Dudding, Bailles, Wright and Clark. Rams to head flocks a specialty.
R. W. STEVENS, LAMBETH, ONT. London Station. 5-y-om

BREEDERS OF Improved Large Yorkshire Pigs.

Markham Baron, the sweepstakes Barrow over all breeds at the Guelph Fat Stock Show, 1892, bred by us. A choice assortment of Pigs now on hand. Only first-class stock shipped to order. Markham Herd Farm, at Locust Hill Station. 17-y-om **W. O. PIKE & SONS.**

IMPROVED: LARGE: YORKSHIRES



The largest herd and the most profitable type of Yorkshires from the feeder's standpoint in America. Over fifty sows bred to seven different stock boars for the spring trade. Pigs for exhibitors purposes a specialty. Stock shipped to order are guaranteed to be as described. Personal inspection solicited. **J. E. BRETHOUR, Burford, Brant Co., Ont.** 3-y-om

YORKSHIRE PIGS

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

T. TEASDALE, CONCORD, ONT., breeder of high class Berkshires. Some fine pigs October litters, both sexes, for sale. Also fine lot young pigs farrowed in March. Come and see my stock, or write for prices and description. 6-y-om

IMPROVED YORKSHIRES,

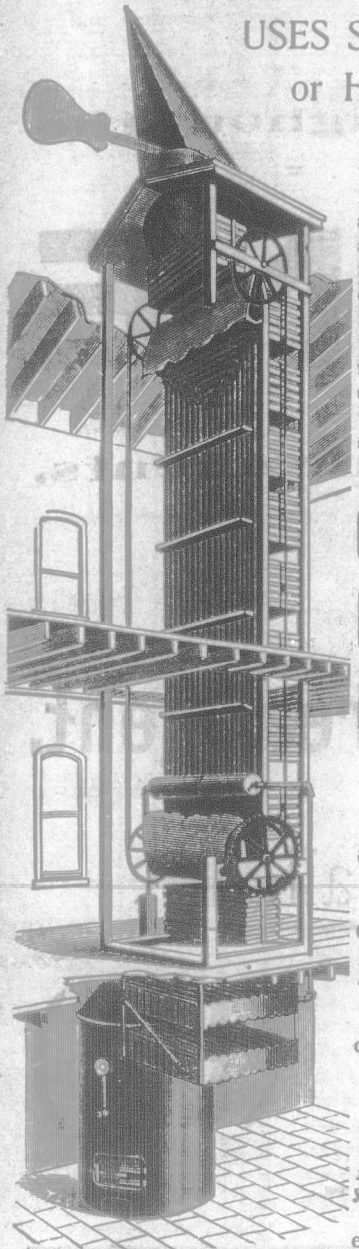
Sired from imported stock of Duckering, Sanders Spencer and Walker Jones breeding stock, of all ages, for sale; also a few Bates bulls of milking stock.
WM. COWAN, V. S., Galt, Ont. 9-y-om

LARGE IMPROVED YORKSHIRE PIGS and Holstein Cattle.

We breed nothing but the best, and sell cheap, and guarantee satisfaction or ask no pay. Come and see us, or write for prices and be convinced
FLETCHER BROTHERS, Oxford Mills P. O., Ont., Kemptville St'n, C. P. R. 6-2-y-om



THE WILLIAMS EVAPORATOR USES STEAM or HOT AIR



Exposes fruit to greatest heat immediately; gradually rises to top; finally descends to the high, dry heat, and is removed at same point where inserted.

ONE MAN MACHINE.

3 Sizes.

Capacity—75 to 200 BUSHELS of apples per day.

Most profitable business. Prospects of great fruit year.

Order early.

Waterous, BRANTFORD, - ONT.

THE HOME OF THE BERKSHIRES. J. G. SNELL & BRO., Edmonton, Ontario.

Now is a good time to order pigs from litters farrowed this year. We never had so many fine sows to breed from as at present.

LARGE ENGLISH BERKSHIRES My herd are imported or bred from imported stock, and have carried winnings at leading shows for years, including sweepstakes over all breeds at last Guelph Fat Stock Show.

C. T. Garbutt, box 18, Claremont, Ont., imp. and breeder of Berkshire Pigs and Cotswold Sheep. Promising young pigs of October and January litters. Sows in farrow. Imp. boars in use.

H. J. DAVIS, Woodstock, Ont., Breeder of High-class Large Berkshire and Imp. Large White Yorkshire Swine, Short-horn Cattle. - A grand

lot of young pigs ready for shipment of both breeds; also boars fit for service from prize-winning stock. Stock shipped to order. Satisfaction guaranteed. Young Bulls generally on hand.

ISRAEL GRESSMAN, New Dundee, -IMPORTER OF- Large - English - Berkshires 4-y-om

S. COXWORTH, CLAREMONT, ONT., Breeder and Importer of Berkshire Hogs

A choice lot of young pigs just fit to ship. Pairs supplied, not akin, sired by my three grand Stock Boars, "High Clear Prince," "King Lee" and "Champion Duke." Also a few choice sows of Oct. litters. Write for prices or come and see my stock.

HOW IS YOUR HORSE? IF HE'S SICK AND YOU CAN'T TELL WHAT'S THE MATTER He surely Needs MAUD'S CONDITION POWDER

We offer to mail for 10c. a regular 25c. package to anyone who wishes to try them before purchasing a supply. DAVIS & LAWRENCE CO. (Ltd.), - MONTREAL.

HAMILTON ENGINE AND THRESHER WORKS, Established 1886.

Manufacturers of Portable and Traction Engines, with either RETURN TUBULAR or LOCOMOTIVE BOILERS (13 Sizes). Peerless Separators (5 sizes). Rusher Separators (2 sizes). Eclipse Separators (2 sizes). Horse Powers (Pitts Pattern) from 2 to 12 H. P. Clover Mills, Baggers, Barley Beaters, Wagon Elevators, Grain Tallers, etc.



SAWYER & MASSEY CO. (Ltd.), Hamilton, Ont. 12-a-om.

BERKSHIRES AND YORKSHIRES. Choice stock for sale at reasonable prices. Orders filled in rotation. Inspection invited. Write for prices. THOMAS WATSON, Springvale, Ont. 8-2-y-om

C. R. DECKER, Chesterfield, Ont. A number of young boars fit for service; also some six weeks old (choice) and some choice sows in farrow mostly from imported boars. Prices reasonable. Call and see stock, or write for prices. G. T. R. Station, Bright, Ont. 15-2-y-om

TAMWORTH PIGS. We are now prepared to furnish pigs from imported sows and boars not akin, of the best strains obtainable. Reduced rates by express. Write for particulars to H. George & Sons, 7-y-om CRAMPTON P. O., Middlesex Co.

THE OXFORD HERD OF REGISTERED POLAND CHINAS Our herd of Improved Poland-Chinas won 36 first, 13 second and 6 third prizes in 1893, including the Herd prize at Montreal and Toronto, for best boar and two sows, any age. Stock, both sexes and all ages. Pairs and trios not akin for sale at all times. Correspondence solicited or inspection of herd invited. 15-y-om W. & H. JONES, Mount Elgin, Ont.

PINE GROVE HERD OF POLAND-CHINAS I have a few pairs of good fall pigs, unrelated, yet for sale. Send for Catalogue just out, for description of Spring Litters. CAPT. A. W. YOUNG, Tapperville, Ont. 17-1-y-om

IMPROVED SUFFOLK SWINE, THOROUGH-BRED HORSES, DURHAM CATTLE AND SOUTHDOWN SHEEP. A grand lot of Suffolk Pigs, all ages, for sale at prices to suit the times. A. FRANK & SONS, The Grange, four miles from Cheltenham Stn., C. P. R. & G. T. R. 24-2-y-om

Duroc-Jersey Swine Are the best all-round hog known. No squealing; quiet disposition; good grazers; defeated the Berks and P. C. on all points at Mich. Agri. Coll. test. Pigs for sale. Address, P. T. B. LAMARSH, Wheatley, Ont. 4-2-y-om

DUROC-JERSEY FARM TAPE BROS., - Ridgetown, Ont. Importers and breeders of pure-bred Duroc-Jersey Swine. Stock for sale. Prices reasonable. Correspondence solicited. 9-2-f-om

MAY WE SEND YOU FREE OUR CATALOGUE OF HARNESS AND SADDLES. It contains cuts, descriptions and prices. We have a larger trade in these goods than any other firm in Canada. We sell them in every Province and Territory. We guarantee prices lower than any local dealer can possibly give. We ship them with privilege of examination before paying for them. We have every style of harness, from dog, goat or pony to heavy and extra heavy, double and single; also gents', boys' and ladies' saddles. Address THE SUPPLY CO., NIAGARA FALLS, ONTARIO

100 Rods BUCHANAN FENCE CO. SMITHVILLE, ONT. \$35.00 8-L-om

MUNGER'S AMERICAN STRAIN. Large New Game Bantams. This is the most improved strain of Bantams yet introduced into Canada. It is a cross between the Game and the Old English Game. It is a cross between the Game and the Old English Game. It is a cross between the Game and the Old English Game. Address F. M. MUNGER, DeKalb, Illinois

FOR SALE OR EXCHANGE. I will sell very cheap, considering quality, my entire flock of INDIAN GAMES, both breeding stock and chicks; or I will exchange them for first class R. C. B. Leghorns, Light Brahmans, B. P. Rocks or other pure-bred stock for farm use. Canadian agent for WEBSTER & HANNUM BONE CUTTERS. Write me for prices of the Cutters and all kinds of poultry. JNO. J. LENTON, Park Farm, OSHAWA. 19-y-om

ECKARDT'S PLYMOUTH ROCKS. None Better Grown C. W. ECKARDT, 3-y-om RIDGVILLE, ONT.

ADVERTISE IN ADVOCATE

STOCK GOSSIP.

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

Mr. T. H. Medcraft, Sparta, Ont., called at our office June 15th, and reported his Shropshire sheep and Large Improved Yorkshire swine as doing well. He claims to have the best lot of yearling rams and lambs he ever had. His yearling rams number thirteen, his lambs twenty-four. Mr. Medcraft has a very good flock of sheep and a fine herd of Yorkshires. He reports the demand good, but says he has now a number of very fine Yorkshires for sale.

Messrs. John Morgan & Sons, Kerwood, in a recent letter write: "I sold the bull calf, Gold-finder, which we exhibited at the Chicago World's Fair, to Thomas Carrol, of Wilkesport. He is a very superior youngster, and will doubtless grow to be an excellent animal. We have a few good things for the fall shows. Our animals will appear in the show rings of 1894."

A. W. Young, Tapperville, has found advertising in the FARMER'S ADVOCATE a profitable investment. He writes under date of June 11th: "I have only four fall pigs left, but I have a splendid lot of youngsters now ready to ship; they are all sired by that King of Poland-China sires, Canada Wilkes. I have thirteen select sows yet to farrow, and can supply customers at any season with pigs of any desired age. Send for my free catalogue."

On June 8th, Mr. James Thompson, Mildmay, sent us the following: "I have been breeding Leicesters for thirty-five years; they are considered good sheep, but the little experience I have had with the latest introduction, viz., the Suffolks, leads me to conclude they surpass the Leicesters as dams and milkers. For the production of early lambs, I doubt if there is and breed to excel them. The lambs grow any fatten very quickly. Below I give the age and weight of three of my Suffolk lambs: The first, a twin, 150 days old, weighs 108 lbs.; second, 97 days old, weighs 102 lbs.; third, 86 days old, weighs 84 lbs. At the present time their average daily gain in one pound per day. Who can beat this?"

Mr. James Webb, of the English firm of Messrs. John Thompson & Co., auctioneers, etc., under a recent date, writes as follows: "The improvement in the result of the Short-horn sales in England is well maintained since the high prices at the Renwick sale, and that of Mr. Edmunds' herd in Gloucestershire, where 265 gs. and 210 gs. were respectively made for young bulls—one for Ireland and the other for South America. On May 22nd, at Mr. James Howell's sale, in South Wales, a bull calf of the old Gwynne family (from the branch bred many years in Cumberland) made 100 gs., the purchaser being Mr. F. W. Bond. The recent death of Mr. Hugh Aymer, the noted Norfolk agriculturist, will bring this entire herd suddenly into the market on the Friday of the R. A. S. C. show week, June 27th next, the day after the sale of H. R. H. the Prince of Wales' Hackneys in the same county."

H. Bollert, of Cassel, reports that the Maple Grove Holsteins are doing very finely since going to grass. The heifer, Jennie E. 4th, which was two years old March 26th last dropped a beautiful heifer on April 8th, and commenced her milk record on the 13th, and gave in thirty days 1,275 lbs. 10 oss., or an average of 42 lbs. per day. She is now on grass alone, and, under very unfavorable circumstances, milking from 45 to 48 lbs. daily. Under similar circumstances, I believe that she stands without an equal in Canada. The most gratifying part of it is that she is one of my own breeding, which proves that I am working on the right principle. The calves from Colanthus Abbecker (all heifers this season) are a grand lot. An enterprising dairyman from Waterloo Co., who looked them over lately, pronounced them the best he had ever seen. He said: "If you look at them you can see the word milk written in large letters at every point. They certainly are of the true dairy form."

Messrs. W. & J. Menzies, of Kirkwall P. O., Ont., have recently bought from Mr. Arthur Johnston, of Greenwood, the beautifully-bred bull, Indian Lancaster, sired by Indian Chief, and out of Mary Anne of Lancaster 15th, by imp. Warfare (56712), G. D. imp. Mary Anne of Lancaster 14th, of the famous old Lancaster, or Lavender family, so very popular at Sittytown, and at Keval, Indian Lancaster is a big growthy calf, of March 27th, 1893. He is stylish, full of quality, and exceedingly well-fleshed. He is one of the right good ones of the old Chief's get. On his dam's side, he is descended from an extraordinary milking kind. His grand-dam, though in her eleventh year, made three pounds of butter per week—with the calf running at her foot, and sucking all it could take—the present season. She continued this for four weeks, and then dropped to her two pounds per week, under the same circumstances, only that her calf was able to take more. The Messrs. Menzies have a nice select little herd of Shorthorns, and this young bull ought to leave his mark.

Mr. R. H. Harding, of Thorndale, a prominent and successful breeder of Improved Chester White hogs, has recently added to his already select herd an imported boar and sow from the noted herd of S. H. Todd & Son, of Wakeman, Ohio. Their pigs were each premium-winners at the World's Fair, Chicago. The sow was reserved by Messrs. Todd & Son for the sweepstakes premium as best sow any age, and formed part of the first premium herd of boar and three sows over one year; she was again in the herd that won first premium as boar and three sows over one year, bred by exhibitor. This sow weighed, when twelve months old, over 500 pound. She has great length and depth; she is of the type so much in demand at the present time. The boar took second premium in a very strong class in the section for boar six months and under one year; he was at the head of the herd that won first premium in section boar and three sows under one year; he again held the same position in the first premium herd as boar and three sows under one year, bred by exhibitor. These animals were imported by Mr. T. E. Brethour, Burford, Ont., the very successful breeder of Improved Yorkshires, and sold by him to Mr. Harding.

FARMERS!

Do not be led astray by reports circulated throughout the country that a shortage in

BINDER - TWINE

Is probable.

We will have ample supplies to meet all requirements.

WE GUARANTEE:

Low Prices. Standard Brands. Liberal Treatment.

Blue Ribbon and Redcap are Still Unequaled.

CONSUMERS' CORDAGE CO. (Ltd.)

New York Life Building, Montreal.

11-c-om

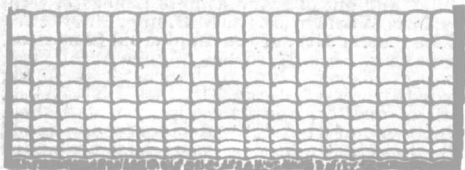
2000 lbs.

Of Goose and Chicken **FEATHERS**

WANTED AT ONCE.

We pay as high as 50c. a lb. for prime live Geese; 25c for Duck. We also buy Chicken and Turkey Feathers. Write us what you have. First come, first served. It means money to you, for we pay cash.

Alaska Feather & Down Co., L'd.,
10 St. SACRAMENT STREET,
7-L-om Montreal.



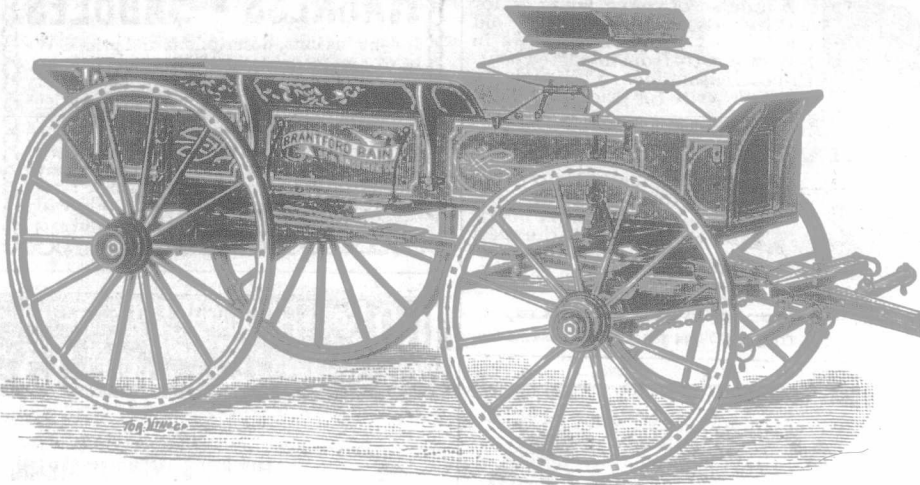
A NEW BROOM SWEEPS CLEAN!

Any kind of wire fence looks nicely when first put up, and it will usually turn stock when new and tight. Whether it will continue to look well and do good service for any length of time, depends almost wholly on its ELASTICITY. The Page is practically the only elastic fence on the market; the only MASTER of contraction and expansion; therefore, the safest to buy and use.

The Page Wire Fence Co. of Ontario, Ltd.
WALKERVILLE, ONT. om

USE
RAMSAY'S
Barn and Root
PAINTS.

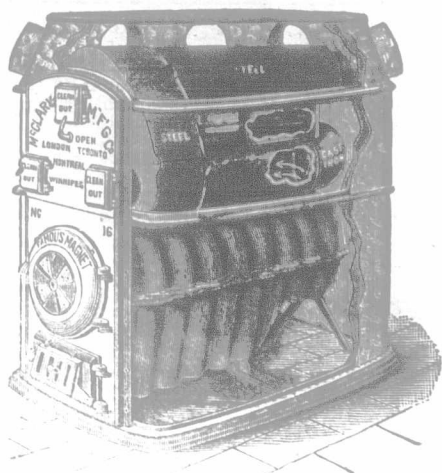
WE INVITE YOU TO INSPECT THE "BRANTFORD BAIN"



Because it will pay you to buy it. It is finely finished, well proportioned, light running, durable, superior quality. There are thousands of farmers who are well pleased with their BRANTFORD BAIN WAGON. Write us for prices, or call on our agents.

BAIN BROS.' MANUFACTURING CO., - 7-a-om - BRANTFORD.

McCLARY'S FAMOUS FURNACES



This is a cut of our Famous : Magnet WOOD FURNACE.

With it you can keep your entire house warm, and do it cheaply.

EVERY USER DELIGHTED

If your local dealer does not handle our goods, write our nearest house.
THE McCLARY MFG. CO.
7-y-om LONDON, TORONTO, MONTREAL, WINNIPEG, VANCOUVER.

WE MANUFACTURE THE: GEM STEEL WINDMILLS, Steel Towers,

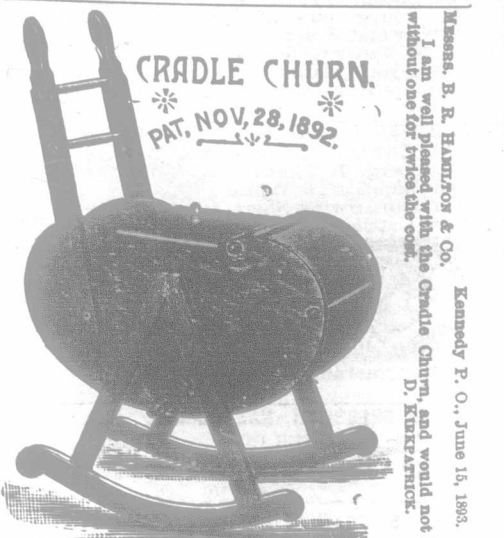
AND THE OLD RELIABLE: HALLADAY ... STANDARD ... PUMPING ... and GEARED

WIND MILLS

Guaranteed to be the Best Made.

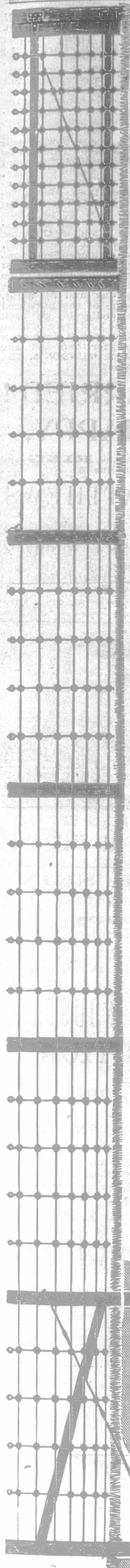
Also Pumps, Tanks, Feed Mills, Haying Tools, Saw Tables, etc. Send for illustrated catalogue.

Ont. Wind Engine & Pump Co.
367 Spadina Ave.,
10-om TORONTO, ONT.
Mention Farmer's Advocate.



For sale by hardware dealers generally. If your dealer does not keep them write to B. R. HAMILTON & CO., Pat-ntees, Neepawa, Man. 48-y-om

ADVERTISE IN THE ADVOCATE



**THE
LOCKED-WIRE
FENCE CO.,
INGERSOLL,
ONT.**

The accompanying cut represents five panels of fence and gate of the LOCKED-WIRE FENCE which is now built with improved corrugated hardened steel stay and Bessemer steel clamp, a combination which is proof against the most unruly stock or designing men. The crimp in the wire, in combination with steel clamp, when locked acts as a spring, adjusting the fence to heat or cold.

—PERFECTLY—
**Safe, Stronger, Better
AND CHEAPER**

than any other fence, and without doubt the best fence on the American continent.

All persons having wire fences erected in the past, should use the stays and steel clamps of the Locked-Wire Fence Co. on them. The crimp consumes all the slack, makes the fence tight, and adds over 100 per cent. to its value, at a very small cost.

We desire to inform the farmers and public generally that we are prepared to supply the material or erect this fence throughout the Dominion of Canada.

Recollect, we are the only firm that is furnishing the genuine material in the form of the corrugated hardened steel stay and Bessemer steel clamp.

**THE BEST
FENCE**

MADE FOR
**Farms and
Railroads.**

Agents

Wanted

In every

Township.

Send for circulars and particulars.

Address

—THE—

LOCKED-WIRE

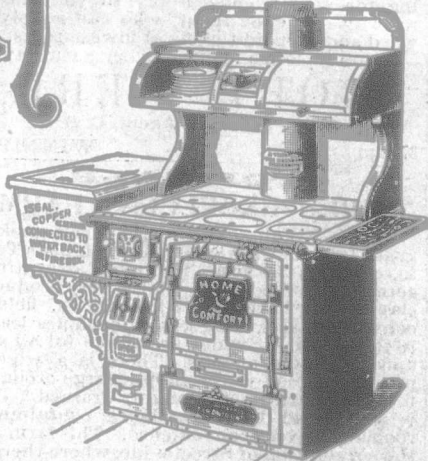
FENCE CO.,

INGERSOLL, ONT.

THE HIGHEST AWARDS

Were received at
WORLD'S COLUMBIAN EXPOSITION,
BY THE WROUGHT IRON RANGE CO., ON

**HOME COMFORT
STEEL
HOTEL AND FAMILY RANGES.**



**CARVING AND STEAM TABLES,
BROILERS, MALLEABLE WATERBACKS,
ETC., ETC.**

This Style Family Range is sold only by our Traveling Salesmen from our own wagons at one uniform price throughout Canada and the United States.

Made of MALLEABLE IRON and WROUGHT STEEL and will LAST A LIFETIME if properly used.

**SALES TO JANUARY 1st, 1894,
277,199.**

MADE ONLY BY **WROUGHT IRON RANGE CO.,** MANUFACTURERS OF
Hotel Steel Ranges, Kitchen Outfittings and "Home Comfort" Hot-Air Steel Furnaces.

OFFICE, SALESROOM AND FACTORY,
70 to 76 PEARL STREET, TORONTO, ONTARIO,
and Washington Avenue, 19th to 20th Streets, ST. LOUIS, MO., U. S. A.
Founded 1864. Paid up Capital, \$1,000,000.

7-y-om

We have received the following goods and have them in our warehouses at the following prices, at which they cannot be secured again. Our stock is very limited. Cash has to accompany all orders for these goods. We guarantee them first-class goods in every respect. So don't delay your order if you want any of them.

- A good, large Bell, suitable for school, worth \$16, we will send you for \$12
- A Thomas Organ, Woodstock, worth \$110 dollars, for 50
- A Kern Organ, Woodstock, worth \$150 " " " " 75
- A Mercer Grain Binder, complete, for 85
- A 14-inch Ensilage Cutter, with 10 feet of carriers, for 50
- A Large Ensilage Cutter, without carriers 45
- A Trenton Fanning Mill, No. 1, only 12

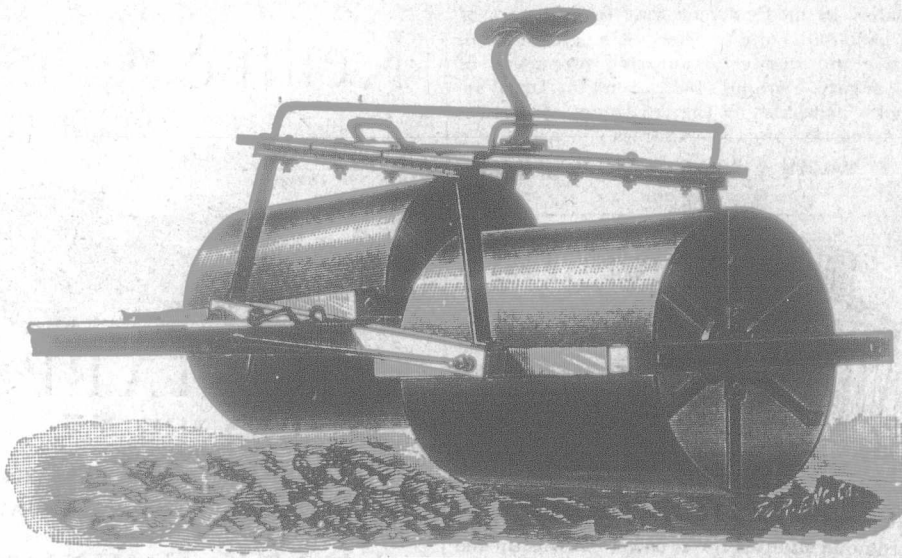
We want you to distinctly understand these are a job lot bought for much less than manufacturers' prices, and will be sold to the first buyer.

THE GRANGE WHOLESALE SUPPLY CO. (Ltd.)

126 King Street East, TORONTO.

The DALE PIVOTED LAND ROLLER (Patented)

A Steel Roller, the drums of which oscillate on pivots and adapt themselves to the unevenness of the ground.



The bearings are the only wearing parts, and are guaranteed to last from Ten to Fifteen Years, and can be replaced at a nominal cost. It rolls all the ground, no matter how rough. There is no axle shaft, no strain, and consequently no wear. It is easily oiled between the drums.

If your local agent does not supply you, write direct to **T. T. COLEMAN,** SOLE MANUFACTURER, SEAFORTH, ONT. Mention this paper. 2-om

CREAM SEPARATOR BELTS

ANTHON CHRISTENSEN & CO.,

Niagara Falls, Ont., Canada; Suspension Bridge, N. Y., U. S. A., and Dursley, Eng.,

MANUFACTURERS OF HIGH-CLASS BELTS FOR DRIVING CREAM SEPARATORS.

Our belts are used successfully all over the world. It is settled they have no equal in price, quality, durability and workmanship. 10-y-om

**THE : NICHOLS : CHEMICAL : CO.,
CAPELTON, P. Q.,**

Manufacturers of Complete Fertilizers

HIGHEST AWARD AT THE WORLD'S FAIR, CHICAGO.

For All Crops, All Soils, Canadian Climate.

Send for 1894 Catalogue, containing full particulars and testimonials from many reliable farmers. 2-2-f-om

400—Helderfeigh Fruit Farms Nurseries—400
(Four Hundred Acres in Extent.)
Established 1882.

There is no place in Canada where the season is longer than here. Hence we get trees brought to the fullest maturity, capable of withstanding the severest cold. Having one hundred acres in fruit, from which cuttings, buds, scions, etc., are taken, I can safely guarantee the purity of my stock to be equal, if not superior, to any other nursery. The soil is specially adapted to produce vigorous, hardy trees, now growing and for sale. All the leading sorts of both old and new varieties deemed worthy of propagation. Catalogues free on application. Agents wanted in every township. 18-y-om E. D. SMITH, Winona, Ontario.

ULCERKURE

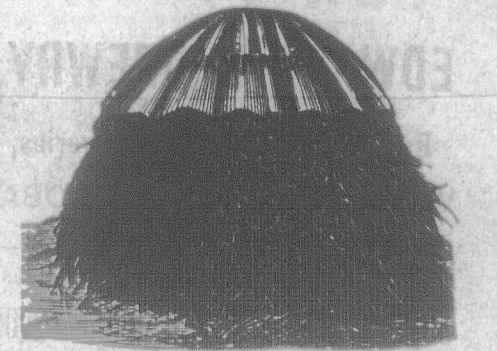
A new Chemical Compound discovered by Dr. Warnock, Member of Royal College of Veterinary Surgeons, England; Fellow of the Glasgow Veterinary Medical Society.

A NEW DISCOVERY,

With a specific chemical action, for the immediate cure of wounds and ulcerated sores on Horses, Cattle, Dogs, etc., such as Barb Wire Cuts, Collar and Saddle Galls, Cracked Heels, Frost Bites, Foot Rot, Rope Burns, Mallenders, Sallenders, Broken Knees, Ring Worm, Scratches, Scalds, Cuts, Burns, and all foul and putrid sores of all descriptions. Recommended by the largest stock owners in Canada.

A. E. WALDON & CO., Chemist, Calgary, Alta. 5-y-om

THE SYMMER PATENT



HAY AND GRAIN CAP.

THOROUGHLY WATERPROOF.

The most practical, cheap and efficient hay and grain cap yet introduced. Not necessary to fasten down. Almost indispensable on grain when using a self-binder.

VEGETABLE AND FLOWER COVERS

For Transplanted Plants.

Stack Covers,

Built in sections. Diam. at bottom, 8 feet, by about 5 feet deep.

Send for circular to **SYMMER HAY CAP CO.,** Sawyerville, P. Q. 7-h-om



The FAVORITE CHURN

The most simple. The most durable. The most effective. The easiest to keep clean.

Water tanks specialty, and shipped to all points. Correspondence and shipments promptly attended to. All kinds of cooperage.

ST. MARYS COOPERAGE

4-2-y-om **F. E. BUTCHER,** St. Marys, Ont.

The High Speed Family Knitter

Will knit 10 pairs socks per day. Will do all work any plain circular knitting machine will do, from homespun or factory yarn. The most practical family knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. We guarantee every machine to do good work. Beware of imitations. Agents wanted. Write for particulars. Dundas Knitting Machine Co., Dundas, Ontario. 17-y-om

GODERICH ORGAN

High grade, fine tone. Send for Catalogue. Made at Goderich, Ontario. 1-y-om

Advertise in the Advocate.

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