

MANITOBA AND WESTERN EDITION

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

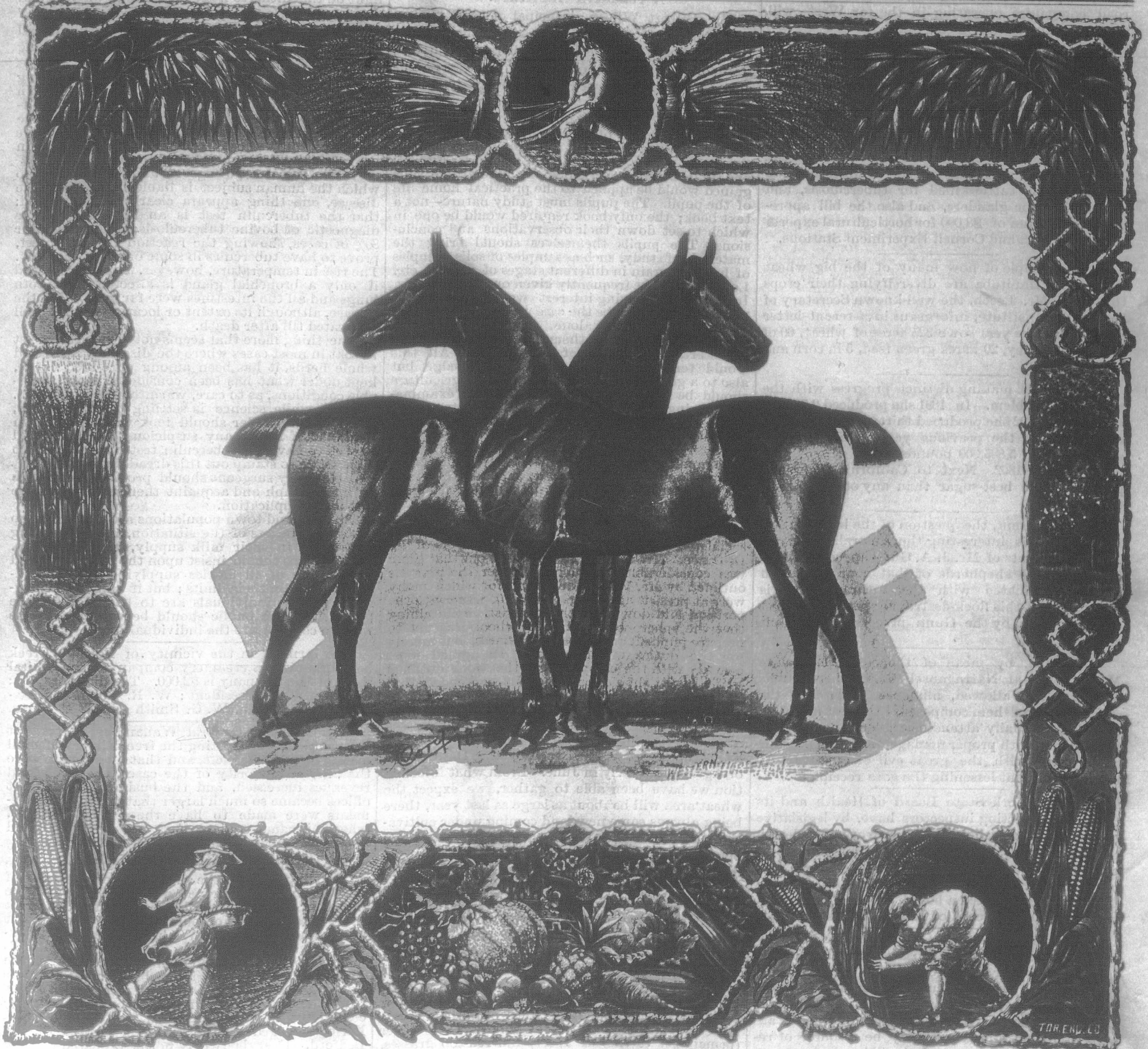


* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

VOL. XXIX.

LONDON, ONT., AND WINNIPEG, MAN., JUNE 5, 1894.

No. 359.



A PAIR OF GERMAN COACH HORSES,
THE PROPERTY OF J. CROUCH & SON, LA FAYETTE, IND.

Reports from Great Britain show that the present lambing season has been one of the most prosperous for many years.

The School of Agriculture, University of Minnesota, has instituted a special course in dairying and domestic economy for young women.

All the bills for the extermination of the Russian thistle, that have been pending in the U. S. House Committee on Agriculture, have been reported adversely.

Read "Invicta's" queries in this issue re water supply. We would like to hear from any who have satisfactorily solved this problem. Your experience will certainly assist someone.

The Rural New Yorker has sent Mr. Bull \$52.50 as the first instalment of the gratitude fund, which it is collecting for the originator of the Concord grape, who is in needy circumstances.

Great indignation is expressed by all horse and turf papers in what they term the official white-washing of those who were engaged in the famous Alix-Pixley case, by the extraordinary verdict or finding of the Board of Appeals of the American Trotting Association.

It is reported that, although the United States Secretary of Agriculture decided to discontinue the experiments which have been conducted for the past two years in rain-making, several of the railroad companies operating in the far West will continue experiments in this line.

Michigan has a very stringent law against the introduction of fruit trees affected with the black knot. Any person who neglects to remove or destroy diseased trees will be subjected to a fine of one hundred dollars, three months' imprisonment, or both, at the discretion of the judge.

The Governor of New York has signed the Thornton Bill, providing for the compensation of the owners of cattle killed for tuberculosis, and horses killed for glanders, and also the bill appropriating the sum of \$8,000 for horticultural experts at both Geneva and Cornell Experiment Stations.

As an example of how many of the big wheat farmers in Manitoba are diversifying their crops this year, Mr. Leech, the well-known Secretary of the Central Institute, informs us in a recent letter that he has this year sown 325 acres of wheat, 60 of oats, 45 of barley, 20 acres green feed, 5 in corn and 3 in roots.

Nebraska is making distinct progress with the sugar-beet problem. In 1891 she produced 2,700,000 pounds; in 1892 she produced thirty-three per cent. more than in the previous year, while in 1893 she turned out 5,835,900 pounds, or a gain of fifty per cent. over 1892. Next to California, Nebraska produces more beet-sugar than any other State in the Union.

Just at present, the question of the inoculation for anthrax is interesting the Australian world. The experiments of Mr. J. A. Gunn appear to have convinced the shepherds of that country that an animal vaccinated with the anthrax virus is proof against this flock-destroying pest. The cost of vaccination, by the Gunn process, is only four cents per head.

We learn, by mean of the New Hampshire Mirror, that at Narragansett Park, where public betting is not allowed, immense fields face the starter, many of them composed of the best material, and that the daily attendance is enormous. This shows that, with proper management, it is possible to do away with the great evil of race tracks—betting—without lessening the gate receipts.

The New York State Board of Health and its tuberculin-injecting inspectors have, by legislative enactment, been relieved of their work of ordering suspected cattle slaughtered. A commission, to be composed of one veterinarian, one physician, and three members of the State Dairymen's Association, has been created a board, by the Legislature, to supercede the Board of Health in this work.

Mr. Hatch's new anti-Option Bill, which is intended to repress bogus transactions and gambling in grain and other farm products, has been favorably reported on by the Agricultural Committee of the American House of Representatives. It is thought that the prospects for the passage of this bill are good, and that it will not only be a source of revenue to the Government, but will have a tendency to stop all reckless gambling in grain and provisions.

A Pair of German Coachers.

The cut on first page of this issue represents two of the famous imported German Coach stallions, Ludwig, No. 1452, and Picador, No. 1611, the property of the La Fayette Stock Farm, La Fayette, Ind.; J. Crouch & Son, proprietors. These gentlemen bought the entire lot of the German Government World's Fair exhibit of German Coach stallions and mares. They are magnificent animals of the greatest possible style, knee-action and finish. They are solid colors, mostly bays, with a few browns, 16 to 16½-hands high, and weigh 1,400 to 1,500 lbs. These horses have been carefully bred by the German Government in one line for several hundred years, and it is said they breed like themselves, from all kinds of mares, with most remarkable certainty, and sire the finest of coach and carriage teams—the toppy 16-hand horse that always sells. These horses show speed, are active roadsters, and are counted the long distance horse of Germany. They are growing in favor every day as their superior qualities become known. They are remarkably handsome, and smoothly built, possessing well muscled limbs, clean, stout, flat bone below the knee, and the best of feet. They have the finish, the vim, and the appearance of the thoroughbred, from which they have descended. J. Crouch & Sons also handle trotting and pacing stock, particulars of which may be gleaned from the interesting catalogue which they issue.

A Teachers' Institute.

Mr. Gilbert Wilson, principal of the Brandon Collegiate, read a paper on "Agriculture in the Rural Schools," at the late teachers' institute, at Brandon. The following notes of the essay, and discussion which followed, we clip from the "Free Press":—

"He would place the subject on the programme of studies, because of (1) its educational value, (2) its sociological value, (3) its economic value. In the junior classes, nature herself should be studied, and in the senior divisions the knowledge thus gained would be applied to the practical home life of the pupil. The pupils must study nature—not a text book; the only book required would be one in which to set down their observations and conclusions. The pupils themselves should bring the materials of study, such as samples of soils, samples of hay and grain in different stages of growth, etc. Lessons could be frequently given out in the fields. In this way, a living interest would be fostered, which could never be the case if the subject were taught by text book alone. Pupils should be encouraged to experiment themselves, on a small scale, to ascertain principles of growth, etc. All this would tend not only to accurate knowledge, but also to a genuine interest in farming. Agriculture should be made compulsory at teachers' examinations, being substituted for physics or botany, and the Normal schools should give instruction in best methods of presentation."

Messrs. W. A. McIntyre and H. S. McLean agreed with much advanced by Mr. Wilson, which was not as great an innovation as many suppose. Much of the work outlined was being actually carried on at present, under the name of nature study. Mr. J. D. Hunt gave hints and suggestions as to many points in which improvement might be made in the social and economic condition of the farmers of the Province. Mr. J. Ridington pointed out that there was considerable difference between the plan as outlined by Mr. Wilson and that for which many were at present agitating. He took issue with the position laid down by the essayist, maintaining that the sphere of the Public school was not to prepare pupils for any special business, but merely for the duties of citizenship. He agreed most heartily with the essayist that the work outlined in the paper should be done, but contended that this was not the duty of the Public school, but of the Agricultural college.

Manitoba Crops.

A crop report will be issued by the Department of Agriculture early in June. From what information we have been able to gather, we expect the wheat area will be about as large as last year, there being always some new land coming under cultivation, but there will be a much larger area than before devoted to other crops—barley, oats and flax, while corn, roots and grasses will be sown in far greater quantities than ever before in the history of the West. The Winnipeg seedsmen report largely increased sales this spring of all field and garden seeds. Keith & Co. state that in all lines they have greatly exceeded last year's business, there being a special demand for corn, peas, turnips, rape and millets, while Mr. Perkins says he has sold forty bushels of North Dakota Flint, besides considerable quantities of other corns, and also large quantities of timothy, red clover (principally to the far West) and red-top grasses, onions, turnips and mangolds. Body & Noakes, linseed oil works, say the demand for flax-seed far exceeds any previous year.

Rape.

Undoubtedly this year, when the time for seeding cereals is over, there will be many wet places upon many farms throughout this Province and in portions of the Territories which will be unfit for planting potatoes, and also won't be dry enough in time to sow turnips. To all farmers in this fix, I would strongly recommend that they sow all spots conveniently got at with rape, which would not only be a great boon to the cattle and the hogs of the mixed farmer, but also to the purely agricultural one, in keeping his land sweet and in tone; and if he has no use for it in feeding animals, it is the very best manure he can get for enriching his soil, and at the same time the most useful agent in killing weeds. Sow broadcast, thickly, in the second or third week of July. This vegetable is really the best for all kinds of cattle, especially milch cows in the fall when the grass is getting withered and dry. Of course great caution must be taken at the commencement of its use, as cattle are apt to devour rather than eat it, and get bloated. The most favored plan is to pull and feed it to your cattle when they come into their pen in the evening, and after doing this for a week or so, give them about two hours a day grazing upon it for a while; after that they may be allowed to go to the patch when they please.

BOB BARCLAY.

Tuberculosis.

Tuberculosis, at the present time, is receiving a great deal of public attention, not only on this continent, but in Europe. Science has thrown new light on this hitherto little-understood disease, and it is now enjoying what might be termed a "boom." The newspapers publish, under flaring headlines, all kinds of misleading statements, generally mixing up tuberculosis and pleuro-pneumonia. "Expert evidence" is not wanting of the most blood-curdling nature as to the imminent danger to human life in partaking of the milk or meat of an animal however slightly affected; others, again, taking the opposite extreme, claim that tuberculosis is no more prevalent nor the death rate from consumption in the human subject no higher than in past years.

While "doctors disagree" as to the extent to which the human subject is liable to contract the disease, one thing appears clearly demonstrated: that the tuberculin test is an almost infallible diagnostic of bovine tuberculosis; something over 80% of cases, showing the reaction from the test, prove to have tubercles in some organ of the body. The rise in temperature, however, is just as marked if only a bronchial gland is affected as if both lungs and all the intestines were far gone with the disease, although its extent or location cannot well be located till after death.

One thing more that seems not very clear as yet is that in most cases where the disease has effected whole herds, it has been among pure-bred cattle, kept under what has been considered most favorable conditions, as to care, warmth and ventilation.

Now, while science is settling these problems, every cattle-breeder should look well to his own herd, and, if he has any suspicious cases, it would be well to have the tuberculin test applied, and do all possible to stamp out this dreaded plague.

Veterinary surgeons should provide themselves with the lymph and acquaint themselves with the method of application.

The city and town populations are wakening up to the seriousness of the situation, and demanding protection in their milk supply, and rightly so. Corporations should insist upon the inspection and purification of all dairies supplying milk to consumers within their limits; but if animals belonging to private individuals are to be killed for the public weal, the public should be willing, in some way, to compensate the individual loser.

The farmers in the vicinity of Portage Creek have organized a creamery company. The capital stock of the company is \$2,000. The directors are: Chas. Cuthbert, President; W. R. Robinson, Sec.-Treas.; C. J. Green, W. G. Smith and T. E. Byres.

Ex-Postmaster-General Wanamaker states that he spent \$10,000 in testing the free delivery of mail matter in rural districts, and that the results were that, in the majority of the cases, the mails and revenues increased, and the business at the post offices became so much larger that private arrangements were made to have the service continued, when it became evident that the present United States Administration would not continue it.

We publish in this issue an interesting article on the adaptation of the silo to the requirements of the Western farms, prepared by Mr. Bedford, of the Brandon Experimental Farm, for the Manitoba Dairy Association, for publication in a bulletin it was intended to issue. We have in previous numbers of the ADVOCATE fully described Mr. Bedford's methods of cultivation, cutting and wilting of the corn, and also the varieties best suited for this country, and in April 20th issue appeared a letter from Dr. Harrison, giving an account of how successful the silo had proved on his Newdale Stock Farm, managed on the methods advised by Mr. Bedford. Everybody may not be prepared to build a silo right away, but everyone erecting new buildings should calculate on putting in a silo some day, and plan their barns accordingly.

THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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

- 1. The Farmer's Advocate is published on the fifth and twelfth 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—

THE FARMER'S ADVOCATE, OF THE WILLIAM WELD CO., WINNIPEG, MAN.

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National League for Good Roads.

The National League for Good Roads will join with the New Jersey State Road Improvement Association in calling a general conference of all Road Improvement Associations in the United States, to be held at Asbury Park, N. J., between July 2 and 6, 1894, on the occasion of the National Editorial Convention at that place.

It is not intended at this meeting to form any national organizations, or to take any combined action, but to discuss the general subject with the advantage of all the local information obtainable.

It is expected that some of the road machine companies will give an exhibition of road construction in all its branches, at that time and place.

Many of the leading railroad companies have expressed a desire to aid in the general movement for good roads, by making very important concessions in the transportation of road materials, and it will be suggested to the companies to have representatives at this conference for the purpose of promoting some concerted action in this direction.

The office of Road Inquiry of the U. S. Department of Agriculture is actively co-operating in the movement.

How to Build a Silo.

"Will you describe to a new subscriber the way to build a silo? There are none near here. Would a brick building be suitable and cheap? May I sink the floor of the silo lower than the byre floor? What size would be suitable to supply sixteen head of cattle with food during the winter?"

"The ADVOCATE is a welcome addition to our list of papers. We have, through it, obtained the addresses of many of Canada's best Ayrshire breeders. RICHARD ANDERSON."

The first silos were pits dug in the earth. In these the ensilage was fairly well preserved, but the most serious inconvenience from the underground pits was the great difficulty experienced in getting the silage out when needed. With the introduction of improved carriers on the cutting boxes, the pit silos dropped into disuse. They are now principally built above ground, or if constructed in the barn, are on a level with the stable floor. Wood is generally recognized as the best material for the construction of silos, being much cheaper than brick or stone, and equally as serviceable in the preservation of the fodder.

LOCATION.

Silage is a heavy food, and should be located as near the stock as possible. In order to have the silo near the cattle, and also to make the construction as cheap as possible, it is a wise plan to build in the barn. A root cellar, or a portion of it, can frequently be converted into a silo by taking out the floor above, and building a wooden wall to the height of the barn plates. Where the cattle stand in two rows, with a feeding alley between, it will often be convenient to build at the end of the barn, with the door opposite the passageway. It should be so located as to be filled from the outside. Ample space for cutting-box, power and wagons is necessary.

MATERIAL.

Stone or brick is now seldom used, unless it is desirable to make use of standing walls of masonry, and even in such cases it is better to have the walls lined with wood. Mr. E. D. Tilson, of Tilsonburg, Ont., has in use several excellent silos constructed of brick coated with cement plaster. At the Kansas Experimental Station nearly 50 per cent. of ensilage stored in stone silos was spoiled. Though no such results have been noted by others, yet experience goes to prove that a better ensilage can be obtained from wooden silos.

FLOOR.

The cheapest floor consists of solid clay, raised a few inches above the surface of the surrounding ground. A wooden floor is not to be recommended. A coat of cement, though not necessary, is often applied to the floor. John Gould, the well-known ensilage authority, of Ohio, recommends hollowing out the clay floor in the form of a bowl, the earth from the centre to be thrown up and packed firmly around the bottom of the wall, in order to take part of the pressure from the sides of the silo.

FOUNDATION.

The foundation should be of stone or brick, though this is not absolutely necessary; concrete formed of gravel and cement is equally good, especially up to the surface of the ground. The wall, upon which the sills rest, should be at least six inches above the floor, and eight inches above the ground surface. The sills should be anchored to the masonry by means of iron rods. They may be made of two pieces of 2x8 or 2x10 inch stuff, spiked together; these should be painted with coal tar, and bedded in mortar with the ends crossed at the corners and well spiked together.

STUDDING.

Studs smaller than 2x8 inches are seldom used, even for small structures. Experiments carried on at the Wisconsin Experimental Station, with a view to determine the pressure which was safe to allow on the sides of a silo, showed that to insure against bending, the studs should be not less than ten inches wide for a silo sixteen feet deep, and not less than twelve inches for eighteen to twenty feet deep, and wider in proportion as the depth increases. In these tests the uprights were eighteen inches apart. To be secured against lateral pressure, the studs should be mortered into the sills. Strength in the walls is most essential (the pressure being very great), in order to prevent spreading, which admits the air and spoils the ensilage.

LINING.

The usual lining consists of two thicknesses of boards, joints broken; a thickness of tarred paper should be used between the layers of boards. Other materials have been used, but none have proved so satisfactory as the above. Lath and plaster have been tried, but the silage renders the plaster soft, and liable to be destroyed, as well as the laths and framework. The Wisconsin Experimental Station lined one silo with tin, another with sheet iron, neither of which was satisfactory. The inner lining should be of boards, dressed on the side next to the ensilage. A method which is being adopted to a considerable extent, and one which has the recommendation of John Gould, is to use a single thickness of T. & G. lumber, dressed on the inside. In this case the groove should be filled with coal tar before the next board is put on. This forms an air-tight covering, and at much less expense than two thicknesses of lumber with tar paper between.

There is much difference of opinion in regard to the advisability of painting the inside of silos with coal tar or other material for the purpose of preserving the wood. A lining perfectly impervious to dampness would be effective, but in practice numerous places are left for the silage juices to enter the wood, while the coat of paint may do harm by preventing the quick drying of the boards after the removal of the ensilage. Some prefer an ordinary coat of paint.

The officers of the Wisconsin Station examined a number of silos, both painted and unpainted, and found but little advantage in the paint. If the silo is built inside the barn, no lining on the outside will be required. If it is a separate building, the best plan is to use two thicknesses of sheathing, with tar paper between, though good results are reported where only one thickness of inch lumber has been used. The silo will be more durable if the outside coat of lumber is dressed and treated to a coat of paint.

CORNERS.

As a rule the ensilage settles badly in the corners, especially if tramping has been neglected. This allows decay to commence; almost invariably the worst ensilage is found in the corners. Sharp corners may be avoided by nailing a vertical board with beveled edges in the corners. The aperture behind this board may be filled with sawdust or some other suitable material. Instead of boards, the corner may be filled by using a three-cornered piece of timber made by splitting—say, a 6 x 6 in. scantling, with a saw.

DOORS.

The doors may be continuous from top to bottom, thus forming a chute through which the ensilage may drop to the floor of the cattle stable, or there may be a space of several feet left between them. The former method is more convenient for feeding, but the latter adds strength to the silo, and prevents the walls from spreading. If outside doors are used they should be hung on hinges. The best method for arranging the inside is to place short boards across the doorway, which will be held in place by the weight of the ensilage, and can be built up as the height of the ensilage increases—ice-house fashion. By the use of tar paper the air can be excluded.

VENTILATION.

In all silos which are not built inside a building, and for this reason do not require an outside wall, ventilation between the lining and the outside wall should be provided for. This permits the circulation of dry air between the walls, and thus retards action of decay. In order to allow for this ventilation, the outside lining should not come to the plate nearly by two inches. In the lowest board of the outer lining auger holes may be bored between the studs. These ventilators should be covered with wire netting; it is better to close them altogether in cold weather.

THE ROOF.

This is not a matter of great importance, provided it is light and waterproof. A space should be left in the gable for a door, or if the roof is circular, it will be necessary to build a dormer window for the carrier which conveys the ensilage into the silo. As there is a large amount of heat and moisture given off by the ensilage, sufficient ventilation should be provided for by good-sized ventilators.

SIZE OF THE SILO.

The size of the silo will depend upon the number of animals in the herd, and also upon the length of time which it is necessary to feed them. A rough estimate would be one cubic foot per animal per day. The Wisconsin Station recommends a depth of at least 24 feet. The smallest per cent. of waste occurs in deep silos, but the additional cost in framing the building and elevating the ensilage largely counterbalances any advantage which there may be in having the silo of a greater depth. A round silo has a greater capacity for the amount of lumber used than a rectangular one, and the liability to waste at the corners is done away with. At the usual estimate of 50 pounds to the cubic foot of ensilage, allowing 40 pounds of ensilage per day per animal for 200 days, sixteen cattle would require 64 tons of ensilage, or a total cubic space of 2,560 cubic feet; this would be equal to a silo of 16x16x10 or 20x12x10, inside measurement. But, as ensilage will settle greatly, often to the extent of one-third the bulk, allowance will have to be made. In this case, a good size for Mr. Anderson would be, for a rectangular silo, 14x14, and 20 feet deep, or for a round silo, 16 feet inside diameter and 20 feet deep, which would give a total capacity of 100 tons, or allowing for settling, about 70 tons.

COST.

It is almost impossible to give the cost of building a silo, owing to the great variation in the cost of the material and in the price of labor. If built in a barn, a silo, such as the above, would cost about one dollar per ton of capacity, or less, if the material is on the farm, or if the silo is of large size. A silo of the dimensions of the one just described, if a stone foundation was built, would require 118 cubic feet of stonework:

Table with 2 columns: Item and Cost. Items include Studding, Sills and plates, Siding, Tar paper, Nails, and Carpenter work.

If single boarding were used, 1,200 feet of T. & G. lumber, dressed on one side, at \$20, would cost \$24, or a saving of \$9.80 over the double boarding and tar paper, besides requiring less labor and nails, which would more than pay for the tar required for filling the grooves. If the silo is constructed as a building by itself, the additional expense incurred will be for the outside sheeting and roof. The outside sheeting would cost about the same as for the inside; it may be either single or double, as preferred. The single boarding of T. & G. lumber will be found cheaper and equally satisfactory. Whether single or double, the inside boards must be sound, free from knot-holes and be dressed. Wide lumber is not desirable. It is a good plan to put on the inside boards vertically. If the silo is circular in form, rather less lumber will be required.

The Silo, as Adapted to Manitoba.

BY S. A. BEDFORD, BRANDON EXPERIMENTAL FARM.

Even the most enthusiastic advocates of the silo do not claim that the silo adds anything to the value of green corn, and if it were possible to stack the corn the same as we do our native hay, the advantages of the silo would hardly compensate for the extra work connected with its management. But, owing to the large amount of sweet sap contained even in well-cured corn, it is impossible to stack it as we do hay.

We contend that the use of the silo has the following advantages: It enables us to grow and preserve one of the most productive of all fodder crops. For ensilage purposes the crop can be stored in any kind of weather, enabling us to utilize odd days during wheat harvest.

A silo, properly built, preserves the green corn with nearly all its feeding qualities uninjured. Out ensilage is in the best possible condition for mixing with other fodder. The corn is stored in a very compact form, occupying little space, an important consideration where building is costly.

The building of a silo in connection with a bank barn is a very simple affair; the two constructed on the Brandon Experimental Farm are each 9x9 feet and 22 feet deep, the sills are 6x6, tamarac; on these rest the 2x8 studs, placed perpendicularly, 18 inches apart, capped with a 2x12 plate. On this framework a double thickness of boards are nailed horizontally, both inside and out, and with tar paper between each layer of boards, care being taken that the tar paper is well lapped around the corners. In other words, the silos are two large, air-tight packing boxes, 9 feet square and 22 feet deep.

Well-tramped clay is used for the floor, and appears to answer every purpose. As they are inside the barn, no roof is required.

The probable cost of a silo inside of a bank barn is about \$1 per ton of capacity.

The silos are filled by running the fodder (which, with us, is generally Indian corn) through a cutting box; a carrier attached elevates the cut fodder and drops it in the centre of the silo at the rate of a ton in ten minutes; after each load, this cut fodder is spread over the silo so as to intermix the butts and leaves and insure even settling.

To allow time for settling, the silos are filled on alternate days; the last two feet of the top is filled with cut straw, and when very cold weather sets in, a movable cover of boards, tar paper and chaff is placed loosely over each silo.

Before the silo is half filled, fermentation sets in, and this heat is maintained well into the new year.

The ensilage is ready for feeding in three or four weeks; it is then of a greenish-brown color, and has a decided malty odor and a slightly acid taste; but with ensilage made of immature or un-wilted corn, the odor is disagreeable, strong, and the acidity greatly increased.

The ensilage is fed from the top by means of small doors in the front, which must, of course, be tightly closed before the silo is filled.

All stock readily eat the ensilage, and its effect is somewhat similar to good pasturage, insuring a heavy flow of milk even in midwinter.

The amount fed varies from 15 to 35 lbs. per cow, and is always mixed with a proportion of dry fodder and meal.

In conclusion, we find that ensilage from early ripening corn can be profitably made in this Province, and it is the very thing required to keep the system of our cattle in good shape during the long and sometimes severe winter.

Summer and Fall Fairs of 1894.

Brandon, Man., July 11, 12 and 13.

Portage la Prairie, Man., July 19 and 20.

Winnipeg Industrial, July 23 to 28.

Pilot Mound, Man., Oct. 2 and 3.

Shoal Lake, Oct. 3.

Springfield, Man., Oct. 3 and 4.

Souris, Man., Oct. 3 and 4.

Gartmore, Man., Oct. 4.

Manitou, Man., Oct. 4 and 5.

Minnedosa, Man., Oct. 5.

Neepawa, Oct. 10 and 11.

Calgary, July 16 to 19.

Secretaries are requested to send in dates of fairs to the FARMER'S ADVOCATE.

Our Scottish Letter.

Since I last wrote, Mr. Gardner, the Minister of Agriculture, has given his verdict on the opening of the ports to Canadian cattle. He says: "No; but if I am satisfied, by an examination of lungs for some little time further, that there is no risk of disease from Canada, then the ports will be opened in the end of July." This reply, which is not in the words actually used by Mr. Gardner, has been variously interpreted. To the great body of farmers in Great Britain and Ireland, it has given satisfaction; but it has by no means pleased the minority in the north-east of Scotland and Norfolk, whose experience with Canadians led them to form a high opinion of their merits as feeders. No doubt the lot of the feeder in this country is at present not a happy one. The gradual increase in the number of foreign stores, imported up to the date of the outbreak of pleuro-pneumonia, caused many in this country to cease breeding cattle, or to breed them in less numbers than formerly, and the quantity of dead meat which is coming in is lowering the feeder's revenue, so that he is between two fires. Stores are rising in price, and fat are tumbling, with the result that he is unable to see how ends are to be made to meet. But even at current prices, farmers are not obtaining remuneration for their home-bred cattle, and consequently there may soon be another cry than that which we have heard. Altogether, the situation is difficult, and the future will inevitably see changes of one kind or other. Meantime the question simply is, whether the minority of cattle feeders, who clamor for the opening of the ports, are to dictate the National Policy against the interests of the overwhelming majority of their countrymen who take another view? It is hardly right that such should be the case.

We are now in the height of the Ayr and Glasgow show season. It is in the west of Scotland that cattle shows are seen to the best advantage, and there is a general feeling that we have too many of them. At Ayr, Maryhill and Glasgow three great shows have been held within a fortnight. The first is the favorite meeting place for Ayrshire cattle, the second is an intermediate kind of gathering, at which a good show of horses can generally be seen, and the third is the great Clydesdale show of the season. In regard to Ayrshires, some have long been fighting against the fancy ideas which prevail in their judging, and it is a gratifying feature that at last there appears to be some hope of getting the great dairy breed judged with an eye to the production of milk. It is a great misfortune when a useful breed is made the sport of a fancy, and this too long was the fate of Ayrshire cattle. If one thing should have been more strenuously resisted than another, it was the abuse of the milking powers of a dairy breed. All that judges looked at, for a number of years, was a tight, long, shallow vessel, and a short thin teat. If a cow had these she could win a prize, although they are the very points which dairymaids detest. It would almost seem as if a form of insanity had taken possession of breeders and judges, when animals with such properties were preferred to place and prize. Now, as I have said, the tide has turned, and dairy purposes are not forgotten when Ayrshires are being judged. Some grand, milky-looking stock were shown at Ayr by Mr. Alexander Cross, of Knockdon; Mr. Abram Kerr, Castlehill, Durrissdeer; Mr. Hugh Drummond, Craighead, Mauchline, and Mr. Robert Montgomerie, Lessnessock, Ochiltree. Sir Mark J. Stewart, Bart., has a grand milking herd at Southwick, Dumfries, and Mr. William Hunter, Fulton Mains, Prestwick, has Ayrshires which proved victorious in the milking test at the recent show.

Clydesdales, at Glasgow, were one of the grandest exhibitions of the breed seen for many years. The family group prize for the best five yearlings after one sire was won by the well-known veteran, Macgregor 1487, now the oldest Clydesdale breeding horse of repute. No other horse has so often won in these competitions as Mr. Andrew Montgomery's old champion. His daughter, Royal Rose, bred by Mr. And. Montgomery, and owned by Mr. Wm. Graham, of Edengrove, Penrith, won the cup as the best mare under four years old. Mr. James Lochart showed his splendid Darnley mare, Pandora, and won easily in a strong class of brood mares. She is out of an English dam, and is, perhaps, the best animal ever produced by the cross of a Clydesdale sire on a Shire dam. In the yield mare class, Mr. John Gilmour, of Montrave, won with the Ayr champion mare, Montrave Maud, the daughter of Prince of Wales 673, and the world-famed Moss Rose. It was unfortunate that there was no competition between Pandora and Montrave Maud for a special premium—none being offered. Pandora's son, Mains of Airies, stood second to Macgregor in the family competition, and Mr. Wm. Renwick's Prince Alexander 8899, won for the group of five two-year-olds, with five out of seven foals left by him when a two-year-old colt. The championship for the best male Clydesdale was won by Mr. William Clark's two-year-old colt, Royal Garty, which has not yet been beaten in his class, and looks well. He beat Prince of Millfield. Mr. Walter S. Park won the special for mare with two of her progeny, with the nice mare, Hatton Beauty, and her son, Prince of Erskine, and daughter, a two-year-old filly by Prince Alexander.

SCOTLAND YET.

Early Maturity.

BY JOHN A. ROSS, BUTTERFIELD, MAN.

In these hard times everyone is endeavoring to reduce the cost of production in all branches of farming to the lowest possible limits. In the breeding and feeding of live stock there is no doubt that one of the best ways to reach this end is to breed and feed our stock so as to develop early maturing tendencies in them as much as possible. No one will deny that it would be throwing away all chance of profit, if cattle were fed at the present time till they were six or seven years old, and sheep and swine as long, in proportion, before they were ready for the butcher; yet in the beginning of this century that was the common practice, and our forefathers would have been lost in astonishment to have seen steers turned off fat at two years old, and pigs at six or seven months. There is no doubt but that there is still great room for improvement in this respect among the common farm stock of this country. Not only does a farmer, who feeds his stock for a year longer than his neighbor, practically lose the amount of food fed during that year, but it is also now a well-known fact that the youngest meat is the cheapest to produce. How can an ordinary farmer so handle his stock as to encourage this characteristic in them? First, a pure-bred male should always be used; such have, to a great extent, this characteristic developed in them; but as there are great differences, even among pure breeds, one from a family already noted for this quality should be chosen, if possible. And here let me say that a good male, having once been procured, and having proved himself valuable, should not be lightly discarded, even if his retention might entail some in-breeding. It is to the interest of breeders of pure-bred stock to advocate the changing of males as much as possible, as it brings grit to their mill. There is no doubt that in-breeding has its uses as well as its abuses. For example: in-breeding between two thoroughly good animals will be more certain to produce an animal having most of the good points of its parents than the mating of unrelated animals will, and there is no doubt that an in-bred animal is much more potent and able to stamp his good qualities (as well as his bad ones) on his offspring. The chief thing in in-breeding is to be careful to only breed the best to the best, and so perpetuate the survival of the fittest only, which nature, in her own way, is continually doing with all wild animals, with no bad results. I am quite aware that in advocating in-breeding I am treading on dangerous ground, and, as it is a subject large enough in itself for a separate article, I will leave it for the present, and will only remark that so long as the constitutions of the animals are unimpaired, judicious in-breeding is of great use in securing the desirable qualities of early maturity, quality and aptitude to fatten in live stock; then early maturity may be encouraged through early breeding. There is no doubt that the noted Short-horn breeders of Aberdeenshire have, to a great extent, earned the name for utility which their stock possess, by having them calve at two years old instead of three, as is often practiced. Anyone who has seen their stock can have no fault to find in regard to size. Even if size were sacrificed to a certain extent it would be a small loss compared to the gain, as early maturity and quality are of much more value than quantity in the markets of the world to-day. An animal bred early is likely to turn out both a better milker and surer breeder than if left until fully grown. The great thing to be always kept in view is utility. The offspring of these early-bred animals will have a natural tendency developed to breed and mature early, and nature will, by this means, along with judicious and careful feeding, be encouraged to do her utmost in the shortest possible time. Of course, there is a limit to this; if carried too far it would be almost certain to result in a weakened constitution. The successful breeder is the one that can so handle his animals so as to get the greatest development in the shortest possible time, which can only be accomplished with animals of a strong and healthy constitution, and all that that implies. Of course only the best and most rapid growers and feeders should be kept for breeding purposes. The most inexperienced breeder can easily recognise such animals by their wealth of glossy hair and mellow "touch," as these are but the outward signs of their vigorous constitutions and sound digestive organs.

At the World's Fair.

Japan—The great advance which was made in all the Eastern Countries, in the arts and sciences, is illustrated in the apiary by the following:—"A small but interesting exhibit was made by Japan. One of the simplest native hives, built in sections, placed one above the other to the number of six, was shown. While not presenting any feature that could be advantageously adopted here, it is of special interest to American bee-keepers, because it is constructed on the principle of the shallow, horizontally-divided section hive, and, being one of the oldest Japanese hives, antedates by a few centuries the patent granted by our Government on this feature in bee-hives."

The Situation as to Home-Breeding.

BY "A BREEDER."

Before giving up the breeding of horses and declaring the business dead, will it not be well to take a candid, practical view of the case; and, before throwing away advantages already gained, consider well what has brought on present conditions; whether the causes are likely to continue indefinitely, and if not, how best to prepare ourselves to take advantage of the change when it comes?

Many breeders attribute the present condition of the home market to an overproduction and the introduction of electricity. The overproduction has been entirely of the cheaper grades, and this is the class being displaced by electricity. Electricity can never take the place of the Heavy Draught or fine Coach Horse. General business depression has had more to do with the fall in the home market than anything else. That this condition will last long no one believes. A renewed demand is among the certainties of the future, and when it does come there will be a short supply to meet it, because of the falling off in breeding for the past three years, and the probable continuance of it for a year or two to come.

Now, this fact alone to me is strong evidence of what is in store for those who keep on breeding first-class horses. Horses, as a rule, are short-lived animals; the visible supply is being used up at a very rapid rate, and the fact that it takes five years to produce a horse ready for market is lost sight of by the croakers who are now, and have been for three years, crying the horse business down. Another fact is, that the best time to engage in the production of any staple commodity is when it is down, and not when it is booming. There are two safe plans to follow: One is to fix upon a line of business and stick to it persistently, and another is to watch those who are producing the same article. Let up when they are persisting hardest, and be ready to go in when they let go. We have made good progress already, and now to drop it because of a temporary depression, that is liable to come to any business, is to lose ground and throw away good opportunities.

The manufacturer can stop his mill for a day, a week, or for months, and start up at practically the same place where he stopped, losing little more than the interest on his investment. Not so with the breeder that sells off his brood mares, or allows them to pass their bloom.

I have known farmers who had spent a great deal of money and many years in breeding up a nice class of mares, to sell them off in a fit of despondency, retaining only such as they could not sell. The present conditions are simply the result of bursting boom bubbles. This great country is not going to destruction; business is settling down to a sound basis, and a healthy reaction is sure to follow. A revival in general business will bring a quick and strong demand for horses, and the man who then has good Saddle horses, Coach horses and high-steppers to sell, can name his own price for them. It is the firm conviction of the best informed horsemen that that time will come before the foals of 1894 are ready for market. But they must be good horses. The "plug" now ranks with the yellow dog; there are mighty few people that have any use for him. The time was when the American Tramway Company used to gobble up hundreds every year. But electricity and McKinley knocked that trade on the head, and now the only class of horse there is any demand for is something worth looking at. Slab-sided, barrel-headed brutes have had their innings. Let farmers learn the lesson so plainly taught. Pay, if necessary, a few dollars more, secure the service of a well-bred stallion, feed the foal generously, and care for it well when it comes. Then, when it reaches a marketable age, the buyers will be hunting you up, instead of you hunting around for a buyer. Better not breed at all than breed scrubs—they will never pay.

The owners of mongrel stallions should not impose upon their neighbors by offering them the service of such horses, even at \$3 or \$5. The very best are none too good, but I would always prefer a poor specimen of a good breed to a good specimen of no breed—these quarter-bred Clydesdales, Hambletonians, Indian pony, Morgans, for example.

As a proof that good horses are in demand, I quote a few prices made on February 27th at the Union Stock Yards, Chicago, for some Coach horses, gathered for the occasion by Wengars & Son. Nearly 200 head averaged \$260, one pair of chestnuts bringing \$1,675; \$900 for a pair of browns; \$500 for a brown gelding; \$600 for a black mare. Several were bought for export to Scotland and France. With such prices as the above, I maintain that the high-class Carriage horse is the money horse for the farmers to breed.

I trust that these few points will cause some breeders to look at the prospect from a practical standpoint.

Messrs. Bousfield and Greenwood, of Douglas, are establishing a creamery, on the cream-gathering system, at Douglas. They purpose securing a large supply from the farmers near Carberry, and have it shipped every day by train.

Timely Notes for June—No. 1.

THE "AGGRESSIVE FARMER."

O, well for him whose will is strong!
He suffers, but he will not suffer long;
He suffers, but he cannot suffer wrong;

Who seems a promontory of rock.

But ill for him who, bettering not with time,
Corrupts the strength of heaven-descended will,
And ever weaker grows thro' acted crime,
Or seeming-genial venial fault,
Recurring and suggesting still!

—Tennyson.
Mr. Foster, with a great flourish of trumpets, and much self-applause, brought down his "revenue" tariff bill, declaring farmers ought to be now satisfied, as he had done so much to relieve them. In committee, the bill has been so remodelled as to become worse than the old tariff, in most instances, and the specific duties, acknowledged to be unfair, have in many cases been re-imposed, the strong wills of the manufacturers and their supporters in Parliament prevailing over the weaker wills and smaller numbers of the tariff reform delegates.

The "aggressive farmer" is a phrase I came across the other day, and, under the circumstances, it seems to be applied to the wrong party,—the aggressive manufacturer and hoodler would be more correct. Many of us flatter ourselves that we are becoming more aggressive each year. Perhaps we are; but we want to be so in a somewhat sterner manner, if we are going to accomplish anything. We are steadily losing ground; many are losing their very farms, through their weakness in voting for the men who are robbing them of their birth-right. Friends, are we to have a repetition of the total collapse in the United States before we awake from our sloughful sleep, or will we act before it comes, and avert such a catastrophe? Why is it that men are being discharged from railways and other public concerns? Why is it that banks and other moneyed institutions are curtailing their credits? Is it because the farmers are so prosperous that they do not want money, and have no necessity to sell produce to keep the railways in operation, or is it that the farmers have already sold everything they can sell, or that can be squeezed out of them, and that in consequence there is no more work for the railways to do, and the banks consider it too risky to lend money to men who are already so deeply involved? "Open confession is food for the soul," and I think that the plain truth about the present state of the country should be made known, and then, if we farmers stick together, we can, must and will rise out of the mire into which we have allowed ourselves to be dragged. Let us work for our party—the farmers' party. Let Grits and Tories go to—well—Halifax, and we will make Canada what she should be—a good place to live in, and then:

Whatever record leap to light,
We never shall be shamed.

THE SEPARATOR AGENTS.

I think you will agree with me that we have had enough declamation through the press, and through circulars by mail, about the merits of the De Laval and Alexandra machines. They each claim to be better than the other. Why don't they come down in their prices, and put them within reach of the general farming public; \$100 to \$125 is too much for a hand separator, and the power machines are also expensive, the charge for the tread or sweep power being exorbitant. At their prices, there must be a tremendous profit in them for someone—the patentees, the makers, or the agents. To meet the times, let them sell the machines at, say \$60 apiece, and mutually agree to let the prospective buyer take the one he likes best.

CHEAP WATER.

I want to know, in company with many more, the cheapest reliable way of having a constant supply of water. Given a good well and a warm stable close to it, can a tank be made to work in connection with a windmill, with a floating valve arrangement, cheaper than a hand-pump? The windmill, without a tank, is unreliable, as the wind does not always blow. Again, with a spring and a hydraulic ram, with a pipe laid six feet below the surface, it seems to me the supply of water could be obtained at a minimum cost. Again, it has been my experience, and that of many others near here, to have the pumps break down in the very coldest time, and it is well to have a reserve of water on hand. Which is the simplest form of pump for deep wells?

GENERAL.

Get that manure out on the summer fallow; plough it in; don't leave it round the stable for another year.

Set all the hens possible this month. Test the eggs for fertility before using. After two weeks, test again, then "double up" your settings under fewer hens, and give those that are left without eggs a fresh lot, and let them sit on for another three weeks. It is better than to let a hen fool away her time with a couple or so of chicks.

SINGLE OR DOUBLE DITCHES.

This spring should have convinced even the most hardened grader of them all that two ditches for an earth-graded road are a nuisance, and that in most cases the prairie sod is the best trail to travel on. In certain sections in Manitoba, in the wet years, when the waggon tires cut through the sod, the wheels go down to the axles at once. There is no solid subsoil, and only the network of grass and willow roots to travel on. Again, why is gravel not more used; it is very handy in many parts, and is surely preferable to mud? Also, is the municipality liable for damages when culverts are washed away and waggons and horses get damaged on bad roads?

"INVICTA."

The Institutes.

DOUGLAS.

R. E. A. Leech, Secretary Central Farmer's Institute, organized the Douglas Institute on May 12th. The attendance was good, and the meeting interesting. D. McKeand was elected president, and A. B. Wilkie, secretary-treasurer.

BIRD'S HILL.

A fairly well-attended meeting of the above institute was held on the 12th May; President R. R. Taylor in the chair. George H. Greig, of the FARMER'S ADVOCATE, read an interesting paper on "Swine Breeding and Feeding," which was followed by a lively discussion. Mr. Taylor stated that he had fed over 100 hogs the past winter and had not lost one. He did not believe in boiling feed, but fed dry chop, and gave plenty of water to drink; strongly believed in roots, and considered variety of food absolutely essential to healthy growth of pigs. Robert Jackson prefers slightly damping the chop fed to pigs, and said, at present prices of feed, 3¢ cents live weight for hogs would leave the farmer a profit.

Fourteen dollars worth of standard agricultural works were selected, and ordered through the FARMER'S ADVOCATE. This will form the nucleus of a library for use of all members of the Institute. June 15th was the date fixed for holding the annual meeting.

OAK LAKE.

A meeting was held at Oak Lake on Tuesday, for the purpose of organizing a Farmer's Institute. There was a good turn-out of farmers. Mr. James Elder, President of the Central Farmer's Institute, was present and addressed the meeting, after which the work of organization was proceeded with, about forty members having paid their fees.

The chair was occupied by Mr. S. Hanna, and Mr. W. Chambers acted as secretary.

Mr. W. J. Helliwell was elected president; Mr. T. Spiers, vice-president; Mr. Chambers, sec. treas., and the following directors:—R. L. Lang, J. J. Arsenault, Arch. Leitch, D. Cameron, D. W. Row and R. K. Smith.

After votes of thanks were tendered to Mr. Elder and the chairman, the meeting dispersed, all well satisfied with the day's proceedings.

Hog Raising from the Producer's Standpoint.

BY CAPT. A. W. YOUNG, TUPPERVILLE, ONT.

In your issue of April 15th I noticed two letters, one from Mr. Davies, of Toronto, and the other from J. Y. Griffin & Co., of Winnipeg, referring to the outlook for pork. As regards Mr. Davies' letter, he simply gives the oft repeated advice to produce the hog the market requires, not the heavy mass of fat that we see so often; the advice is not only timely but it is such that farmers and breeders must face successfully or ignominiously fail.

In reference to Mr. Griffin's letter, he seems by its tenor to fancy that only the Yorkshire and Tamworth are worthy to enter the "charmed circle," that is, to produce the pork the packer requires to suit the consumers' demand. Now, sir, as far as the Berkshire and Suffolk not being what is required, I have nothing to say. There are doubtless those among the champions of the breeds condemned by Mr. Griffin who will take up the cudgel in their defence. It is all very well for a packer who does not furnish the feed to recommend such breeds as Tamworth and Yorkshire, but when the poor farmer tries a lot of spring Yorkshires or Tamworth's alongside of a pen of some of those very much condemned breeds, he will begin to see where the profit has gone, for the money is in the feed, not the machine. By judicious feeding a far better grade of pork may be produced than where, as is often the case, the principal diet is corn. Now, sir, in what we have to say about the improved Poland China, Mr. Griffin will likely claim I have an axe to grind, but all I have to say is let the farmer that produces the material for the packer try the machine we recommend alongside of the ones Mr. Griffin recommends, and be the judges. Does he stop to think that the bulk of the hogs slaughtered in Chicago and the Western States are Poland China crosses or pure ones, and are we to think that all these people have taken up with the wrong breed? Farmers do not think so, and when the packer gets the product of the improved strains crossed on the common stock of the country he will be satisfied. The Poland-China, if of the best improved strains, will produce pigs that will give good shoulders, but not thicker through than the hams; good sides well layered with lean and fat; will fatten as easily at six months as at 18 months, and should when at 7 months weigh not less than 225, with only ordinary feeding, while with extra feeding may do much better. Farmers are becoming awakened to the necessity of procuring the best that can be obtained, and the breeder must produce it or quit the business. The trouble is that each breeder claims his own best, which leaves the farmer in the position of pay your money, shut your eyes, and I'll give you something to make you wise.

But when a packer puts in his oar and advises farmers to invest in any breeds, it goes a long way with many farmers who want the best. Again, all farmers cannot see their way clear to invest in more than one breed, but sooner or later there will get into a neighborhood different breeds, and where this happens the best is sure to predominate, as farmers must have the breeds that keep easiest.

A Home-made Stacker.

Mr. H. P. Edmunds, of Illinois, has devised a home-made hay-stacker, an illustration of which is given herewith:—

The frame is made of two poles or timbers, about forty feet long. This is long enough to build stacks twenty-five to thirty feet high. Use poles of light wood to avoid unnecessary weight in handling; poplar does well. If suitable native timber cannot be obtained, use pine, splicing two pieces together to secure the needed length. Use 6 x 6 inch timbers for the lower section, and 4 x 4 inch material for the upper part. At the top they are bolted together with a single strong bolt. The cross-bar near the top is about 4 feet long, and is bolted to the posts.

They are set on top of the ground and supported by long guy ropes, which are attached at the apex and staked at I, L. These stakes must be set so the straight line connecting them will run lengthwise through the centre of the site for the stack. The load of hay is then driven along the end, as shown in the illustration, and the fork loaded. The rope for drawing up the loaded fork is tied to the cross-beam, passed through the pulley on the fork, through pulley three on the cross-beam, and extending down to the ground on one side of the stack and toward the opposite end of it to avoid too much of a side draft, passing through pulley 2 as shown. After the fork is set, the load is drawn up by a horse or team hitched to the rope which runs through the pulley at 2. The poles remain in the position shown at A until the load strikes the cross-beam, when the draft brings them over to the position B. The load is then immediately over the stack, and is dropped upon it. When the load is off, the poles are easily tipped, and in drawing back the fork the man in the wagon usually pulls them back to the position shown at A, or if they are not thus pulled back they will come into position when the team is started to draw up the next load. This is a very cheap and easily-constructed device for stacking hay, and can be used where hay is hauled on wagons, hay sleds, or by any of the devices for drawing in shocks. The length of stack, which will be made at a single setting, can be varied to suit the builder. Quite a common method is to put up a convenient length, and simply move the stacker on far enough to build another section to the first, and so on, making a long rick. This method also saves time in moving, as the poles do not have to be taken down, being simply "stepped" along to the new position. The guy ropes must be quite long, varying somewhat with the length of the stack.

Dominion of Canada—Department of Agriculture—Dairying Service.

BY JAS. W. ROBERTSON, DAIRY COMMISSIONER.

The Dominion Government has made provision for the maintenance of two travelling dairies in Manitoba and the Northwest Territories. They will be under the direction of the Dairy Commissioner for the Dominion.

The object of the travelling dairies is to afford those who are engaged in buttermaking an opportunity to gain further exact, practical and helpful information on all parts of the process, from the separating of the cream to the printing and packing of the butter.

One expert buttermaker and an assistant, with an outfit of dairy utensils, including a centrifugal cream separator, a churn, a butter-worker, a Babcock milk tester, etc., etc., will compose each travelling dairy. Two days will be spent at every place which is visited, if the local committee make the necessary preparations of a place for meetings, a supply of milk and a supply of cream.

The programme of instruction and illustration will be arranged, as far as practicable, in accordance with the following time cards:—

FIRST DAY.

10 to 12 a. m.—(1) Running of centrifugal cream separator, and separating cream from about 20 gallons of milk to be supplied by the local committee; (2) testing samples of milk; (3) preparing about two gallons of cream, to be supplied by the local committee. 2 to 5 p. m.—(4) Churning of cream supplied by the local committee; (5) making butter etc.; (6) Ripening of cream from centrifugal separator; (7) address on buttermaking.

SECOND DAY.

9 to 10 a. m.—(1) Testing samples of milk. 10 to 12 a. m.—(2) Churning cream from centrifugal cream separator, and making butter. 2 to 4 p. m.—(3) Running the centrifugal cream separator; (4) Discussion on dairying.

REQUIREMENTS.

To enable the farmers, their wives and families to get as much benefit as possible from the practical teachings of these travelling dairies, it is necessary that a local committee or individual, in every place to be visited, should arrange beforehand:

1. For a convenient place of meeting.
2. For a supply of about 20 gallons of sweet

whole milk, to be furnished on the morning of the first day.

3. For a supply of about two gallons of cream (ripened, if practicable); also to be furnished on the morning of the first day.

4. For the distribution of bills (similar to this, which will be furnished free), announcing the dates and places of meetings, widely and thoroughly in the surrounding country.

Farmers are invited to bring samples of whole milk, of skimmed milk and of buttermilk, to be tested; about half a teacupful is plenty for each sample.

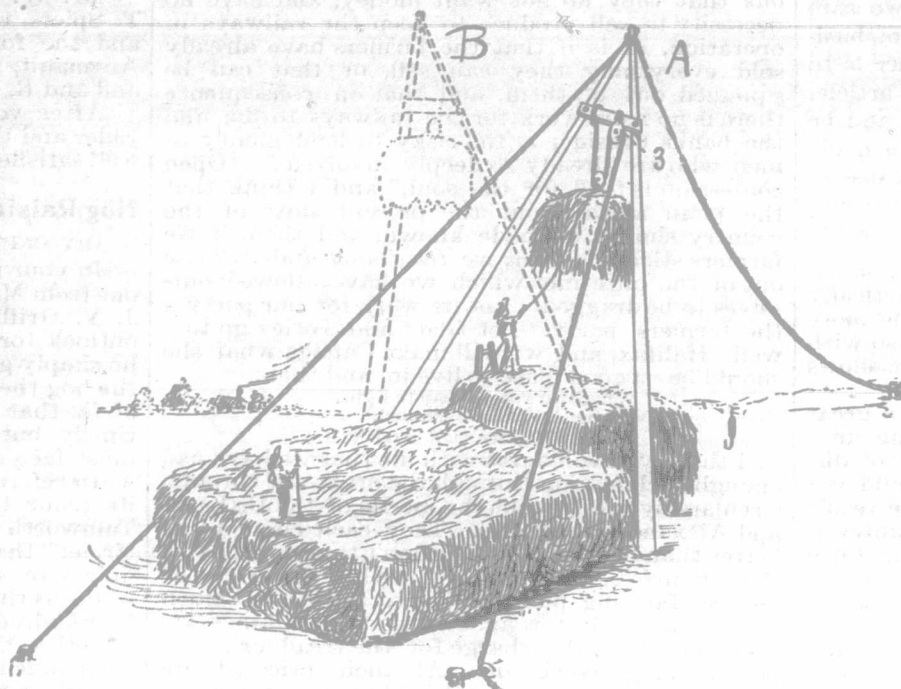
IMPORTANCE.

In many districts in Manitoba and the Northwest Territories dairying can be followed with profit and success. The soil, the pasturage, the fodder crops, and the climatic conditions, as well as the demands and opportunities of the markets, are all suitable for the production of the finest quality of milk, butter, cheese, beef and bacon. By a system of mixed farming, the growing of wheat at a profit may be helped and not hindered; and thereby the farmers may protect themselves from the very serious risk of loss and failure which is incurred by any individual or community in the Western provinces that depends wholly or mainly on one crop or on the selling of grain only.

I urge the farmers and business men generally to avail themselves of the benefits which these travelling dairies are intended to give. The women from the farms are specially invited to be present at the meetings.

If you are interested in the welfare and progress of the district where you live, you are hereby invited to see that a local committee is formed and that it makes the necessary preparations for your locality in good time.

The following places will be visited by one of the Travelling Dairies, on the dates mentioned:—



THE HOME-MADE STACKER.

ROUTE 1.

Moosomin, N. W. T.	May 28th and 29th
Whitewood, "	30th "
Broadview, "	June 1st "
Wolseley, "	4th "
Indian Head, "	6th "
Qu'Appelle Station, N. W. T.	8th "
Regina, N. W. T.	11th "
McGregor, Man.	14th "
Portage la Prairie, Man.	18th "
Austin, Man.	21st "
Carberry, Man.	22nd "
Douglas, "	25th "
Oak Lake, "	27th "
Elkhorn, "	29th "
Virden, "	July 3rd "

ROUTE 2.

Brandon, Man.	May 29th and 30th
Reston, "	June 1st "
Souris, "	4th "
Hartney, "	6th "
Napinka, "	8th "
Melita, "	11th "
Oxbow, N. W. T.	14th "
Deloraine, Man.	18th "
Morden, "	21st "
Manitou, "	25th "
Pilot Mound, "	27th "
Crystal City, Man.	29th "
Killarney, "	July 3rd "
Boissevain, "	5th "

Cable advices report that the first shipment of Canadian cattle to the British Isles have arrived and passed the special government inspector. There were 370 head in this shipment, and not one is reported as suspicious. The cattle, which were good, though not of the best quality, brought from four and three-quarters to five pence per pound. It is now thought that if the 6,430 cattle now afloat pass the same examination, it will induce Hon. Mr. Gordon, President of the Board of Agriculture, to remove the obnoxious embargo at once.

Travelling Dairy Work.

The Manitoba Dairy Association has made arrangements to supplement the work done by Prof. Robertson's travelling dairies, utilizing the appropriation made by the Local Government for travelling dairy work.

Prof. Robertson proposes taking up the principal points along the Manitoba, Northwestern and the Glenboro branch, in addition to the programme as published elsewhere, (or above), and hopes to cover that much before harvest begins. This leaves the Red River Valley and points along the Northern Pacific to be supplied by the local Association, and the following programme has been laid out by the directors:—

The Alexandra Centrifugal Cream Separator, presented to the Agricultural Department by Mr. R. A. Lister, the English manufacturer of these machines, for this purpose, will be utilized, along with a complete outfit, consisting of Babcock Tester, churn, butter-worker, etc.; and a competent butter-maker has been employed to accompany the outfit and the lecturer who will be put in charge for the various routes. A programme similar to that published by Prof. Robertson will be adopted.

Mr. John Hettle, M.P.P., President of the Dairy Association, and whose name has long been identified with progressive dairying, will take charge over the Northern Pacific from Wawanesa to Morris. S. M. Barrie, agent in the Province for the Alexandra Separators, and who owns several successful cheese and butter factories in the Red River Valley, will then take charge at St. Jean, Letellier, Niverville and Dominion City, after which Wm. Scott, agent of the De Laval Separator, and one of the most practical buttermakers in the Dominion, will take up the balance of the work from Kildonan to Balmoral.

The route mapped out is as follows:—

Wawanesa	Saturday, June 2nd
"	Monday, " 4th
Belmont	Tuesday, " 5th
"	Wednesday, " 6th
Baldur	Thursday, " 7th
"	Friday, " 8th
Miami	Saturday, " 9th
"	Monday, " 11th
Morris	Tuesday, " 12th
"	Wednesday, " 13th
St. Jean	Thursday, " 14th
"	Friday, " 15th
Letellier	Saturday, " 16th
Niverville	Monday, " 18th
"	Tuesday, " 19th
Dominion City	Wednesday, " 20th
"	Thursday, " 21st
Kildonan	Saturday, " 23rd
"	Monday, " 25th
Bird's Hill	Tuesday, " 26th
"	Wednesday, " 27th
Dougald	Thursday, " 28th
"	Friday, " 29th
Little Mountain	Saturday, " 30th
Rosser	Tuesday, July 3rd
"	Wednesday, " 4th
Oak Point	Friday, " 6th
"	Saturday, " 7th
Balmoral	Tuesday, " 10th
"	Wednesday, " 11th

Prof. Robertson has promised that one of the travelling dairies will be at the Winnipeg Industrial during the whole week, and will be prepared to give lectures and object lessons during the forenoons of the fair, and also to test the milk of the various breeds on the grounds.

Butter and Buttermaking.

Mrs. Joseph Yuill, of Carleton Place, sends us the following additional information on the above subject, which she dealt with in our issue of April 15th:—

"Setting aside a small quantity of ripened cream, for future use, would not suit the purpose, for the reason that the ripening process keeps going on until it is too highly ripened. I have tried keeping both ripened cream and fresh buttermilk for starter, and I find that fresh ripened cream makes a sweeter and a better article than either old cream or buttermilk.

I have used six different kinds of creamers, and find the plain cans the most suitable. First, it is the cheapest; second, it is easier kept clean.

It is no easy job to keep a tap clean, and, if you have a tap, you must have glass, and there is a roughness inside the can alongside the glass which is hard to keep clean. And last, but not least, if there is any sediment in your milk, you will get it in your cream. Of course the agents selling these cans will say that the sediment will run off with the skim milk, but it did not do that with me. I got the sediment with the last dregs of cream every time.

At the Wisconsin Experiment Station, recent feeding trials showed that they was worth from seven to eight cents per hundred for mixing with cornmeal and shorts for pigs, when hogs bring the prices they now command. It behooves those who wish to come out right in these trying times to be more considerate in the use of this by-product of the cheese factory.

Our Common Schools and Farmers.

From the New England Magazine, March, 1894.

BY E. P. POWELL.

The following article was recently published in the New England Magazine. It is so much to the point that we decided to reproduce it.

Canada, especially the older provinces, suffer from the same conditions as prevail in New England. The remedy suggested appears to be the chief or only one which will permanently benefit the country:

"The difficulty with agriculture is two-fold,—farming does not pay, and farm life is not attractive. The result is that our population, which one hundred years ago was ninety per cent. agricultural, is now but little over sixty per cent. such; and the ratio is decreasing. The national pride in vast cities is an error of judgment. Any one of our metropolitan cities might be reduced one-fourth in size without loss to productive capital. Deduct the dependent and criminal classes of New York, and you bring down your census by two hundred thousand. The first great break with barbarism was when land tilling began to create permanent homes and the home instinct; and the next was when each family could have its separate house and its individual tastes. Any reaction toward the herding instinct is a movement backward; and our efforts as social reformers should be exercised to prevent such a tendency. If you ask the lower classes in our cities why they are there, and why they endure such pinchings of penury, and if you further urge on them to accept your help to secure a home in the country, you will find as a rule that they cannot endure the loneliness of dissociation. They are like your domestic animals, or the sparrows in the eaves. Our cities are not filled with foreign influence altogether; even the tenements and cellars are populated largely by our own native-born people. When we come to a consideration of the problem of capital and labor, and the friction of competition so bitterly complained of by Mr. George and Mr. Bellamy, we find that the worst elbowing is done in the undifferentiated masses, not by individuals sharply separated by skill and knowledge. It is a mistake to assert that we are living in an age of individualism; we have hardly touched the threshold of individual character. It is a question of supreme importance whether American life has not of late been moving toward the mass, and not toward the man.

I do not see that I can emphasize the danger to which I desire to call attention better than by going back to Thomas Jefferson and the founding of Democracy in 1800. It was Jefferson's profound conviction that agriculture must underlie a republican government as the basis of prosperity. "The American people," he said, "will remain virtuous as long as agriculture is our principal object. When we get to be piled upon one another in large cities, as in Europe, we shall become as corrupt as they." The very key to a possible republic lay, in his judgment, in the tillage of land, as predominant over commerce and manufactures. In his maturest years he wrote as follows: "It is by dividing and subdividing republics from the great national one down through all its subordinations, until it ends in the administration of every man's farm by himself, by placing under every one what his own eye may superintend, that all will be done for the best. What has destroyed liberty and the rights of man in every government which has ever existed under the sun? The generalizing and concentrating all cares and powers into one body, no matter whether of the autocrats of Russia or France, or of the aristocrats of a Venetian senate. And I do believe that if the Almighty has decreed man shall ever be free, the secret will be in making himself the repository of powers respecting himself, so far as he is competent to them, and delegating only what is beyond his competence." Jefferson would certainly, if allowed to reappear to survey the American Republic, warn us that we had, while becoming powerful as a nation, lost power as a people; that we had gone far to undermine our Republic by forsaking our fields and becoming "piled upon one another" in great cities.

But we are at once answered that, however dangerous this may be to republicanism and individualism, it is nevertheless a natural drift of events; that farming does not pay,—and no influence can keep a people at an occupation that is not remunerative. We might ask the counter-question: Do cities pay? Is it profitable, even from a material point of view, to crowd into municipalities? Do most of those who desert the farms prosper in the avenues of trade? Morally and socially, the exchange is disastrous for the majority of our young people. Statistics show that three generations of city life exhaust vitality, and that our cities must be steadily fed by an influx from the rural districts. Most of this influx, however, is simply absorbed and lost. It is fed to the octopus of vice and beggary and disease and general want. On a farm a failure is seen, while a lad who is lost in the city drops out of sight, and reappears only in the potter's field.

The city is not a natural product. Its crowds are not needed for the mechanical industries. The bulk live from hand to mouth. At least one-fourth can be dispensed with economically. The whole system is false. We mass our people, and then carry food to them at vast expense and waste. The key to prosperity is not in the distribution of products, but in the distribution of consumers.

There is a story of some college boys who were off for a Saturday's outing. They wished to show

their wit and knowledge at the expense of a farmer whom they met. At last he turned on them: "Very well, gentlemen, now let me ask you one question: I see you have killed a snipe. Can you tell me whether that snipe is a bird or a fowl? Will you tell me what is the difference between a bird and a fowl?" The boys tried in vain to invent some definition which should accurately classify snipe, turkeys, quail, hens, sparrows and geese. Snapping his finger at their classical learning, the farmer informed them that "a bird takes food to its young, but a fowl takes its young to the food." Our cities are built on the bird plan; our farms run on the plan of the fowls. We cover our land with costly railways, to enable us to convey sufficient food to the crowded cities; that is, we have our food in one place and our mouths in another. We are doing the sparrow trick too largely in proportion to the turkeys. We are educating our young folk to desert the farms and squeeze into blocks, and to lose their individuality by becoming bits of the mechanism of urban life. Not one in a hundred gets rich—not one in twenty gets a competence.

But farming does pay; it is paying; that is, in right hands, with right methods. Whole counties of New England, that were deserted practically by our own farmers, are taken up by Canadian French, and they are thriving. I have seen the old Yankee stock that came to Central New York, up the Mohawk Valley, run out, mainly by Irish people. These, in turn, gave way to Germans, who will doubtless in a couple of generations yield their titles to others. So long as any race holds to old-fashioned culture and methods of life, all goes well; but by and by the new ideas and new methods are inevitable, and then there is a lack of something. They are unable to readjust themselves to the new order. But we cannot expect to resurrect the eighteenth century. We must find out our difficulty; and that is, as I shall aim to show, that our common school education is almost precisely what it was one hundred years ago, and in no way fitted to the other revolutions in farm life.

Our fathers on the farm were producers in the main for home consumption. Each homestead was expected to be self-supporting, or nearly so. Wives wove, knit, sewed, cooked, dyed, made soap and candles; husbands not only ploughed, but made their own shoes, cut their own fuel, and mended their own simple machinery, as well as built their own houses. Each farm raised nearly all that was eaten, worn, or enjoyed. Little was sold; little was bought. There was swapping of surplus among neighbors; and wheat, corn, oats, rye, were in each man's private bin. But to-day the farmer everywhere is a trader. In Dakota he raises his truck for Chicago, his wheat for London, his corn for New York. On the other hand, he buys his fuel, lights, clothes, most of his food, and his comforts. This flings him in with the world of speculators and adventurers. The farmer deals in futures as much as the Chicago dealer who buys October corn in July. On the old plan the farmer was everywhere moderately successful. He was educated for that style of work and to be content with that style of life. Now machinery has elbowed him out of his pride, skill, and art; and his wife also is left without her craft. He no longer swings his scythe with pride, or his axe with rhythm. She does not sew and knit. He buys coal, and has hung up his bucksaw forever. She buys stockings, and the old spinning-wheel is an object of curiosity.

The change involves new needs, new desires, new methods. The farmer who handles money instead of household material, and who speculates in crops, as all farmers now do, learns to need fine horses and carriages, handsome houses and barns, and costly tools. The wife learns to require costly dresses, pianos, furniture that is fashionable, literature, and art. Education becomes costly; and when the children get it, they push off from the farm for the city. A few farmers get rich, exactly as a few Board of Trade men amass wealth; but the bulk grow poor, and most of them ultimately dwindle away. I can find barely a dozen old families in my own township who "hold on," readjusting themselves to the changes. This is the story everywhere. It is impossible to make the farm universally profitable on such a system. Many move West, or move on; lose the home instinct, and create a migratory sentiment. This is not a desirable sentiment to increase.

The bottom of the difficulty is not some mystery; nor is the cure some nostrum in the way of statute law. The secret is that our common school education is not adapted to create a race of farmers capable of adjusting themselves to the times. We are educating away from the farms, and not toward them. Emerson says: "We are fired with the hope to reform men. After many experiments, we find that we must begin earlier—at school." That is what we come back to each time that we attempt social amelioration. The solution of the labor problem is not in legislation, but in improved tact and skill in the blood and in the fingers of the laborers. The marriage problem will be settled, not by layer on layer of laws, but in a higher moral education of boys and girls to comprehend the purpose of life as altruistic instead of egotistic. The farm perplexity is in a peculiar manner dependent upon defective education. So long as the old order of things existed, the curriculum of common education was satisfactory. The farm boy of the early part of our century had two sorts of education; one half of it was home training, the other half was from the schools. At home he had manual culture—he was taught to handle tools such as were

used, and to be proud of his skill; he must hoe his row, and turn a straight furrow, and mow a clean swath, and know the knacks of plain farming. At school all he needed was the three R's; and those he got. A peculiarly talented boy, or one all brains and no muscle, went over to the parsonage, and was fitted for college. The farm boy only needed to read, to write, and to cipher; the rest of his education was on the land.

But note how total is the change. That part of the boy's education which consisted in skilful handling of the scythe and axe and other tools is useless and vacated. So far as the three R's are concerned, they can mostly be taught at home. *What we want of our country schools is to make the farming to-day intelligent, interesting, and profitable.* The boys and girls should first of all be taught the composition of the rocks and soils with which they have to deal. This should be complemented with a good knowledge of plant and animal life. I suppose that no one could be more ignorant of these things than the average farmer. He is in no case taught in the common schools the structure of the animals he employs, or the grains that he eats. Geography gives a knowledge of the surface of the earth in general; it points away from the farm. Geology gives a knowledge of the earth under foot, the farmer's own immediate property; it makes every grain of sand and every granule of clay interesting; it opens the eyes to ten thousand things the farmer must daily touch and see. Yet the farm children have geography, and not geology. No one surely would condemn geography, no one would shut in or circumscribe the farmer's interests; but I plead for the other. Geology I would follow with biology in its forms of zoology and botany, and in its divisions of physiology, entomology, and ornithology; that is, I insist that our country schools shall undertake to make farmers. The boy on the farm—and the girl, quite as much—needs to know the things under his feet and over his head, the soil, the life in and on the soil, and his relation to them. He should understand a cow and a horse in their zoological relations, and, to some extent, anatomically. I am considering the broadening out of farm life, and the awakening of interest in those things that make a part of the farmer's daily life. *As the schools are, whatever is taught points to the store and the city, and not to the farm.* A college professor said to me: "We can do very little in the way of putting more science into the college curriculum until the high schools are revolutionized, and that requires a preliminary change in the common schools." Before the age of seven or eight, in well-to-do families, where kindergartens are impossible, the child should be taught chiefly to observe. He should learn to see well and to use all his senses. After that age books should be used as aids to observation; not to dispense with original observation, but to assist. Every child should become an investigator. When this change is made, and the curriculum is readjusted as suggested, I do not say that you cannot drive our boys away from the farms into trade and manufacture; but I do say that, unless a lad is born with a particular bias for something else, *he will love the land, so that he will not wish to leave.*

So utterly impossible has it been for myself to secure my children what I call a rational education, that I have done what I regret many more do not do or cannot do,—have built a laboratory and employed private tutors. Here they enjoy with a zest drawing, geology, biology, chemistry, mathematics, and music, with, as far as possible, field work. These studies are followed by a general knowledge of life on the globe as well as the history and science of human language and thought. At this point geography becomes a rational part of education. The result has been more than satisfactory. They love the land, and the things of the land. I am confident they will never consider land culture inferior to traffic. Their minds are here because their acquaintances are here. Their souls are with the birds, the plants, the animals, the bugs. They also escape that fatal vacuum which is created by a school system that omits moral culture,—a vacuum quickly filled with an inrush of immoral emotions, and by premature knowledge of sexual impurities. Home education should be widened to the utmost possible limit, and no system of public schooling should be tolerated that omits moral training.

(TO BE CONTINUED.)

Explanations Called For.

Under the subject of "Butter and Butter-making" (by Mrs. Yuill), in the *ADVOCATE* for April 15th, appears the following sentence, viz.:—"If a cow drinks 100 lbs. of impure water, 87 per cent. of the impurities of that water will be found in the milk." Is this statement correct? It seems rather startling. Kindly answer in your next, and oblige,
SUBSCRIBER, TRURO, N. S.

MRS. YUILL'S REPLY.

The statement which I made in my article on buttermaking, that the impurities of water which a cow drinks go into the milk, is practically correct. Still, it is open to criticism; for instance, impurities in water of a vegetable nature might be eliminated by the process of digestion; but the impurities of water which usually affect milk are bacteria. These the cow has no power to separate from water, and of course, are found in the milk. Such impurities are often found in water from wells which are contaminated by the soakage from cesspools, outhouses, or barnyards.

QUESTIONS AND ANSWERS.

Veterinary.

BLACK TOOTH.

"QUIZ," Qu'Appelle.—1. "Please give cause, effect, and treatment of black tooth in sucking pigs? Does it detract from the usefulness of the animals for breeding purposes or lessen their selling value?"

"2. Also are round black patches usual on thoroughbred improved White Yorkshire?; sire and dam registered?"

1. Premature decay of the temporary teeth of pigs is due to some defect in the secretions of the *dentinal sac*. If the teeth are loose they should be removed with small forceps. This should be done especially if the gums are inflamed. It will not lessen the value of the animals either for breeding or selling purposes. The permanent teeth will appear in due time, and will likely be healthy and remain so.

2. Black spots, with hair of same color, will disqualify. Small blue spots on skin with white hair, though not desired, are frequently met with in pure-bred Yorkshire swine.

W. A. DUNBAR, V. S., Winnipeg.

LAME MARE.

E. J. H., Carnduff.—"I have a mare that goes lame on rough ground; lump formed on shoulder. Is it more than a sprain?"

We are not good at guessing, and without a fuller history and description of the case, do not feel competent to prescribe proper treatment.

RETENTION OF AFTER-BIRTH.

L. O. LEMIEUX, Joly, Man.—"What is the cause of our cows not 'cleaning' after calving? The trouble is very prevalent this season; cows that seem strong and healthy, before calving, do not clean, and then give no milk and fall away to nothing. What will prevent it in future?"

Retention of the after-birth is very common among cows. The causes are not very well-known, as it occurs under every condition of feeding and management. The connection between the foetal membranes and the womb of a cow are very strong, and in almost every case of premature birth the process of disunion is very protracted. In such cases, the "after-birth" is sometimes absorbed, but it is usually expelled in a partially or wholly decomposed state. The following are some of the other alleged causes of retention of the "after-birth": Rapid contraction of the mouth of the womb; giving cold water to drink immediately after parturition; protracted and severe labor; abnormal adhesion of the womb and "after-birth." The accident has been observed to be more frequent in years when the fodder is not good, especially when it is mouldy, and it occurs more frequently in old cows than in young ones. When the "after-birth" is retained twenty-four hours after parturition, the following drench may be given with advantage: Epsom salts, twelve ounces; nitrate of potash, one ounce; fluid extract of ergot, half-an-ounce; dissolve all in one quart of hot beer, add half-a-pint of treacle, and give in one dose. At the same time, tie a weight, not exceeding two pounds, to the extruded portion of the "after-birth." I know that there are objections to this mode of treatment, but if the weight is no heavier than that mentioned, it will do no harm, and by affording gentle traction will tend to expedite the removal of the foetal membranes. When other means have failed, and the cow is becoming feverish, the hand should be inserted into the womb and the membranes carefully separated from the cotyledons. This operation requires a good deal of patience and care, and should only be undertaken by a person who has some knowledge of the anatomy of the parts. When the "after-birth" has been removed by the hand in a decomposed state, the womb should be syringed with a solution of carbolic acid—carbolic acid, one part to forty of soft water.

W. A. DUNBAR.

Miscellaneous.

DRIVE-WELL.

P. CLARK.—"I want to put down a drive-well. Can you or any of your readers inform me how to proceed? Give size of pipe, how protected from frost, and what kind of soil they are considered a success in. I have had three wells, and have had to abandon them all. Surroundings low and quick-sand; below, the trouble too much surface water."

Either 1½-inch or 1¼-inch pipe may be used. The only way to protect the pump from frost, is to have a leak hole below the surface of the earth to drain the water from the pump. The drive-well succeeds best where there is a layer or bed of gravel containing a quantity of water; it also gives fairly good satisfaction in sand, but in most cases will not furnish a very large quantity of water; say about enough to supply a house for domestic purposes is about the limit. Mr. Clark does not say at what depth he gets the water. I might say that it is not advisable to try to drive pipe of that size any more than twenty feet at the outside. In my opinion the best well he could have would be a drilled well, with 4-in. or 5½-in. oil-well casing put in, till a satisfactory supply of water was obtained. By this method the surface water is completely shut off.

WM. SHARP, 184 Hamburg Ave., Toronto.

WATER SUPPLY.

S. K.—"As I am a little scarce of water near the buildings in winter, having to let most of the horses and cattle go to the Don, about eighty rods away, for a drink, which I believe does them good in fine weather and harm in stormy weather. When

the track is icy, if I had plenty of water, I would not let them out of the barnyard from fall till spring. There are three ways I can get water: First, by well; can get quicksand springs from 30 to 35 feet deep, which require to be curbed about 6 or 8 feet at the bottom; then the water raises only about three feet in them, which makes it hard to pump; also, the valves soon wear out. Second, by cisterns, with cave troughs from the buildings; cisterns would have to be cemented; do not know whether they would require to be bricked up before cementing. Third, by digging a well about 240 rods from the house and barns, where, I think, there could be first-class water got at less than twenty feet deep, which, I am thinking, might be brought down by iron pipes through the house cellar, and then to the barn. If taps would work well in each place, they would be very handy, as we would not need to go out of either house or stable for water—winter or summer. Now, as I have never had anything to do with piping in any way, and as you seem to know all about such things, I would like you to answer in the first ADVOCATE which of the three ways you think would be the best and cheapest, especially the size, cost and kind of pipe to be used; also, how deep they should be put in, how long they would be likely to last, and if there is much danger of them filling up or not working well from any other cause; how to fix pipe in the well where water begins to run. Not having levelled to the hill, cannot tell how many feet of fall there is, but am sure there is a good deal. In the first place, the piping will be down hill for about a hundred rods; then it would have to go up hill for about twenty rods, perhaps to the height of twenty feet; then the rest would be slightly down grade; all through clay ground."

The drilled well, with pipe inserted to where the water is obtained, is the only method, and if the water has to be elevated too great a distance to do it by hand, a windmill should be erected and a tank elevated, which will give water at any point desired. Eavetroughing and cisterns are in use in some localities, and when properly constructed, give fairly good results. To make a good job it would be necessary to brick it before cementing. The third method would be pretty expensive, as inch-pipe would cost six cents per foot in Toronto, and would have to be laid below frost, say two and a-half or three feet deep. There is a drilled well on the Nichol farm, near Newtonbrook, not far from Mr. K's. This well had been dug 62 feet through clay; 118 feet was then drilled through sand, where water was found in a gravel bed. A windmill was erected; the water supply thus obtained was abundant, supplying the needs of a farm containing 350 acres; a heavy stock is carried.

WM. SHARP, 154 Hamburg Ave., Toronto.

NUMBER OF CUBIC FEET TO A TON OF HAY.

W. R. AUSTIN.—"Please inform me through the FARMER'S ADVOCATE what a ton of hay put in a stack last summer would measure in cubic feet. 1st. Good hay. 2nd. Mow-burnt hay?"

The usual estimate is about 500 feet to the ton; but, on account of the great variation in hay, it is impossible to give a general rule, for it will vary all the way from 400 to over 600 feet, according to the amount of tramping and the size of the stack. Mow-burnt hay will weigh considerably more to the foot than good hay.

The Mammoth Cheese Again Heard From.

Through the kindness of the Dairy Commissioner, Ottawa, we have recently received a sample of the mammoth Canadian—eleven ton—cheese. Although the flavor is somewhat stronger than cheese kept under suitable conditions, still the quality is a marvel of excellence, considering the very unfavorable conditions in which it has been placed and the extreme temperature through which it has passed. The body and texture of the cheese have been well preserved, and does not appear, as yet, to have entered upon that stage of decay and rotteness predicted by some of its enemies.

The mammoth cheese—called the Canadian Mite—was exhibited at the World's Fair, at Chicago, last summer. It was made at one of the Dominion Experimental Dairy Stations, in Lanark County, Ont., in September, 1892. It stood in the vast Agricultural Building, on the World's Fair Grounds, at Chicago, from May until November, 1893. As the building had a glass roof, the temperature was often as high as 95 degrees inside.

The mammoth cheese was afterwards shipped to England, and was cut up in London during March and April of the present year. Excepting a few inches on the surface, the quality was similar to the sample sent to Canada. This sample was cut from below the middle of the big cheese, and the quality is still exceptionally fine, when we consider its age and the very unsuitable conditions to which it has been exposed. It amply justifies the reputation of Canadian cheese, in possessing good keeping qualities, and utterly refutes the slander on an important industry, circulated by an unscrupulous cheese dealer, to the effect that it was "spoiled" and "rotten."

The exhibition of the mammoth cheese at the World's Fair was indeed a great advertising hit, and to the very end of its career it has done excellent service to the dairy interests and dairy farmers of Canada, by drawing the attention of the world to the magnificent possibilities of Canada's agricultural resources, and to her capabilities as a producer of the finest quality of dairy products.

A Study in Churning.

We hear so much of late in regard to the great loss caused by the imperfect separation of cream from the milk, as revealed by means of the Babcock test, that we forget the loss which the same unerring detective points out to us in the buttermilk. By referring to the report of the travelling dairies we find that the average of butterfat in the samples of buttermilk which were brought in to be tested by farmers was over one per cent., while individual samples went even higher. Nor is it the private dairyman alone who is losing money in this way, for by examining the buttermilk at creameries and large dairies, the same tale is told, though in a less marked degree.

During the past year Prof. Wallace, of the Iowa Experimental Station, has been devoting special attention to this loss of fat in buttermilk, with a view to ascertaining the cause and finding out whether this loss can be avoided, and if so, the conditions necessary to secure the best results. He states that during the past summer a large number of samples of buttermilk from both creameries and private dairies were tested. In only one sample was the amount of fat found to be as low as two-tenths of one per cent., and one sample tested as high as seven and two-tenths per cent. The loss by farmers and in private dairies was found to be much larger than that from creameries, but still it was found as high as two and a-half per cent. in some factories. From careful investigation it was estimated that a factory which received 10,000 lbs. of milk, or its equivalent in cream, would lose between \$5 and \$6 per day, while some of the large factories during the greatest flow of milk would lose from \$15 to \$30 daily from suffering the fat to pass off in the skim milk and buttermilk. From previous experiment it was thought that the degree of ripeness of the cream has a decided relation to the proportions of butterfat lost in the buttermilk. To decide this point, and at the same time to prove the practicability of a chemical test for the right degree of acidity, Prof. Wallace had recourse to "titration," a method used in chemistry to tell the strength of acids by means of a standard alkali solution. His work in this direction showed that the degree of acidity had a very marked effect upon the complete separation of the butter globules; that the range of this correct degree was very slight, or that both insufficient ripening and over-ripening had the same effect of increasing the per cent. of butter in the buttermilk.

Prof. Wallace closes with the following summary:—"While this report covers a great many churnings, and represents much work, we shall continue investigations in this line during the coming year, until we secure results which are fairly decisive. The result of our work so far seems to indicate that the acidity of the cream bears a decided relation to the loss of fat in churning, and a test of this kind for acidity cannot but be of considerable help to the butter-maker, even though he has had years of experience."

Leguminous Plants.

A bulletin recently issued by the United States Department of Agriculture, on Leguminous Plants for Green Manuring and for Feeding, contains some exceedingly instructive information on this important subject. It concludes with the following summary, which will be read with interest at this time of year, when many are busy plowing in a weed crop on their summer fallows:

Probably of all the legumens, the pea is the only one suitable to cultivate in Manitoba, and, sown with oats (drilled cross ways), they can be cut on the green side with the binder, tied in small sheaves so as to dry through, and fed either with or without running through the straw cutter, make one of the best feeds possible for all stock, especially milk cows. The blue-lupin grows wild in some sections of Manitoba, but is a woody, bushy plant, and although cultivated in some parts of Europe, does not look as if it could be made profitable with us.

(1) Green manuring improves the physical properties of the soil by making the soil more porous and adding to its supply of humus. It brings up the dormant plant food from deep down in the soil, and deposits it near the surface, where it can be used by plants feeding near the surface.

(2) Green manuring with buckwheat, Hungarian grass and other non-leguminous plants, adds nothing practically to the soil which was not there before, except a mass of vegetable matter which decays and goes to form humus.

(3) Green manuring with clovers, peas, beans, lupines, etc. (leguminous crops), actually enriches the soil in nitrogen drawn from the air. These plants can grow with very little soil nitrogen. They store up the nitrogen of the air as they grow, and when plowed under, give it up to the soil and to future crops. It is the cheapest means of manuring the soil with nitrogen.

(4) But animals, as well as plants, require nitrogen for food. By feeding the crops of clover, cowpeas, etc., only about one-fourth of the fertilizing materials of the crop is lost, if the manure is properly cared for. As the nitrogen of the air is the cheapest source of nitrogen for plants, so it is the cheapest source of protein (nitrogen) for animals. The leguminous crop is best utilized when it is fed out on the farm, and the manure saved and applied to the soil. The greatest profit is thus secured, and nearly the same fertility is maintained as in green manuring.

(5) For renovating worn or barren soils, and for maintaining the fertility where the barnyard manure is not properly cared for, green manuring with such leguminous crops as cowpea, clovers and lupines, is recommended. A dressing of potash and phosphates will usually be sufficient for the green manuring crop.

(6) The practice of green manuring on medium and better classes of soils is irrational and wasteful. The farmer should mend his system, so that the barnyard manure will be as well cared for as any other farm product. Loss from surface washing, leachings, fermentation and decay should be guarded against. Then, the feeding of richer food will mean richer manure, and better and cheaper crops.

(7) The system of soiling, or feeding green crops in the barn in place of pasturage, enables a larger number of the animals to be kept on a given area of land, and the manure to be more completely saved. For this purpose leguminous crops are extremely valuable.

(8) Hay from leguminous crops is about twice as rich in protein as hay from grasses. In the one case this protein (nitrogen) is obtained very largely from the atmosphere; in the other it is all drawn from the fertility of the soil. Leguminous crops yield larger crops of hay to the acre than grasses. Hence the production of food material on an acre, especially protein, is several times larger with leguminous crops.

(9) If allowed to ripen, the seed of the cowpea and soja bean furnishes an extremely rich, concentrated feed, which can be ground and fed in place of expensive commercial feeds. The straw remaining may be fed as coarse fodder, for it is richer than ordinary hay.

(10) Grow more leguminous crops. They furnish the cheapest food for stock and the cheapest manure for the soil. They do this because they obtain from the air a substance necessary for plants and animals alike, which costs, in the form of fertilizers and feeding stuffs, from fifteen to twenty-five cents a pound.

Professor Wallace's Report—1.

The report which Professor Robert Wallace, of Edinburgh University, has just made upon the resources of the prairie regions of Canada is one of the most authoritative of recent publications regarding that section of the Dominion. It is based upon experiences gained during a tour from Winnipeg westward, last autumn, and its value is much enhanced by the fact that the Professor visited Canada in 1879 as a member of the tenant-farmer delegation of that year. Naturally, he sees many changes.

WINNIPEG AFTER FOURTEEN YEARS.

Winnipeg, for instance, was fourteen years ago a city of only 5,000 people, and few houses had any claim to architectural beauty, or even any degree of stability. There was no attempt at road-making, and no pavements in even the principal streets; while the Professor recalls the sight of the remains of one of those wonderful ironless structures, the Red River cart, which had hopelessly stuck in the mud in Main street, not far from the site of the Manitoba Hotel. How different a picture does the city now present.

Now the city has an unmistakable claim to be regarded as such, having an assessed value of \$21,000,000 sterling, and, according to last census, 32,219 inhabitants. The rate of taxation is a little less than 2 per cent., including school rates and other taxes. The main buildings—which include an hospital, medical college, free schools, high schools, and a university—can be fairly described as magnificent. The schools are supported by the city, and the colleges by the various denominations, to which the Government gives small grants. There is a daily attendance of 3,500 children at the free schools. The facilities for transit include a most perfect system of electric cars, which frequently travel at a rate of not less than twelve miles an hour.

THE FUTURE FOR MANITOBA WHEAT.

Fourteen years ago Professor Wallace estimated the cost of Manitoba wheat laid down in Liverpool at 26s. per quarter, and it was then believed that wheat could not be profitably grown in England at less than 50s. a quarter. Yet wheat is now at 24s. to 25s. a quarter, and it is still grown in England—presumably at a profit—and is imported from the Northwest, though not as yet in any considerable quantities. The day of Northwest wheat in European markets is bound to come, for reasons which Professor Wallace explains thus:—

It is a fact well known to millers that the wheat of Manitoba is of superior quality, although to the eye of the British farmer, accustomed to large, plump grain, it looks small and insignificant. The grains are extremely hard and horn-like, and the dough, when produced in breadmaking, has in an exceptionally high degree that peculiar quality which bakers call "strength." In other words, the dough has such tenacity that when pulled by the baker in working it is difficult to break, and when undergoing the process of cooking it resists the expansion of the gases forming in the bread with such success that the product is left light and open. A barrel of Manitoba wheat, 106 lbs. in weight, will produce eighty-eight loaves of 4 lbs. each.

Soft wheat, on the other hand, such as that grown in Oregon, will give from 35 lbs. to 40 lbs. less bread per barrel. It will now be easily recognized why millers appreciate Manitoba wheat, and find it economical to mix with the flour produced by wheat grown in other localities.

WHERE THE BEST WHEAT IS GROWN.

Wheat of this description is, of course, grown in almost all parts of the Northwest; but it is in the valleys of the Assiniboine and Souris Rivers that the best wheat-growing land is, Professor Wallace thinks, to be found. These naturally form the lowest regions, ranging from 733 feet, at Winnipeg, upwards, as the ascent of the rivers is made, but lower by about 200 to 300 feet than the land lying at a greater distance from the rivers. It is on these elevated parts that the frost is found to do more injury than in the lower ground. For example, the range of the Pembina Mountains, Swan Lake, Somerset and Alta districts are all most liable to suffer. The soil of the valleys is considerably heavier than that of the rising ground, and in this way is not only more suitable for wheat growing,—being denser, closer, and more retentive of water—but altogether better suited for producing large crops of the finest quality,—the hard, flinty wheat, for which Manitoba is so famous. To those who are not acquainted with the character of the land in this Northern region, it is not uncommon to find the belief prevalent that the whole area is a vast plain of level land, without an obstacle as far as the eye can reach, and all equally suited to the growth of wheat, if there were settlers in sufficient numbers to occupy it. On the contrary, says Professor Wallace, though the country unquestionable looks flat, and the view is not broken by any great obstacle, yet the difference in level from point to point throughout its extent is considerable,—as is also the variety of soil and climate—and, consequently, the difference in results attained in wheat growing are very great. On the Hope Farm, Professor Wallace saw a splendid crop of wheat, which was sown on May 20th and took only ninety days to ripen, and gave an average yield of thirty-five bushels to the acre. But this record was beaten by another across the Red River from St. Jean, in which a crop of wheat, classed as No. 1 hard, ripened in eighty-two days. As a rule, however, judging from the experience of the ten years previous to 1893, it takes about 120 to 135 days for wheat to ripen in Manitoba.

FREIGHT RATES.

Dwelling upon the all-important subject of railway freight charges on wheat, Professor Wallace notes that the reduced rates inaugurated this year on the Canadian Pacific Railway from western points to Fort William, the lake port for Manitoba, will make a difference of about \$300,000 (say, \$60,000) to the farmers of Manitoba, on the basis of last year's crop; and he it noted that:

Wheat is thus carried by the Canadian Pacific Railway at the same freight charges about 100 miles further than wheat going by other lines from points north of Dakota, contiguous to the boundary line with the States.

Western Steer Feeding.

BY RICHARD GIBSON, DELAWARE, ONT.

I have lately seen the way cattle are handled by the western feeders; at one farm I found 400 steers in a bunch divided in two lots by a fence running through centre of yard, the smaller steers being together; attached to each was a deep, open shed, under which, by close crowding, nearly the whole lot could lie in cold nights or stormy days; it is needless to say they were all dehorned. Water troughs in this shed never froze, and self-feeding troughs containing corn and bran, and large racks holding clover hay were the appurtenances thereof. Again, there were racks all around the yard and through the centre where corn and bran could be fed fine days, and night and morning these were filled with corn fodder, partially husked.

These steers were put up to feed in October, and had gained over 400 pounds per head, at a cost of about nine cents per head per day.

It seemed a careless way of feeding, with corn and hay before them all the time; still, I am more convinced than ever that we in Canada cannot compete with the western feeder, and that should there be a reciprocity treaty with the United States I feel satisfied my village butcher would be cutting up western-fed beef.

What astonished me most was the ease with which these steers were fed corn and bran in self-feeding troughs, to be had for the trouble of walking thereto. Water and clover hay ditto, *ad libitum*. The stalks were loaded in field into waggons and hauled direct to yards, two men doing the feeding night and morning, simply as chores.

In Canada, with our root pulping, grain grinding, chaff cutting, mixing and feeding, cleaning out barns, etc., it would take at least fifteen to do what the two were accomplishing west, and the results equally as good. I have since ascertained that the bunch to which I refer have been sold. I figure out the profit about \$18 to \$20 per head, besides the manure. Now, here comes the rub: What is that manure worth? To the average Wisconsin farmer, perhaps not much, though they certainly do appreciate that essential to good farming more than their cousins on the black prairie corn belt soil. In Canada and England steers are often fed to convert certain crops into manure. We expect a profit on the feeding; that is, we expect to sell to ourselves the coarse

grains grown on the farm, to be fed to steers at a higher figure than the quoted market price. That is a direct profit, but the indirect is one of perhaps greater importance; that is, as manure factories converting the coarse grains and fodder into pabulum for future crops; and just as long as well-made barn manure produces the crops that it does, acting well on all soils not drowned with water, so long will steers be fed. Fortunately for western feeders, corn grows so naturally, can be produced so cheaply, and being highly carbonaceous, the crop takes but little out of the soil, hence can be grown often on same field. Moreover, it is such capital feed for cold weather, and answers its purpose so cheaply and well, that the question is scarcely ever raised as to whether other feeds might be advantageously fed with it; and while it may be necessary in many parts of the continent to consider feeds from both a manurial and feeding standpoint, such will not occur for many years within the strictly black soil corn belt. But in other parts the question is becoming more serious every year—how to keep up the fertility of the soil? It may be asked, why bother with feeding cattle for the manure, when one can buy artificial manure so cheaply and so scientifically mixed. The reply is, that it is by no means certain in its results, its value depending in a great measure upon the amount of rain-fall in the season; it is effervescent in its effects, soon over with; it is useful to the market gardener or seedsman, who commands big prices for his produce; but for the farm proper, except for occasional crops, it will never take the place of well-made barn manure made by animals when fed on nitrogenous foods, such as peas, oats, linseed and cotton cakes. The two latter have never taken the place in America amongst the favorite feeds that they deserve, nor occupy the same position as in England. So valuable are they regarded there that a tenant farmer leaving his occupancy gets a portion of two years cake bill paid.

I was rather astonished to learn that it paid to buy bran, when \$12 a ton, to mix with corn, when the latter was worth 25 cents per seventy pounds. I can understand that the addition of bran would make a more balanced ration, but where that was not considered, but simply used because it paid in beef, was what surprised me.

Another cause of wonder to me was the loose state of the bowels of the steers. Had I not seen the evidences of kindly growth and fast feeding in the bright eye, glossy coat, curly hair of good length, and the care bestowed upon it by the animals licking themselves, I should have thought they were scouring, consequently under the influence of some irritating substance, and, therefore, not in proper health to digest and assimilate their food. In Canada we can make beef at profit, but it must be at high pressure, feeding right from birth, and turn off at eighteen months to two years, and could the generous feeding steer of old still be purchased, we could feed at a profit, even in these days of low prices. The steers of thirty years ago are to be seen no more. It was hoped that the Scotch Shorthorn would exert an influence for great good. As show cattle, they are small and neat, but where are the steers? I believe they are getting commoner yearly.

In addition to the steers, there is another element of profit in connection with the feeding thereof, and that is the Poland China, as a scavenger, a perfect success; as a utilizer of waste, he stands without a rival; but as a first-class bacon hog, I am afraid the claims of his partisans are overdrawn; neither his conformation or the food he so evidently enjoys seem to me conducive to the manufacture of that choice side meat styled breakfast bacon.

I was much amused watching them. They evidently understood when to expect a ration, and I never knew until I saw them following steers why they flopped their ears. *It is to protect their eyes.* What cute creatures. Here I've been saying to breeders for years, "You've got an almost perfect hog in the Poland China for your purpose of converting corn into pork; but there is something wanting; they lack finish; if you could only breed them with prick ears, what an improvement it would be." But the Poland China knows his business, and evidently refuses to be improved that way. Wise hog!

Dry Food for Chicks.

Dough is objectionable as food for young chicks, for two reasons: First, it contains too much water, and the chicks are thus forced to swallow more water in the food than they otherwise would. Second, there will be a portion left over, which is liable to ferment, thus leading to disease, the gape worm being one of the ills to consider. Dry food is more suitable. It is not necessary to feed chicks until they are thirty-six hours old, and then rolled oats or oatmeal may be given every two hours, only a small quantity being required. Stale bread or mashed potatoes may be added by way of variety. When a week old, screenings may be allowed, and as soon as they can eat it, whole wheat and cracked corn may be given. At this stage, three times a day will be often enough to feed, and no food should remain over. It is better for the chicks to be underfed than overfed. If they have a grass plat upon which to exercise, they will find many substances for use, and will grow rapidly, if kept dry and free from lice.

Away With the "Dunghill."

The Editor of the "Farm Poultry Monthly" thus describes a recent visit to one of the immense packing-houses of Kansas City:—

"Armour & Co. are killing and dressing three thousand to six thousand head of chickens a day; it would pay you to see their place; you would get some interesting facts," wrote Mr. Hawk, of Kansas City, when we were considering the advisability of a trip West this winter. A few days later, while turning over the pages of the Midland Poultry Journal (of Kansas City), we came upon an advertisement of Messrs. Armour & Co., urging farmers to get thoroughbred Wyandotte, Plymouth Rock, or Indian Game males to improve the quality of their poultry. "That, certainly, is unique," we thought. "There is a meaning in that, if we could only get at it. Business men are not, as a rule, paying advertising bills without there being reasonable grounds for expecting returns in the shape of profits."

Armour & Co. have added poultry dressing and shipping to their beef, mutton and pork packing and shipping. One day last fall there came to the slaughter houses, among a great many other coops of chickens, several coops containing "culls" from a farm where are kept Wyandottes only. Instructions were given to have that lot kept together and by themselves, so that they might be compared with the common "dunghills," of which the bulk of the receipts consisted. When dressed and arranged for comparison, it was easy to see that the pure-bred Wyandottes were far superior in plumpness, fullness of breast, smooth, fair skin, yellow legs,—in fact, that it was a far better average lot of dressed poultry than the common stock. Mr. Armour's attention was called to the display, and he instructed the foreman in that department to pack five cases, of one hundred pounds each, ship one of them to each of five commission houses at different points in the East, and hand him a special report of the returns—also reporting prices returned on common chickens sent to same places the same day. When the returns came in it was found that the five cases of Wyandottes graded as "A No. 1," and the price was three cents a pound more than for the common chickens.

What an object lesson!

Armour & Co. are killing three thousand to six thousand head a day—six to ten tons. Calling it an average of eight tons, three cents more a pound makes a difference of \$480 a day—a hundred and forty-four thousand dollars a year. Is it any wonder that they urge farmers to improve the quality of their stock?

If it is worth the while of Armour & Co. to pay advertising rates to get that advice before the farmers, how much more it is worth to the farmers to heed that advice, and improve the quality of their stock! The bulk of that additional hundred and forty-four thousand dollars a year goes into the pockets of the farmers. It is only their commission, a small per cent, for killing, dressing, packing and shipping, that Armour & Co. get. If Armour & Co. get but eight cents a pound for the common stuff, they can pay the farmers but six and a half or seven cents a pound for it; while if they get eleven cents a pound for the "A No. 1" lot, they can pay the farmers nine and a half or ten cents for it. It costs as much, and takes as long, to kill and pick a scrub as it does a pure bred—and the expense of handling (dressing, packing and shipping) is the same. If Armour & Co. get three cents a pound more for the good stuff, they get their commission on a third more returns; but the farmer gets the full third more. It costs him no more to hatch and raise good stock than it does to hatch and raise scrubs, and he will get three cents (probably thirty-three and a third per cent.) more a pound for it.

It was worth the cost (and fatigue!) of our journey to get that one object lesson.

The point would be better understood if one could walk through the cold-storage room, where is about 300,000 pounds (a hundred and fifty tons!) of dressed poultry and game, the good stuff carefully wrapped in paper and packed in boxes ready for shipping. Each box has stenciled on it the kind and quality of the contents; as, for example, "40 broiler chicks, 1½ lbs.," "30 roaster chicks, 3½ lbs.," "25 fowls, 4 lbs.," etc. In one corner was half a carload of lean, skinny things, piled up. "What are those?" we asked. "Those are 'soupers'; three or four cents a pound for those," said our guide. Now, it cost as much to coop and send in those lean "soupers" as it did to coop and send in those "A No. 1" Wyandottes—and it takes just as long to dress, pack and ship them. The farmer gets almost nothing for the "soupers" he sends in, and Armour & Co. get hardly enough for them to pay for handling. After seeing that great pile of "dunghill soupers," we could well understand why Armour & Co. advise farmers to improve their stock!

Fortunately, the writer had his heavy ulster on, else he would have invested in a severe cold, so many interesting things attracted us in that immense cold-storage room, where the thermometer varies little from six degrees above zero the year around. There were stacks and stacks of spare ribs, tenderloins, etc., piled up like cord-wood; long rows of boxes of poultry of all kinds, from the broiler chick to the huge turkey-cock; and of game of every class, including frogs' legs, frozen up in buckets of water. It was all very interesting; but the most interesting (most valuable) thing was that great pile of "soupers" contrasted with the "A No. 1" chickens. The former bring three or four cents a

pound; the latter three times as much—and it costs just as much to hatch, raise, feed, coop, dress, pack and ship a mean "three-cent souper" as it does an "A No. 1" thoroughbred.

He would be dull, indeed, who couldn't see which would pay him the best to raise."

Chatty Stock Letter from the States.

FROM OUR CHICAGO CORRESPONDENT.

Top cattle prices, \$4.40, being 35c. lower than a fortnight ago, and \$1.60 lower than a year ago, when best corn-fed steers sold at \$6.00; "stillers," \$5.40, and heifers, \$4.80. Top hogs, \$5.00, being 35c. lower than half a month ago, and \$2.70 lower than twelve months ago. Top sheep (shorn), averaging 162 lbs., \$1.85, being 10c. higher than a fortnight since, and about 40c. lower than at the corresponding time last year. Top lambs, \$5.00, against \$7.35 a year ago. Best draught horses, \$200, being \$35 lower than a year ago. Street car horses, \$60 to \$85 per head, against \$65 to \$110 a year ago. Wheat, 57½c., against 73½c. a year ago. Corn, 38½c., against 41½c. a year ago. Mess pork, \$11.85, against \$20.75 a year ago. Lard, \$6.87½, against \$10.45 during the boom twelve months since.

The beef cattle market is working along very unsatisfactorily to owners of thoroughly ripe heaves. The 1,000 lb. and 1,100 lb. steers are selling at about the same notch—\$4.00. The distillery cattle feeders are still holding back all the cattle that are not forced to market, and that indicates a belief that better markets are in prospect. Recently large shipments of beef steers and bulls have been made from here to Antwerp, by N. Morris and Reemer & B. The cattle exporters are complaining quite bitterly about the low prices abroad, and say they are losing some good money. The dressed beef business is steadily crowding out the live stock shippers.

Dave Waixel, son of Isaac Waixel, has quit the cattle trade and gone into the livery business. Louis Regenstein, formerly of the old firm of cattle shippers, Myers & R., has dropped out and gone into the engraving business with some nephews.

The United Dressed Beef Co., of New York, has consolidated the interests of a number of former live cattle dealers and butchers.

In the hog situation there is no remarkable change from a fortnight ago. Hog buyers are somewhat perplexed to know what to look for. They thought for a while that they had prices well on the road to \$4.00, but latterly the supplies have been running short and the demand has improved. The farmers were never so saving of their pigs as they are this spring, but for all that, there does not seem to be a very large surplus anywhere in the country. A well-informed dealer declared that if it were not for the general business depression, hogs would now have been selling for \$8.00 @ \$7.00.

Sheep receipts are on the decrease, and the market is consequently in healthier tone. The market, however, does not regain the boom-like buoyancy of six weeks ago. The great bulk of the "crop" of fed Western sheep is in, and the runs of Texas and other range sheep are belated on account of a scarcity of grass. Latest reports, however, point to good rains and fine grass nearly everywhere, and sheep will soon begin to gain in flesh. The writer has spent more than half his life, or 17 years, on this market, and this year (A.D. 1904) is the first in which he ever saw shorn sheep actually outsell woolled sheep of the same mutton quality. It indicates a queer state of affairs when good wool is not considered worth the cutting and caring for. The time must come, and soon, when this will change. Texas was literally flooding the market a year ago this time with 70 to 95 lb. sheep, selling at \$3.25 @ \$4.40. So far this year she has sent forward almost no grass sheep, but will have a host of them a little later.

Joseph Gould, of J. A. Hathaway & Co., was here, having returned from the Eastern seaboard, where he went to see some of his sheep safely off. He shipped some from Montreal. The ocean freight on sheep is about \$1.50 per head. He made contracts at Montreal because the opening of navigation brought a lot more boats to that port than could get loads, so they were willing to cut rates a little.

Mr. Gould is shipping 120 to 130 lb. fed and shorn Western wethers, which he contracted at the Mississippi River during the high prices, at \$4.75 per 100 lbs.

The coal strike indirectly affects the meat industry by decreasing the number of general factories in operation. The late trade depression has demonstrated that it is the working man who must be depended upon to eat the meat.

The horse market is improving, though the plugs are being sold at very low figures. The Chicago Union Stock Yard Co. is putting up additional barns and office buildings to accommodate the growing horse business. Electric light sales of Coach and Hackney horses have proven satisfactory.

The chinch bug has been the cause of much loss to the farmers of Kansas and other Western States. Many remedies have been tested, but none have been so effective as that discovered by Prof. Snow, of the University of Kansas. This remedy consists in spreading an infectious disease among the chinch bugs. Bugs which have been infected with the disease are placed in the fields, and in turn infect others. So successful has this treatment proved that we are informed that in some counties people are employed to make a business of applying the infection.



THE STORY

A Curate's Temptation.

The Rev. Oswald Campion sat, deep in thought, in a small room in Walworth. His thin and naturally thoughtful face wore a worried and hopeless look, and his tall figure seemed to stoop under some heavy burden. "How will it all end?" he murmured; "God help me in this trouble." Wearily he arose and crossed to the fireplace. He strove to warm his numbed fingers over the small handful of embers in the grate, then with a sigh rested his arm on the mantelpiece. Again he sighed, and passed his long thin hands over his brow. A sudden terrible thought occurred to him. "God of mercy," he cried, "add not that to my cup of bitterness!"

He started violently as the door was opened and a gentleman entered quietly.

Campion tried to speak, but his lips refused their office. Seeing his agitation, his visitor said, calmly:

"I congratulate you, Mr. Campion; you have a son."

"And my wife?"

"Is doing as well as can be expected; but, as you know, she is far from strong, and requires every care."

"I know," said the clergyman, sadly. "May I go and see her?"

"Certainly, but do not excite her."

Campion's pale face flushed, but it was by excitement rather than joy, for the weight on his heart was too heavy to be easily raised. With merely a slight bow to the medical man, he went upstairs.

During the few minutes he was allowed to remain in his wife's room, he strove desperately to hide his anxiety and encourage the girl-mother, who glanced at him wistfully as he looked at his new-born heir.

"Cheer up, Edith, my darling," he said, brightly, as he kissed her pale face; "you will soon be well again now, and then we will get away from this dreadful London."

"Ah, Oswald," she whispered, pressing his hand affectionately, "it we could do so! But I am so troubled to know how we shall manage now."

"You mustn't bother yourself, dearest; we shall do splendidly. I have heard of a first-class curacy, and I have every hope that I shall obtain it. So keep up your spirits."

"But meantime, dear, what are we to do?"

"Do! Why, pull on as best we can."

"But have you any money, Oswald? You know you told me yesterday you did not know what to do for some."

"Yesterday! Oh! that was a long time ago. I have plenty now. Robinson has paid me that thirty shillings that has been owing so long, so for the present we are quite rich," he said, gaily.

"But, Oswald—"

"There, darling; Dr. Thornton said you were not to be excited, so I must not let you talk any more."

He kissed her again, as an old woman, who was doing duty as nurse, entered, and then quietly withdrew.

He paused on the landing, and a look of blank despair settled on his features. "God forgive me for those lies!" he thought. "But I could not let my poor girl lie there, weak and ill, and fret about money affairs. It is bad enough to have to do so when you are well and strong, but for her now it would be terrible."

He reentered his room and sat down at the table. Then he proceeded to turn out his pockets. He found a solitary sixpence and fourpence half-penny in bronze and placed it before him. He surveyed his possessions and murmured bitterly: "Something must be done at once. I will cast my ridiculous pride on one side, and will call on Mr. Pearson. I don't suppose it is much after three, so I shall have time to catch him to-day." Without hesitation he put on his hat—which, unfortunately, gave too evident signs of its owner's impecuniosity—and left the house.

Oswald Campion's was a common case. The only son of a struggling professional man, he had received a good school education, and had finally been sent to the University of Oxford. He obtained his degrees with honors, and then had decided to take "Orders." Almost as soon as he had done so, he obtained a curacy in the Midlands, with a stipend of £80 a year.

Here he had met Edith Burton, the orphan daughter of a local lawyer, and their acquaintance had speedily ripened into love. Meanwhile Campion's father died, leaving only sufficient property to ensure his widow a bare maintenance. As time went on, the young man pressed his sweetheart to marry him at once, and painted such glowing pictures of their future, brightened by love and ennobled by their religious work, that the girl at last consented.

Their bright views early received a rude shock. Campion's marriage much displeased his rector, who fully understood that a "single" curate made a church attractive to the spinster element of the congregation. So one day, when Oswald had preached a sermon embodying bold and striking views, the rector seized the opportunity to cast doubts on the young man's orthodoxy, and to gently hint that he might find a more congenial sphere of work elsewhere.

The curate's sensitive nature was wounded, and without weighing the consequences, he promptly resigned his charge. Then he came to London, where he thought his sincerity would ensure him success. Alas! he knew not the modern Babylon. Too proud to play the toady, he was overlooked by the powerful. Too sincere and intellectual to preach commonplace, but "taking" sermons, he could not impress the masses, and, lacking assumption and confidence, he was pushed aside by inferior but stronger men. Thus it was that after six months' struggle he felt that he had exhausted every resource, but found himself with a sick wife and young infant to provide for on a capital of 10 l. 2s., and prospects nil.

II.

Wearily, and with flagging footsteps, Campion took his way along the Borough, and over London Bridge. He looked longingly at the omnibuses going westward, but he felt that his small capital would not justify the expenditure of even a penny; so he plodded on. It was February, and snow was falling thickly, so that the streets were "slushy"; and the cold air affected even the well-clad. The poor curate in his threadbare clothes, and without an overcoat, felt the keen weather intensely; and his body suffered an amount of discomfort that coarser natures never experience. Every step reminded him that his boots were worn down at the heels, and a suspicious "whish" and feeling of dampness to his toes warned him that one of them was not even weather-proof. At last he paused in front of a large warehouse in Cannon street. He glanced up and saw the name, "Pearson & Co., Papermakers," and knew that he had reached his destination. He paused, however, on the threshold, feeling that terrible sinking that occurs to nervous men when they find themselves in a position repugnant to their feelings. At last he summoned up sufficient courage to enter the office. A dapper young clerk stared at him rudely, and then, with an easy air of insolence, asked him what he required.

"I wish to see Mr. Pearson."

"Hum! I know he is very busy. Can you state your business?"

"Certainly not, to you, sir," said the curate, in a tone that caused the other evident surprise. He, however, crossed to a

senior clerk and made a whispered communication. The elder man glanced round, and then said in a tone loud enough to reach Campion: "Oh, you had better take up his name. The governor's always willing to see a parson." The young man recrossed to the curate, and taking his card, disappeared into an inner room. Presently he returned, saying, "Step this way, please."

Campion followed his conductor, and was ushered into a plainly but comfortable furnished office. He saw before him a stout, pompous-looking gentleman, seated at a desk, who glanced up as his visitor entered, but hope died out of the curate's heart as he caught the look of complacency on the florid countenance.

Mr. Pearson pushed his papers on one side, and with a pious look said:—
"Take a seat, Mr. Campion; I am always glad to see the ministers of God, although I am unusually busy just at present."

"I would not willingly disturb you; I can call some other time."

"By no means, my friend. My work has always been God's work before worldly affairs, and I judge by your garb that you come in His name."

"I trust so," said the curate; then plunging into business, he continued: "I saw your advertisement in yesterday's Telegraph, asking for clerical or lay-workers for your East-end Mission, and I thought perhaps—"

"That we could utilise your services. Indeed we can. There is work enough for all in the Lord's vineyard. Have you an appointment in London?"

"Unfortunately, I have not at present."

"And, naturally, you do not wish to waste time that is so precious and can never be recovered. We will gladly enroll you amongst our workers. The harvest is great, but, alas! the laborers are few," said Mr. Pearson, turning his eyes upwards.

Campion paused, then said, desperately: "I fear you do not quite understand me. I am anxious, most anxious to work, but I have a wife and child to consider. What I therefore seek is employment that will afford at least some slight pecuniary return. I thought you might—"

"What?" interrupted the other, opening his eyes wide in astonishment. "What do I hear? Do you come to tell me that you wish to enter our grand cause from mercenary motives?"

"Certainly not, sir, but surely the workman is worthy of his hire."

Alas! that holy text is too often made an excuse for avariciousness," said the other, raising his hand deprecatingly. "But let us not bandy words. If I give my services, surely I have a right to expect others to do the same."

"Truly, sir, but you are wealthy; you can afford it. If you had a wife and child wanting the bare necessities of life, would you then be willing to do so?"

"I see," said Pearson, raising his eye-brows superciliously. "I quite misunderstood you. I did not think you were one of those unscrupulous individuals who don the garb of a clergyman as an excuse for begging."

"Sir," said Campion, indignantly, "I am at least entitled to my costume, I am fully ordained, and—"

"Well, well," said the other, "I have neither time nor inclination to listen to your private affairs." Then he struck a bell, and, as his clerk entered, said:—

"Johnson, show this person out."

Campion retired, feeling terribly humiliated. As he opened the office door he heard the clerk, with a laugh, say to his colleague, "I thought he looked too seedy to be up to much."

Utterly dejected, Campion walked back towards London Bridge. It was five o'clock, and the streets were, comparatively speaking, quiet. The snow was still falling, and an east wind drove it fiercely into the faces of the pedestrians. He had tasted nothing since breakfast, and paused as he came to a confectioner's. The simple cakes looked very tempting to the hungry man, but heroically he moved on, determined not to lessen his small store. Just then an elderly gentleman came out of the shop, and turned up the street in front of the curate. The young man followed aimlessly, and almost unconsciously kept his eyes fixed on the figure before him. Suddenly the stranger placed his hand in his pocket and drew out his handkerchief, apparently to wipe the snow from his face. As he did so, Campion noticed something fall into the snow with a dull thud. He quickened his steps, uttered a feeble "Stop, sir!" but the wind carried away his voice. He stopped and picked up the article, and shuddered violently when he found a purse in his hand, that from its weight seemed to be well filled. Visions of the importance of the treasure to him dashed through his mind, and for a moment he determined to retain it. Then the natural honesty of his pure nature asserted itself, and he looked round for the owner. The delay, however, had been fatal; he just caught sight of the old gentleman stepping into a hansom, and then the vehicle rolled off, leaving the young man too bewildered to follow.

With mingled feelings that he could not analyze, the young curate walked homewards. He forgot his weariness and his hunger; even the biting wind and cold, driving sleet affected him not, for he was at war with himself. A terrible temptation was before him. On the one side was his upright nature, and on the other his love for his helpless wife and child. Unconsciously, he paced onwards until he reached his home.

TO BE CONTINUED.

The Land of Used-to-Be.

BY JAMES WHITCOMB RILEY.

Beyond the purple, hazy trees
Of summer's utmost boundaries,
Beyond the sands—beyond the seas—
Beyond the range of eyes like these;
And only in the reach of the
Enraptured gaze of Memory
There lies a land long lost to me—
The land of Used-to-Be.

A land enchanted—such as swung
In golden seas, when sirens clung
Along their dripping brinks and sung
To Jason in that mystic tongue
That dazed men with its melody—
O! such a land, with such a sea
Kissing its shores eternally,
Is the fair Used-to-Be.

A land where music ever girds
The air with belts of singing birds,
And sows all sound with such sweet words
That even in the low of herds
A meaning lives as sweet to me;
Lost laughter ripples limpidly
From lips brimmed over with the glee
Of rare old Used-to-Be.

Lost laughter, and the whistled tunes
Of boyhood's mouth of crescent runes,
That rounded, through long afternoons,
To serenading plenilunes—
When starlight fell so mistily
That, peering up from bended knee,
I dreamed 'twas bridal drapery
Snowed over Used-to-Be.

O! land of love and dreamy thoughts,
And shining fields and shady spots
Of coolest, greenest grassy plots,
Embossed with wild forget-me-nots!—
And all ye blooms that longingly
Lift your fair faces up to me
Out of the past, I kiss in ye
The lips of Used-to-Be.

THE QUIET HOUR.

Now.

Rise! for the day is passing,
And you lie dreaming on;
The others have buckled their armour,
And forth to the fight are gone;
A place in the ranks awaits you,
Each man has some part to play;
The Past and the Future are nothing,
In the face of the stern To-day.

Rise from your dreams of the future—
Of gaining some hard-fought field;
Of storming some airy fortress,
Or bidding some giant yield;
Your Future has deeds of glory,
Of honor (God grant it may!),
But your arm will never be stronger,
Or the need so great as To-day.

Rise! for the day is passing;
The low sound you scarcely hear
Is the enemy marching to battle—
Arise! for the foe is here!
Stay not to sharpen your weapons
Or the hour will strike at last,
When, from dreams of a coming battle,
You may wake to find it past.

A. A. PROCTER.

Manliness and Christianity.

Is Christianity opposed to manliness? Most assuredly not! And yet some very excellent people seem to suppose that when a man accepts Christ and His Gospel he is to become a poor, miserable weakling, without backbone or bravery; a nerveless creature, ignorant of all pleasure.

There is no more dangerous and misleading mistake than to suppose that a sallow-visaged dyspeptic, with a morbid solemnity of manner, is more acceptable to Christ than a bright, true-hearted, athletic fellow, whose very sport is consecrated by a manly, muscular Christianity.

The Christian life is no dark sepulchral existence; it is full of buoyancy, freshness and vigor. "They that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles; they shall run, and not be weary; and they shall walk and not faint."

We must rid ourselves of the erroneous idea that when a man becomes a Christian he ceases to think for himself, and that he bids farewell to all secular literature, music, and art. The fact is, that no man is so well able to enjoy life, and to appreciate its beauties and blessings, as a thorough-going and whole-hearted Christian.

Energetic Courage.

There are certain conditions of affairs in which a man is bound to speak out and be antagonistic—when conformity is not only a weakness but a sin. Great evils are in some cases only to be met by resistance; they cannot be wept down, but must be battled down. All the great reformers and martyrs were antagonistic men—enemies to falsehood and evil-doing. It is the strong and courageous who lead and guide the world. The weak and timid leave no trace behind them; while the life of a single upright and energetic man is like a track of light. In a righteous cause, he stands upon his courage as upon a granite block; and, like David, he will go forth to meet Goliath, strong in heart, though a host be encamped against him—"Stand fast in the faith; quit you like men; be strong."—[Smiles.]

Christianity in Business.

There are many Christians who, in their afflictions, are thoroughly submissive. Their trials make them better. They bow before God when He touches their hearts, they say and feel that He does all things well. But take these same men, and trouble them in their business, and where is their Christian submission then? Apparently, they are no better than infidels. They have not educated themselves to yield their wills to God in their business affairs; afflictions there cause them, as it seems, to grow worse and worse all the time.

A week filled up with selfishness, and the Sunday stuffed full of religious exercises, will make a good Pharisee, but a poor Christian. Many people seem to think Sunday is a sponge with which to wipe out the sins of the week. Now, God's altar stands from Sunday to Sunday, and the seventh day is no more for religion than any other. It is for rest. The whole seven are for religion, and one of them for rest.—[H. W. Beecher.]

Want of Self-Knowledge.

Half the evil in this world comes from people not knowing what they do like, not deliberately setting themselves to find out what they really enjoy. All people enjoy giving away money, for instance; they don't know that—they rather think they like keeping it; and they do keep it under this false impression, often to their great discomfort. Everybody likes to do good; but not one in a hundred finds this out.—[Ruskin.]

Failures.

The only real failures that a man makes of his life are either to live a life of indolence, and not to strive at all, or to follow unworthy aims and to strive for what is base or paltry. Then, whether he succeed in his purpose or not, his true failure is accomplished, for he is traveling on a downward road. But, as long as he looks upward and pushes onward, as long as his intentions are good, and his endeavors brave, he cannot wholly fail, though he may not reach that which he so eagerly desires.

MINNIE MAY'S DEPARTMENT.

How to Keep Friends.

BY MARY B. FERGUSON, SMITH'S FALLS, ONT.

"Love all, trust a few, do wrong to none;
Be able for thine enemy rather in power than use,
And keep thy friend under thy own life's key."
—"All is well that ends well."

"And keep thy friend under thy own life's key"—so says Shakespeare, but probably many of us find it much harder to keep our friends than the poet thought when he penned these words years ago, and it seems almost futile to attempt to lay down any special theory or plan, for, in dealing with this question, only very practical methods must be used to gain the desired end.

Often we find friends like money, "Easy got, easy gone." A smiling face and pleasant appearance may attract, but it requires more than these to keep friends through cloud and sunshine, happiness and sorrow. We have seen instances of rapid growth of friendship, something akin to Jonah's gourd, but when the strong rays of misfortune, adversity or sickness appear, where are these friends? Alas! like the gourd, they have vanished from sight, and only a void in the heart of the afflicted or bereaved one marks the spot where once they stood. But do we, in our hurried, every day life, realize the full importance of the meaning of that word? Is it a name to be given to every casual acquaintance? Do we rightly distinguish between friend and acquaintance, or do we confuse the individuals as well as the words? Very often this is the case, and I believe it to be one reason we find it difficult to keep our so-called friends.

We cannot choose our relations, but we have full liberty to select our friends, and may we be guided wisely always, remembering that "true worth is in being, not seeming."

It is a very important matter, especially in youth, that the associates we class as friends should be morally pure. How many young people, just merging into manhood or womanhood, place someone on the highest pinnacle of friendship, and believe in him, perhaps more firmly than in themselves, only to find by some unforeseen circumstance that the friend they surrounded with a halo of goodness and truth, and almost idolized, lived only in their imagination. By the rude shock which their highest and best feelings receive, infinite harm is done and injury inflicted, which time alone can heal.

The true basis of firm friendship is three-fold, consisting of mutual love, mutual respect, and mutual forbearance, and perhaps the last is not the least necessary element. How often, in moments of thoughtlessness or impatience, we utter words that, almost as soon as they are spoken, we would give much to recall, or, at some intended or supposed slight, we give vent to our outraged feelings, which, had we the forbearance to restrain, would bind our friend to us with a still stronger tie of love and respect.

There is another element we find necessary to exercise in our intercourse with our friends, and that is—faith in them. Once allow ourselves to doubt their good intentions, or put our own construction on their good actions, thinking they are just doing kind acts to further their own end, or to gain popularity, we will find ourselves in a very unenviable frame of mind. No doubt we pride ourselves that we can see deeper than others, and so forget "to honor them with truth, if not with praise."

Any secret or confidential information confided to us by our friends should be regarded as a sacred trust. Never be guilty, on any account, and especially for the mere love of gossip, of breaking the imposed trust, but guard it as you would your friend's purse.

Another plank in the platform of friendship (and, indeed, upon it rest all the others) is sincerity. Is there anything so disastrous to our friendship, anything that so easily severs the silken tie that binds friends together, as to find that our supposed friend is insincere? With what pain we murmur, Tekel! Tekel!

So then, first, if we wish to keep our friends, let us be what we expect them to be—sincere in all we do and say. Doubtless, this is hard, but the constant adaptations of action to the right intention will win the day.

Then, again, remembrance and practice of the Divine injunction: "Do unto others as you would they should do unto you," and "Bear one another's burdens," are sure means of retaining our friends. Let us be careful of others' feelings, always remembering that, after all, the members of the great human family are very much alike in their sensibilities, feeling those things most keenly which touch on their own peculiar troubles.

There is a wise old saying: "Never mention murder to the family of the man who has been hung for a like crime." So, in conversation, keep as far as possible from those subjects you know will wound the feelings and lay bare the family skeleton.

Where can we find a higher type of ideal friendship than that expressed by the poet, Tennyson, in his "In Memoriam," dedicated to his dead friend. He gives us a glimpse of what we ourselves should be, if we would have the friends of our youth life-long friends, and climb with us the "altar-stairs of life." As we pass from youth to maturer age, is not our friendship often purified from dross by the "changes and chances of this mortal life?" As Miss Procter writes:—

"I shall know by the gleam and the glitter
Of the golden chain you wear,
By your heart's calm strength in loving,
Of the fire they have had to bear.
Beat on, true heart, forever;
Shine bright, strong golden chain,
And bless the cleansing fire,
And the furnace of living pain.

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES:—

All too soon has May's prophecy been verified, and although we feel some lingering regrets for the departed, we joyfully greet the coming of the "Peerless Goddess of the year." To those of my boys and girls who go to school even this lovely month will pass too slowly, because they are looking forward to the summer holidays, and every intervening day seems, oh! so long. To talk of this delightful time but makes the longing greater, and, as the realization is yet a few weeks distant, we will leave the subject.

I promised to tell you some flower legends, and when more appropriately than now; but I must confine myself to two or three, lest the editor grumble at my taking up too much space. It is said that all the flowers were growing in a beautiful garden, in which their Maker used to walk, and as He passed among them each flower "bent on its lowly stalk"; but, as the legend says:—

"The lily was vain of her beauty,
And, as His step drew near,
Stood proudly erect and stately,
And said: "I am fairest here."
The Master gazed on it sadly,
In His gaze grief gathering slow,
Till the lily bent before Him,
The lowliest of the low;
And the tear that fell on its petals,
As sadly He turned away,
May be found a glittering dew drop
In the lily's heart to-day."

The moral in the above legend is self-evident, Perhaps none is greater favorite than the "little flower with eye of blue," the Forget-me-not, and of it many legends are told, and I shall give you two of them.

One day, in Germany, a young soldier was taking a farewell walk with his lady love, when, passing by a swiftly-flowing stream, she saw growing in the water a pretty flower, and requested him to get it for her. In trying to grasp it, he lost his footing and fell into the water, but before being swept away he managed to reach out the flower to her, and his last words were, "Forget me not!" so the flower has ever since borne that name.

When to flowers so beautiful
The Father gave a name,
There came a little blue-eyed one—
All timidly it came;
And standing at the Father's feet,
And gazing at His face,
It said, with meek and timid voice,
Yet with a tender grace:
"Dear Lord, the name Thou gavest me,
Alas! I have forgot."
The Father kindly looked on him
And said, "Forget Me not."

The June roses have not yet started to bloom, but we have many other beautiful flowers to console us during their absence. I must tell you what a delightful drive I had one day recently. Our road lay near a river which flows between two steep and thickly-wooded banks, and although we could hear its murmuring, it was only occasionally that we caught a glimpse of the bright, sparkling water. The trees on either side of us bent over and formed a bower of leaves to protect us from the sun, and flowers and ferns brightened the landscape all around us. Returning in the evening, the song of the whip-poor-will added to our pleasures, and I enjoyed myself so much I was almost sorry when I reached home—the dusty old city once more.

One of my boys wrote me some time ago and told me he works every summer to earn money to go to school, and is now preparing to enter the Normal School. Well done, Harry! you are made of good material, and are sure to get along; I admire your spirit, and wish you every success. I would like to know what place you will occupy ten years hence. If Uncle Tom is a true prophet, it will not be a lowly one.

I have been so busy lately that I neglected writing until almost the last day, and now I am obliged to hasten, but you will soon hear again from

UNCLE TOM.

P. S.—Uncle Tom proposes to hold a Word Competition, and trusts it will prove interesting to the nephews and nieces. A prize of \$2.00 will be given for the longest and most correct list of words formed from the letters contained in the two words, FARMER'S ADVOCATE, all lists to be in our office by July 3rd.

RULES.

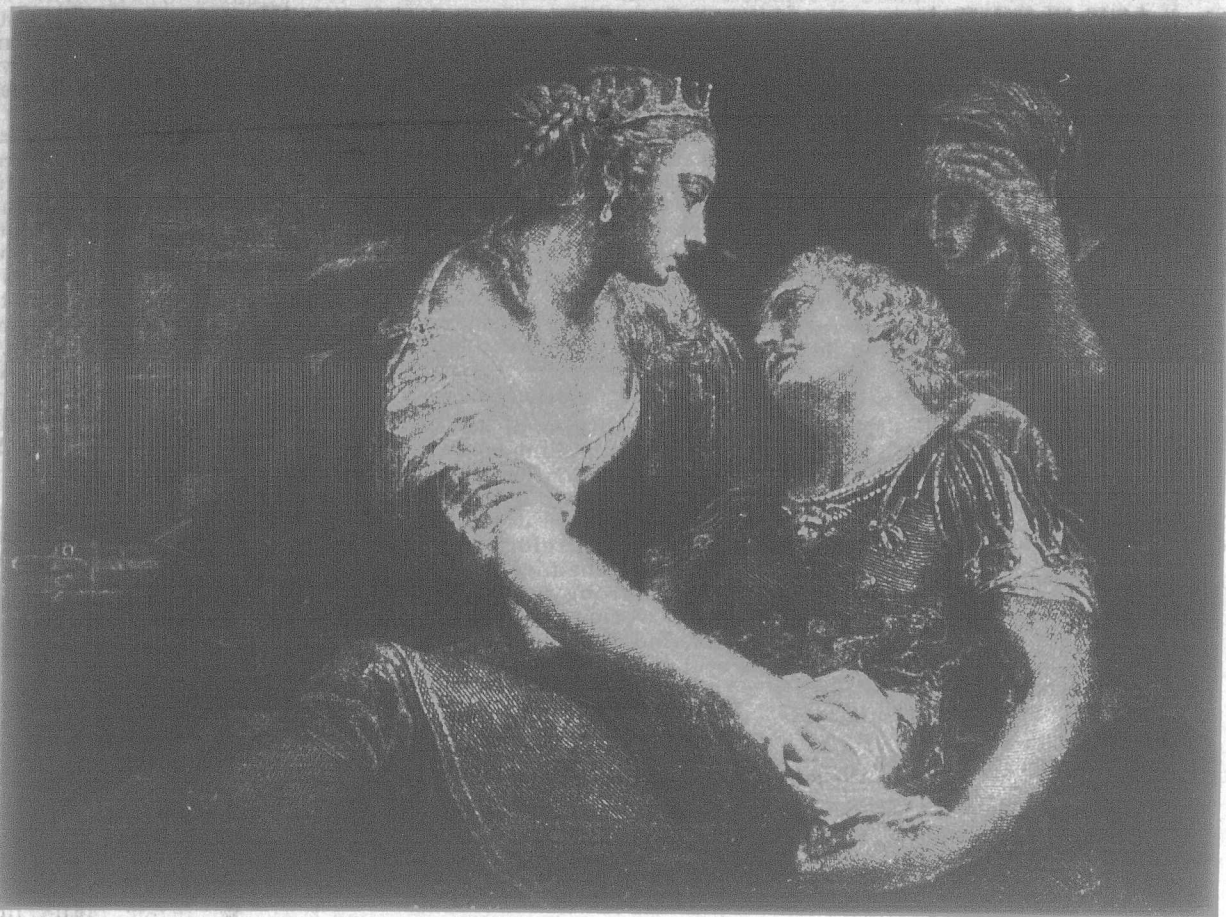
1. Write only on one side of the paper.
2. No letter to be used oftener in the same word than it appears in FARMER'S ADVOCATE.

3. No abbreviations or proper names allowed.
4. All misspelled words will be cancelled.
5. The singular and plural forms of the same word not admissible.
6. All lists must be numbered and the total written plainly at the top.

The Death of Mark Antony.

FROM THE ORIGINAL PAINTING BY POMPEO BATTONI.
(ETCHED BY S. RODRIGUEZ).

Perhaps the most dazzling romance in history is that of Antony and Cleopatra. This picture gives us one of the last scenes in that magnificent and tragic drama. After his disgraceful defeat at Actium, which was due to his insane love of Cleopatra, Antony was a prey to melancholy, and for a short season held scarcely any intercourse with the Queen. Ere long, however, they were on the old terms of intimacy, and soon, also, Antony's spirit revived, so that when Caesar again approached with his forces, he determined to make a fight that should give him either victory or an heroic end. But when the opposing forces met, first his navy and then his army deserted to the enemy, and Antony was left with only a few personal attendants. In his astonishment and despair, he attributed the desertion to the treachery of Cleopatra. Learning that Antony thus suspected her, and fearing the effects of his anger, Cleopatra fled to a strong, tower-like mausoleum, which she had prepared as a refuge in time of calamity. At the same time she caused Antony to be informed that she had put an end to her life. This turned the current of her lover's feelings into the old channel. It was the



THE DEATH OF MARK ANTONY.

last bitter stroke of misfortune. Why should he longer live? He commands his trusty servant, Enos, to thrust him through; but he, to escape that painful duty, falls upon his sword and dies at his master's feet. Thereupon Antony inflicts the fatal blow upon himself. As his life ebbs slowly away, Cleopatra sends, begging him to come to her in the monument. He is instantly carried thither, but, as she cannot descend, lest Caesar's minions take her, it was necessary to draw the dying man up into the monument; this she and her two women, with the greatest difficulty, accomplished. Here Antony died in her arms, shortly to be joined in the spirit world by her whose love undid him. The spirit of this moving scene is vividly conveyed in the verses of General W. H. Stytle, some of which we quote:

I am dying, Egypt, dying,
Ebbs the crimson life-tide fast,
And the dark, Plutonian shadows
Gather on the evening blast.
Let thine arm, O Queen, unfold me,
Hush thy sobs and bow thine ear,
Listen to the great heart secrets
Thou and thou alone must hear.

Let not Caesar's servile minions
Mock the lion thus laid low;
'Twas not foeman's arms that felled him,
'Twas his own that struck the blow;
His, who, pillowed on thy bosom,
Turned aside from glory's ray,
His, who, drunk with thy caresses,
Madly threw a world away.

As for thee, star-eyed Egyptian,
Glorious sorceress of the Nile,
Light the path to Stygian horrors
With the splendors of thy smile.

Give the Caesar crowns and arches,
Let his brow the laurel twine,
I can scorn the Senate's triumphs,
Triumphing in a love like thine.

Pompeo Battoni was born at Lucia in 1708, and died at Rome in 1787. He was one of the most celebrated artists of the decadence, and some of his works have enjoyed great popularity.

Puzzles.

PRIZE PUZZLE.

1—SQUARE WORD.

My FIRST is "something lean and rough;"
To show its name, I've said enough;
I'll call my SECOND, to make it rhyme,
"A milky fluid derived from chyme."
Now, for my THIRD, write at your will
"A clause that's added to a bill."
If you will catch my FOURTH, be aly,
For it is "brisk and lively."
Or, should you meet a pretty dame,
Perhaps this LAST may be her name.

G. W. BLYTH.

2—

Five little patients here I have,
In a precarious state;
My FIRST, though nigh to death alway,
In a chair can sit up straight.

My SECOND I visit much indeed,
For in bed he long hath lain;
My THIRD is always in good spirits,
Though never free from pain.

My FOURTH in scowls and frowns appears,
And never out of trouble;
My FIFTH you cannot make him straight,
In two he'll always double.

CHARLIE S. EDWARDS.

3—ENIGMA.

Oh, how many tales of me
could be told
By the rich and the poor, by
the young and the old,
For I never do good wherever
I am,
Although I have been from
creation of man;
No legs have I got, yet how
swift do I go!
And often I cause the blackest
of woe.

ADA SMITHSON.

4—CHARADE.

My FIRST is "to study care-
fully."
Just as my cousins do;
My SECOND is "an inhabit-
ant,"
Who to his country, is
true;
My THIRD is a very small in-
sect,
Which works almost con-
stantly;
My WHOLE is what we all
must use
When writing to Uncle T.

ADA SMITHSON.

5—RIDDLE.

My FIRST is to conquer,
My SECOND is a part,
My TOTAL often is applied
To a great work of art.

Answers to May 1st
Puzzles.

1—M O T T O
O T H E R
T H I R D
T E R S E
O R D E R

- 2—X. L. C. R. (Excellior).
- 3—Love-Knot.
- 4—Persist.

Novel Frames.

The materials for one are primitive—stout thread, pasteboard, pine bark and a little varnish. Separate the bark into thin flakes, which is easily done; select nice, smooth pieces, and cut leaves out of them. I chose my model, oak leaves, from nature, and marked the veins with a penknife. Having cut the pasteboard to the desired shape for the frame, sew on the leaves, taking care that each one overlaps the other so as to hide stitches and cover the ground work. To finish the back and put in the picture and glass, paste stout lining, in which a slit has been cut for the picture, over the back, taking care that room is left for it to slide in and out. If the picture is to be a fixture, one may paste all together. If the frame is to stand on a table or bracket, it must be furnished with a stout support; a piece of thin board is best. To hang, and this way is easier, attach a cord. Varnish the frame afterwards.

Another frame is made out of cork carpet-lining, often packed around bottles. This is gilded, and need not cost more than a few cents for turpentine and varnish, and perhaps five cents worth of gilding, in powder form. But that is not the cheapest, for my latest achievement in frame making costs nothing but a little time, trouble, and a scratch or two.

Choose pieces of board—the cover of a dry-goods box will do—and fit together for the frame, making a groove at the back for the picture to rest it. If you are accurate, the corners will be little trouble; but, if not, and if they look somewhat unsightly, it will not much matter, as the wood will not show in the completed frame. Gather the lichens and mosses which grow on old posts and trees, and glue them securely over the frame. You will have a pretty and rustic, yet artistic, frame.—The Housekeeper.

ROYAL GROWN SOAP

HAS NO EQUAL!

Beautiful Picture for 25 Wrappers.

ROYAL SOAP CO'Y,
Winnipeg.

BINDER TWINE

During the season of 1894 we will again sell that well-known Binder Twine—the American Stanley Sisal. This is the fifth season we have sold this twine, and we have yet to hear of any twine, at any price, which gives better satisfaction. It is a pure, white, unmixed Binder Twine of great strength, and guaranteed to pass through any machine without a hitch or a stop of any kind. Our customers of former years are loud in its praises, and we anticipate a large demand. We will take it as a favor if orders be sent in early; in fact, at once. We cannot foresee the exact demand, and, of course, being an imported twine, our stock is limited.

The American Stanley Sisal Binder Twine is put up in canvas sacks, containing 60 lbs. each. Our terms are always cash with the order. We never break the sacks of 60 pounds. Our prices for this very superior twine are as follows:—

To Ontario farmers, in quantities of not less than two sacks (120 pounds), only eight and one-half cents per pound (8½c.); delivered to your nearest railway station free.

To Quebec farmers (not less than 120 pounds), delivered free to any station in Quebec, for nine and one-half cents per pound (9½c.).

To Manitoba farmers (in quantities of not less than 300 pounds), delivered free to any railway station in Manitoba, for eleven (11c.) cents per pound.

To Northwest Territory farmers (not less than 300 lbs.), delivered free to your nearest railway station for twelve and one-half cents (12½c.) per pound.

The above are our very lowest prices, no matter how large your order is.

Order at once to be sure of getting this grand twine. Address

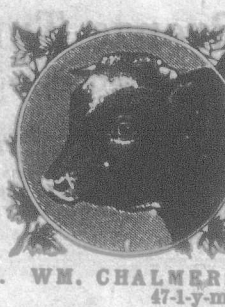
STANLEY MILLS & CO

Hamilton, Ontario.

5-4-3m

A FINE SHORTHORN BULL AND Two Choice Heifers FOR SALE.

Will have two litters of Yorkshires in spring from prize-winning sows and sire at Brandon and Souris shows. Orders for spring delivery booked at \$5 each. Correspondence solicited.



WM. CHALMERS, 47-1-y-m
Hayfield, Man.

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JOHN S. ROBSON, Proprietor.

SHORTHORN CATTLE

A few choice young Bulls and Heifers for sale now. Write for particulars. 10-1-y-m

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The Prize-Winners of the West. Females of all ages, also young bulls for sale at bottom prices. Nearly all the most popular families represented. The diploma bull Poma 3rd's Clothild at head of herd, whose eight nearest female ancestors have better records than a average 22 lbs. 4 oz. each in seven days. Also Breed Improved Large Yorkshire Pigs.

Address— W. J. YOUNG, Emerson. 11-m

D. FRASER & SONS, Emerson, Manitoba,

Breeders and Importers of DURHAM CATTLE, SHROPSHIRE and SOUTHDOWN SHEEP, and PURE-BRED POLAND-CHINA PIGS

YOUNG STOCK FOR SALE

WM. SHARMAN, Souris, Manitoba,

BREEDER OF PURE HEREFORD CATTLE AND YORKSHIRE PIGS

A few thrifty young bulls from 12 to 24 months old, sired by Tom Wilton (464), a son of Conqueror and grandson of the great Lord Wilton, from imported and home-bred cows, for sale now at prices to suit the times. 9-c-m

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Treherne, Manitoba. BREEDER OF Holstein Cattle and Improved Large Yorkshire and Red Tamworth Swine. A grand lot of young pigs in April and May at low prices. Orders now being booked. Correspondence solicited. 67-y-m

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. PRICES LOW. M. B. V. MILLIDGE, 11-1-f-m St. John's, WINNIPEG.

BERKSHIRES



JOHN A. ROSS, BUTTERFIELD, MAN.

I can supply now a few of different ages of excellent pedigree. Booking orders for spring delivery. Write for what you want. 63-y-m

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 cheap. Some are imported. 65-1-f

R. J. MITCHELL,

Poison Avenue, - Winnipeg, Man.

BERKSHIRE PIGS

Bronze Turkeys and Plymouth Rocks. 61-y-m

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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:

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Blue Ribbon and Redcap are Still Unequaled.

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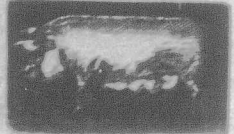


I send out nothing but the best. Made a clean sweep in thoroughbred pigs last fall at Fort Qu'Appelle, Indian Head and Regina fairs. Prices low. Address.

B. WOOLHOUSE, Loon Creek, N. W. T.

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.



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Under the authority of Secs. 8, 19, 20, 22 and 23 of the Veterinary Association Act, 1890 (S.C. Chap. 69) the following persons only are entitled to practice as Veterinary Surgeons in the Province of Manitoba, or to collect fees for the service rendered as such:-

- Alton, W. W. Wawanam. Coote, H. L. B. Minnedosa. Coxe, Samuel. Brandon. Dunbar, W. A. Winnipeg. Dann, Joseph. Deloraine. Fisher, John Frederick. Brandon. Fisher, Peter M. Melita. Hinman, Willet J. Winnipeg. Hopkins, Arthur George. Carberry. Henderson, W. S. Carberry. Irwin, John James. Stonewall. Lipsitt, J. H. Holland. Little, Charles. Winnipeg. Little, William. Boiesvain. Little, Michael. Pilot Mound. Livingston, Archibald M. Melita. McFadden, D. H. Emerson. McMillan, Adam. Oak Lake. McNaught, David. Rapid City. Morrison, Wm. McLeod. Glenboro. Murray, George F. Morden. McLoughry, R. A. Elkhorn. Peole, John Wesley. Carberry. Rutherford, John Gunton. Portage la Prairie. Shoults, Wm. A. Gladstone. Smith, Henry D. Winnipeg. Spiers, John. Virden. Sweet, T. J. Morden. Taylor, William Ralph. Portage la Prairie. Thompson, S. J. Carberry. Torrance, Frederick. Brandon. Walker, J. St. Clair. Boissevain. Young, M. Manitou.

The practice of the veterinary profession in Manitoba by any other person is in direct contravention of the statute and renders him liable for prosecution. W. J. HINMAN, Registrar. 9-6-m

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To make room for young stock am offering a fine lot of hens at \$2.00 each. Eggs for hatching, \$2.00 per setting. My birds have won prizes in 1892, 1893, 1894. Single comb White Leghorns only.



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White Leghorns and Light Brahmas.

GET OUR CATALOGUE AND PRICE LIST FOR 1894.

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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. L. Brahmas 2 " 13. One P. Rock Cock 1. Orders promptly attended personally. No circular. Send stamp. Address, A. WILLIAMS, Boundary St., WINNIPEG, MAN. 67-y-m

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EGGS from 1st prize breeding pen Light Brahmas (at recent Manitoba Poultry Association Show, average score of hens 90) at \$3 per 13. Other pens at \$2 to \$5 per 13. Langshans from imported birds at \$2.50 per 13. A good, imported Cockerel and a few Hens for sale.

Address- C. M. RICHARDSON, FARMER'S ADVOCATE, WINNIPEG, MAN. 66-1f-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, 95 to 96; \$2 per 13 eggs. Plymouth Rocks-Cockerel "Hero," 93; points; hens, 91 to 92; \$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.

M. MAW, Winnipeg, Man. 62-y-m

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FOR 1894

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Light and Dark Brahmas, Buff and Partridge Cochins, Barred Plymouth Rocks, Black Langshan, Black Spanish, Fit Game, Guinea Fowls and Black African Bantams, Silver Grey Dorkings. Fowls for sale of each variety. 1 won 14 first prizes out of 16 entries in 1891, and 10 firsts, 7 seconds and 1 third in 1892, at Winnipeg Industrial Exhibition. Send stamp for catalogue and price list. 55-1-y-m

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Prize-Winning Buff Cochins, Blk. Spanish, W. Leghorn, W. Wyandottes, Camp Bantams and Mammoth Pekin Ducks. ALL EGGS, EXCEPT WYANDOTTES, REDUCED TO \$1 PER 13.

SENT SAFELY. PRICES REASONABLE. A. M. Matheson, BRANDON, MAN. 65-tf-m

FORT ROUGE POULTRY YARDS

Eggs for Hatching From Barred and White Plymouth Rocks, Silver, Light 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

WINNIPEG : POULTRY : YARDS

S. WISE, - PROP. BREEDER OF PRIZE-WINNING

GOLDEN WYANDOTTES.

Prizes won in 1892, 1893 and 1894. Price of eggs for balance of season reduced to \$2 per 13, and \$3.50 per 26. Barred Plymouth Rock eggs \$1.50 per 13. Address- 633 Ross Ave., 10- WINNIPEG.

Reid's Poultry Yards

BREEDER OF:- 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-

AN : UNPARALLELED : RECORD.

At the Manitoba Poultry Assn. Show, 1894, my SILVER WYANDOTTES won -Pullets, 1st, 2nd & 3rd; Cockerels, 1st & 3rd; Hens, 2nd & 3rd; Breeding Pen, 1st and Medal for Highest Scoring Pullets at the Show. Eggs from prize-winning birds, \$3 per setting; from other pens, \$2, which are the same stock, but not shown. W. D. LAWRENCE, MORDEN, MAN. 67-f-m

EGGS : FOR : HATCHING.

- Golden and Silver Hamburgs \$3 per setting
- Light Brahmas 3 "
- Langshan 3 "
- Silver Wyandottes 3 "
- Blue Andalusians & Buff Leghorns 3 "
- Barred P. Rocks and B. Minorcas 3 "
- White and Brown Leghorns 2 "
- Pit Games 2 "
- Cornish Indian Games 4 "
- Black and Brown Red Games 3 "
- Rouen and Pekin Ducks 2 per 11.
- Bronze Turkeys 3 " 11.

Chicks for Sale after July 1st. A fair hatch guaranteed. Address, AUSTIN POULTRY FARM, AUSTIN, MANITOBA. WM. JONES, Prop. 63-y-m

E-G-G-S

LIGHT : BRAHMAS

EXCLUSIVELY - Only \$2 per 13. Orders booked and filled in turn as received. WM. BRAMMALL, 375 Jarvis Ave., WINNIPEG, 60-f-m

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ALEXANDRA CREAM SEPARATOR

Our Separator does not go through the hands of half a dozen agents before reaching our customers. We import them direct from the manufacturers in England; that is why we sell it 25% cheaper than any other Separator. S. M. BARRE, Dairy Supplies and Produce, 249 KING ST., WINNIPEG.



Send in your orders early. Butter bought and sold at the highest figure. Proceeds promptly remitted. 59-y-m

May 23rd, 1894.

SPECIAL CIRCULAR TO SHIPPERS ONLY.

(Containing Changes in Prices from Regular Monthly Circular of May 1st.)

CONDITION OF MARKET.

There are no advances to note, but declines in Sheep Pelts, Dry Hides, Tallow, Deerskins, Mink, Otter, Wolf and Muskrat, and a very dull demand for Salted Hides and Sheared Wool. Mink are in dull demand. Trade is very dull, but we cannot see how there can be much further decline, except on Ginseng, which should be shipped in promptly before prices are lower. During warm weather Dry Hides, Deerskins, and Furs must be beaten often to keep out the bugs, which will destroy them; but it is better to keep them shipped up close and save this work.

JAS. McMILLAN & CO., (INCORPORATED), MINNEAPOLIS, MINN.

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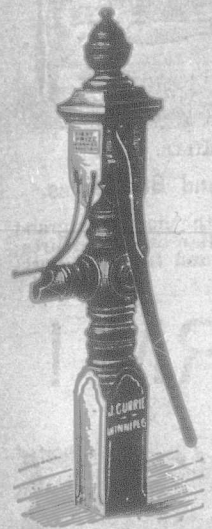
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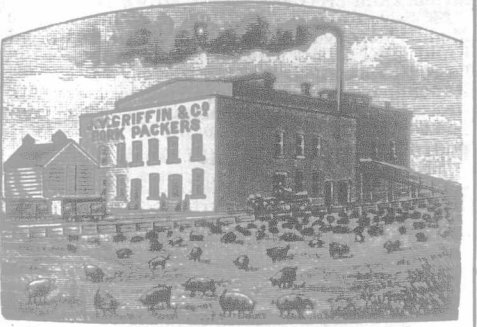
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5-Bar, for \$5. Others in proportion. MOUTH-ORGANS FROM 25 CENTS UPWARDS. ALL CLASSES OF STRINGS, SMALL GOODS, MUSIC & MUSIC BOOKS. J. FRANK GRUNDY, 59-y-m P. O. Box 259, WINNIPEG, MAN.

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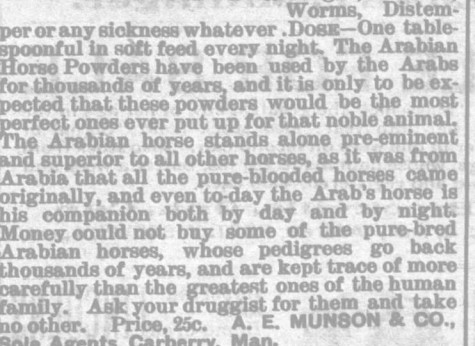


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ARAB HORSE POWDER. THE BEST IN THE WORLD

These Powders will Purify the Horses' Blood, Build up their System and put them in good condition, making the horse Loose-winded and hardy. Anyone using these Powders will find their horses entirely free from Coughs, Colds, Worms, Distemper or any sickness whatever. Dose-One tablespoonful in soft feed every night. The Arabian Horse Powders have been used by the Arabs for thousands of years, and it is only to be expected that these powders would be the most perfect ones ever put up for that noble animal. The Arabian horse stands alone pre-eminent and superior to all other horses, as it was from Arabia that all the pure-blooded horses came originally, and even to-day the Arab's horse is his companion both by day and by night. Money could not buy some of the pure-bred Arabian horses, whose pedigrees go back thousands of years, and are kept trace of more carefully than the greatest ones of the human family. Ask your druggist for them and take no other. Price, 25c. A. E. MUNSON & CO., Sole Agents, Carberry, Man.



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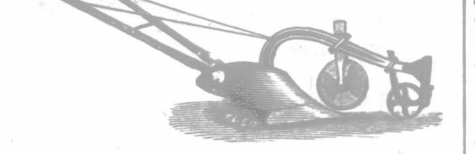


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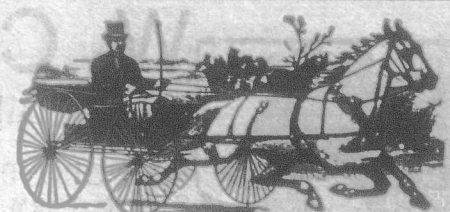
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American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LIVING, Sec., Lafayette, Indiana. 13-1-y-om

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THE TROTTER STALLION MORELIGHT 9337,



record 2:30, will stand for service at Ingersoll London, St. Thomas, Aylmer and Brownsville. See route bill Morelight 9337, record 2:30, was sired by Twilight 315, sire of Shawan, 2:16; Mat T., three-year-old, 2:24; Dr. Tilton, 2:24; Northlight, 2:24; Morelight, 2:30; Eva, 2:33. Lady Carr, dam of Morelight, dam of Ambassador, 2:21 (sire of 34 from 2:15 to :30); Alexandre, 2:24; Mary S., 2:28; Morelight, 2:30; Strathbane, trial 2:30; to wagon over Maud Granger, 2:24; Alar Clay, trial 2:29 (sire of Alar Clay, Jr., 2:29); Sally Dudley, dam of Markland, 2:21; Juno, dam of Millant, 2:24; Pounmore, sire of Crest, 2:22. Service fee \$25 to insure. A. DUNN, Box 451, Ingersoll. 7-0-0

FOUR IMPORTED GLYDESDALE STALLIONS.

All four years off. Fresh horses of fine quality and the best breeding. Prices according to the times. 11-1-f-om NEIL SMITH, Brampton.

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Shorthorns and Leicesters - OUR SPECIALTIES. Choice Young Stock of Both Sexes for Sale. E. GAUNT & SONS., 13-1-y-om St. Helens, Ont.

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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. Farm one mile from G. T. R. station. 7-f-om

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, 24-y-om Stratford.

H. CARGILL & SON, SHORTHORNS.

Two imported bulls are now at the head of our herd. Stock of both sexes and different ages from the best imported and home-bred cows now for sale. 11-y-om



SHORTHORN BULL.

I have still a grand Young Bull fit for service, sired by Roman Prince Imported. 10-4-om S. B. GORWILL, FANSHAW.

We now have FOR SALE Four Superior Shorthorn Bulls of different ages, sired by such noted bulls as imported Baron Lenton and imported Reporter and Cavalier, also some extra good Cows and Heifers. J. & A. SOMMERVILLE, 2-1-y-om ELDER'S MILLS, Ont.

H. I. ELLIOTT, Riverview Farm, Danville, P. Q. Breeder of Scotch Shorthorns. Representatives of the most noted Scotch families: Duchess of Glosters, Claret, Lovely, Nonpareils, Minas, Rosebud and Mayflower. Herd headed by the imp. Cruickshank bull, King James. 15-1-y-om

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Stock for sale. 17-1-y-om LENNOXVILLE, P. Q.

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At the head of my herd is the Kinnellar bull imp. Royal George, while my cows and heifers are principally of the Wimple and Rosedale, also of Kinnellar breeding. Young bulls are now offered. JOHN GILLSON, 13-y-om London, Ont.

IF YOU WANT a well-bred Shorthorn Bull for use on grade cows, or a heifer to start a herd with, or some Improved Yorkshire pigs from imported sow Lady Lindsay (42), write C. G. DAVIS, Woodland's Terrace Farm, Freeman P. O. 13-1-y-om

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I will sell bull calves from my stock bull, Royal Sovereign, at prices to suit the times. Come and see me or write. M. J. IRELAND, Copetown, Ont. 15-1-y-om

BRILLIANT CHIEF, a No. 1 Shorthorn Bull

B calf, 13 months' old, for sale, at a moderate figure; all dark red; sired by our stock bull Bampton Chief - 14880 - dam a good milker. Write for particulars. - R. RIVERS & SONS, Spring Hill Farm, WALKERTON P. O., ONT. 15-1-y-om

TWO SHORTHORN BULLS FOR SALE.

Good ones; prize-winning ancestry; low prices. Come and see them. H. & W. D. SMITH, Hay, Ont. Exeter, G. T. R., one-half mile. 13-1-y-om

SHORTHORNS, SHROPSHIRE AND BERKSHIRE

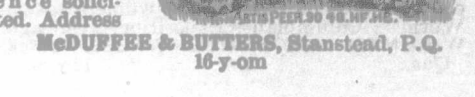
Choice young stock of all the above breeds always on hand, and for sale at reasonable prices. W. G. PETTIT, 13-y-om Freeman P. O., Burlington Stn., G. T. R.

WANTED TO PURCHASE PURE KERRY BULLS AND HEIFERS

ADDRESS-D. McEachran, 10-0-om Montreal, Que., Canada.

SUNNYSIDE HOLSTEIN-FRIESIANS

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



HOLSTEIN BULL FOR SALE

To avoid in-breeding I must sell my stock bull, Netherland Romulus. This is one of the best Holstein bulls in Canada. He won second premium at the Industrial this year in the strongest class ever shown there. Warranted right every way, perfectly quiet, and as good as when he was a two-year-old. Price very low. R. S. STEVENSON, Ancaster P. O., Ont. 13-1-y-om

LARGE IMP. YORKSHIRE PIGS

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 BROS., Oxford Mills P. O., Ont. Kemptville Station, C. P. R. 5-1-y-om

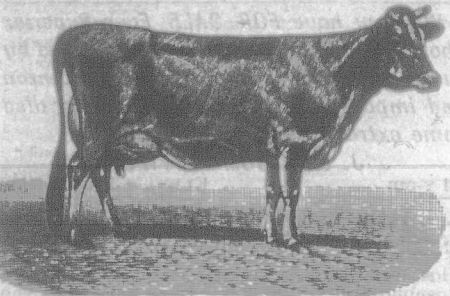


HOLSTEIN-FRIESIANS.

If you want the choicest of the breed, then write or visit Maple Grove. Only the very best are kept and bred here. No culls sold from my herd, they go to the butcher. Choice young things from the great Colanthus Abbe-kerk now for sale at living prices. Also some extra fine Berkshire pigs. Address, H. BOLLERT, 3-1-y-om CASSEL, ONT.

FOR HEREFORDS

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



Jersey Cows, Heifers and Calves, registered and High Grades, rich breeding and good colors. Our motto, "Individual merit by liberations." Economy of production and value of product. Pedigrees written in butter. Come and see, or address J. O. SNELL, EDMONTON, ONT. 5-y-om

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

JERSEY CATTLE

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

EXMOOR JERSEYS.

H. COOKE, Orillia, Ont. Breeder and importer of the choicest milking strains of Jerseys. Inspection solicited. Prices right. 3-1-y-om

JERSEYS AND TROTTERS.

At the head of herd is Nell's John Bull, grandson of Ida of St. Lamberts. Females from \$75 to \$150. Our stud is principally composed of the get of Almont Wilkes & 192 and General Stanton, the sire of more horses in the 30 list than any sire in Canada. Jonathan Carpenter, 13-1-y-om WINONA, ONT.

FIRST PRIZE JERSEY HERD.

Two young bulls from first prize cows and first prize bull at Toronto. Several heifers to calve shortly, suitable for family cows. 3-1-y-om J. H. SMITH, Highfield, Ont.

BARCHESKIE HERD OF AYRSHIRES

Andrew Mitchell, the largest breeder and exporter of Ayrshire cattle in Scotland, has always on hand and for sale bulls, cows and heifers of the choicest breeding and quality. Inspection invited. Prices on application. Apply to ANDREW MITCHELL, 3-1-y-om Barcheskie, Kirkcudbright, Scotland.



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

W. C. EDWARDS AND COY IMPORTERS AND BREEDERS.



PINE GROVE STOCK FARM, Rockland, Ont. SCOTCH SHORTHORNS.

The imported Cruickshank bull Grandeur is at the head of this herd of Imported and Home-bred Cows and Heifers of the most approved Scotch families. ALEX. NORRIE, Manager.

ELMHURST STOCK AND DAIRY FARM, CLARENCE, ONT. Shorthorns, Shropshires and Berkshires

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



Laurentian Stock AND Dairy Farm: NORTH NATION MILLS, P. Q. Ayrshires, Jerseys and Berkshires. Imported Emperor at the head of a grand lot of Imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires. 7-1-y

THORNCLIFFE STOCK FARM!



Montrose, The Ruler, Carruchan Stamp, Knight Errant and other celebrities. My stock in the above lines were very successful at all the large shows last year. Call and examine our stock before purchasing elsewhere. 19-1-y-om

I have on hand the best young GYSDALE Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darley, Macgregor, Energy, Lord.

SHROPSHIRES. Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also Rams and Ewes of this year's importation.

SHORTHORNS! CHOICE YOUNG HEIFERS and BULLS by the celebrated Cruickshank bulls NORTHERN LIGHT -AND- VICE CONSUL

ROBERT DAVIES, Proprietor. P. O., Toronto.

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, \$300. IMPROVED YORKSHIRES.—We claim to have the longest, deepest and most typical LARGE YORKSHIRES in AMERICA, and the reason is we have paid more money and imported more pigs from the best herds 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, 9-y-om J. Y. ORMSBY, Manager.

COTSWOLDS

I HAVE FOR SALE Shearling Rams, Shearling Ewes, Ram and Ewe Lambs FROM IMPORTED STOCK. ALL REGISTERED. T. HARDY SHORE, 9-1-y-om Glanworth, Ont.

JERSEY CATTLE FOR SALE

Bred for butter. Q. 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 oz. butter in one week on second calf. Also stock from the greatest living prize bull, Canada's Sir George, whose dam made 238 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, Brookville, Ontario, Canada. 8-y-om

JOHN A. MCGILLIVRAY

Jerseydale Farm, Uxbridge, Ont.; Midland Div. C. T. R., importer and breeder of Dorset Horned Sheep 19-1-y-om

WOODROFFE STOCK AND DAIRY FARM.

Ayrshire Cattle. A choice lot of young Bulls and Heifers of the richest milking strain now on hand. Correspondence solicited. Address, J. G. CLARK, Ottawa, Ont. 19-1-y-om

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, Balles, Wright and Clark. Rams to head flocks a specialty. R. W. STEVENS, LAMBETH, ONT. London Station. 5-y-om

T. W. HECTOR

Importer and Breeder of Dorset Horn Sheep. The oldest flock in Canada. P. O.: Springfield on the Credit. Stations: Springfield and Cooksville, C. P. R.; Port Credit, G. T. R. 6-1-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

IMPORTED SHROPSHIRE EWES

And their lambs for sale by car lots; also a very choice Short-horn Bull calf, ten months old. W. S. HAWKSHAW, Glanworth P. O., Ont. 7 miles south of London. 7-1-y-om

To Stockmen & Breeders.

LITTLE'S PATENT: FLUID NON-POISONOUS SHEEP DIP AND CATTLE WASH.

For the destruction of Ticks, Lice, Mange and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc. Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy. The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock: "MAPLE SHADE" HERDS AND FLOCKS. BROOKLIN, ONT., Sept. 4th, 1890.

J. YULL & SONS, Meadowside Farm, Ontario

Carleton Place. Our herd is composed of seventy-five head. Leonard Meadowside—1423—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

JOHN DRYDEN, BROOKLIN, ONT.

Makes a specialty of breeding choice SHROPSHIRE SHEEP -AND- Cruickshank Shorthorns

DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders. JOHN DRYDEN. Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, Ont. Sole Agent for the Dominion. 7-1-y-om

Imported OXFORD AND SUFFOLK SHEEP

—CONSISTING OF— 120 EWES AND 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. 3-1-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

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 JNO. PIKE & SONS.



BOULDER GRANGE FLOCK

REGI STERED SHROPSHIRES. Imported and home-bred stock of the finest quality and most fashionable breeding, with prices to suit the times. Inspection invited. C. W. GURNEY, 7-1-y-om Paris, Ont.

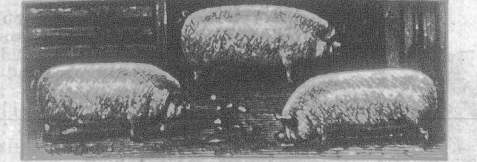


YORKSHIRE PIGS

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

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.,
Gait, Ont.

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. 3-7-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. 6-7-om

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. Pigs of all ages for sale, pairs supplied not akin. 8-7-om
GEO. GREEN, Fairview, Ont.

BERKSHIRES
Of the best strains not connected, from a number of grand sows and three different boars. Fifty-eight prizes won last season. All ages for sale, including sows in farrow. 3-1-7-om
WM. McALLISTER, Varna, 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. Can supply a few pigs from litters farrowed in January and February. These will be right for the fall exhibition where prizes are given for pigs of this year. We have also for sale some young boars fit for service. Write for descriptions and prices. 2-7-om

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. 8-7-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 Class Prince," "King Lee" and "Champion Duke." Also a few choice sows of Oct. litters. Write for prices or come and see my stock. 6-7-om

ISRAEL GRESSMAN, New Dundee,
—IMPORTER OF—
Large - English - Berkshires
4-7-om

GREAT SWEEPSTAKES HERD OF OHIO IMP. CHESTER WHITE SWINE.

Our herd won more first prizes and sweepstakes than all others combined, including Toronto, Montreal, London. Thirty imported and home bred sows for the spring trade. Orders booked for spring pigs in pairs or trios not akin. Stock for exhibition a specialty. Pedigrees furnished. Reduced rates by express. Write for particulars. H. GEORGE & SONS, Crampton, Middlesex County, Ont. 7-7-om

Registered Improved Chester White Swine & Dorset Horned Sheep are my specialties. Cleveland (Imp.) No. 330, whose sire won sweepstakes at the World's Columbian Exposition, heads the herd. Young stock ready to ship, and guaranteed as described. Write for particulars, etc., to R. H. HARDING, Mapleview Farm, Thornedale, Ont., Middlesex Co. 19-1-7-om

E. D. GEORGE
PUTNAM, ONT.

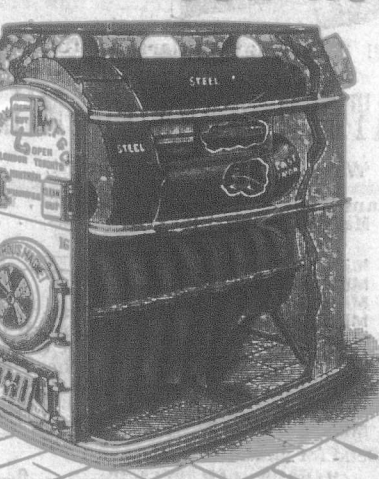
Importer and Breeder of Ohio Improved Chester White Swine

The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 15-1-7-om



Sheep, Hogs, Horses, & Cattle
ARE GREATLY IMPROVED BY GIVING THEM
"MAUD'S" CONDITION POWDER
MIXED IN FEED
PRICE, 25c. AND 50c. PER PACKAGE.
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.

MAKE YOUR HOMES COMFORTABLE



We can supply you with
- the best -
WOOD FURNACE
- IN CANADA. -
OUR - FAMOUS - MAGNET
- HAS NO EQUAL. -
EVERY USER DELIGHTED

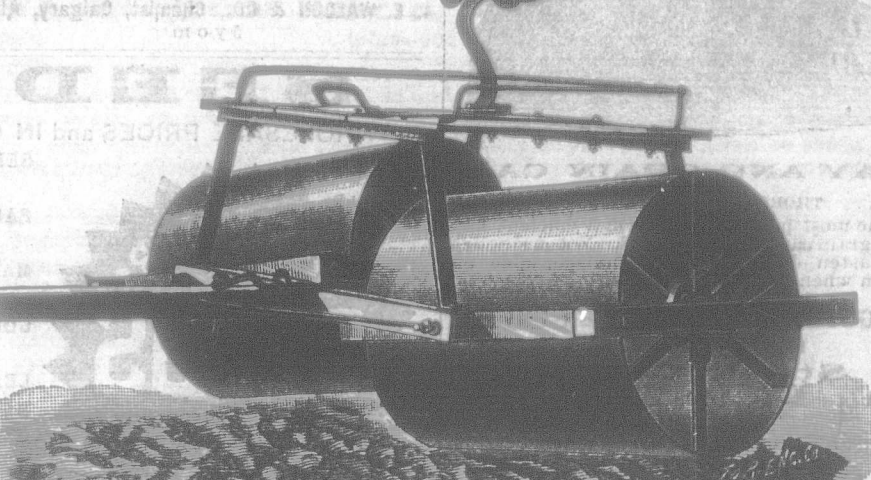
THE McCLARY MFG. CO.
7-7-om LONDON, TORONTO, MONTREAL, WINNIPEG, VANCOUVER.

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. 10-7-om

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. F. COLEMAN,** SOLE MANUFACTURER, SEAFORTH, ONT. Mention this paper. 24-1-om

THE OXFORD HERD OF REGISTERED POLAND CHINAS

Our herd of Improved Poland-Chinas won 23 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. 15-7-om
W. & H. JONES, Mount Elgin, Ont.

W. & F. ROW, AVON, ONT.

Breeders and importers of Poland Chinas and Tamworths. Young pigs of all ages, and both sexes furnished, not akin. A few Poland-Chinas boars fit for service on hand. Stock guaranteed as represented. 7-1-7-om

PINE GROVE HERD

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,
17-1-7-om Tapperville, Ont.

GODERICH ORGAN

High grade, fine tone. Send for Catalogue. Made at Goderich, Ontario. 1-7-om

Advertise in the Advocate.

COLLONEN POULTRY YARDS.
20 Mt. Brydges.

BIG REDUCTION

In price of eggs for the balance of the season after 20th May.

- Black Hamburgs, \$1 per 13.
- B. P. Rocks, - - - 75c. per 13.
- Br. Leghorns, - - - " " "
- W. Leghorns, - - - " " "
- S. Grey Dorkings, - - - " " "
- B. Minorcas - - - " " "
- Light Brahmas, - - - \$1 per 13.

HIGH-CLASS, THOROUGHBRED POULTRY.

Fresh eggs, securely but lightly packed, from prize pens of White, Silver and Golden Wyandottes, White and Barred P. Rocks, \$1 per 11. Indian Game eggs, \$2 per 13. Bronze Turkey eggs, 25c. each, or \$3 per 13. Stock for sale after July 1st.
I am Canadian agent for WEBSTER & HANNUM BONE CUTTERS and STONE CRUSHERS. Write me before you buy.

JNO. J. LENTON,
19-7-om Park Farm, OSHAWA, ONT.

NOTICES.

In writing to advertisers please mention the Farmer's Advocate.
"Have been highly satisfied with work done by my ad., and will come to you again." So writes A. M. Matheson, the poultry breeder of Brandon. See his ad. in another column.
The prize list of the twelfth annual exhibition of the Springfield Agricultural Society has come to hand. This is one of the best local shows in the Province, and the prize list is, as usual, good. It will be held in the Society's grounds on October 3rd and 4th.

The FARMER'S ADVOCATE special premium to be awarded to the sweepstakes herd, open to all beef breeds of cattle, at the Brandon Summer Fair, is a very handsome mantel clock, valued at \$20. It may be seen in the window of Mr. W. W. Matthews, the jeweller, 552 Main St., Winnipeg, from whose large stock it has been selected.
All parties having furs, hides, sheep skins, wool, seneca root, etc., to dispose of should notice the advertisement of Jas. McMillan & Co., Minneapolis, Minn., in this issue of the ADVOCATE. This company is one of the largest in the West, and they will be pleased to furnish copies of their monthly circular to all applicants. The circular contains price lists, and also directions to shippers, and other useful information regarding the products handled by them.

The Wilson Manufacturing Co., Hamilton, report a great demand this spring for their carts—the Queen and the Hamilton Jogging and speeding carts. These carts are becoming more popular every year, and are said to be both graceful and neatly proportioned, with a soft, pleasant motion, and are safe, reliable and easy riding. We would advise our readers to communicate with this firm before purchasing. See advertisement in this number of the paper.

We direct the attention of all interested to the separator belts advertised in our columns this issue. In this connection, Mr. Anthon Christensen announces that, without any doubt whatever, he is making the best driving belts in the world for cream separators. He made the first endless belts that were used on the Paskitide Cream Separators, of Denmark, and since that time has kept on improving them, so that at present they are incomparable in strength, finish and durability. His belts are in use all over the world, and have proved all his claims for them, as can be seen by the number of testimonials in his possession. For further particulars address him, Suspension Bridge, N. Y., P. O. box 643. The loss and expense of using a poor belt is really surprising, to say nothing about the trouble and vexation. A good machine's best value is brought about by using a good belt.

STOCK GOSSIP.

J. S. Smith, Maple Lodge, writes us as follows:—Our young Shorthorn bulls have done exceedingly well, and none of them should be idle this season. They are right good ones, and we price them at very moderate figures indeed. See advertisement in this issue.

Mr. S. Coxworth, Claremont, Ont., has purchased from M. J. C. Snell a pair of imported Cotswold ewes fitted for show. These he intends to take to Manitoba in July, along with a number of others. Mr. Coxworth is one of Ontario's most enterprising and successful Berkshire breeders. He has also a fine flock of Cotswolds. Although a young man, he is the first among Ontario's breeders to make an exhibition of sheep and swine at Manitoba fairs. Who says Ontario's sons have not pluck and enterprise? Such men deserve patronage and support.

Mr. J. C. Snell, Edmonton, Ont., reports a good trade in Berkshires, and the following sales since last report:—To Farmers Syndicate, Quebec; J. M. Richardson, Glasgow, Ky.; O. M. Latham, Cultus, Ont.; R. O. Mason, Adairsville, Ky.; J. H. Newland, Slick Rock, Ky.; Thos. Ky. Brin, Ont.; H. G. McBurney, Churdan, Iowa; J. R. Semple, Brins, N. S.; J. H. Small, Kelso, Que.; E. D. Nichol, Nashville, Tenn.; A. Edwards, Onondaga, Ont.; John Cook, Elnor, Ont.; E. A. Morris, Magnanawan, Ont.; T. W. Seely, Ivanhoe, Ont.; J. C. Woodridge, Indian Run, Ky.; E. Morris, Glasgow, Ky.; Jas. Chinnick, Chatham, Ont.; John Phin, Hespeler, Ont.

Mr. Arthur Johnston, of Greenwood, writes to say that the demand for young bulls still continues, though prices offered are very low. The supply is becoming limited; but there are still a few good ones left in most herds, which are being offered at very moderate prices. We have a few still for sale. We are now offering for sale the very finest lot of young cows and heifers that we have ever had. Grand heifers, and many of them well forward in calf, by Indian Chief or Imported Royal Member. We will sell them at hard-times prices. We wish particularly to direct attention to our yearlings—the grandest lot we have ever had. Many of them are good enough to win anywhere in the best of company. No reserve with us.

At the World's Fair, on seven principal breeds of sheep—Cotswolds, Leicesters, Lincoln, Shropshires, Oxford, Southdowns and Dorsets—note the following:—Canada won 59 first prizes, while the United States won 39; Canada furnished 23 of the winners to the U.S., Robert Miller, of Brougham, Pickering Township, furnished 24 of these 23. Canada won 50 second prizes; U.S., 42. Canada furnished 11 of these to the Americans, and Robert Miller sold 9 of them. Canada won 40 third prizes; U.S., 28; of which Canada furnished 9, and R. Miller, 6 of the 9. Canada won 34 fourth prizes, and U.S., 29. Canada sold 9, of which R. Miller sold 2. Out of 88 first prizes given in the above classes, only thirteen of the winners were bred or imported from England by breeders in the States; the balance were bred or selected by Canadians. Sheep selected by Robert Miller (some shown by himself, others by Canadian and American exhibitors) won 32 first prizes, 16 seconds, and 8 thirds and 5 fourths. A sweepstakes was given for the best ram of any age, and best ewe of any age in the above seven classes; nine of the winners were shown by Canadians and six by Americans. Six of the sweepstakes winners were imported by Robert Miller, and only one was selected in England by a U.S. breeder. None of them were bred in America.

STOCK GOSSIP.

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

Peter Lusk Bogart, writes us that the pig which he purchased from Mr. J. M. Hurley, Belleville, is fully better than he had expected, and that he is well satisfied with his purchase.

Mr. W. G. Pettit, Freeman, Ont., writes in a business letter to this office, that he has had an increasingly active demand for Shorthorns, Shropshires and Berkshires, and his sales in the last six months have been more numerous than any time in the last twenty years. Mr. Pettit is strongly of the opinion that at the present prices of grain in Ontario, that no farmer who can afford to get good stock should sell a bushel of grain of any kind. Oats and wheat ground together make a strong, healthy feed for any kind of stock. He mixes two of oats to one of wheat. He states that he has two very superior young bulls still left fit to place at the head of any herd; they are red roans, and both good show bulls. I am already booking orders for ram lambs for to ship in September. Had one ewe that had four good, strong lambs; they are now over two months old and all doing well.

PRIZE PLYMOUTH ROCKS

- Our Eggs Hatch. -

FROM GRAND PRIZE MATINGS, \$2 PER 13
FROM CHOICE SELECTED STOCK, \$1 PER 13

Customers report from Quebec "13 chicks from 13 eggs"; Toronto, "14 chicks from 14 eggs"; Victoria, B. C., "10 chicks from 12 eggs." New circular and catalogue free.

C. W. ECKARDT, Ridgville, Ont.

EGGS from grand yards of Black Minorcas, Light Brahmas, Brown Leghorns and Banded Plymouth Rocks, \$1 per setting, worth \$3, as my matings are high scoring birds and prize-winners all over. Some choice Minorcas for sale. W. L. BROWN, London West, Ont. 5-1-d-om

MUNGER'S AMERICAN STRAIN

FOR SALE, GRAND BUREAU OF THE GREAT CHICAGO SHOW, MAY 15, 1897. Bred by F. M. MUNGER, DeKalb, Ill. Bronze Turkeys, Banded and White Plymouth Rocks, White and Silver Wyandottes, Brown and White Leghorns. 25 Years Experience in Raising and Breeding. 40 Grand Breeding Pairs for 1894. Pairs and Eggs for Sale at all Times. Cairs, Triss and Breeding Cans. Hatched for Great Results. Bred by F. M. MUNGER, DeKalb, Ill. Address F. M. MUNGER, DeKalb, Illinois

GEO. BENNETT, Charing Cross, Ont., breeder of Chester White Swine, Partridge Cochins, Plymouth Rocks, Light Brahmas, Golden, Silver and White Wyandottes, White, Brown and Black Leghorns, Piled and Indian and B. B. Game Fowl, Toulouse Geese, Bronze Turkeys and Pekin Ducks. Pea-fowls for sale; price of eggs, \$1.00 per 11. 7-1-y-om

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HALLADAY PUMPING and GEARED WIND MILLS

Guaranteed to be the **Best Made.**

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

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USE RAMSAY'S VARNISHES. IN HANDY CANS.

100 Rods BUCHANAN FENCE CO. SMITHVILLE, O. \$35.00

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We send them everywhere. We guarantee prices lower than any local dealer can give—(Violins from \$1.00 each up). We ship them with privilege of examination before paying for them. Send your name and address on a postal card, and we will send you our wholesale price list of Musical Instruments. Address

THE SUPPLY CO., NIAGARA FALLS, ONTARIO

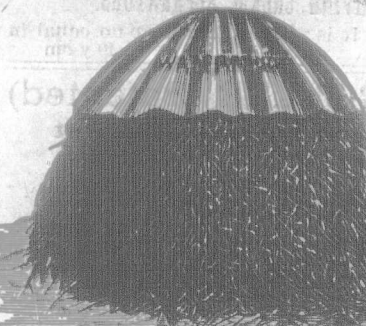
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Dear Sirs—After using the Cradle Churn, I would have no other.

BROOKFIELD, May 23, 1893
Messrs. B. R. HAMILTON & CO., 45-om

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For sale by hardware dealers generally. If your dealer does not keep them, write to B. R. HAMILTON & CO., Patented, Nepean, Ont.

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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.

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"THE BEST IN THE WORLD" SO THEY SAY!

Herbageum a success with calves; Herbageum a success with pigs; Herbageum a success with turkey chicks. It prevents disease, and ensures best results. Ask your merchant for it, and have no other.

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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.

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Land for Everybody.

FREE GRANTS OF GOVERNMENT LAND. -- CHEAP RAILWAY LANDS FOR SALE ON EASY TERMS.

GOOD SOIL PURE WATER!! AMPLE FUEL!!!

The construction of the Calgary and Edmonton Railway, and the Qu'Appelle, Long Lake and Saskatchewan Ry. has opened up for settlement two new districts of magnificent farming land, viz., that between the North and South Saskatchewan Rivers, and that between Calgary and Red Deer.

Full information concerning these districts, maps, pamphlets, etc., free. Apply to

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CHATHAM FANNING MILL, With Bagging Attachment.

It will Save Many Dollars in Time and Trouble if you buy a

It Cleans Alsike Clover to Perfection; also Marrowfat and Black Eye Peas.

1,000 Mills Sold, 1884
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More than have been sold by all the factories in Canada put together and doubled.

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A new Chemical Compound discovered by Dr. Warneck, 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, Mallets, Sallenders, Broken Knees, Ring Worm, Seratches, Scalds, Cuts, Burns, and all foul and putrid sores of all descriptions. Recommended by the largest stock owners in Canada.

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AT WHOLESALE PRICES and IN QUANTITIES TO SUIT YOUR WANTS.

J. A. SIMMERS' SEEDS TORONTO

SELECTED RED COB WHITE ENSILAGE—Per bush. (56 lbs.) 70c.; per 2 bush., \$1.35; per 10 bush., \$6.50.

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EXTRA EARLY HURON YELLOW DENT—Per bush. (56 lbs.) \$1.40; per 2 bush., \$2.70; per 10 bush., \$13.

EARLY BUTLER YELLOW DENT—Per bush. (56 lbs.) \$1.40; per 2 bush., \$2.70; per 10 bush., \$13.

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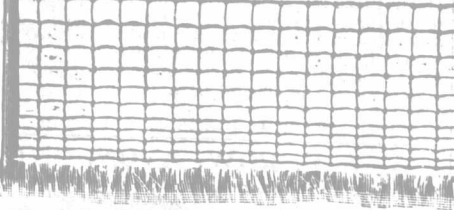
RURAL THOROUGHBRED WHITE FLINT CORN—Per bush. (56 lbs.) \$1.50; per 2 bush., \$2.80; per 10 bush., \$13.

GOOD COTTEN BAGS at 20c. each. LINEN BAGS at 10c. each.

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THE PAGE WIRE FENCE CO. OF ONT. (LTD.), WALKERVILLE, ONT.

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.

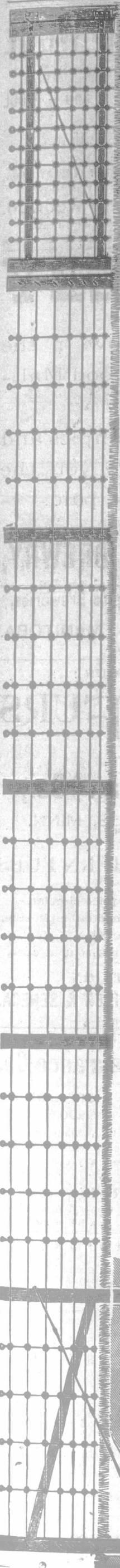
Capacity 75 to 200 BUSHELS of apples per day.

Most profitable business. Prospects of great fruit year.

Order early.

WATEROUS, Grantford, Canada.

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**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 despising 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

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**LOCKED-WIRE
FENCE CO.,
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BUCKLE PRINTING COMPANY

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

MICA ROOFING

Use Mica Roofing on all your buildings. It is cheaper than shingles.

Water Proof and Fire Proof.



Use Mica Paint to Repair Leaky Roofs. Shingles, Iron or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of 108 square feet each, 36 feet long by 3 feet wide, and cost 2 1/2c. per square foot, thus affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing about 75c. per square cheaper than shingles. Special terms to dealers who buy our Mica Roofing to sell again. Orders and correspondence answered promptly.

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17-1-y-om Office—101 Rebecca Street, HAMILTON, ONTARIO.

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
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- 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

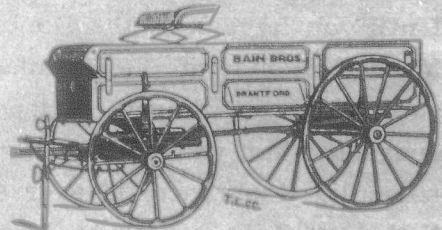
We want you to distinctly understand these are a job lot bought for much less than manufacturers' prices, and will be sold to the first buyer.

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126 King Street East, TORONTO.

THE HIGHEST AWARDS
Were received at
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HOTEL AND FAMILY RANGES.
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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.
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OFFICE, SALESROOM AND FACTORY,
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7-y-om

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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.,** Brantford. 7-a-om

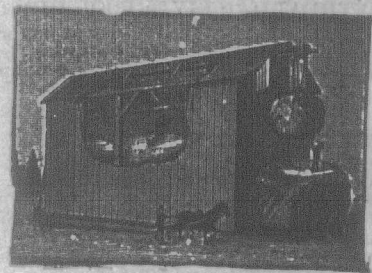
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Quickly, Thoroughly, Forever Cured

by a new perfected scientific method that cannot fail unless the case is beyond human aid. You feel improved the first day, feel a benefit every day; soon know yourself a king among men in body, mind and heart. Drains and losses ended. Every obstacle to happy married life removed. Nerve force, will, energy, brain power, when failing or lost, are restored by this treatment. All small and weak portions of the body enlarged and strengthened. Victims of abuses and excesses, reclaim your manhood! Sufferers from folly, overwork, early errors, ill health, regain your vigor! Don't despair, even if in the last stages. Don't be disheartened if quacks have robbed you. Let us show you that medical science and business honor still exist; here go hand in hand. Write for our book with explanations and proofs. Sent sealed, free. Over 2,000 references.

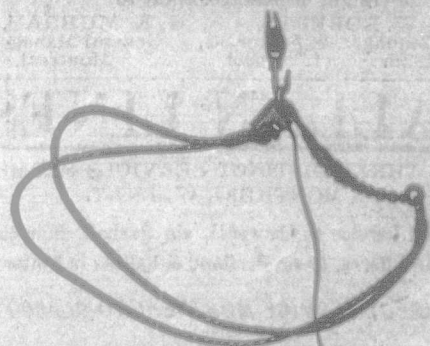
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PITCHING MACHINE

For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without hanging over. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter
Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

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