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THE FARMER'S ADVOCATE
 AND HOME MAGAZINE

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

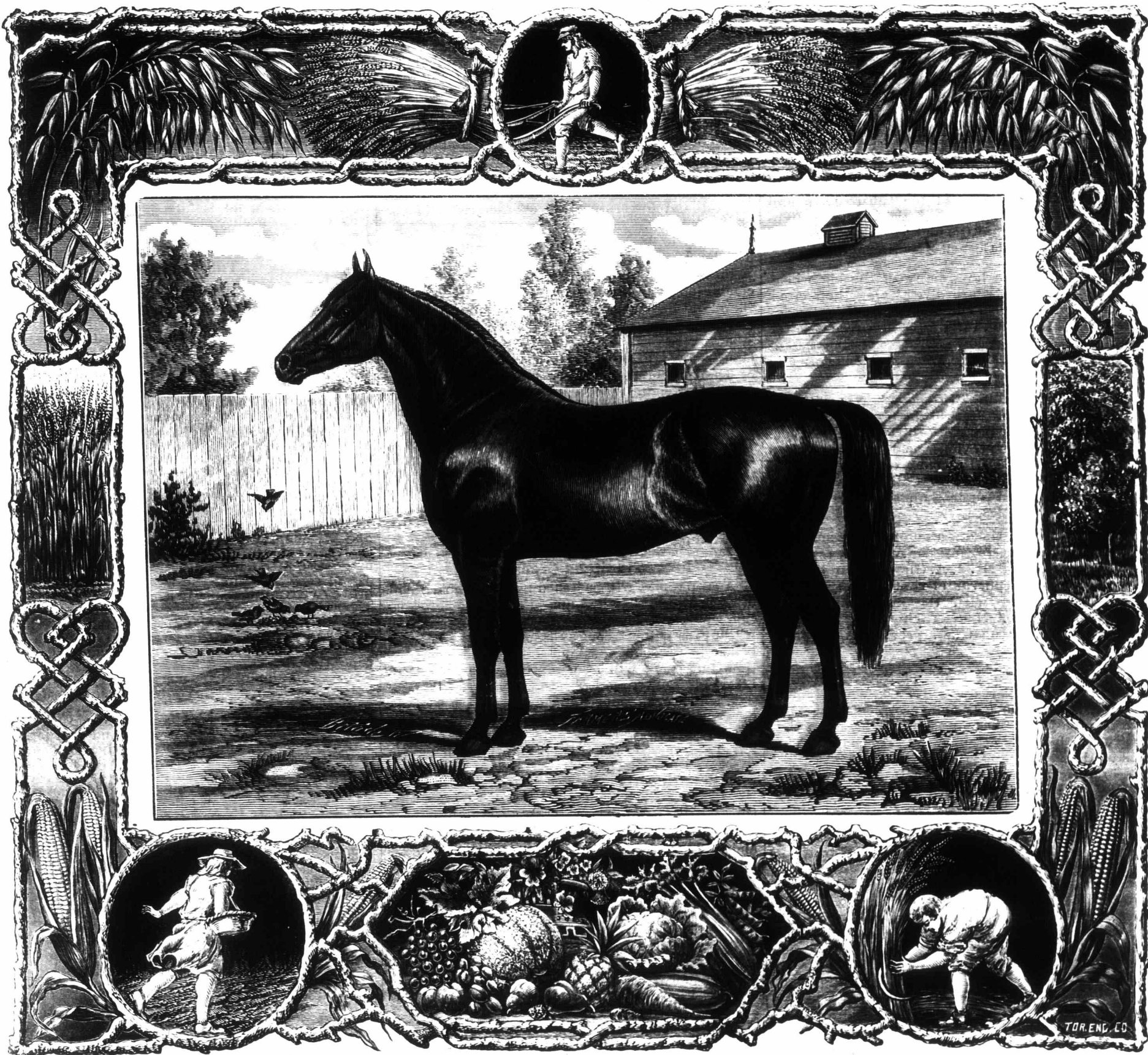
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THE CARRIAGE STALLION, KNIGHT OF THE VALE,
 THE PROPERTY OF MESSRS. KNETTEL, BOISSEVAIN, MANTOYA.

EDITORIAL.

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.

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 Narragansell 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 supersede 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.

Knight of the Vale.

Our frontispiece engraving is a representation of that superb carriage stallion, Knight of the Vale, the property of Messrs. Knettel, Boissevain, Manitoba. Knight of the Vale (1799) is registered in Volume V. of the Yorkshire Coach Horse Society of Great Britain, also recorded in the American Cleveland Bay Stud Book, (999), Volume III., and No. 17 in the Horse Breeders' Lien Act of Manitoba. He was bred by Wm. Codling, Eskdalside, Slights, Whitby, England, afterwards passing into the hands of John White, "The Grange," Appleton, Roebuck, Bolton, Percy, Yorkshire, from whom he was purchased by his importers, Messrs. J. D. McGregor & Co., Brandon, Manitoba, subsequently being purchased by his present owners.

Before leaving England he made for himself a remarkable showyard record, winning second place at the great Yorkshire show in a strong and representative class, and third at the Royal at Warwick in 1892; these are the largest and most important shows of Cleveland Bays and Yorkshire Coach Horses held in the United Kingdom.

Since coming to this side of the "pond" his successes in the show ring have been numerous, always heading the lists wherever shown. At the Winnipeg Industrial in 1893 he stood first in the four-year-old class, and took the sweepstakes (silver medal) for all ages; he also captured the "FARMER'S ADVOCATE" special (a very handsome marble clock and bronze ornament), given for the best carriage stallion in classes 8, 9 and 10, which included Thoroughbred, Hackney and Coach Horses. He also won first and silver medal at the Boissevain Spring Stallion Show, and at the Boissevain Agricultural Societies' Show in the autumn.

Knight of the Vale is a beautiful bay in color, stands 16½ hands high, and at present weighs about 1,600 pounds. He has the clean blood-like head and neck of the Thoroughbred, well-laid shoulders and grand top, good feet and large, flat, hard bone so essential to the roadster. He moves with that elegant and forceful action characteristic of the Cleveland Bay.

Foaled in 1889, sired by County King 110, first dam by Wonderful 533, third dam by Bass Rock, S. B., etc., etc., of extremely fashionable breeding, combining some of the most celebrated sires in the Cleveland Bay, Yorkshire Coach and Thoroughbred history. Among them such names from the Cleveland Bay records as Statesman, Wonderful, Cleveland Lad and Skyrocket; and from the stud book of Thoroughbreds, Necromancer, Bass Rock and Darley Arabian.

Manitoba is fortunate to have such a horse within her borders, and great credit is due to the importers and owners of such horses, and now when ordinary horses are so low in value it is the more important to breed only good mares to the best available stallions.

The Knittle Bros. can accommodate a limited number of approved mares during the season, with care and pasture at reasonable rates.

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.

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.

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.

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.

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.

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 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. Byers.

THE FARMER'S ADVOCATE & HOME MAGAZINE

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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 sils rest, should be at least six inches above the floor, and eight inches above the ground surface. The sils 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 sils. 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 sheeting, 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 verticle 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:

Studding, 10 pieces 2x12, 1,600 feet, at \$16	\$25 60
Sills and plates, 16 pieces 2x12, 512 feet, at \$16	8 20
Siding, 1,200 feet, dressed one side, at \$14	16 80
Siding, 1,200 feet, rough lumber, at \$12	14 40
Tar paper, 3 rolls, at 80 cents	2 40
Nails, etc.	5 00
Carpenter work	10 00

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 \$0.80 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 frame-work 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.

A Bug Trap.

The following, which I have found excellent for keeping borers from quince and apple trees, may benefit some reader, and it is better than printers' ink to prevent canker worms from crawling up trees:—One quart bright, not white, varnish, one-half gill sulphuric acid, one gill lard oil; mix the acid and varnish first—it makes a thick paste, and the addition of the lard oil thins it. Apply it thoroughly from one foot above to two inches below the surface of the soil around a tree. I believe it is a sure preventative. I apply it higher for worms. It takes about six to eight months to dry, and it never lets up on a victim. I have used it three years and never knew it to fail. [F. H. Thatford, in Rural New-Yorker.]

STOCK.

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, Durrisdier; 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 yeld 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. Newick's Prince Alexander 8800, 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 foals left by 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 YER.

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., \$4.85, 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 1,600 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 \$6.00 @ \$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. 1894) 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 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 \$200, 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.

Clydesdale Spring Show.

In your report of the Spring Show, in the ADVOCATE of 15th April, you close by saying:—"Through the unfortunate ruling by which the produce of imported mares had to be shown in the Canadian-bred class, and the absence of imported stallions in the younger classes, the prizes for three and two-year-olds went abegging, while the breeders of stallions from Canadian-bred mares, anticipating the strong show made in Canadian Clydesdales bred from imported mares, failed to appear."

Will some of the Clydesdale men explain why this ruling was made? Of course, they have some reason for making this rule, and I think the public would like to know what that reason is.

Is the produce of an imported mare and of an imported horse not good enough to compete with an imported animal? If not, why not?

Why should the produce of well-bred Canadian mares and of imported horses not have a class of their own, if this ruling is to stand?

Do the Clydesdale importers wish to force the produce of Canadian mares out of the show ring altogether, as was the case at this show?

I hope some of the Clydesdale men will be good enough to answer these questions. Scor.

On two previous occasions we dealt very fully with this question. We invite interested parties to send their views to us. In a later issue we may again treat this subject editorially.

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 the 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.

Eleventh Ontario Provincial Fat Stock Show.

On the 15th of May a Provincial Fat Stock Show Association was again organized in the City of Guelph. The Association is composed of delegates elected by the following bodies:—

The Agriculture and Arts Association was represented by seven delegates, viz.: J. C. Snell, Edmonton; A. Rawlings, Forest; R. McEwen, Byron; J. Sissons, Crown Hill; Joshua Legg, Gananogue; Wm. Dawson, Vittoria, President of the Agriculture and Arts Association; and Mr. Henry Wade, Secretary of the same body.

The Sheep Breeders' Association and the Dominion Swine Breeders' Association were represented by five delegates, viz.: John Jackson, Abingdon; John Kelly, Shakespeare; S. Coxworth, Claremont; J. E. Brethour, Burford; F. W. Hodson, London.

The Guelph Fat Stock Club was represented by four delegates, viz.: Jas. Anderson, J. I. Hobson, J. McCorkindale, Jas. Miller, all of Guelph.

Mr. J. C. Snell was unanimously elected President of the Club for the year 1894.

Mr. Henry Wade, Secretary of the Agriculture and Arts Association was by common consent chosen Secretary.

The prize list has received additions in several classes, especially in the pure-bred sheep division. In some classes new sections have been created. The classification is practically the same as last year. The rules and regulations have been somewhat altered; a few minor changes have been made. It is very desirable that a large number of pure-bred sheep, swine and cattle be shown. The prizes offered are larger, and should encourage live stock men to make barrows, wethers and steers. This show is attracting a great deal of attention, not only throughout this Province, but also across the lines and in Manitoba and the Canadian Northwest. Without doubt the exhibition last year was the best winter show ever held on this continent. The officers this year hope to make the coming display a still greater success than heretofore. The exhibition will be held December 11, 12 and 13.

The prize list is now in the printers' hands. Copies and full particulars may be obtained from Mr. Henry Wade, Toronto.

FARM.

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 reimposed, 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 boodler 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 birthright. Friends, are we to have a repetition of the total collapse in the United States before we awake from our slothful 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,
It 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 summerfallow; 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.

"INVICTA."

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 1, 1. 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.

Horticultural Notes for June.

Raspberries should receive constant, shallow cultivation until just before the fruit begins to ripen, after which time all cultivation should cease. All new canes should be cut back as soon as they have reached the height of three feet, as the number of laterals thereby produced will bear double the quantity of fruit the following season as would be grown if the canes were left untrimmed. Orange or red rust should be cut out and burned as soon as discovered. When spraying for *Anthraxnose* do not use Bordeaux mixture after the fruit has set, but use ammonical copper carbonate instead.

Blackberry canes should also be cut back at the height of three feet. The rows should be kept as narrow as possible by thorough cultivation. Only one cane should be allowed to grow in each two feet of space in the row; all others should be treated as weeds and hoed off as soon as they appear.

Strawberry plants which have been set out this season should have all blossom buds carefully pinched off, for if the fruit be allowed to ripen it will greatly diminish their vitality. All runners which appear should be cut off up to the first of July, after which time they may be allowed to run in matted rows, if care be taken to prevent them from becoming too much crowded. In cultivating, use a very narrow-toothed cultivator, so as to throw up as little ground as possible.

Asparagus should have the ground kept very loose and mellow. After the first of June oneshoot should be left to grow from each crown. All others may be cut up to the first of July, after which time all cutting should stop for the season.

There is still time to plant a patch of water and musk melons. Do not neglect this now, as the nice, luscious melons that will find their way to your table in the fall will more than repay you for the small amount of time and labor expended.

ELLIS F. AUGUSTINE, Aughrim, Ont.

At the Wisconsin Experiment Station, recent feeding trials showed that whey 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.

DAIRY.

Dairying in Ontario.

A special bulletin, with the above heading, has been issued by the Department of Agriculture for Ontario. It seems to be especially appropriate just now, when dairying is attracting so much attention from the farming community, and from those interested in developing the agricultural resources of the Province. The information, the facts and the statistics given are well arranged and selected, and furnish conclusive answers to a number of important questions which will naturally arise when one contemplates engaging in dairying, or is considering how the industry may be extended and developed.

In answer to the question, "Have dairy products decreased in price in Ontario as much as grain?" the following table of comparisons is given:—

	Fall Wheat per bush.	Oats per bush.	Factory Cheese per lb.	Creamery Butter per lb.
	Cents.	Cents.	Cen's.	Cents.
1883.....	105.0	38.0	10.45	21.33
1884.....	80.5	33.1	10.46	21.69
1885.....	81.5	31.5	8.12	19.69
1886.....	73.6	32.0	9.25	19.52
1887.....	78.4	31.6	10.54	20.10
1888.....	102.4	40.5	9.24	19.52
1889.....	88.4	30.5	9.35	21.01
1890.....	94.2	41.1	9.06	19.24
1891.....	95.1	36.5	9.35	20.51
1892.....	70.7	30.8	9.55	20.59

It will be seen from this that while fall wheat has decreased in price from 105 cents to 70.7 cents

These figures show that hay will remove from the soil 550 times as much fertility as butter, at the same value. It would not, therefore, be advisable for the Province to develop to any great extent the export trade in hay. Wheat and other grains also take a much greater amount of fertility out of the soil than dairy products, while the amount taken out by butter alone is merely nominal. Fat cattle are considerably higher than cheese or butter, yet much lower than the grains mentioned.

The facts here given are, no doubt, borne out by the experiences of many farmers in the Province who have made a specialty of grain-growing and selling the raw products off the farm. They have found that while the prices of these products have been gradually getting lower, the natural fertility of their farms has been decreasing at a much faster rate, making their farms less productive and the business less profitable. The laws of nature are inevitable, and the agriculturist in this Province who imagines that he can farm by selling off these raw products, will find, in a very few years, that his business has not been prosperous, and that his lands have been gradually deteriorating in value. The nourishment taken out of the soil by any system of farming must be restored by using fertilizers. These, as a rule, are expensive. The best thing, therefore, to do is to carry on some line of farming that will not reduce the fertility of the soil. A system of dairy farming carried on intelligently and practically will not reduce those valuable constituents of the soil. In fact, where this system is carried on properly the fertility of the farms is increased and the land made more productive.

ADAPTABILITY OF ONTARIO TO DAIRYING.

There are a number of statistics given to show the adaptability of Ontario to dairying. In Ontario, in 1883, there were 635 cheese factories, and the value of the cheese manufactured was \$5,580,330. In 1892, there were 856 cheese factories, and the cheese manufactured was valued at \$8,950,930. Cheese-making is more largely developed in some districts than others. Oxford manufactures the largest quantity of cheese of any county in the Province, it being valued at \$847,643. But in Leeds County the value of cheese made per head of the rural population is \$37.00, while in Oxford it is only \$28.00. The average per head of the rural population is only \$8.00 for the whole Province. If it equalled that of Leeds, the total make would be \$40,000,000.

Ontario is considered to be a large cheese-producing country; yet, according to these figures, we are only making about one-fifth of what we should make, if the farmers in every district were giving as much attention to the business as they are in one or two of the counties mentioned. It would not be wise to develop the cheese industry to the extent we might be capable of; but there is room for considerable increase in the make without overstocking the market. The quality of the goods must be kept up, however. Unless we do this, it would be safer not to increase the quantity. But at the present rate of progress, and with our dairy schools and other means of instruction, we are in a fair way to still further improve the quality of our cheese, and thus enhance its value and make it more in demand in the home market.

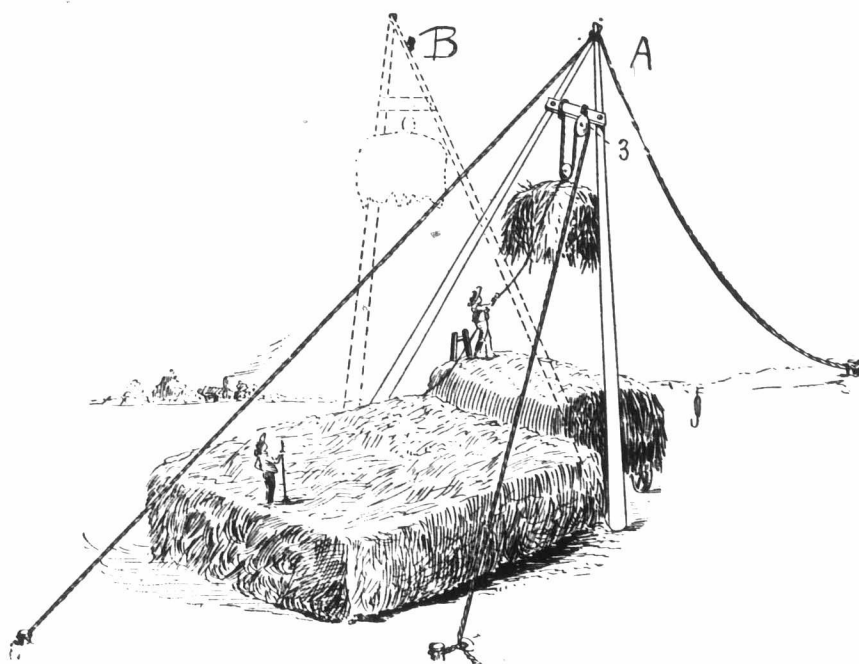
Ontario's climate is also very suitable for dairying. During the cheese season the nights are comparatively cool, and we have not so much of that hot, muggy weather as our neighbors to the south, which is so unfavorable to successful dairying. Besides, our soil and climate are such that the best of succulent foods for the production of milk can be grown easily. Our winters, though sometimes very severe, have not been found a detriment to successful winter dairying. The experience of those who have engaged in winter buttermaking on the co-operative plan, for a couple of years back, goes to show that this branch of dairying can be carried on with profit to the farmer even during our coldest winters. There is considerable room for the development of the butter trade in this direction. We will have more to say of the butter later on.

A COMPARISON OF CANADIAN AND AMERICAN EXPORTS OF DAIRY PRODUCTS.

The following statement shows that Canada's cheese exports have increased regularly since 1872, while her butter exports decreased to \$331,958 in 1891. Since then, however, there has been a gradual increase:—

Year ending June 30.	Cheese.		Butter.	
	Amount.	Value.	Amount.	Value.
1872	16,421,025	1,840,284	19,068,448	3,612,679
1877	37,700,921	3,897,968	15,470,550	3,224,981
1882	50,807,049	5,500,869	15,161,839	2,963,156
1887	73,004,418	7,108,978	5,485,509	979,126
1888	81,173,267	8,928,242	4,415,381	798,673
1889	88,534,837	8,915,634	1,780,765	331,958
1890	91,290,187	9,372,212	1,931,585	349,131
1891	106,292,140	9,508,800	3,768,101	602,175
1892	118,270,052	11,652,412	5,736,636	1,056,058
1893	133,946,365	13,407,470	7,036,013	1,296,814

The cheese exports from the United States have fallen off 65,000,000 pounds from 1881 to 1892, and the butter exports by one-half.



THE HOME-MADE STACKER.

per bushel during the last decade, or about 32 per cent., cheese has only decreased from 10.45 to 9.55 per pound, or about 8½ per cent., and creamery butter, from 21.33 to 20.59 cents per pound, or about 3½ per cent. If the season of 1893 were included in the table, there would be a wider variation between wheat and dairy products. Wheat, on an average, brought a much lower price in 1893 than in 1892, while the price of cheese was somewhat higher in 1893 than in 1892. The facts given here are borne out by the actual practice of our successful farmers. In those sections of the Province where dairying has been made a specialty during the past ten years, the farmers are, as a rule, in better circumstances, are making more money out of their farms, and are not experiencing the "hard times" so commonly spoken of in other sections.

IS DAIRYING LESS EXHAUSTIVE UPON THE SOIL THAN OTHER METHODS OF FARMING?

To answer this a table is given, showing the amount of soil constituents taken from the land by the removal of the different products. The values given are merely for comparison, and show the relative amounts of nitrogen, phosphoric acid and potash removed:

\$1,000 Worth of	Nitrogen.	Phosphoric Acid.	Potash.	Relative Value.
Timothy hay (100 tons).	2.50	1.000	1.80	50
Wheat (1,100 bush. grain)	1.980	718	312	100
Barley (2,500 bush. grain)	1.888	680	160	100
Turnips (10,000 bush. roots)	1.080	600	270	23
Fat cattle (20,000 lb. alive)	46	310	35	23
Whole milk (10,000 gals.)	292	200	150	120
Cheese (10,000 lb.)	100	115	10	8
Butter (5,000 lb.)	5	5	5	5

EXPORTS OF DAIRY PRODUCTS FROM UNITED STATES.

Year ending, June 30.	Butter.		Cheese.	
	Amount.	Value.	Amount.	Value.
1881	31,590,500	6,256,024	147,995,614	16,380,248
1885	21,633,148	3,643,646	111,992,900	10,444,409
1889	15,504,978	2,568,765	84,999,828	7,889,671
1890	29,748,042	4,187,489	95,376,053	8,591,042
1891	15,187,114	2,197,106	82,133,876	7,405,376
1892	15,047,246	2,445,878	82,100,221	7,676,657
1893	8,920,107	1,672,690	81,350,923	7,824,648

The great decrease in butter from 1892 to 1893 is particularly noticeable in this statement. Another remarkable thing is that the price of cheese was over 15 per cent. less in 1893 than in 1881, while that of Canadian cheese was only about 8 per cent. less in 1893 than in 1882. These figures indicate that the United States export trade in dairy products is decreasing very fast. The probabilities are that in a very few years she will be able to consume all her dairy products at home.

THE BUTTER INDUSTRY.

A very important feature of this bulletin is the amount of attention given to the butter industry. Statistics are given, showing that in 1883 there were 27 creameries in operation in Ontario, and that in 1892 there were 50. The price of creamery butter is quoted as being 21.33 cents in 1883, and 20.50 cents in 1892. It is further estimated that less than 3,500,000 pounds of creamery butter were produced in Ontario in 1892, which would be less than 10 per cent. of the total made in the Province, or, in other words, for every pound of creamery butter made there are over 10 pounds of dairy butter made. It is thus seen that the co-operative system in butter-making has not been very largely developed in the Province. The co-operative principle is, without doubt, the most effective and the most satisfactory method of dairying, whether applied to cheese-making or buttermaking. A better and more uniform quality is produced, and a higher price obtained than for the dairy butter.

To show this difference in price a table is arranged, comparing the prices obtained for dairy and creamery butter in the wholesale market in Toronto. The lowest and the highest prices paid for dairy butter for the first of every month are given, and the price of creamery butter as well. It is shown that between June, 1892, and May, 1893, the average of the lowest prices paid for dairy butter was 13.5, and the average of the highest prices, 18.6, while the average price of creamery butter for the same period was 23.6. Between June, 1893, and May, 1894, the average of the lowest prices for dairy butter was 15.4, and the average of the highest prices, 19.6, while the average price of creamery butter for the same period is given as 23.7. It will be seen from these figures that creamery butter sells for 8 to 10 cents higher than the poorest dairy, and for 4 to 5 cents higher than the best dairy butter. It costs from 3 1/2 to 4 1/2 cents per pound to get creamery butter manufactured. A dairyman will then have more for his butter, after paying for making, by having it manufactured at a creamery. In other words, he will receive more for his cream than he will for his butter, if made at home.

This table of Toronto wholesale prices sets forth another important fact. While the average price of creamery butter for the past year was just the same as for the year previous, the average of the highest prices for dairy butter was 1 cent higher, and the average of the lowest prices 2 cents higher than during the previous year. This would be a mean average of 1 1/2 cents per pound, therefore the quality of our dairy butter during the year has greatly improved. The increase in value of our 50,000,000 pounds of dairy butter by 1 1/2 cents per pound means an increased return of \$750,000.

This improvement in the quality of our dairy butter is due, in a very large measure, to the work of the Travelling Dairies. They have developed a spirit of enquiry and a desire on the part of farmers for the most improved churns, butter-workers, butter-prints, and all the latest appliances for successful buttermaking. They have shown the people in a practical manner how to make good butter, and the best methods to adopt to secure a uniform article; and, more than these, they have given object lessons of the proper handling of butter, so as to fit it for market, and in this regard have been so instrumental in cultivating a taste for neatness and care in packing butter and in preparing it for the consumer, that they have well repaid for the expenditure, if nothing more were accomplished.

There are other important facts brought out in the bulletin, showing the value of improved methods, cost and plans of factories and creameries, and comparisons between Canadian and Danish dairy products, and how the latter have taken the lead in the British butter market, upon which valuable comments might be made, but space will not permit. Suffice it to say, that the information given in this bulletin is of special value to every dairyman.

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 6,139 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.

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 churning, 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."

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.

Explanations Called For.

Under the subject of "Butter and Buttermaking" (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.

Management of Cheese Factory Herds.

In the April 1st issue of the FARMER'S ADVOCATE, a statement was given of the cash returns received last year by patrons of the Harrietsville (Ont.) cheese factory. One of our readers, in the Maritime Provinces, wrote us for "further particulars," and the following have come to hand:—

GOOD RETURN FROM A DEHORNED HERD.

In answer to your letter in regard to the statement made in the ADVOCATE of April 1st, about the amount of money received for milk at the Harrietsville cheese factory from my cows, I would say that the milk averaged \$9.27 per 1,000 pounds. The cows kept were Grades, Durham, Holstein and Ayrshire, with native cows, and came in between April 1st and middle of May. The milk was sent to the factory until the first of December, after which we made butter for our own use. The food was all raised on the farm, and consisted of pasture, corn and roots. My cows are dehorned, and I find it very beneficial.

PHILIP ABBOTT.

THE SYSTEM OF FEEDING.

Your letter re Harrietsville cheese factory to hand. In reply, I beg to say the report of the amount received from factory in 1893 by parties named in your paper sometime ago is perfectly correct; a large number of others received similar amounts per cow. I do not think I can give you all the information you require, but will refer to what I think the most important points. In the first place, the class of cows generally kept are what I would call fairly good Grade cows, great attention being paid to the milking qualities. The factory commences running about the second Monday in April, and continues until about the first of December in each year. The make of the Harrietsville factory during the past three seasons has averaged, per year, a little over two hundred and forty-eight (248) tons; supposed, I believe, to be the largest factory in the world. From the time of commencing to send to the factory until about the second week in May we feed chopped oats, peas and barley, mixed; but from the time grass gets flush we feed nothing but the pasture, until later on, when the grass begins to fail; then we start to feed green corn, with the ears or cobs, in sufficient quantities to keep the flow of milk up to a good standard quality. Later on, say about the latter part of August or early in September, we start to feed turnips. I consider feeding part corn and part roots is better and produces a greater flow of milk than either separately. The number of cows kept, on an average, is about fifteen on one hundred acres, and so on in proportion. The cheese trade has been found, with us, the most profitable business farmers can invest in; but I need not explain that to make it successful requires a great deal of care and attention. Of course, we have got to make great preparation to raise the fodder I have referred to. There are some parties who, from lack of attention and feed, do not realize much over \$30 per cow, but I would say eight-tenths of the patrons realize over \$40 and up to \$50 per cow for the season. Dehorning is popular in large herds of cows, but I do not see much advantage in small herds.

R. TOOLEY.

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 rottenness 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.

QUESTIONS AND ANSWERS.

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

Veterinary.

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 dental 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 potass, 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.

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 quicksand; below, the trouble too much surface water."

Either 1 1/2-inch or 1-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 to have would be a drilled well with a pump, and a flow-line casing put in, that will allow a supply of water to be obtained. By this method the water is not nearly so hot.

Wm. Sharp, 154 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 eave 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. Eave-troughing 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.

APIARY.

Smokers When to Use, and What to Use in Them.

BY JOHN MYERS.

A good smoker is one of the essentials in any bee-yard, and a poor one is one of the greatest nuisances that a beekeeper can have. Just think of a person in the midst of opening a colony and they begin to get rather angry, and he makes a grab for the smoker and commences to puff, puff, but there is not draft enough to blow the smoke clear of the nozzle of the smoker. Methinks that under such circumstances a person's thoughts are not very elevating. A good smoker should have a strong draft—strong enough to blow the smoke clear across the hive and down between the frames to the bottom of the hive, if needed. Now, don't think that I advocate overdosing them with smoke, because I don't, as you will see further on, but there are times when one needs a good volume of smoke, and it is sometimes necessary to blow it down between the frames, especially when you want to drive the bees out of an upper story. Another essential in a good smoker is that it has a good, lively spring, so that it will contract and enlarge quickly. I like a cold spring best; there is no other kind of spring that will act so quickly and at the same time make so little pressure to close it. The leather on a smoker should not be too heavy. I have often seen persons when buying a smoker, pick one with the heaviest

leather they could find, thinking that it would last longer than one with lighter leather, but in that they were mistaken; as long as the leather is not soft and spongy, we need not care how light it is; the working of the bellows causes the leather to crease, and the heavy leather will crack much sooner than the light. In purchasing a smoker, I do not buy one that is too small; the extra trouble of filling so often will soon make up the difference in price between a large and small one.

When and how shall we use them? I always use the smoker every time I open a hive; I think it pays; you don't make your bees so cross if you use a little smoke when opening the hive. I once heard a beekeeper say he never used smoke when he opened his hive; I went to visit him and see the bees that never needed smoke. They were the crossset insects I have ever seen. When the owner went to open a colony, he protected his head with a veil and his hands with gloves, and tied the bottom of his pants close, so no bee could get in there; then he took off the cover of the hive and started to manipulate the frames. The bees fairly poured out at him, and tried to sting him all over, but, of course, he was thoroughly protected, and they could not do him any harm; but woe to the cat, dog, man, or beast that came within ten rods of him. I went home satisfied that I did not want any of the bees that needed no smoke. I have worked among my bees for half a day without a veil, but I always use a smoker. I don't advise working among bees without a veil over the face; I nearly always wear one; I never believe in overdosing bees with smoke. I go to a hive that I want to look into and take off the cover, then start to raise the quilt at one corner; as I continue to take it off, I gently puff in a little smoke just to let them know that I am around; as a rule, scarcely a bee will take wing; they will sit quietly on their combs until I am through looking at them. If I happen to let a comb slip or jar against the hive, I will be apt to need the smoker again. In the above I am supposing that they are Italians (the only kind I keep; if the bees are blacks, they will be more irritable. I might tell how to use the smoker in driving bees out of section cases and upper stories, but, since the introduction of the Porter Bee Escape, this method is very little practiced. The escape does the business so quickly and with so little trouble that I think very few beekeepers will go back to using smoke for clearing the supers.

WHAT KIND OF FUEL SHOULD BE USED IN SMOKER?

I always use dry planer shavings; not those from a large planer used in dressing lumber—those are too coarse—but those from a buzz planer or moulding machine are just right; put a few in the bottom of smoker, then light a match and throw it in on them; after the shavings gets a-going, commence working the bellows and get the shavings to become thoroughly heated through; now fill up the smoker with more shavings and pack them as you fill; keep puffing the bellows while you are filling, and when you have it filled place a few bench shavings, those made with an ordinary hand plane, on top, to keep the small shavings from being blown through the nozzle; you are now ready to go to work.

There are other things that makes good smoker fuel—such as rags, rotten wood, carpet felt, cedar bark, etc., but, after trying all of them, I like the shavings best. If you were to ask Mr. Wm. McEvoy, Foul Brood Inspector, what were the three best articles for smoker fuel, he would be likely to say: First, cedar bark; second, cedar bark, and third, cedar bark, as there is nothing, in his opinion, like dry cedar bark for smoker fuel. Well, cedar bark, if well dried, is very good, but "I" like pine planer shavings a little better.

The late Mr. Cornell, at one of our Association meetings, told me the best article he had ever tried for smoker fuel was carpet felt—that is, the felt paper used for putting under carpets. The way he used it was to roll up a piece large enough to fill the smoker, then light the lower end and shove it into the smoker. He said it would last a long time, and would not go out until it was all consumed. I have not tried it, but mean to do so this season.

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 beekeepers, because it is constructed on the principle of the shallow, horizontal divided section hive, and, having one of the ends of the boxes, articulated by a few hinges, it is easily expanded by our government method of increasing the hives."

POULTRY.

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 spareribs, 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."

ENTOMOLOGY.

The Periodical Cicada or Locust.

M. V. SLINGERLAND, CORNELL UNIVERSITY.

These curious and wonderful insects appear in different parts of the country at definite intervals of either thirteen or seventeen years; hence they are known as the Thirteen-year (*Cicada tredecim*) and Seventeen-year (*Cicada septendecim*) Cicadas. Their appearance began to be noted in the last century, and several years ago the entomologist at Washington made an extensive study of the creatures, with the result that the different broods of them are now numbered and the localities where they occur have been mapped; so that the years in which they have appeared during the present century are known, and it is possible to foretell where a brood will appear above ground at a certain time in the future century. There are thus numbered and mapped thirteen seventeen-year broods and eight thirteen-year broods of the insect in the United States. I find no record of the occurrence of the insects in Canada. This year two broods will appear above ground—one (brood XII.) a seventeen-year and one (brood XVIII.) a thirteen-year brood. Brood XII. will appear in N. Car., Ind., Mich., Va., Md., Northern Penn., throughout New Jersey, in Connecticut, and all along the Hudson, in New York. This brood has been observed in some of these localities every seventeen years since 1724. Brood XVIII. is a Western and Southern one, occurring from Illinois southward, and thence eastward to the Atlantic coast of the Carolinas. This brood was first noted in 1803. Next year broods II. and XIII. are expected; the first occurs in Georgia, the second in Iowa. One or more broods will appear somewhere in the United States every year during the present century; but none will again occur in New York until 1898, 1899, 1900, 1902.

The sharp, shrill screech of the adult insect will soon be ringing in the ears of many who may read this, in different parts of the United States. The adults appear in the latter part of May and in June. Egg-laying soon begins; and it is by this operation that they do most of their damage. The eggs are laid in slits cut in the twigs of trees—both fruit and forest trees. However, the injury then done is rarely so great as to necessitate the use of remedial measures; so, ordinarily, the insect need cause no serious alarm. There is but little danger of their spreading to other localities; the areas over which they appear increase but little, if any. Field crops will not be injured by it. The eggs hatch in about six weeks; the little creature drops to the ground, and, burrowing therein, begins its seventeen years of underground life. These nymphs feed upon the roots of vegetation, often going to a depth of several feet. The years roll on. What sort of a calendar can the little buried nymph have? What a Rip Van Winkle sort of an awakening it must be when, after nearly two decades have passed, with all the marvelous changes in this busy world above them, the nymphs—curious, crab-like creatures—push their way to the surface, crawl up the trunk of some near-by tree, and there undergo their final transformation to the winged state. They can now fly about and view the changes that have taken place since their mothers confided their embryonic forms to a slit in a twig, nearly a score of years before. Ordinarily, in coming from the ground, the nymphs do not continue their galleries above the surface; but it has been observed that in low, flat, wet localities, they often do continue the gallery from four to six inches above the ground, forming a sort of chimney, in the top of which they may be found in May. The adult insects live but a few weeks at most; they do not return at sunset to the holes from which the young emerged, as some have thought. It seems strange that it should require nearly a score of years of toil beneath the ground to prepare these creatures for their brief residence among nature's beautiful things above ground. But of such are the mysteries of nature. [An excellent account of these wonderful insects, accompanied by a colored plate, can be found in the Annual Report of the Commissioner of Agriculture, at Washington, for 1885, p. 23.]

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 Walsworth. 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 numb 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, "if 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 splinter 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 1012s., 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 onwards. 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 passed 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 recessed 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 be willing to do so?"

"I see," said Pearson, raising his eye-brows superciliously. "I quite understood 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 flashed 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 penitentes—
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 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 E. 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," 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 a 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,
Ebb's the crimson life-tide fast,
And the dark, Plutonian shadows
Gather on the evening blast.
Let thine arm, O Queen, enfold 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,
He, 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 crows 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 sly,
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. (Excelsior).
- 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 scratcher 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.

FARMERS!

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

BINDER - TWINE

Is probable.

We will have ample supplies to meet all requirements.

WE GUARANTEE:

Low Prices. Standard Brands. Liberal Treatment.

Blue Ribbon and Redcap are Still Unequaled.

CONSUMERS' CORDAGE CO. (Ltd.)

New York Life Building, Montreal.

11-c-om

BINDER TWINE

During the season of 1914 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, unadmixed 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.

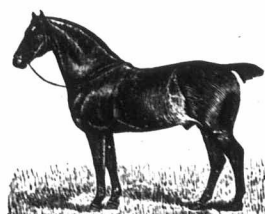
5-a-om

Grand Dispersion Sale OF JERSEYS, HOLSTEINS, SHROPSHIRE & DORSET HORN SHEEP AND CHESTER WHITE PIGS. JOSEPH STRATFORD, Brantford, Ont.,

INTENDS OFFERING FOR SALE DURING THE MONTH OF JUNE or JULY, DATE NOT YET POSITIVELY SET, ABOUT TWO HUNDRED THOROUGHbred SHROPSHIRE SHEEP AND FIFTY LAMBS, DORSET HORN EWES AND LAMBS, INCLUDING SHEARLING EWES AND RAM LAMBS OF BOTH BREEDS. ALSO A LARGE HERD OF REGISTERED . . . JERSEY AND HOLSTEIN CATTLE, ALL AGES. . .

This Sale will offer an opportunity for Canadian farmers to put in a foundation stock of any of the above, at prices they have never been sold for or offered in this country before. Mr. Stratford's business for years past has rested with the Americans, and he is fully determined now to see if it is not possible to bring about a revival action with our Canadian farmers in the matter of handling these different breeds of cattle and sheep. The Jerseys are from the original stock of Valancey Fuller, at Waterdown. The Holsteins are of the Royal Aggie family, while the Shropshires and Dorsets are from the best flocks in the United Kingdom. Watch for date later on, and don't miss the first grand opportunity of buying, at farmer's prices, the best kind, and from the best flocks ever sold in Canada.

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



The above stud, though only commenced in 1890, has achieved unparalleled success at all the leading Canadian shows, such as Montreal, Toronto and London, also at the CHICAGO WORLD'S FAIR. The most notable in this stud are, the Shire horse Bravo II, 1235, winner of first at Toronto, Montreal and London, and also beating all Clydes at the latter show in the sweepstakes. Hackney, Fireworks No. 3392, winner at Chicago, Toronto and London. Shires and Hackneys always on hand for sale. For further particulars apply to the Proprietor, ROSSEAU, Muskoka.

**WANTED TO PURCHASE.
PURE BRED KERRY BULLS AND HEIFERS**
ADDRESS—D. McEachran,
Montreal, Que., Canada.

10-c-om

THE TROTTING 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, 2:23; Dr. Tilton, 2:25; Northlight, 2:28; Morelight, 2:30; Eva, 2:33; Lady Carr, dam of Morelight, dam of Ambassador, 2:21; (sire of 31 from 2:15 to 3:00; Alexandre, 2:25; Mary S., 2:28; Morelight, 2:30; Strathbane, trial 2:20; to wagon over Maud Granger, 2:31; Alar Clay, trial 2:29; (sire of Mark Clay, jr., 2:29; Sally Dudley, dam of Markland, 2:21; Juno, dam of Milant, 2:26; Fougere, sire of Crete, 2:29). Service fee \$25 to insure. A. DUNN, Box 451, Ingersoll.

FOUR IMPORTED CLYDESDALE STALLIONS.

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

11-f-om

FOR SPRAYING FRUIT TREES, OR SPRAYING CATTLE FOR THE HORN FLY,

And for a general purpose machine, the Lewis combination pump, the Wonder, noticed in the Advocate of May 1st, is no doubt the best in the market. Write W. H. VAN TASSEL, Belleville, for particulars. 11-a-o

STOCK GOSSIP.

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

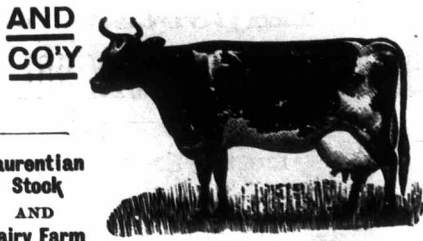
Mr. Peter Stoughton, St. Sylvester, writes us that the Holstein heifer which he purchased from Mr. G. W. Clemons, St. George, arrived at the station in good shape, having been well cared for en route. He is much pleased with the animal, and well satisfied with his bargain.

Mr. J. C. Snell, Edmonton, reports the following recent sales of Jerseys from his herd:—To Geo. Latsch, Freeport, Ont., 1 bull, 2 heifers; G. A. Deadman, Brussels, Ont., 4 heifers; R. Hamilton, Holyrood, Ont., 1 heifer; G. G. Truher, Strasburg, Ont., 1 cow; J. W. McCready, Middleton, Ont., 1 heifer; Abraham Fry, Jordan, Ont., 1 heifer; W. C. Treleaven, Lucknow, Ont., 3 heifers; Arch. Tolton, Walkerton, Ont., 2 cows; H. T. Vincent, Port Sydney, Ont., 1 bull, 1 heifer; J. C. Stockwell, Danville, Que., 1 bull; A. Wooley, Springfield, Ont., 4 heifers; A. Hutton & Son, Brampton, 1 heifer.

Mr. W. B. Cockburn, Aberfoyle, sends us the following notes from Point Levis, Que.:—“I have just landed at Quebec, by SS. Texas, on the Dominion Line of Steamships, from Bristol, after spending three weeks amongst the largest and best herds of Shorthorns, Oxford and Suffolk sheep flocks in Scotland and England; also attending His Grace the Duke of Northumberland's Shorthorn sale, one of the largest ever held in England, some 1,500 people being present, where one bull, fourteen months' old, made 265 gs. (\$1,300), others made 165, 115, 100 gs., etc. One three-year old heifer reached 100 gs., several others 80 and 90 gs. I also visited the Earl of Aberdeen's Park and herd of Aberdeen-Angus cattle. A drive around this seven-mile park and residence would make one feel our country should appreciate our worthy Governor-General and Lady Aberdeen's services very highly, when they would leave such a lovely home and surroundings to come abroad and attend to our Canadian affairs. I attended the Somerset-Ayr Show, held at Bridgewater, on the 9th, 10th and 11th of May. My purchases are 80 Oxford and Suffolk sheep; the Oxfords from three of the best-known English flocks; Messrs. A. Brassey's, G. Adam's and J. Treadwell's; the Suffolks from the Earl of Ellesmere's flock. The lot consists of 13 shear rams, 3 shearling rams, 68 shearing ewes and 8 ram and ewe lambs; all recorded in the English flocks books, and selected with great care to combine size, quality and pedigree. I hope to land them at Greenhouse in about two weeks, where any one wishing to inspect them will be made welcome. I also selected a Shorthorn bull and two females from Mr. Wm. Duthie's herd of Scotch Shorthorns, of Collynie, Aberdeen, Scotland and they will be imported shortly.



W. C. EDWARDS AND COY IMPORTERS AND BREEDERS.



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.

ELMHURST STOCK AND DAIRY FARM CLARENCE, ONT. Shorthorns, Shropshires and Berkshires. Our flock is from the choicest English flocks, headed by the ram sent out by Mr. Thos. Dyke; also milking Shorthorns, with imported bull Pioneer at the head of the herd.

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.

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 cow at Chicago, also the famous two-year-old. Sires of both were sold from this herd. Also Welsh Blood Ponies for ladies' and children's driving. Stock for sale always on hand. GEO. SMITH & SON, Grimsby, Ontario. 3-y-om

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 2.193 and General Stanton, the sire of more horses in the 30 list than any sire in Canada.

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. In speculation invited. Prices on application. Apply to ANDREW MITCHELL, 3-1-y-om Barcheskie, Kirkcudbright, Scotland.

ARYSHIRE BULL CALVES FOR SALE

Imported in dam from Scotland in 1893. Two choice ones from the most noted sweep-stake dairy breed strains produced in Scotland. For milk, butter and cheese records they are second to none, having competed successfully at all large contests in Scotland and England which were open to the world. Make no mistake. Head your herd with this noted strain, which were purchased regardless of expense. For further particulars, write or come and see R. G. STEAGY, Importer and Breeder of Ayrshires, Maple Grove Ayrshire Stock Farm, line G.T.R., LYN Ont. 7-1-10



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

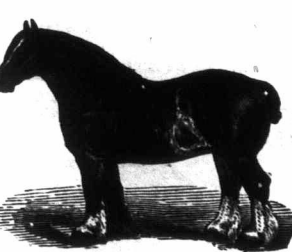
THE GLEN STOCK FARM

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

J. YUILL & SONS,

Meadowside Farm, Ontario. 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

THORNCLIFFE STOCK FARM!



I have on hand the best young GIBBS-MALF Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darnley, Macgregor, Energy, Lord 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. Terms reasonable. 19-1-y-om



SHROPSHIRE. 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 VICE CONSUL

SHORTHORN BULL.

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

AMPLE SHADE STOCK FARM.

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

SHORTHORNS.

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

IMPORTED SHORTHORNS.

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

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

Cargill, Ont. 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

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, 3-1-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. 13-1-y-om

JOHN RACEY, JR.,

BREEDER OF Shorthorn Cattle and Berkshire Pigs. Stock for sale. 17-1-y-om LENOXVILLE, P. Q.

ADVERTISE IN THE ADVOCATE

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.

JERSEY CATTLE FOR SALE

Bred for butter. G. sons and g. daughters of "Massena," the greatest cow of her age in the world—3,000 lbs. milk and 654 lbs. butter in her 16th year; also stock from "Signal of Belvedere," whose dam made 20 lbs. 3 ozs. butter in one week on second calf. Also stock from the greatest living prize bull, Canada's Sir George, whose dam made 263 lbs. butter a week and 57 lbs. milk a day. Splendid bulls, six months old and registered, \$100 each. MRS. E. M. JONES, Brockville, Ont., Can. Mrs. Jones' great book, Dairying for Profit, 30c. by mail. Address, ROBT. Y. BROWN, Agent, Box 324, Brockville, Ontario, Canada. 8-y-om

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., Kempville 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 Abberker 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.

TWO SHORTHORN BULLS FOR SALE.

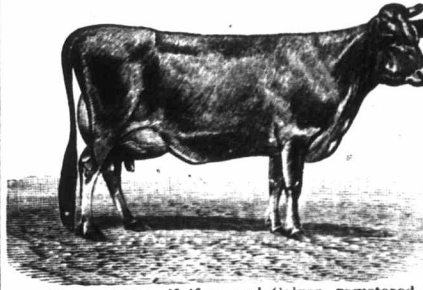
Good ones; prize-winning ancestry; low prices. Come and see them. H. & W. D. SMITH, Hay, Ont. Exeter, G. T. R., one-half mile. 13-1-y-om

SHORTHORNS, SHROPSHIRE AND BERKSHIRES

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

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



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

STOCK GOSSIP.

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

J. S. Smith, Maple Lodge, writes us as follows:—Our young Short-horn 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. C. Mason, Adairsville, Ky.; J. H. Newland, Slick Rock, Ky.; Thos. Bell, Erin, Ont.; H. G. McBarney, Churdan, Iowa; J. R. Semples, Brule, N. S.; J. H. Small, Kelsco, Que.; H. D. Nichol, Nashville, Tenn.; A. Edwards, Onondaga, Ont.; John Cook, Elsinor, Ont.; E. A. Morris, Maganetawan, Ont.; T. W. Seely, Ivanhoe, Ont.; J. C. Woodbridge, Indian Run, Ky.; E. Morris, Glasgow, Ky.; Jas. Chinnick, Chatham, Ont.; Johh 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.

Messrs. J. & W. Russell, Richmond Hill, Ont., report the following sales:—To Mr. John Forth & Son, of Glen Buel, Ont., Short-horn bull Border Chief; his dam is full sister to Lord Stanley, the winner of more money and first prizes than any bull shown at Chicago in 1893; to George Bell & Son, of Elder's Mills, Ont., Short-horn bull, Annandale; to William Shier, Sunderland, Ont., Short-horn bull, Crown Prince; to F. Birdsall & Son, Birdsall, Ont., Short-horn bull, Warden; to R. Pinder, Newmarket, Ont., Short-horn bull, Cleveland; to Thomas Ingram, Manitowaning, Manitowaning Island, Short-horn bull, Manitou; to Wm. Neve, Dalston, Short-horn bull, Grandeur. The last six are all descended on the dam's side from Isabella, by Wellington, winner of the sweepstakes gold medal at Philadelphia, in 1876, for best animal in the field, male or female. Her descendants won sweepstakes individually and in the herd at Chicago, 1893.

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 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 grown 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.

NOTICES.

Those requiring a competent farm or stock man should consult the advertisement of Mr. R. W. Pugh in another column.

We would call the attention of our readers to the change of advertisement made in this issue by the Metallic Roofing Co., manufacturers of the Eastlake Fire-Proof Shingles. One very important consideration which is too often overlooked in buying roofing material, is that, in addition to the other advantages, the use of these goods lessens the cost of insurance materially. Below we give copies of testimonials which speak for themselves:—

I take pleasure in certifying that the roofs covered with your metallic shingles have given the utmost satisfaction. A large number of the buildings on the exhibition grounds have been covered with your metallic shingles, and have proved the tightest roofs we have. I also consider your metallic shingles and siding to be a good fire protector. MARK HALL, Architect.

I agree with Mr. Hall's statement as to the character of the roofing material manufactured by this company. They can be used when wooden shingles cannot be considered, either on the score of appearance or safety against fire. The siding and shingles are also ornamental in design while effective as a fire guard. JOHN J. WITKOW.

President Industrial Exhibition, Toronto. We have used large quantities of your metallic shingles and siding during the past twelve years, and have always found them to give every satisfaction, while at the same time we have found, by actual experience, that your shingles can be laid two thousand feet quicker than any other on the market. We might mention that we galvanized "Eastlake" sand squares of your new buildings erected on the exhibition grounds in this city this season. The sixty tons of your "Owl" brand of galvanized corrugated iron, for the new train shed at the Union Station here, is very satisfactory. J. H. GIBBS BROS., Toronto.

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.

Imported LINCOLNS

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

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. 7-1f-om

JOHN DRYDEN, BROOKLIN, ONT.

Makes a specialty of breeding choice SHROPSHIRE SHEEP

AND:— Cruickshank Shorthorns

Low down, heavy weights, thick fleshed and easy feeders. A few choice young bulls, good colors and good quality, are ready for immediate shipment. PRICES MODERATE. 3-1-y-om

SHROPSHIRE - FOR - SALE

My whole flock of 80 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

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

BOULDER CRANCE FLOCK OF REGISTERED SHROPSHIRE. 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-f-om Paris, Ont.

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

JOHN A. MCGILLIVRAY, Jerseydale Farm, Uxbridge, Ont., Midland Div. C. T. R., importer and breeder of Dorset Horned Sheep 19-1-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. 5-1-y-om

Large Improved YORKSHIRES AND ENGLISH BERKSHIRES

A few choice sows in farrow, last June, July and October pigs, also a few heifers fit for service at once, also a choice lot of spring pigs. Many of the above pigs are bred from imp. stock. Pairs supplied not akin. Prices reasonable. Apply to WM. GOODGER & SON, 11-y-o Woodstock, Ont. Box 160

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, 1894.

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.

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 WICHTMAN, DRUGGIST, OWEN SOUND, Ont. Sole Agent for the Dominion. 7-1-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.

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

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: 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 boars for the spring trade. Pigs for exhibitors purposes a specialty. Stock shipped to order are guaranteed to be as described. Personal inspection solicited. J. E. BRETHOUR, Burford, Brant Co., Ont. 3-y-om

G. J. GILROY & SON Glen Buel, - Ont., Have for sale some Holstein Cows, one good young Bull, also a number of Improved Large Yorkshire and Berkshire Pigs. 7-y-o

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

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. 9-y-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-y-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. I can supply a few pairs from litters farrowed in January and February. These will be right for the show. Exhibitors who desire young pigs for this year. We have also a few young boars fit for service. Write for descriptions and prices. 2-y-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-y-om

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

A choice lot of young pigs just fit to ship. Pairs supplied, not akin, sired by my three grand Stock Boars, "High Clear Prince," "King Lee" and "Champion Duke." Also a few choice sows of Oct. litters. Write for prices 8-y-om

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

Registered Improved Chester White Swine & Dorset Horned Sheep are my specialties. Cleveland (imp.) No. 320, 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-y-om

E. D. GEORGE PUTNAM, ONT. Importer and Breeder of Ohio Improved Chester White Swine

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

THE OXFORD HERD OF REGISTERED POLAND CHINAS

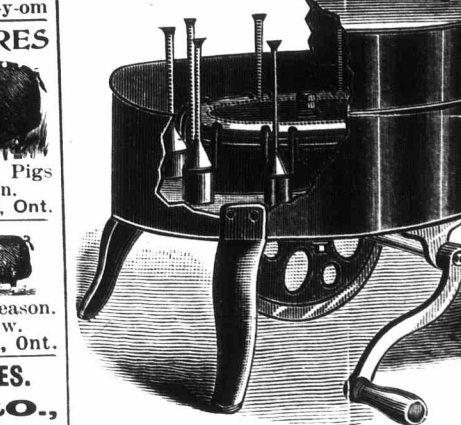
Our herd of Improved Poland Chinas won 36 first, 13 second and 6 third prizes in 1893, including the Herd prize at Montreal and Toronto, for best boar and two sows, any age. Stock, both sexes and all ages. Pairs and trios not akin for sale at all times. Correspondence solicited or inspection of herd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

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-China boars fit for service on hand. Stock guaranteed as represented. 7-1-o

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

WE HAVE THE BEST AND SIMPLEST BABCOCK TESTER in use. Also dealers in ALPHA DE LAVAL SEPARATORS

We manufacture a complete line of Dairy Goods. Send for estimates of factory outfits. 10-b-o CREAMERY SUPPLY CO., Guelph.



WE HAVE THE BEST AND SIMPLEST BABCOCK TESTER in use. Also dealers in ALPHA DE LAVAL SEPARATORS

We manufacture a complete line of Dairy Goods. Send for estimates of factory outfits. 10-b-o CREAMERY SUPPLY CO., Guelph.

The Williams EVAPORATOR

Uses Steam or Hot Air.

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

ONE MAN MACHINE.

3 Sizes

Capacity—75 to 200 BUSHELS of apples per day.

Most profitable business. Prospects of great fruit year.

Order early.

WATEROUS, Brantford, Canada.

EXCELSIOR LIFE Insurance Company.

Incorporated 1889. Head Office, TORONTO. Issues the most attractive policies in existence. Foremost in features conducive to success. Largest surplus security for policy-holders.

RELIABLE AGENTS WANTED. B. F. CLARKE, MANAGING-DIRECTOR.

SEND for Catalogue of CHAMPION EVAPORATOR. THE G. H. GRIMM CO., Montreal.

LANGSHANS

My birds are imported from the most celebrated English Breeders. I have distinct yards of the best prize-winning strains. EGGS FOR HATCHING.

C. Harleston Irving, Newmarket, 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.

(E.O. 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.

HEADQUARTERS FOR S. C. White and Brown Leghorns, S. L. Wyandottes, S.S. Hamburgs; eggs, \$1.00. B. P. Rocks from grand prize matings, \$1.50; from choice selected stock, \$1.00. E. B. Red Games and B. Minorcas, \$2.00 per 13; \$3.00 per 26. All letters answered. Address 31-y-o J. E. McCOMBS, Ridgville, Ont.

HIGH-CLASS, THOROUGHBRED POULTRY. Fresh eggs, securely but lightly packed, from prize pens of White, Silver and Golden Wyandottes, White and Banded P. Rocks, \$1.00; H. 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, Park Farm, OSHAWA, ONT.

ADVERTISE IN THE ADVOCATE

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.

CULLODEN POULTRY YARDS. 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.

MUNGER'S AMERICAN STRAIN. Breeding Pairs for 1894. Address F. M. MUNGER, DeKalb, Illinois

2000 lbs.

FEATHERS

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

Alaska Feather & Down Co., Ltd., 10 St. SACRAMENT STREET, Montreal.

COMPOSITION TREE PROTECTOR

PROTECT YOUR TREES. Against some of the most common and destructive insects, viz.: Codling Moth, Tent Caterpillars, Climbing Cut Worms, Canker Worms, Tussock Moth, Mottled Humber Moth. Patented Feb. 6th, 1893. The only effective remedy against the second brood of Codling Moth. For special information apply to MCGILL BROS., Sole Manufacturers for the Dominion of Canada OFFICE AND FACTORY: 10-d-o 355 Richmond St., LONDON, ONT.

CRADLE CHURN. PAT. NOV. 28, 1892. This is a cradle that I have tried without the least success, as I can do a churning in twenty-five minutes without the least fatigue. It churns, washes and milks up the butter in a most complete manner. Address: CHAS. BOECKH & SONS, Toronto, or to the WATSON MANUFACTURING CO., Ayr, Ont.

HOW TO MAKE DOLLARS out of WIND.



It will Save Many Dollars in Time and Trouble if you buy a CHATHAM FANNING MILL, With Bagging Attachment. It Cleans Aisike Clover to Perfection; also Marrofat and Black Eye Peas.

- 1,000 Mills Sold, 1894
- 1,300 Mills Sold, 1886
- 2,000 Mills Sold, 1888
- 2,300 Mills Sold, 1887
- 2,500 Mills Sold, 1888
- 3,600 Mills Sold, 1889
- 4,000 Mills Sold, 1890
- 4,500 Mills Sold, 1891
- 5,000 Mills Sold, 1892
- 6,000 Mills Sold, 1893

MANSON CAMPBELL, CHATHAM, ONT. For Sale by all MASSEY-HARRIS CO. Agents in Manitoba and N. W. T.

THRASHING MACHINES AND HORSE-POWERS



OLDS' PATENT. The best Tread Horse-Powers and Thrashing Machines made. Take the lead wherever introduced. Also Drag and Circular Saws and Ensilage Cutters. Agents wanted. JOHN LARMONTH & CO., Manufacturers, Ft. St. Charles, Montreal, P. Q.; E. G. Prior & Co., Agents, Victoria, B. C.; A. L. Gruggen, Agent, Moosomin, N. W. T.

THE BEST WAGON ON WHEELS!



HEAD & SHOULDERS OVER ALL OTHERS SNOWBALL WAGON CO. ST. GEORGE, ONT.

The accompanying cut shows where the SNOWBALL WAGON stands in the estimation of the public. It has stood the test for fifty years, and to-day 1,000 of our customers advise their friends to buy the SNOWBALL. We are very busy at present, and would advise any one wanting a SNOWBALL to order early and give us time to look carefully after the work.

Remember We Only State Facts. Other firms may give you fairy tales. We never do. You run no risk in buying a SNOWBALL WAGON. We know farmers who have run a SNOWBALL WAGON for fifty-five years, and still in fair shape. Always address SNOWBALL WAGON CO., ST. GEORGE, ONT.

WANTED IMMEDIATELY!

Places for myself and friend, who have just arrived from England and are anxious to engage to work on a farm. Perfectly acquainted with all kinds of stock feeding and fitting horses, or any farm work. Address R. W. PUGH, 282 Ridout Street, London, Ont.

GODERICH ORGAN

High grade, fine tone. Send for Catalogue. Made at Goderich, Ontario.

Advertise in the Advocate.

STOCK GOSSIP.

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

At the World's Fair, on seven principal breeds of sheep—Cotswolds, Leicester, Lincoln, Shropshire, Oxford, Southdowns and Dorsets—note the following:—Canada won 59 first prizes, while the United States won 39; Canada furnished 26 of the winners to the U.S. Robert Miller, of Brougham, Pickering Township, furnished 24 of these 26. Canada won 36 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 98 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 sweepstake 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 sweepstake 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.

N. H. Gentry, Sedalia, Mo., President of the American Berkshire Association, in a letter to Mr. Joseph Snell, Edmonton, Ont., says:—"The books of Mr. Lovejoy, the treasurer of this Association, give the most positive assurance of the unprecedented activity of the growing interest in Berkshires in the United States and Canada. The cash receipts of the Association for the months of January, February, March and April, 1894, exceed the receipts for the corresponding months during the past twenty years, and are larger than the average receipts for January, February, March and April of the past ten years by over ninety-five per cent. The officers of the following State and Provincial Fairs have accepted the offer of this Association, and will advertise the premiums for exhibits of young and old herds made at their respective State fairs in 1894, viz.:—California, Georgia, Illinois, Indiana, Iowa, Maine, Massachusetts, Minnesota, Nebraska, New Jersey, North Carolina, Ohio, Rhode Island, South Carolina, Texas, Virginia, West Virginia, Washington, Oregon, Wisconsin, Province of Ontario and Province of Quebec. In a number of States in which no State fair will be held in 1894, the vice-presidents of this Association are conferring with the breeders as to which of the leading county or district fairs will best suit a majority of the exhibitors of Berkshires interested in the competition for the prizes offered by this Association. The activity in the demand for recorded Berkshires has never been more spirited and satisfactory to advertisers than during the past six months, and the breeders who use the live stock and agricultural press, in calling attention to their herds, will not be disappointed in the results."

CARGILL HERD OF SHORTHORNS.

Messrs. H. Cargill & Son, of Cargill, Ont., have long been quietly and carefully building up a herd of exceedingly well-bred Scotch Shorthorns of the most popular families. Many of the animals now in the herd were imported from the foremost breeders in the north of Scotland, such as Campbell, of Kinellar; Duthie, of Collynie; Bruce, of Heatherwick; and others. The two bulls in use in the herd during the past year were imported Albert Victor (5250), and imported Saladin, the former of which is one of the very best-bred Golden Drop bulls that ever came to America, as well as being a most excellent individual, and a first-class stock-getter. A daughter of his won second prize at the Toronto Industrial Exhibition (5250), in one of the best classes ever shown at Toronto, though only in very moderate condition, and young for her class. Saladin was bred by Mr. Wm. Duthie, of Collynie, and he was sired by Mr. Amos Cruickshank's Vice-Chancellor (50881), and out of Sea Foam, a cow of Mr. Cruickshank's Spicy family, embracing such sires as Gondolier (52566), Vicking (48873), Royal Duke of Gloster (28864), and Champion of England (17526). Of the females, five were imported, viz.:—Two of Mr. Campbell's Urys, two of Mr. Bruce's Rosebuds, and one of Mr. Main's Myrtilles. There are at present three daughters of the two imported Ury cows, one granddaughter, making in all six Urys, besides two sons, and a number of sons sold. The Urys are not only one of the favorite tribes in the Kinellar herd, but they are one of the very best. The first of them was purchased at a sale of Captain Barclay's, of Ury fame, one of the very first to found a herd of Shorthorns in the north of Scotland. Since then they have been steadily bred with greatest care to bulls of outstanding individual merit, and the best of breeding, most of which were drawn from the herd of Mr. Cruickshank, of Sittyton. The Rosebuds number three, and they, too, are of an exceedingly old family in the north of Scotland, the first one having been selected by Mr. A. Cruickshank, for Mr. Bruce, at the sale of the late Mr. Milne, of Fintray House, Aberdeenshire, about the time that Mr. Cruickshank was founding his own herd at Sittyton. There are also two of Mr. Cruickshank's Lovelies—a grand old family which remained popular at Sittyton until the dispersion of that herd. There are several of the justly popular Strathallans, all descended from the beautiful roan Strathallan cow shown so successfully by the Messrs. Cargill paid considerably over the four figures for a daughter of the above cow, from which the females of that tribe in the herd are descended. Besides these famous old families, there are others of excellent breeding and capital individual merit, all being bred to the best of imported Scotch bulls. They are all tribes long and favorably known to Canadians as exceedingly good milking tribes of Shorthorns. With the above named sires in service, and tribes of cows enumerated, it may be asked: Where can breeders of Shorthorns find richer blood from which to select a bull to head a good herd? The whole herd, numbering in all about forty head, are at present in the very best form, though not in show fix. They are healthy, robust, and all breeding, that are of breeding age. The Messrs. Cargill are now issuing a catalogue of the herd, which will be mailed free to any person writing for it.

NOTICES.

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

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.

One of the most useful articles on the farm is a basket. Every possible line of these are manufactured at the Oakville Basket Factory, and include every description of fruit basket or package, grain, root, chaff and butcher's baskets; three different sizes of satchel or lunch baskets; a most useful line is that of a plant basket, which are intended for bedding plants and vegetables, and are so cheap that there is no need of pots for this purpose. Look up their advertisement in another column.

We take pleasure in calling the attention of our readers to the advertisement of the McClary Stove Manufacturing Company, London. From a very small beginning, fifty years ago, this firm have, by strict attention to business, and by fair and honorable treatment of all customers, so increased their business that now they own one of the largest stove factories on the continent. Branches have been established in Toronto, Montreal, Winnipeg and Vancouver. Read "A Farmer's Testimony" in our advertising columns.

IMPERIAL PRODUCE COMPANY.
The annual meeting of the stockholders of the Imperial Produce Company, of Toronto (Ltd.), was held May 8th, at their office, on Toronto street, in that city.

The Secretary presented a report showing the increased advantages the Company possessed in their methods of handling consignments, and that his trip to England had resulted in still further reducing charges of transport, to the advantage of consignors.

The Treasurer's financial statement shows all charges and expenses paid and a large surplus remaining, out of which the stockholders have been paid a dividend, the Company reserving a sum sufficient to cover all estimated expenses of 1894. The stockholders were so pleased at the results that they returned the same officers, the Hon. Charles Drury being president, John Stark, Esq., treasurer, and A. Jones, secretary. The Board of Directors represent the dairy and fruit interests of Canada. It is interesting to observe that the Company succeeded last season in establishing many private factory brands of cheese, so that now these brands can be sold on the spot as fast as manufactured during the season. They also have registered in Britain several special brands of cheese and some of butter, covering only the choicest makes, and in all these cases they are prepared to purchase to fill their orders direct.

This Company is also prepared to make tests of Canadian lines of produce or products of our country of any kind, without charge, and thus assist in promoting the general interests.

OUR BOOK TABLE.
We are indebted to the editor, Mr. Linus Woolverton, M. A., Grimsby for a handsomely bound volume of the Canadian Horticulturist for 1893. It is not only an attractive but useful volume for the library of the fruit grower.

Through the courtesy of Mr. J. W. Darrow, publisher of The Fanciers' Review, we have received a copy of "Five Hundred Questions and Answers on Poultry Raising." This little pamphlet contains a vast amount of useful and practical information, in the form of questions and answers on the various departments of poultry raising, such as feed and care, diseases, eggs, incubators, buildings, etc., with a chapter on turkeys, geese and ducks. This, the third edition of this work, has been entirely revised and rewritten by Mr. P. H. Jacobs, editor "Poultry Keeper," The Fanciers' Review, Chatham, N. Y., U. S. A.

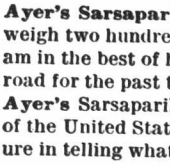
"Indianland and Wonderland" is the title of an elegant booklet, describing and illustrating the entrancing beauties of the Yellowstone National Park, Puget Sound and Alaska. The illustrations are really beautiful, the entertaining descriptive matter printed on fine quality of paper. It contains chapters on the chief points of interest along the Northern Pacific Railroad system, including St. Paul, Minneapolis, Duluth, the Red River Valley, Rocky Mountains, Yellowstone Park and Alaska; also a chapter on the Jesuit Missions of the Northwest. It can be obtained by enclosing a six-cent stamp to Chas. S. Fee, General Passenger Agent, Northern Pacific Railway, St. Paul, Minn.

We are in receipt of a little work entitled "The Formation of Pure-Bred Flocks and Their Subsequent Management," by the well-known English sheep breeder and exporter, Mr. Alfred Mansell, Shrewsbury. This book deals with the formation of the flock and its management, the selection and treatment of sheep intended for exhibition at agricultural shows, and closes with about twenty-seven practical questions on sheep husbandry, which are briefly answered by twenty of the most successful sheep breeders of England. Mr. Mansell has received letters stating that Her Majesty the Queen, H. R. H. the Prince of Wales, and the Minister of Agriculture have been pleased to receive copies of this work. Milliar, Cooper & Nephews, Berkhamsted, England, are the publishers.

With the rapid increase of Farmers' Institutes, Patrons of Industry, Granges and other agricultural organizations, there has naturally been developed among the membership a very keen interest in rules of order, and, in fact, the general procedure of public meetings. This, the Advocate thinks, is as it should be, for there is always a distinct advantage in having things done "decently and in order." Many of our readers will, therefore, be specially interested in the volume entitled "Procedure of Public Meetings," written by J. G. Bourinot, LL. D., Clerk of the House of Commons, Ottawa, whose name is a sufficient guarantee as to the excellence of the work. The book is divided into five parts—one devoted to the rules and usages of Parliament; one each to rules of order and procedure for public meetings; corporate companies, gatherings; church, schools and conferences; municipal councils. The index is most complete, covering forty pages. Carswell & Co., Toronto, are the publishers.

Only the Scars Remain.

"Among the many testimonials which I see in regard to certain medicines performing cures, cleansing the blood, etc.," writes HENRY HUDSON, of the James Smith Woolen Machinery Co., Philadelphia, Pa., "none impress me more than my own case. Twenty years ago, at the age of 18 years, I had swellings come on my legs, which broke and became running sores. Our family physician could do me no good, and it was feared that the bones would be affected. At last, my good old mother urged me to try Ayer's Sarsaparilla. I took three bottles, the sores healed, and I have not been troubled since. Only the scars remain, and the memory of the past, to remind me of the good Ayer's Sarsaparilla has done me. I now weigh two hundred and twenty pounds, and am in the best of health. I have been on the road for the past twelve years, have noticed Ayer's Sarsaparilla advertised in all parts of the United States, and always take pleasure in telling what good it did for me."



AYER'S Sarsaparilla
Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Cures others, will cure you

VIOLINS GUITARS ACCORDEONS FLUTES, FIFES, PICCOLOS, AND OTHER MUSICAL INSTRUMENTS

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 **FREE** our wholesale price list of Musical Instruments. Address

THE SUPPLY CO., NIAGARA FALLS, ONTARIO

THE SYMMES PATENT



HAY AND GRAIN CAP.

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

VEGETABLE AND FLOWER COVERS

For Transplanted Plants.
Stack Covers,
Built in sections. Diam. at bottom, 8 feet, by about 5 feet deep.

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

USE RAMSAY'S . . . VARNISHES. IN HANDY CANS. ADVERTISE IN THE ADVOCATE

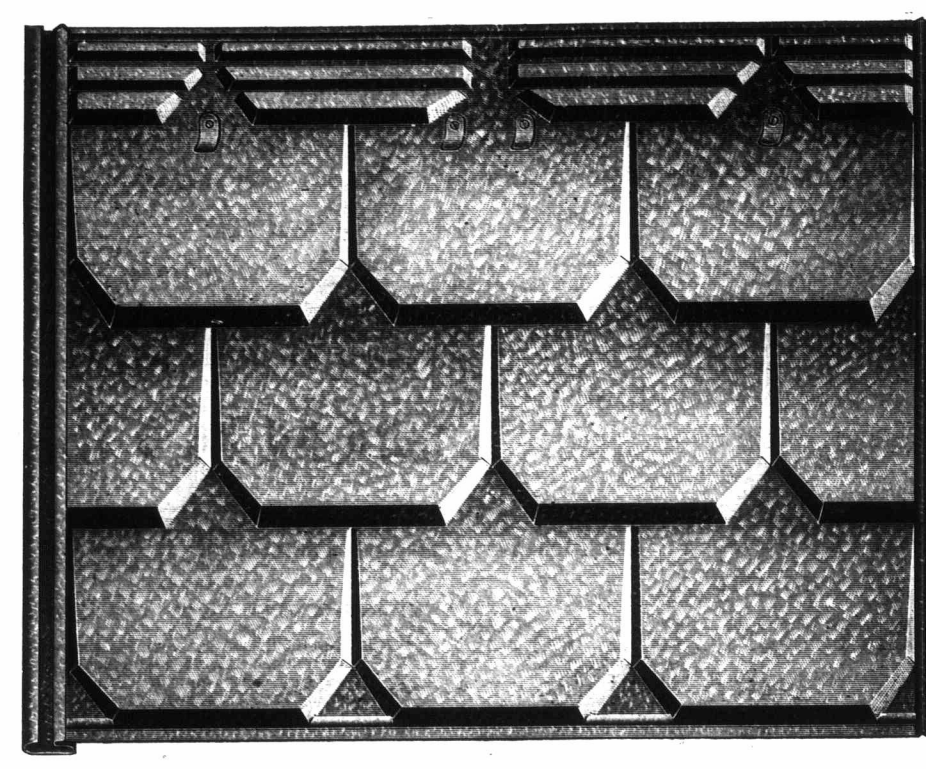
SEED CORN
AT WHOLESALE PRICES and IN QUANTITIES TO SUIT YOUR WANTS.



SELECTED RED COB WHITE ENSILAGE—Per bush. (56 lbs.), 70c.; per 2 bush., \$1.35; per 10 bush., \$6.50.
PARAGON GIANT WHITE ENSILAGE—Per bush. (56 lbs.), 70c.; per 2 bush., \$1.35; per 10 bush., \$6.40.
MAMMOTH SOUTHERN SWEET WHITE DENT ENSILAGE—Per bush. (56 lbs.), 68c.; per 2 bush., \$1.30; per 10 bush., \$6.25.
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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.
WISCONSIN YELLOW DENT—Per bush. (56 lbs.), \$1; per 2 bush., \$2; per 10 bush., \$10.
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.
Orders by mail promptly attended to.

J. A. SIMMERS,
SEED MERCHANT AND GROWER, TORONTO, CAN.

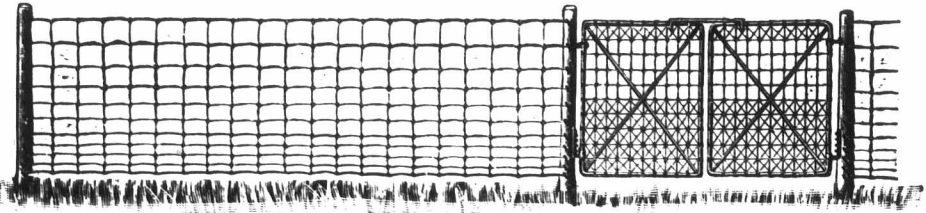
"EASTLAKE" STEEL SHINGLES.



GALVANIZED OR PAINTED. THE SHINGLE OTHERS TRY TO IMITATE. HAS NO EQUAL. CAN BE LAID BY ANYONE. FULLY GUARANTEED. FIRE-PROOF, DURABLE, ORNAMENTAL AND CHEAP.

—Sole Manufacturers—
METALLIC ROOFING COMPANY (Limited),
10-y-o 82, 84, 86, 88 and 90 YONGE ST., TORONTO, ONT.

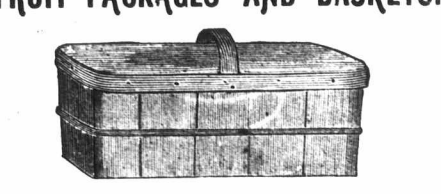
.. VERY DELIBERATE. ..



The Lake Shore & Michigan Southern R. R. Co. took a "flying trip" to the World's Fair, but didn't have time to decide on the fence question. In fact, they took SEVEN YEARS to investigate the PAGE FENCE before deciding to adopt it for use on their entire line. Besides testing it for five years, the Chief Engineer and Div.-Engineers made special trips, travelling hundreds of miles to inspect the first fences built (some serving on second set of posts), and questioning owners on every point. The first order was received April 20th, and probably 150 miles will be used during the season. Elasticity "is in it."
THE PAGE WIRE FENCE CO. OF ONT. (LTD.), WALKERVILLE, ONT.

Many Old FARMS require so much fertilizing **Won't Produce a Profit.** The rich, loamy soil of Michigan Farms produces a fine crop without this expense. The near markets, general healthfulness of climate and freedom from cyclones, blizzards, together with good society, churches, etc., make Michigan Farms the best in the world. Write to me and I will tell you how to get the best farms on long time; low rate of interest.
O. M. BARNES, Land Commissioner, Lansing, Mich.
23-L-o

ALL KINDS OF FRUIT PACKAGES AND BASKETS.

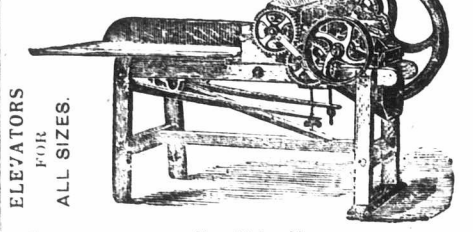


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LIVE STOCK AUCTION SALES

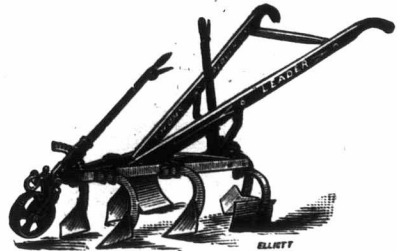
Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Edmonton; Hon. M. H. Cochrane, Compton, P. Q., or this office. **JOHN SMITH,** Brampton. 9-1-y-o

CUTTERS
IN FIVE SIZES.



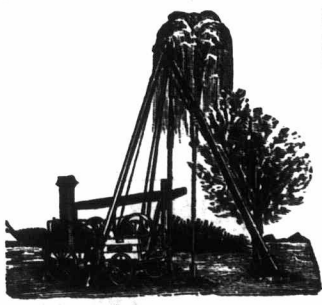
ELEVATORS FOR ALL SIZES.
Our Cutters are all self-feeding. All our Power Cutters have safety fly-wheels. If you keep stock, you need one of our Cutters. Write for catalogue.
M. MOODY & SONS,
Terrebonne, Que.

CORN AND ROOT CULTIVATORS FOR 1894



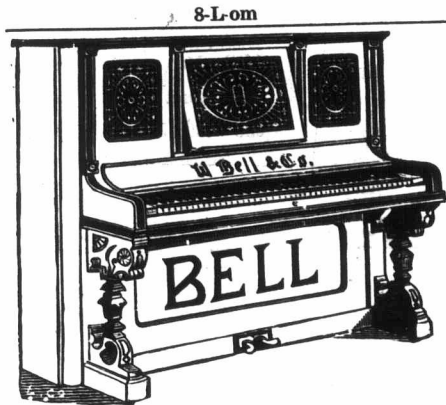
We were the first to manufacture the Lever Extension Cultivator in Canada. We claim to be leading the trade in this particular line of goods. Every enterprising farmer and dealer wants to handle the best tools. We make a specialty of Cultivators, and keep ahead of the times. Those desiring to handle the Famous Watford Cultivators for 1894 please correspond now and secure the right of sale. One of our other specialties is Riding Plows. Who has not heard of the famous Watford Riding Plows? Patented in Canada and the U. S. We are right on deck again with some more valuable improvements. Send for circular. We manufacture the Ripper Feed Cutter.

THOMS IMPLEMENT WORKS, - WATFORD, ONT.
Established 1875. 11-a-o



WM. SHARP, Practical Well Driller,
184 Hamburg Ave., TORONTO, ONT.

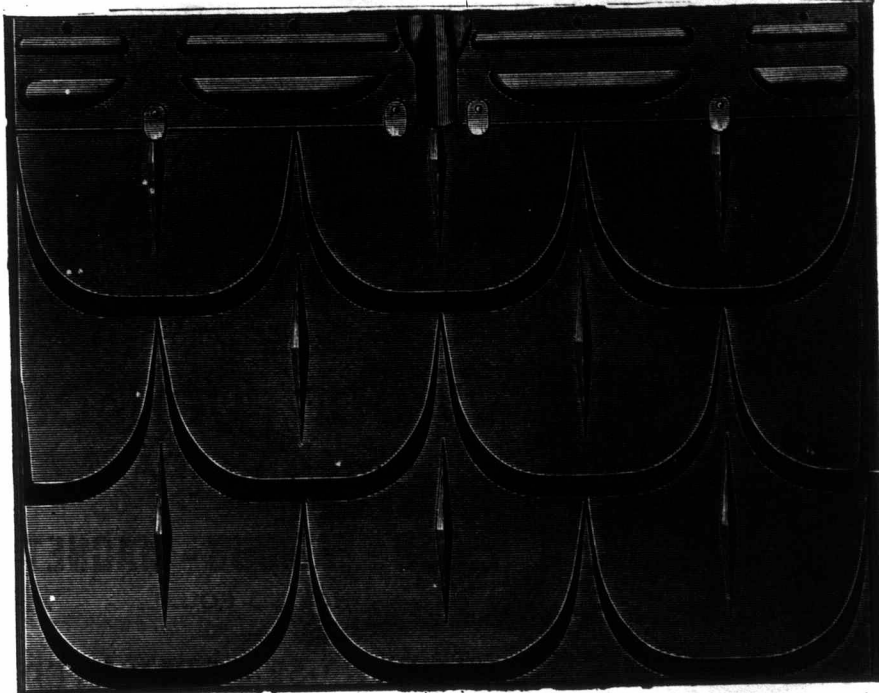
100 Rods BUCHANAN FENCE CO.
SMITHVILLE, ONT. 35.00



PIANOS, REED ORGANS & CHURCH PIPE ORGANS
THE STANDARD INSTRUMENTS OF THE WORLD.

Send for Catalogue.
BELL ORGAN AND PIANO CO.,
Guelph, Ont. 17-1-y-o

THE - PEDLAR - PATENT - STEEL - SHINGLE
WILL LAST A LIFETIME.



FIRE-PROOF, LIGHTNING-PROOF, WATER-PROOF. Nearly as Cheap as Wooden Shingles. Send for Illustrated Catalogue. Reliable Agents wanted in every vicinity.

ADDRESS—**THE PEDLAR METAL ROOFING CO., OSHAWA, ONT.**
1-y-o

THE FARMER'S COMPANY

EVERY FARMER HIS OWN MANUFACTURER.

THE MERCER M'F'G. CO. (LTD.)

UNITE THEIR INTERESTS WITH THEIR CUSTOMERS.

The problem solved how to secure cheap machinery. Every farmer co-operating with and taking stock in the Company secures his machinery at wholesale prices. No farmer can afford to miss this opportunity to secure his machinery and supplies at right prices and protect himself from designing combines.

The Mercer Manufacturing Company (Limited) is a chartered Company (under the Dominion Act granted January, 1894), and shareholders are only liable for the amount for which they subscribe. Shares are only \$10.00 each, and more than this amount is saved in one implement. Hundreds have already become shareholders, and every farmer studying his own interests will not delay in connecting himself with this Company.

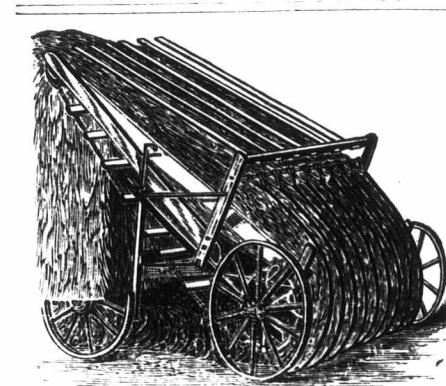
LIST OF MACHINES MANUFACTURED AND SUPPLIED BY THE MERCER MFG. CO. (LTD.):
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ALL MACHINES GUARANTEED.

Pay no attention to agents of other companies, as we sell direct to the farmer, and our method of doing business has only to be looked into to be appreciated by any intelligent farmer. Write for particulars to

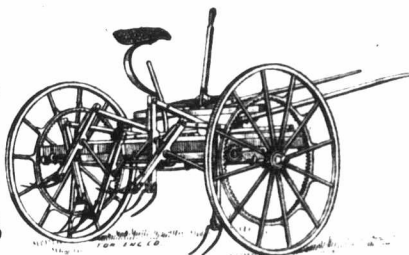
THE MERCER MANUF'G. CO. (LTD.)
Branch Offices and Warerooms, LONDON AND BRANTFORD. Head Office, ALLISTON.

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HAY-MAKING MADE EASY

FULL LINES OF
LOADERS
—AND—
TEDDERS



ADDRESS,
DAVID MAXWELL & SONS
St. Mary's, = 11-b-o = Ontario.

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
OSLER, HAMMOND & NANTON,
LAND OFFICE, 381 Main St., WINNIPEG
Calgary and Edmonton Railway, Qu'Appelle, Long Lake and Saskatchewan Railway Company. 17-1-y-om

STOCK GOSSIP.

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

Capt. A. W. Young of Tupperville, Ont., reports that he is getting large numbers of enquiries for Poland-Chinas.

W. M. & J. C. Smith, Fairfield Plains, write us that they have several extra good Ayrshire bull calves of very choice breeding, nearly fit for service, for sale; also a few Poland-China young boars. See change of advertisement in this issue.

MR. ADAM BECK'S THOROUGHBREDS.

Mr. Adam Beck, of London, Ont., has started out with a nice stud of thoroughbreds, which have come through the winter in fine condition. The beautiful mare Curtolima, by Judge Curtis, dam Tolema, by imp. Glen Athol, has a beautiful filly foal to the cover of Dandy Dimmont. The youngster is brim full of promise for the future, and may be expected to become a second Ajax. Curtolima has produced some good ones, such as Kite String, by imp. Strachino, which filly won the Queen's Plate as a three-year-old in 1890; while Jardine, another of Curtolima's colts, has won in twenty-five events, and is still promising for the future.

Lady Lucy, another good brood mare, which has herself proved a stout runner over long distances. She is by Kyri-Daly, dam Endeavor, by Enquirer. She has recently dropped a fine colt foal to Cortez, which is as handsome as a picture. A beautiful filly is the two-year-old Ranlima, by imp. Ranaleigh 2nd, also out of Curtolima. Yet another is a yearling colt by Banaleigh 2nd, out of Strathleen, by imp. Strachino, which has a good, wedgy form, and will likely make his mark in the future.

Last issue we gave an illustration of Mr. Beck's imported stallion, Grand Falconer, which horse is good enough to head the best stud of thoroughbreds in the country, while he is handsome enough to get the best class of harness, park and saddle horses. His half-brother, Ladas, owned by Lord Rosebery, Premier of England, won the 2,000 guinea stake at Newmarket last month, and is the favorite for the Derby.

SPRING BROOK HOLSTEINS.

During a recent visit we found Mr. A. C. Hallman still paying the close attention that he usually bestows upon his choice herd of Black and Whites. There are something like sixty head, all told, of pure-bred Holsteins in the herd. At the head stands the silver medal bull, Netherland Statesman's Cornelius, which is proving a capital sire, as the heifers are developing finely and the bulls from him are exceptionally good. In fact, it is seldom one sees quite as good a lot of young bulls in a herd, as there were several at the time of our visit, quite good enough in breeding and individual merit to be placed at the head of herds of pure-breds. One calved in August, 1892, from the cow Princess Margaret, a good business cow and a fine individual, is particularly promising. The other is a winner of first prize in the bull calf class at last year's Toronto Exhibition, his dam being Phoebe Zeeman 2nd, which has a record of 60 lbs. of milk per day. Princess Margaret has another bull calf of last fall that is handsomely marked and looks like making it interesting for competitors in future show yards. Yet another likely bull is one from Lily Vermont, a cow sired by Joe, whose dam obtained a record of 88 lbs. of milk per day, and 2,407 in thirty days. Of the four excellent young bulls, two are by the bull Royal Canadian Netherland, and two by Netherland Statesman's Cornelius.

Last season Mr. Hallman imported some Tamworth swine, and he is now busily engaged filling orders, which, in a recent letter he remarked, is both pleasant and profitable. We were greatly impressed with some half-bred Tamworths, which show wonderful development for their age, and Mr. Hallman says that with the present demand for leaner bacon, longer and deeper sides, no hog fills the bill like the Tamworth. He says he finds the Tamworths remarkably quiet, easy and rapid feeders. He has two different strains in his herd, by which he can supply his patrons with pairs not in any way related.

MR. GEO. W. CLEMONS' HOLSTEIN-FRIESIANS

Mr. Geo. W. Clemmons, who holds the office of recording and corresponding secretary for the Holstein-Friesian Association of the Dominion, is also an extensive breeder of the Black and Whites. In a recent visit we were glad to find a wonderful improvement in the herd. A choice lot of heifer calves had arrived, several of which were from favorite cows, and which heretofore had produced bulls. The change is an agreeable one to the proprietor, who naturally wishes the increase in these families to be in the female line. Last season's heifer calves had developed into most promising yearlings, while the first of Artis Aggie Prince's heifers are now two years old; are springing to calve, and, by the appearance of the udders and milk vessels, they were developing, we would expect their performances at the pail will equal that of their paternal grand dam, Artis Kussie, which gave a fraction over 49 lbs. of milk per day as a two-year-old, and 60 lbs. during last summer's dry pasturage, without additional hand feeding.

The yearling bull Netherland Consul, sired by Netherland Statesman's Cornelius, and whose dam, Polianthus, gave 57 lbs. of milk per day as a two-year-old while in the herd of Smith, Powell & Sons, has developed very nicely. The latest purchase is Margaret 4th's Mercedes, of Helderleigh, a bull calf dropped last October in quarantine. Margaret 4th gave 42 lbs. of milk in seven days, and 2 1/2 lbs. of butter in seven days. This cow, in addition to winning many first and second prizes at the leading exhibitions in Ontario, was one of the second prize herd at the World's Fair, Chicago. The sire of this richly-bred youngster is Slepke 3rd, Mink Mercedes' Baron, which won second at Chicago as a three-year-old, whilst showing against aged bulls. Madge Merton, a full sister to Margaret 4th's Mercedes, of Helderleigh, was a prize-winner as a calf at Toronto and Montreal, and stood third in strong competition at the World's Fair, defeating the \$1,500 heifer, Pauline Paul 2nd. Madge Merton brought the top price at the recent dispersion sale of the McNiven herd. Mr. Clemmons has a lot of useful cows that have every appearance of doing business, and we were much pleased with the progress the herd have made in a year.

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.

Messrs. Tape Bros., Ridgetown, report the following sales of Duroc Jerseys: Hugh Mc-Dermid, Emerak, Mar, a pair; Leonard Hunter, Exeter, pair; B. S. Russell, Charing Cross, pair; J. Chinnick, Chatham, pair; J. B. Snoblin, Blenheim, pair; A. A. Burdan, Campbellford, pair; A. Cole, Morpeth, one; J. C. McIntyre, Duart, pair; A. Thompson, Duart, pair; J. Ripley, Dresden, boar; J. Dick, Thamesville, boar; J. Paul, Florence, one; T. H. Tape, Highgate, one; L. Tape, Highgate, pair; J. G. McDonald, Duart, sow; J. H. Gagon, Orwell, sow.

MR. JOHN A. LINE'S HOLSTEIN-FRIESIANS.

The farm of Mr. John A. Line is a short drive south from the Richmond Hill Station on the Northern Branch of the G. T. R., which runs through the farm. The herd of Holstein-Friesians are chiefly of his own breeding, and are descended from two exceedingly good cows, which have all the appearances of being heavy milk-producers. Breezy, bred by Mr. J. Wink, New Hampshire, is a handsome cow of large size, with a large, capacious udder and capital milk veins. She has a record of 14 lbs. of butter in seven days; while her daughter, Breezy 2nd, bred by B. B. Lord, Sinclairville, N. Y., a cow quite equal to her dam in appearance, was giving an average of 68 lbs. of milk per day, and the week previous had made 17 lbs. 13 oz. of butter in the seven days. It will be seen that Mr. Line was determined to buy the best to form the foundation of the herd. Amsterdam, bred at the Agricultural College, Guelph, Ont., has been the stock bull used in the herd for the last three years, and he is a capital specimen of a dairy bull. He is large and of smooth finish; he was sired by Mr. A. C. Halman's Netherland Statesman's Cornelius, dam Verasina, bred by Mr. Bies, Beemster, N. H. His breeding and individual merit are such that he should again go into a herd of pure-breeds. We were also shown a handsome yearling bull, sired by Amsterdam, out of imp. Breezy, which should not be long in finding a customer. Mr. Line has been selling his stock in different parts of the country with the most satisfactory results, as one might naturally expect from the good judgment exercised in the selection of the foundation stock and subsequent breeding.

DUROC-JERSEY FARM.

About three miles from Ridgetown is situated the stock farm of the Messrs. Tape Bros. On this farm is located a very commodious brick house, heated throughout by means of natural gas, which the owners were fortunate in finding on their own farm. Three years ago they purchased, almost by chance, a pair of Jersey pigs, which proved so satisfactory a bargain that they considered the Jerseys would suit their conditions better than any other breed. Deciding to keep nothing but the best, they imported a pair from Mr. C. J. Stockey, of Atlanta, U. S. A., and afterwards bought a boar from T. J. Bennett, President of the American Swine Breeders' Association. In 1893 they imported another choice sow from Mr. Stockey. They have swept everything at the local shows in the neighborhood of Chatham and Ridgetown, and this fall they expect to go east to the larger shows. As an evidence of what the Jersey will do in the production of pork, we were told that one of their own raising weighed 280 lbs. at 6 months of age, and 325 lbs. at 7 months. The Messrs. Tape report a good trade, and that the Duroc-Jerseys are steadily forcing their way into popular favor. A choice young sow had just been sold to Mr. E. H. Small, Norwood, Ill., U. S. A., while eight young pigs had been sold to go to Manitoba. The demand from near home has been such that they have never been able to keep any for their own use, in order to test their qualities as producers of a fine quality of pork. The Duroc-Jersey is a very prolific breed. One very fine sow, the Duchess of Kent, produced 42 pigs inside of eleven months. At a test of different breeds, made at the Michigan Agricultural College, the Duroc-Jersey came out ahead in regard to gain per day, cost of production, and the quality of the flesh.

MR. WM. COWAN'S (GALT) SHORTHORNS AND IMPROVED YORKSHIRES.

In former years, when the prices of Bates' Shorthorns were up in the thousands, the Cowans, of Crockmoir, reaped a nice little harvest in selling representatives of their famous Princess family, for which a price counting less than four figures was never entertained. It is, therefore, not surprising that they still retain a predilection for the descendants of the sorts that were once bred at Kirklevington, for which, at the time spoken of, there was such a demand, at high figures, on both sides of the Atlantic. The present stock bull at the head of the herd of Mr. Wm. Cowan, V. S., is bred after these lines. He was sired by the Duchess bull Duke of Niagara, dam, imp. Thorndale Rose, and belonging to the famous family of that name. The females in the herd number something like twenty-three head, and among these we were shown five of the Princess family, two Gynnes, while the balance were chiefly of those useful sorts that have done so much to assist our beef and dairy cattle interests, and are mostly descendants of Beauty and kindred tribes.

We noticed a pair of Leicesters which carry out the typical form and handsome character for which the Bakewell sheep were famous. However, it appears that imported Yorkshires are just now receiving the largest share of attention in this breeding establishment, for, on the occasion of our recent visit, these numbered over fifty head, which, with a number of sows yet to farrow, will enable the proprietors to furnish Yorkshires of any age and of such breeding that they will be suitable for mating, as they have several strains of different blood. Two imported boars are chiefly in use in the herd. These are Lincoln Lad, bred by C. E. Duckering, Kirton, Lindsey, England, and Kirton Dandy 2nd, also bred by C. E. Duckering; these belong to different families. Several sows are from straight Walker Jones' breeding, their sires and dams both being imported from the noted herd, while the sow, Mus-ican, is from the imported Saunders' Spencer sow.

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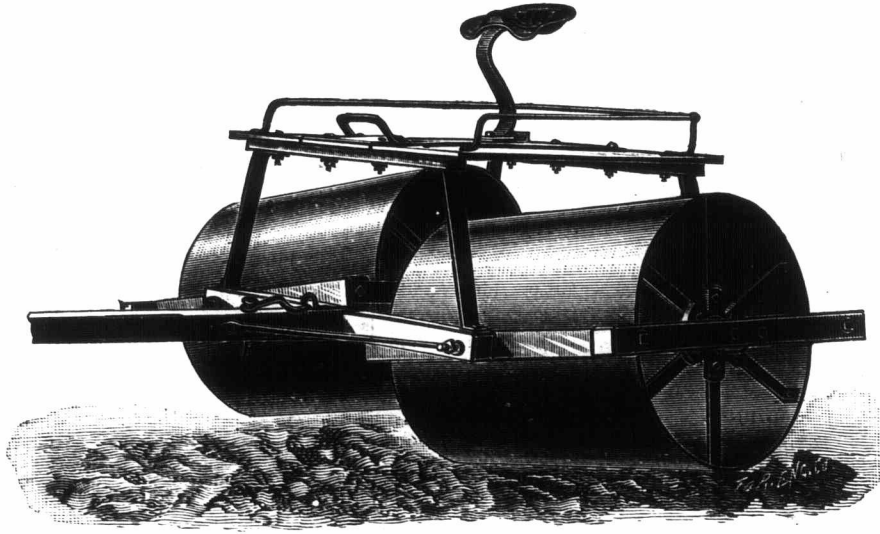


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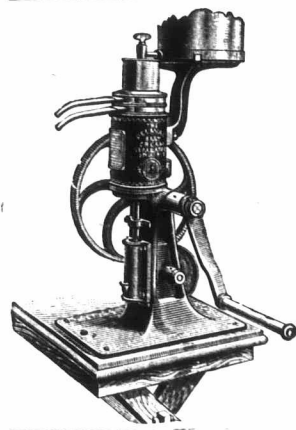
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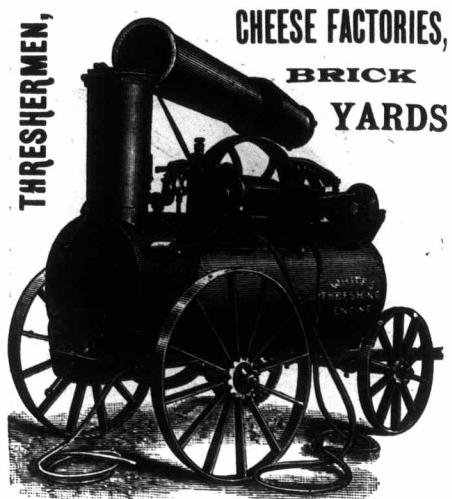
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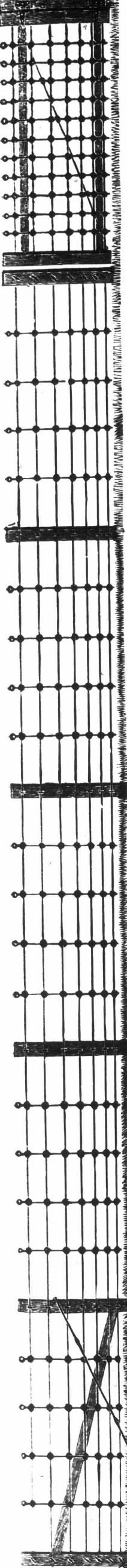
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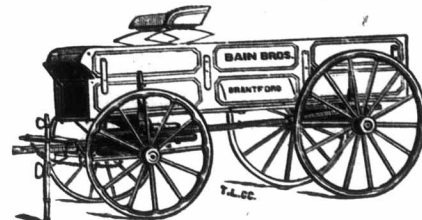
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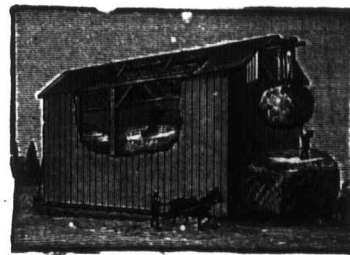
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Though less in price, than any ordinary 3 1/2 to 3-inch cast-iron arm wagon, and our 2 1/2-inch Malleable Giant Arm Wagon is warranted stronger than any ordinary 3-inch cast iron arm wagon, and less in price.

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CHATHAM, Feb. 9th, 1894.

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The managers of Dr. Barnardo's Homes will be glad to receive applications from farmers or others for the boys whom it is proposed to send out from England in several parties during the coming season. All the young immigrants will have passed through a period of training in the English Homes, and will be carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars, as to the terms and conditions upon which the boys are placed, may be obtained on application to MR. ALFRED B. OWEN, Agent, Dr. Barnardo's Homes, 214 Farley Ave., Toronto.
4-y-o

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Every Farmer can send and get his Cottons, Cottonades, Shirtings, Prints, Towellings, Cashmeres & Tweeds at wholesale prices. Boots and Shoes made specially to our order always on hand at Manufacturers' prices. Harness, Harness Parts and Sweat Pads at first cost.

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No. 2 is a grand dairy farm on the River St. Lawrence, comprising 200 acres, on the front road, between Kingston and Gananoque, in the Township of Pittsburg; A1 brick residence and two barns and stone stabling; land all improved.
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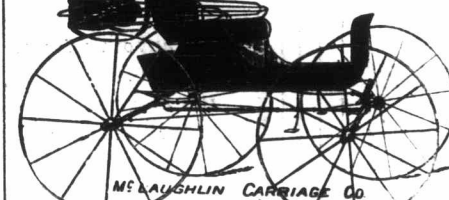
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