

J. C. Rutherford, VS a spl 98

MANITOBA AND WESTERN EDITION

THE FARMER'S ADVOCATE

AND HOME MAGAZINE



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

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THE IMPORTED CLYDESDALE STALLION, PRINCE OF EASTFIELD (6178),
THE PROPERTY OF THE ARCTIC ICE COMPANY, WINNIPEG, MANITOBA.

The spring is the most critical time of the year with most farm stock, coming out of a long winter on dry feed and still waiting for the first appearance of new grass. Calving time, too, is at hand. Of course much of the success of this season's calf crop depends on how the dam was cared for during the past winter; if she has been well wintered, there is little danger of her going wrong at calving time. Linseed cake will be found of great value if fed in moderate quantities to coming-in cows, regulating the bowels and keeping the system cool. Mr. John Boyd, a noted American breeder of Jerseys, has been very successful in the use of linseed meal as indicated. His treatment is as follows:—"Three weeks before the cow is due to calve commence to feed one handful of pure linseed meal in each regular feed, gradually increasing the amount until she gets about twice or three times as much the day or day before calving. As soon as the calf is dropped and before the cow 'cleans,' give a warm mash, very thin, nearly as thin as gruel, made as follows: Four quarts coarse bran, half pint linseed meal, one tablespoonful of salt, one tablespoonful of arnica, warm water to suit. If the cow does not clean readily, give her from four to six quarts of whole oats, dry."

After the calf arrives on the scene, care must be given it if good results are expected. We quote the following excellent advice from the Farming World:—"A prime requisite in successful calf-raising is regularity; let the calves be fed at the same time and in the same order every day. Next to regularity, regard the amount of milk fed; while 15 lbs. to 18 lbs. of full milk is a ration, with skim milk from 18 lbs. to 24 lbs. may be fed, depending upon the ability of the calf to assimilate its food. More calves are killed by overfeeding than underfeeding. Milk should be fed at blood temperature, say 98° to 100° F., and a thermometer should be used to see that it is right. The feeding pail is often neglected; it should receive a daily scalding, and be kept always scrupulously clean. Scouring, the bane of calf rearing, usually indicates indigestion, and is often brought on by overfeeding, irregular feeding, giving the feed too cold, or the animal getting chilled or wet. To check indigestion, a tablespoonful of lime water in each feed is very satisfactory. Successful management of the calf lies at the very foundation of the live stock business, and calls for regularity of attendance and watchfulness, discerning at once all the little wants of the animal, and a general disposition to supply every need as soon as apparent."

Every breeder, whether of cattle, horses, sheep or pigs, will sometimes be called upon to assist at the birth of the young, although generally speaking all animals get along better when left to themselves, unless something is radically wrong; when it is deemed necessary to assist in these cases, the operator should exercise the greatest care to have hands and arms perfectly clean and well smeared with carbolic oil (which can be procured at any drug store at small cost); the floor should be well covered with clean, fresh bedding. Many seemingly unaccountable deaths occur from blood-poisoning, carried into the system of the dam from the dirty hand of the careless operator, or absorbed into the system of the young animal through the navel cord coming in contact with the same dirty hand or a foul stable floor.

By the time this issue reaches our readers seeding will be well underway, and as a larger area of land was plowed last fall than usual, doubtless the work will be completed in good time. Owing to the heavy snowfall throughout Canada and the heavy rains of last autumn, the land should be well supplied with moisture. Now it remains for each farmer to do his part, and if he uses the best seed he can procure, of the varieties that have proved suitable to his locality, treats his seed wheat with bluestone, sows with a drill, and sows all spring plowing the same day it is plowed—doing all his work thoroughly, even should he not cover as much ground as usual, he will at least have the satisfaction of knowing that he did his best, and can look forward pretty confidently to a profitable return for his labor.

The Secretary of the Southdown Breeders' Association of Great Britain has kindly sent us a copy of the Constitution and By-laws which govern this society. This data we print in another column. Canadian and American breeders and importers of Southdowns will do well to carefully read and digest these rules. Many Canadian buyers of imported stock of all sorts seem satisfied if their purchases have simply crossed the Atlantic. Something more than this is needed. It would be better if all other British Live Stock Associations would take similar steps. Well conducted records are a benefit to the country at large, preventing the unexperienced buyer from being imposed upon, and preventing unscrupulous dealers and feeders from stealing the trade that justly belongs to reliable and experienced live stock men.

An Unbeaten Record.

The Arctic Ice Co., like many of Winnipeg's most enterprising firms, have gone extensively into farming. Their farm, comprising 640 acres of excellent land, is situated east of the city of Winnipeg about four miles. Considering the short length of time, a little over a year, this farm has been occupied, much has been accomplished, and about 200 acres made ready for crops.

One of the most important features in connection with their farming operations, however, is their Clydesdale stallion Prince of Eastfield (6183), the subject of our frontispiece illustration. As will be seen, this horse is one of the massive sort, having lots of bone of that clean, flinty quality so essential in a first-class draft horse. He has a nice head and neck, grand quarters and a good middle; his legs are well feathered, and his feet and pasterns right.

Prince of Eastfield is a dark bay, with only a small white spot on face; foaled June, 1885. Bred by John L. Imrie, Maryhill; sired by Prince of Wales (673); dam Jess of Blackhill (5475), by Young Lorne (907); grand dam Flora (179), by Young Lofty (987)—a pedigree any horse might be well proud of. He was imported by Robert Ness, of Howick, P. Q., who has imported many of the best horses ever brought into Canada, and the fact of his having brought out the Prince should of itself be a sufficient guarantee of his superior individuality.

Prince of Eastfield has been exhibited many times both in Scotland and since his importation in 1891 in Canada, and has in every case won first place, never having been beaten. The following are his Canadian victories:—In 1891, first and sweepstakes at Canada Central (Ottawa), Huntington County and Sherbrooke fairs, and first in his class at Montreal. In 1892, he was first at Hochelaga Spring Stallion Show, and after being brought west captured first in his class at the Winnipeg Industrial, and also first in the Springfield fall fair. He is at present in only moderate flesh, and will be travelled east and west of the city.

The Company has one Clyde mare in foal to Prince. Besides a number of Clyde-bred mares, the Company keep a herd of upwards of eighty grade cattle, headed by the Shorthorn bull Captain =4386=, and also ten brood sows, upon which they are using a Chester White hog.

Report of the Experts on Live Stock for the Chicago Exposition.

The Manitoba Government, acting upon a request made by the Provincial Live Stock Breeders, appointed Messrs. McGregor, of Winnipeg, and Leslie Smith, of Wanwanesa, both thoroughly competent men, to make an inspection of the live stock of the Province, with a view to making a selection for the Columbian Exposition. Following is their report to the Provincial Minister of Agriculture:—

Acting under instructions from your department, and guided by a memorandum giving names of owners of stock of all kinds who had applied to exhibit same at World's Fair, we have been engaged for the past two weeks examining such stock, and have much pleasure in submitting the following report:

In Winnipeg and vicinity we have examined the stock owned by the Arctic Ice Company, Sir Donald A. Smith, W. L. Puxley and W. S. Lister, and found some individual animals that were a credit to the Province, but very many were not in a condition for exhibition purposes, although well bred.

In the Wanwanesa district we visited J. B. Chambers and Smith & Stevenson, and found three very promising stallions, worthy of exhibition at any fair.

In the Brandon district we visited Jno. E. Smith, J. D. McGregor & Co., and J. S. McMillan. Almost a full line of the various kinds of horses, cattle, sheep and swine were found here, all imported stock. Many of these animals have been well selected, and they are in good condition.

We also visited Mr. Musk, near Souris; J. H. Proctor, near Virden; D. McCaig, near Douglas; A. Colquhoun, near Douglas; Mr. Shanks and Mr. Rae, near Rapid City; Mr. Darroch, near Minnedosa; Mr. Farney, near Gladstone. Among these we found a variety of horses, cattle, sheep and swine. A few were good, many could not be recommended; while sheep and swine are not up to exhibition requirements.

In Portage la Prairie district we visited Messrs. Glennie, Bray, McKenzie and Simpson. Here we found some fine herds of Jerseys and Holsteins, and the best province-bred Clyde colt we have met.

We found it impossible to reach a number of points on the list on account of snow. An extra fine Yorkshire coach stallion is owned by a Mr. Knittle, of Boissevain. We are satisfied a selection could be made that would include all kinds of horses, sheep, cattle, etc., which, if kept together at Chicago, would be a credit to the province, but we are aware they would be separated to their respective stables, and by that means Manitoba's exhibit would be lost sight of. From our experience in stock it appears doubtful if a good selection of competing animals for the different classes could be made from those we have inspected. It is hard-

ly necessary to say further that, looking at the matter in every light, we do not at present see our way clear to advise the Government to go on with the exhibit.

We understand the Government intends acting upon the report of the experts, and consequently there will be no exhibit of live stock sent from Manitoba to the World's Fair.

Timely Hints for April—No. 2.

HARMLESS FENCES.

In reply to Mr. C. Wright in March 20th issue, I may say that I am not interested pecuniarily in any particular new patent fence, but of some of the harmless fences that are really effective, I may mention the "Kitselman" woven-wire fence, and the "Harris" board or board and wire fence. There are also several picket fences that can be put up by anyone of ordinary intelligence, and that cannot hurt a child, the chief drawback to the general use of them being the high price demanded for the "right" to use them. For my own part, I fail to see why a man can't buy a fence machine as freely as a binder. I also use smooth twisted wire, and if tightly stretched it makes a good fence. The woven fences come a little high, from 40 to 80 cents per rod without the pickets. Both the Kitselman and some other fences were on exhibition at the Winnipeg Exhibition in 1892, and have been and are being advertised in the ADVOCATE. Try even a calf pen with one of the above, and see if you want to go back to the old style!

CATTLE FOR MORE THAN ONE PURPOSE.

I have followed with interest the discussion in the ADVOCATE and other papers as to "general purpose" cows. I believe in the general purpose cow, but I also believe there is scope for the special purpose animal. Let me give reasons for the faith that is in me. In Manitoba, for instance, we have only a few creameries and cheese factories, hence we must have something besides milk and butter. Our steer calves must be fed on the refuse grain and straw of our farms, and we also want a docile, contented lot of cattle, not liable to break through fences, and not great wanderers. The Shorthorn grade fills the bill, the pail, and our pockets.

The city milkmen want a cheap producer of milk, and care nothing for calves or beef. All they require is a cow that will give a good flow of milk of fair quality for a long time, and from all kinds of feed. Here the Ayrshire, and the Holstein, and their grades, find their sphere of usefulness.

Near a creamery or where people are willing to pay a high price for butter, the Jersey will be the one found most profitable.

On the ranch, away in Alberta and Saskatchewan, the active, "rustling" cattle of the Galloway and Hereford breeds, and their crosses, are found to be the best special purpose animals for beef production. For general purpose animals in Manitoba, I would unhesitatingly place Shorthorns first, and the Devons second.

For milk alone, the Ayrshire, and then the Holstein.

For beef alone, the Galloway, the Hereford, and the Polled Angus.

For butter alone, but with only good, quiet handling, the Jersey is *facile princeps*. But this is only my opinion, and, of course, I don't expect every one to concur.

MORE BARLEY.

Our last harvest and its returns in cash have forced many of us to look out for more profitable lines of farming than wheat. I think we will find it in barley. It is a sure crop; the grain is first-class all-round feed, from horses down to hens, and the straw is good fodder. It can be sown later, and taken off earlier than any other grain, on good land will give double the quantity of grain that wheat will, and if fed to good, well-bred stock will give far more return than wheat in cash. But I consider that barley requires a better seed-bed than even wheat, and more intelligent cultivation than it usually receives. Let us have more barley.

GENERAL.

The ground is warm now, so "get a move on." Experiments have proved that the last week in April is the best time for sowing wheat and barley.

If your cattle lick each other this month, they want salt. If they lick themselves, they are thriving.

"Can't see how he does it, he pays so much for feed." But that's *how* he does it, with a mixture of common sense.

Leave the mulch round your rhubarb and your currants till next month.

Don't sell inferior breeding animals; fatten them for the butcher.

So often I read of a horse dying of "inflammation"—of what? of the lungs, of the liver, or stomach? Would it not be better to say definitely what it was, so as to be guided in future to a right remedy?

The Legislature passed a bill for inspection, etc. of stallions. Is not one as urgently needed for bulls? Also, let us hope that our wolves will not laugh at the M. P. P.'s statutory efforts to exterminate them.

Sow plenty of potatoes. I find the beginning of May the best time. They may get nipped a little with a late frost, but they make a heavier crop than later sown ones.

If the weather is windy and inclined to be dry, harrow each day's plowing each night, and keep in the moisture to induce rapid germination.

"INVICTA."

A Criticism of "Invicta's" Plan of Fixed Salaries for Teachers.

To the Editor of the FARMER'S ADVOCATE.

SIR,—Allow me space to reply to the first paragraph of "Invicta's" letter which appeared in issue of March 6th. I am surprised that a man who has been entrusted with the office of school trustee should be so low in his degree of education as to use such disrespectful language in referring to his fellow-beings. If there is such a class as the "ignorant," I would class "Invicta" with them, if he does not know any better than to use in the public press language in reference to human beings he would in talking of the brute beast. No, Mr. Editor, the man who understands his work on the farm is not "ignorant," but has a far more perfect, more honorable, more independent, and one of Nature's grandest professions. He is the man who deserves his remuneration to be fixed who toils his ten to fifteen hours a day, from Monday morning till Saturday night, rather than to be insulted by being called a "Scrub." Now, to fix a standard salary for teachers would only be adding to evil, as competition is the only thing to keep young people from getting lazy and crowding into the profession to escape the more arduous labor of farm life. The "Grade" gets well paid for the short hours he works in comparison with what the other gets. Why not have the legislator fix the price of machinery, of grain, of the farmer's household necessaries, so that he can live, and then he will not grumble at paying young teachers all they can earn? I am one of the so-called "Scrubs," hence my reason for writing you; and in the future let "Invicta" not show his "ignorance" to the public, and may he never forget that some of the "Scrubs" are neither so "ignorant" nor uneducated that they cannot take an insult.

"SCRUB."

Reply to "Invicta" on "Bachelors."

To the Editor of the FARMER'S ADVOCATE.

DEAR SIR,—I notice in "Invicta's" "Timely Notes" for March 20th, a paragraph referring to "Bachelors," in which he states that they are cowards, and don't marry because they don't wish to work during the winter, which is necessary if mixed farming is adopted in place of wheat and wheat only; and that they don't wish to give up loafing round bar-rooms, etc., etc. Now, I think many "Bachelors" are martyrs rather than cowards, because we would not ask any woman to share the hardships which have to be gone through to start farming in this country. And as to loafing round bar-rooms, I am sorry to say that pastime is not confined to "Bachelors." We are willing to turn over a new leaf before marrying, and in order to give my intended wife a clear conception of what kind of life she may expect to live, I want to get into comfortable circumstances, and then I can marry with a fair prospect of living happily and contentedly.

"A MANITOBA BACHELOR."

Horse Breeding as Applied to the Average Manitoban Farmer.

BY T. HARKNESS.

The question that should naturally arise in any man's mind when he decides on starting out to breed a horse is, What kind of animal will be most suitable for his requirements? or, if he intends to breed for the market, What kind of horses are likely to bring top prices when his now embryo horse is ready for sale? These questions settled, he should consider his mare. If she is of the draught breed, a good Clydesdale, Shire or Percheron sort, then my advice is to breed her to a good specimen—the best you can obtain—of her predominating strain. If she happens to be a Clyde, the owner should call on me and see Sir Arthur. If she is a Shire, he can call on my friend Mr. McGregor, who will no doubt be able to suit him. By all means try to have a good, sound mare, free from blemishes, one of the fashionable colors,—brown, bay or black. Now as to weight. She should weigh not less than 1,350 and upwards, and stand not less than 15½ and up to 16 or 16½ hands high; but care should be taken that with increased height she also increases in weight, so as not to have too much daylight under her. Good, deep ribs, full across the loins, long quarters, and if she is a shade wide from point of hip bone to first rib it is not any very serious fault. It gives her more room for the development of the foal. Rather have her wide and roomy behind than narrow. Now I have come to the point that should have been first considered, viz., the feet and legs. The feet should be hard and flinty, nice and round. The bone of the legs should be flat and free from puffs or carbuncles of any kind, the hocks hard and smooth to the touch. Beware of what is called in horse parlance "meaty legged;" a nice feather of soft silky hair on the side of the legs adds greatly to her appearance, and ranks her amongst the sort that brings the copper now-a-days.

Regarding the neck and head, I think if she has all good qualities described above, she can hardly carry a poor head and neck. However, see that the neck is not quite upside down, that the head is not too big, and that the ear is of medium size. Both long and short ears are admitted; but just now I see the short ear is popular among the Clydesdale men abroad. I suppose this is because Prince Alexander, this year's champion, has short ones. See that she has a pair of good eyes, large and prominent.

Now for her action. She should move off freely, be a good walker, have the long swinging gait necessary for horses drawing heavy loads; and when she trots she should throw her feet directly in front, and have plenty of action at the knee. If her legs and feet are right, she will have plenty of spring in her pasterns, they should be sloping; she can pound the road as much as she likes, and in nine cases out of ten she will wear twice as long as one that has not the same confirmation as to feet and legs.

Now I think the breeder is fitted with a mare suitable for a good draught horse.

Now, for the sire. He should combine all her good qualities, and more. He should be rather closer knit, and possess plenty of masculine character. You will all admit, no doubt, that there are horse horses and mare horses—that is, that some horses are more like mares than horses. I mean, of course, in general appearance.

I believe in plenty of exercise, or the ordinary work of the farm for the mare during the time she is carrying her foal, and up to within six weeks or a month of foaling. Avoid, by all means, long hauls, sudden and heavy pulls, and do not attempt to make her go faster than she would naturally on her own accord. A few weeks before foaling time, put her in a good-sized loose box, and, if possible, have a good big yard where she can roam at will. Be careful to see that no blood or offal from slaughtered animals be allowed to remain in her vicinity. In many instances premature foaling may be traced to the fact that the mare has come in contact with something of this kind. When at last the foal has arrived, keep the mare idle for at least ten days or two weeks, and then work her only about five hours each day for another week or ten days, and if it is found that she is warm on unhitching, she had better be kept from her foal until pretty well cooled off. Many foals are checked in their growth and ruined for life by suddenly being allowed to draw milk from a mare that has been heated up. Wean your foal at five or six months. Feed a little whole oats mixed with bran twice a day, say one quart at a feed; and if roots can be obtained, give a few raw in the middle of the day. I prefer carrots. Of course the feed must be supplemented with nice, well-cured native or timothy hay. Allow the foal lots of daily exercise, and you will find in spring your prospective subject for foreign markets has done remarkably well, and is then ready for the grass. See that he has plenty of pure water. I am afraid this is one of the many reasons why our young horses do not mature as well as they should. I heard a man say, who is or was a breeder of horses, that his colts never got a drop of water all summer, and that they had done well. He may have thought so, but I can assure you I did not.

The same treatment, with additional feed according to age, should be continued during the following years until five years old, when, if all hopes and wishes have materialized, you have a horse fit to bring all the way from \$200 to \$300. Begin his tuition during the first winter by teaching him to lead and stand tied. Use nothing but nice, smooth leather halters; anything in the shape of a rope should be kept out of his sight. When rising three years old put the harness on occasionally, and if his dam is handy and not too heavy in foal, hitch him up with her, and drive over to the next neighbor and let him see your new horse. Let him have his head. By this I mean don't check him up with one of those new-fangled over-head checks; and if possible at all, break him with an open bridle. He will soon get over his first fright, and in nine cases out of ten, with this sort of handling, he is pretty well broken the second time he is hitched.

Some of you may be ready to say, "Oh, he is talking draught horse," one totally unfit for the Manitoban farmer. In answer to this I would say, that as the Manitoban farmer has decided on breeding and must necessarily work his mare during the time of her pregnancy and while suckling the foal, he must have one that can stand up to her work and finish up her foal as well, and that the draught mare will do this much easier and more successfully than those of lighter breeds must be admitted; besides, I contend that the best market or the easiest reached will be that in which the draught horse takes the lead, namely, for heavy street traffic in the large commercial centres; it may be sent and said with a good deal of wisdom that by raising a general purpose horse, the breeder can also secure a good market, as such horses would command good figures for coach or carriage purposes in the large cities of both the United States and Great Britain; but this class of horse is something very fancy, and unless our breeders happen to hit the happy medium he has a horse that is not "in it" as compared with the offspring of the draught mare, for should the latter turn out only a plug, he is still a marketable horse if sound, and will bring big money in any country as a dray or lorry horse.

By way of comparison I give you the prices quoted only last week on the Chicago horse market:—J. S. Cooper, Union Stock Yards, Chicago—Southern Chunks, 1,050 to 1,100 lbs., \$40 to \$70; Streeters, \$90 to \$100; 1,250 lb. Chunks, \$110 to \$120; 1,350 lb. Chunks, \$125 to \$140; 1,440 lb. Chunks, \$140 to \$170; 1,600 lb. Draught Horses, \$190 to \$225. F. J. Beovy & Co., Union Stock Yards, Chicago—Heavy Draughts, 1,500 to 1,700 lbs., are in fair demand at \$125 to \$210; Expressers, 1,450 to 1,550 lbs., at \$145 to \$200; Chunks, 1,100 to 1,200 lbs., \$95 to \$130; Streeters at \$85 to \$110. These quotations are sound horses, five to eight years old, well broken.

Sales—Just a few for the sake of comparison:—Coach Horse, fine action, 15.3 hands high, 1,050 lbs., \$180; Express Horse, 15.3 hands high, 1,450 lbs., \$170; Draught Horse, bay, 16.1 hands high, 1,700 lbs., \$205.

From this you will see that heavy draughts command the top prices, and are in active demand. The contention of some that with the advent of electricity as a motive power the use of horses will very materially decrease is a myth. It is admitted that the very fact of electricity being made to do the work of horses has created other and very necessary demand for his use.

Manitoba's Exhibit at Chicago.

Your readers will no doubt be glad to read a few words from Chicago regarding the Manitoba exhibit now fast being placed in position. The building which contains this display has been built outside Jackson Park, between 57th and 59th streets, on Stoney Island Avenue, and almost immediately in front of the main entrance nearest the city. This site was chosen on account of the desirability of inducing as many as possible to visit the building, and to impress all with the varied resources, rapid development and wonderful possibilities of this new province.

By arranging the exhibit in one building a much better effect will be produced than could be hoped for by having the same scattered throughout the different exhibition buildings in the park. The Illinois Central, the elevated road, and the cable cars all drop their passengers within a few steps of this building, and the prospects are it will be crowded throughout the summer, as there is no charge for admission, and every effort will be made by those in charge to make a call pleasant to visitors.

The size of the building is 90x240 feet, four stories; from the roof a good view can be had. The upper stories of the building are used for an hotel, where there will be accommodation for nearly 500 guests, and where all Canadians will be made welcome and given every assistance to see the Fair. The hotel will be leased by Mr. Samuel Grigg, of London (late of the Grigg House). The portion of the building to be occupied by the exhibit is surrounded by a gallery, adding much to the advantages of seeing the exhibit. In the centre of the ground floor will be a magnificent agricultural trophy, showing grains, roots and vegetables, while large exhibits will be made in all grains and vegetables besides. There will be over 500 entries in wheat alone. To show how well Western Canada's soil and climate are adapted to the growth of corn, the government have secured a number of specimens, which will prove of interest to Canadians, and more especially to Americans from the corn states.

Much care has been taken in procuring specimens of native small fruits, both wild and cultured. These will be shown in neat glass jars, and in abundance, as the varieties are numerous.

In large plate glass cases in different parts of the building will be natural history exhibits, prepared with much skill and taste. In these will be seen over 500 specimens of birds of the north country, and in the same display will be fifty varieties of animals, such as elk, moose, bear, etc. The Historical Society of Winnipeg has rendered much service to the government by allowing the use of a selection of their most valuable collection of relics, and in them will be seen many things relating to the discovery and early settlement of the province.

To illustrate the mode of travel in the early days, complete dog trains, Indian carry-alls and Red River carts will be shown; also figures in wax, representing the different tribes of Indians. Models of Fort Garry, Indian schools, government buildings, pioneer homes and later farm buildings will give a good idea of the rapid development of Canada's western plains. That all may get a correct idea of the physical features of the country, a topographical outline has been prepared, showing hills and valleys, rivers, lakes, etc., which will convey at a glance the beauties of the landscape. That there is much wealth in the rivers and lakes will be shown by carefully prepared specimens of the finny tribe, shown in ice where they have been frozen, pure water being used.

The Educational Department will make plain the educational advantages enjoyed in this new country under the school system. Samples of work from schools in all parts of the province will be on exhibition.

In no part of the World's Fair will be found a better display of woman's handiwork. The Manitoba coat of arms will occupy a prominent place on the central trophy.

The manufacturers of the province will make a most creditable exhibit, and prove to all that even if Manitoba is noted for hard wheat, still this is not the only resource of the country. The arrangement of the exhibits will be made with much care, so as to produce the best effects, banners and bannerets being placed throughout the building. To miss seeing this exhibit will be to miss seeing evidences of the most rapid development of any country. The Hon. Thomas Greenway and the Hon. D. McMillan, treasurer, are now here inspecting the work, and are highly pleased with what has been accomplished by the commissioner, the Hon. James A. Smart, whose indefatigable efforts has brought the work forward so that everything will be ready for the grand opening on May first.

How Wheat Grades and the Tariff Affect the Manitoba and Northwest Farmers.

The present low prices for farm produce in this country have led a great many farmers to look a little more closely than usual into the conditions governing the basis of prices of wheat especially, and also in general the other commodities bought and sold by the farmers in the Northwest. So far as I have been able to judge from the tone of the letters bearing on the subject, as contributed to the provincial press, most of the writers seem disposed to lay the blame on the rather exorbitant prices charged for agricultural implements. Every one seems to take it for granted that the low price of grain of all kinds is altogether caused by reasons other than purely local. Some, however, seem to have an idea that the grading system has something to do with the low price, and advocate a large number of grades. We have in Manitoba at present no less than ten grades—one hard, two hard, three hard, one northern, two northern, three northern, one frosted, two frosted, one rejected, and two rejected, while in Minnesota and Dakota there are practically only four grades—one hard, one northern, two northern and three northern. I propose to show that it cannot be the grades that are to blame, as the price in Minnesota and Dakota has been higher, apart from the difference in freights, than the price in Manitoba. In fact, instead of increasing the number of grades to give us a better price, we would, if we had adopted the Minnesota system, have obtained better prices. The grade of one northern is the standard grade in Minnesota, that is, it is the grade which governs the price of the others, lower grades having their value fixed at so many cents each under the price of one northern. Now one northern over the line takes in a much wider range of qualities of wheat than our two hard, though the milling value is supposed to be the same. There is no hard and fast standard fixed as with us, but the average of the whole crop, which if put all together would make that grade, is taken; thus an inspector grading at Duluth into one of the large terminal elevators there might grade a large number of cars as one northern, which if they had to be sold separately might be worth two cents less than others of the same grade, because he knows that when the average of all cars going into that elevator is taken, the whole will run to the standard that has a world-wide reputation as Duluth one northern. In Manitoba if a car does not come just up to the line fixed as the standard of the grade, the car must be graded down and the value taken as perhaps five cents less, though the actual value of the wheat may be not more than a cent less per bushel than the standard. The chances are in our system that a buyer will get perhaps a better average than the standard in shipments out of an elevator like Fort William, because no cars have gone in that are under the standard, while a great many may have gone in that are over. In practice this season, all the wheat that grades two hard, one northern and two northern, and a large proportion of three hard, would on an average have gone into the Duluth one northern grade.

To increase the number of grades in this country would be to establish a purely sample market. This is impossible here, so long as wheat has to be exported and sold in markets thousands of miles distant; no one could do business with export traders in Montreal, New York or England, if a separate sample of every lot of wheat had to be sent there before they could buy. A sample market is only possible in a large milling centre, like Minneapolis, where there is milling capacity of thirty-five thousand barrels per day; and Minneapolis is, in consequence, one of the largest markets in the country. All wheat going there is first graded, that is, cars grading one northern have the certificate as evidence that the milling quality of the wheat is in that high class, but at the same time the wheat is afterwards sold by sample on the Minneapolis Exchange, so that if a car should happen to be a good full plump berry, or a rather thin one, it might do on the actual grade; but taking the result all through the season, the result to the country as a whole is practically the same. A farmer may get two cents more on part of his crop and two cents less for the other part in Minneapolis, while at Duluth he might get the same price all round. A less number of grades, therefore, in my opinion, would simplify matters to the dealers, and give better results to the farmers as a whole.

But I contend that the matter of grading is a very small matter to be considered, when there are other things that bear very much more heavily on the price of wheat in this country. To begin with, the rate of freight to Duluth and Minneapolis as compared with the rate to Fort William is eighteen cents per hundred as compared with twenty-one cents with us—a difference of nearly two cents per bushel. Again, the export of hard wheat from Dakota and Minnesota is falling off every year, owing to the larger milling capacity in the States; as an instance of this, there is at Duluth and West Superior a milling capacity of about twenty-five thousand barrels a day, where four years ago there was not over a capacity of two thousand barrels a day. The mills at Minneapolis can grind thirty-five thousand barrels a day, running full time. The United States is still one of the largest exporting wheat countries in the world, but it is surprising how little of the quality of wheat raised in the north-western states is exported as wheat: this

wheat goes out as flour, and the offal, bran and shorts, finds a market in the ever-increasing market in the great republic. As a rule, our two hard has sold at two or three cents less than one northern when sold for export; this year it sells for the same, but when it is remembered that what grades two hard this year is the pick of the wheat that would grade one northern, our wheat is still at a discount. Anyone can prove this who will take a sample of the same wheat to a Minneapolis miller and to a Montreal or New York exporter, and he will find that he would get at least two cents more for milling use than for export. We have had an example of this in our own Province this season; the Lake of the Woods Milling Company claim that they have not as much wheat as they want, and they have been lately, since the bulk of the wheat has been sold by the farmers, taking what was offered at three cents over the export value. If we had sufficient mills in Canada to grind up all the wheat grown in the Northwest, we would be in as good a position as the farmers in the states adjoining; but there are not mills enough, and if there were they would not have the market for their off-products, bran and shorts, or even for their finer brands of flour. The finest brands of flour in Minneapolis are sold in the States; it is the medium grades that are exported.

The United States is therefore the best market for our best wheat. It is also the best market for our poorest wheat. Take a year when we have a crop like that of 1891, when so much wheat was unsaleable on account of dampness; dealers could not buy it, because they dare not take risks of carrying it to Europe; it was too far even to send it to Ontario. How many farmers know this to their cost is shown in the thousands of bushels that have been pitched out as useless on the prairie. Had we had the American market, this damp wheat could have been taken to mills within 500 miles of where it was grown and used up before it spoiled, or the very worst of it sold for feed in the immense market to the south of us. A visitor to Minneapolis market any time during the past year could have seen thousands of bushels finding a ready market at from thirty to fifty cents, that a dealer who had to export the wheat could not have looked at. But it is when we come to coarse grains that we can see the injustice that is done to this country in being shut out from its natural market more glaringly than in any thing else. Oats and barley, that have this past season been sold at fifteen and sixteen cents per bushel, could have been sold at five to ten cents per bushel more if allowed to go to American markets. Brewing barley has sold in Winnipeg for twenty-five to thirty cents, while in Minneapolis the same would sell from forty-five to fifty. The rate of freight from Brandon to Winnipeg is sixteen cents per hundred pounds, the rate to Minneapolis is twenty-two; a glass of beer sells in Minneapolis at five cents, in Winnipeg at ten. Minneapolis and Milwaukee beer sells at the same price in Winnipeg as the home product, after paying thirty-five per cent. duty and freight added. Comment is needless.

It is to be remembered besides that in oats the bushel here is thirty-four pounds, across the line it is two pounds less—this is besides the difference in price per bushel. So much for what our farmers sell; for what they buy there is now a pretty well-defined idea that they could do better, were the tariff between Canada and the States removed. The old argument that the tariff is higher in the States than with us is about played out. Let any farmer go from Emerson to Pembina and see whether he could not buy his goods of all kinds to better advantage. The fact is that while the United States is nominally a protective country, it is really the greatest free trade country in the world. There is a system of perfect free trade between sixty-five millions of people—those people are the wealthiest people in the world, when the wealth per head of population is taken; and they are the greatest trading people in the world. I mean that on an average an American will do ten times the amount of trade in a year that is done by the average European, thus making their population for trading purposes equal to ten times the number compared with the European standard. That there are farmers in the Northwestern States no better off than farmers here is no reason why we should not improve our advantages by getting their market. No doubt the reckless credit system which we copied from the States has much to do with individual hardship over there, but we are rapidly getting into the same trouble, and the fact that we are handicapped both in our buying and selling will only make things worse here by-and-by. One of the worst handicaps that the farmer is under here is in the price of lumber. Most of the lumber used in Manitoba comes from the Lake of the Woods, a distance from Winnipeg of 145 miles; the same quality of lumber can be brought from Duluth, 470 miles, and pay twenty-five per cent. duty, and be laid down in Winnipeg at the same price. What does the farmer on the prairie want more than cheap lumber? And this is how he gets it under the National Policy.

Let anyone take a map of North America and try if he can see any reason why Canada should be cut off from the southern half of the continent. Look at the Northwest cut off from the east by a barren stretch of rock and great sheet of water, at the State of Maine running away in into what should be Canada and nearly severing the eastern extremity from the Province of Ontario. The whole of the Dominion stretched to a thin line—thin almost to breaking point, across the

continent, and the great solid mass of territory to the south of us. Let us examine ourselves and say honestly, Are we honest when we say that we do not want anything to do with these scheming Yankees; that we want to keep Canada to ourselves? Was there no selfish reason that dictated the so-called National Policy? And now has it been a success? Let the Maritime Provinces answer, mouldering in a dry rot amid unsurpassable riches of mineral wealth; Quebec under the heel of a middle age ecclesiasticism, and her children fleeing in thousands to the south; Ontario with her barley and horses, that used to be a fruitful source of income to her industrious farmers, now unsaleable at home for want of the southern market, and her annexation clubs now forming all over the country; Manitoba and British Columbia, almost too young to know good from evil, and already writhing under the prick of an indefinable something, they know not almost what—let the whole Dominion speak, with its burden of debt mounting up by the hundred thousands, nay, almost by the hundred millions, the population unable, even with the aid of immigration, to hold its natural increase in the past ten years, all answer that the National policy has failed. Those in high places speak to us of relief to be obtained from a federation of the British Empire; free trade with England at the expense of other parts of the world. Why we have free trade with England now; our farm products and manufactured goods enter her ports free. Everything is talked of but admission to the only natural market we have, and one has only to look at the map to be convinced that man is trying to keep asunder what was never intended by nature to be separate. Let the farmers of Manitoba look to this; it will bear enquiry, and it is my opinion that when once they see the truth in its proper light, that it will not be a mere sentiment that will keep them from insisting on getting what is their natural right.

Building with Concrete—Errata.

To the Editor of the FARMER'S ADVOCATE.

In "Building Concrete" your compositor has made a mistake, which I hasten to correct, as it is a very material one. My formula is, one-tenth lime, fresh slacked, to nine-tenths gravel, not one-quarter to three-quarters, or, as I put it, one shovel of lime to ten of gravel.

Yours truly,
G. A. LACEY.

Questions Asked and Answered.

I wish to inform "Thorah Farmer" that the two-horse tread-power is sufficient to drive the ensilage cutter with twenty-four feet carrier, and also drive a provender grinder. The price of all here is about \$255, each article guaranteed and of the latest and best make. As for wind-mills, I have no faith in them for above purposes.

J. B. ABBOTT, Ottawa, Ont.

In reply to Thorah Farmer's enquiry regarding tread-powers and wind-mills, Mr. A. R. Yuill, of Carleton Place, Ont., writes us as follows:—"We have a sixteen-foot wheel, and it chops all the grain and cuts the feed and bedding for 75 head of cattle and eight horses, but we could do the work easier if our wheel was at least two feet larger. The size of the wheel will depend upon the number of cattle kept." Mr. Yuill prefers the Halliday Standard Windmill, for the reason that it is the only one which gives satisfaction in his neighborhood.

RECOMMENDS TREAD-POWER THRESHING MACHINES.

In answer to a Manitoba farmer, I would say I purchased a two-horse tread-power threshing outfit last June, and find it a profitable investment. I have threshed over 3,000 bushels of wheat up to date. Its capacity when properly run is about 250 bushels wheat or 500 bushels of oats; it will thresh all kinds of grain. To run it to its full capacity requires three men and two boys and two team of horses, to thresh from the stook—one man to pitch on, and one to fork to the machine, and one to feed; one boy to take the straw away with the aid of a hay rake, the other to put grain in bags. My experience is that threshing can be done in about the same time it would require to stack with the same help, at a total cost in cash of not more than \$15 per thousand bushels. The two teams should be low, blocky type, and trained to work on power; change off every two and a-half hours. Use the basket racks that require no loading, and two wagons. If "A Farmer" will communicate with me, I will give him all the information he will require. Yours truly,
N. W. DAWSON, Whitewater, Man.

AN ENQUIRY ABOUT BLUESTONE.

A subscriber, "Sandy," writing from Suthwyn, enquires if bluestone wheat would be safe feed for cattle or hogs; if it is dangerous, and if salt pickle would not answer the purpose as well.

[Bluestone (sulphate of copper) is sometimes used as a medicine in small quantities, acting as a tonic and astringent, but is a deadly poison in large doses, and great care should be taken that wheat which has been treated with bluestone is not allowed to be eaten by any animal. Salt brine is a preventive for smut in wheat, but as the seed requires to be soaked for some time in the solution and then dried before it can be sown with a drill, it entails much more labor than treating wheat with bluestone, which only requires thorough sprinkling and is ready for sowing almost immediately, and is generally considered a more certain preventive.—EDITOR.]

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Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

- 1.—No award will be made unless one essay at least comes up to the standard for publication.
 - 2.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling.
 - 3.—Should any of the other essays contain valuable matter, not fully covered by the one awarded the first prize, or should any present different views of the same topic, and we consider such views meritorious, we will publish such essays in full, or extracts from them as we may deem best, and allow the writer ten cents per inch (one dollar per column) printed matter for as much of such articles as we publish. By this rule each writer who sends us valuable matter will receive remuneration for his labor, whether he be the winner of the first prize or not.
- See section 11 and four following in publisher's announcement above.
- A prize of \$5.00 will be given for the best essay on Summer-fallowing, or the best method by which Manitoba and Northwest farms may be kept free from weeds and their fertility retained. Essay to be in this office by May 20th.

[In a new country like this we consider no apology necessary for repeating this as a subject for prize essay this year, as much light is being thrown on this most important subject every year.]

Chatty Letter from the States.

(From our Chicago Correspondent.)

Some good people over here are inclined to take exception to what Messrs. Wm. Davies & Co. said about Canadian pork being far superior to States grown pork. The facts seem to be largely with Messrs. Davies. However, April started in with a \$2 lurch in hog prices from the top of the season; but reaction took place, and a well-known hog dealer said: "Hogs are hogs again, and packers will consider them cheap at \$7 before the month is out; farmers have gotten over the panicky time and are now 'standing pat' for higher prices, which have to come, especially if supply and demand have anything to do with the course of values. Receipts for the next six or eight months will be very light, and before the end of next August prices will go very high." The above words had not been uttered forty-eight hours when hogs were again selling at \$7.00 @ \$7.50. Prices bounded upward 75c. in threedays' time.

Receipts of cattle thus far this year exhibit 75,000 decrease compared with a year ago, and 27,900 increase compared with two years ago. Receipts of hogs thus far this year have decreased nearly 1,000,000 compared with a year ago, and nearly 1,500,000 compared with two years ago. Sheep increased 149,400 compared with a year ago, and 63,000 compared with two years ago.

Forty-five head of 1,166 @ 1,321-lb. feeding cattle sold to an Ohio man at \$4.75 @ \$4.90, the highest feeders have sold for here in over two years. The country seems to have considerable confidence in the future market for fat cattle. Good beef makers realize that to make really prime beefs on high-priced land it is better to buy cattle that have breeding and considerable flesh to start with. There is a very good prospect for the market for desirable fat cattle. Winter-fed Texas cattle will soon be all in. Grass Texas cattle promise to be very good, if the ranges get a little rain soon. The weather is too dry over large areas. Cattle dealers report a very weak demand for meats in eastern markets. Cattle prices are \$1.50 higher than a year ago. The marketing of calves goes merrily on. The demand for veal has been very great. There are fewer thick, fat, heavy cattle marketed than there used to be. The improvement in the best cattle market is already having an appreciable effect upon the demand for well-bred cattle. Away with the scrubs. A prominent Illinois Hereford cattle breeder says there is more inquiry for choice young breeding cattle than there has been before in five years. Buyers do not want to pay liberal prices, but they are willing to try to trade.

While farmers are so rushed with spring work, an advance in hog prices is more likely to check than to augment the marketing of hogs.

Sheep are good property, and are making money for feeders. The high price of pork stimulates the demand for mutton.

Ayrshires and Their Uses.

[A paper read before the Ayrshire Breeders' Association by Mr O. Nichol.]

Ayrshires have been an established breed for over one hundred years, and although they have never been boomed by speculators, as is the case with other breeds, their reputation for usefulness has now become fairly well known. The demand for Ayrshires at present is far in excess of what it has ever been. No doubt this is chiefly because the milk of the Ayrshires, being rich in casein, is peculiarly adapted for the production of cheese, which is a leading branch of our agricultural industries.

Fortunate it was for this country and people that dairymen's associations were formed at a time when agricultural pursuits had become depressed, and much of the land has been impoverished by continuous overcropping; and the scarcity and high price of skilled labor, along with the low price of many farm products, has made grain farming less profitable. A revolution in farming operations had become actually necessary, and now the great majority of Ontario farmers are devoting special attention to the manufacture of first-class cheese, the demand for which seems to be almost unlimited, while at the same time the land is resting and gaining in fertility.

The selling of milk in towns and cities has developed into an enormous business, and for this purpose the Ayrshires seem to be particularly well suited, because they give milk which gives general satisfaction to consumers. Analysts and physicians pronounce it nearly a complete food for children, invalids and aged persons; hence the ever-increasing demand for it. As regards the butter made from the milk of Ayrshires, I find a demand for much more than I can supply at 25c. per pound. When the travelling dairy was operating in our locality last fall, the milk of our cow Virgilia showed by their Babcock test five and a-half per cent. butter fat. She was then giving 48 lbs. per day.

I heard a dairyman say he would like to procure a breed of cows which would produce a large quantity of rich milk on a small quantity of poor food. We have now about a dozen different breeds of dairy cattle, each breed celebrated for some peculiarity, and all having their admirers. It is, however, hardly probable we shall ever possess a breed which will in itself have all the good qualities and peculiar advantages which this individual desired.

When in Shropshire, England, a few years ago, I was told by a large estate overseer, noted for wisdom and for extensive experience with the different breeds of dairy cattle, that in point of economy he had found none equal to the West Highlanders. Another

dairyman said he could get more quarts of good milk out of a ton of hay fed to the little Kerry cows than with any other breed.

I was not prepared to gainsay their statements, but I do know that in the Ayrshires we have a compactly built, industrious, hardy, economical business cow, which has the faculty of assimilating her food and converting it into good milk, and that in the milk pail she shows how readily she responds to the liberal treatment.

I also know that in some breeds, and even among the common cows of the country, there are to be found phenomenal animals which can be crammed to produce immensely, but at the same time a large proportion of them are poor producers. For we must remember that the accomplishments of a few extraordinary cows of any breed does not by any means decide the superiority of the whole.

One of the chief characteristics of the Ayrshire breed is that they are more uniform in productiveness, and that there are fewer culls or scrubs among them than is generally found among other breeds of dairy cattle; and I doubt whether there is any breed better adapted to the needs of the dairymen of Ontario.

Although we have gained a reputation for producing cheese of the very best quality, there is still much room for improvement in the butter industry. I believe there is more fine butter made now than formerly, yet there is a great deal produced which is not so good as it might be. No doubt much of the offensively odoriferous trash is made from cream kept too long without regard to temperature, but a great deal of it results from the want of cleanliness in the manipulation of the milk from which butter is made.

We seldom hear of witches now, yet some allege they are not altogether extinct, and that there is still a mystical virtue in the horseshoe. Before dairy thermometers were much in use, I was once called upon to help a neighbor at churning. The husband and wife had been taking turn about at the dash churn all forenoon, and had come to the conclusion that the cream was bewitched. After dinner I worked at it more than an hour, but could not keep the frothy stuff from overflowing; then it became a question whether I also was not bewitched. A red-hot horseshoe was dropped into the churn, and after a few minutes' agitation the butter came. Perhaps some warm water would have answered the purpose fully as well, but I have no doubt that while that man and woman lived they believed the horseshoe drove the devil out of the churn. In several farming houses I have seen a horseshoe hanging over the kitchen door, but only in one instance have I seen that of a mule or an ass placed in such position.

I heard a person enquiring in Kingston market for servant's butter; he said it lasted longer than the finely flavored delicacy. And I could tell you of a gentleman who procured a tub of butter for family use, which soon became so rancid that even the servants would not eat it.

A generous-hearted farmer in an adjoining county, having heard of the advantages to be derived from the use of the thermometer, brought home to his wife one of the best make. She put it into the churn along with the cream, set away for the night, removed it in the morning, churned as usual, and said she did not see that it made much difference.

The travelling dairy delegation last fall in our locality imparted much valuable information to an appreciative audience; strange, however, many more might have been greatly benefitted who did not avail themselves of the opportunity freely offered on that occasion. It may well be said, "There are none so blind as they who will not see."

I have seen butter being made by persons of untidy appearance—others having seen the like stopped eating butter; and I know of some on whom the very sight of butter acted somewhat like an emetic; consequently, there is not nearly so much consumed as there would be, were our reputation for cleanliness above suspicion.

I have good hope in the rising generation, because I think the time is probably not far distant when this useful art will be taught in every common school throughout the country.

We have much absurd talk about the drudgery of dairy work; for my own part I cannot think of any occupation in which a woman could be engaged than in making delicious butter. Moreover, the healthiest, happiest and prettiest women I have ever seen were dairymaids.

It is encouraging to notice that women are now invited to the dairy school in connection with the Ontario Agricultural College. A good sign of progress will be when many farmers' daughters are taking a short course at that institution. Wise young farmers will marry educated dairymaids; superstition will be dispelled, and our character for butter-making will be exalted, enabling us to compete favorably in the best butter markets.

Sheep Notes.

G. C., of Wapella, writes us that he is well pleased with the ADVOCATE, and was much interested in the articles recently published on Sheep Raising; but he takes exception to the theory advanced by "Practical," in March 6th issue, of raising three and four lambs from each ewe by careful selection and mating. G. C. claims considerable experience in sheep raising, both in Scotland and Ontario, and in United States, and says he never knew of a flock having more than fifty per cent. of twins or five per cent. of triplets; and even if they had more, they could not furnish milk for more than two lambs each.

Institute Meetings.

MELITA INSTITUTE.

A meeting of this Institute was held early in March, at which R. Storey read a paper on Smut, urging the importance of treating wheat with bluestone. R. E. A. Leech, Secretary of the Central Institute, being present, read a paper on "Seeding," by Mr. Bedford, of the Experimental Farm, who was unable to be present. After discussing the papers read, a resolution was passed endorsing the action of the Central Institute in urging upon the Dominion Government the necessity of granting relief to the farmers of this country by reductions in the tariff.

BRANDON FARMERS' INSTITUTE.

"Roads and Road Making" was the subject taken up by this institute at its regular meeting on March the 18th.

Mr. Fred Smith and the Rev. Geo. Roddick read papers on the subject, which were followed by a lively discussion.

Mr. Middleton said culverts built of brick would be better and cheaper than any other kind where stone was not to be had. It was a mistake to plow roads; no team could draw a load on them in wet weather. Gravel should be put on the road without grading, and when ruts were made they should be filled up with gravel. Statute labor is a fraud. Roads should be made by contract; the municipal officers were the proper persons to let contracts.

Mr. Keoster thought that statute labor was the best means of building roads; the pathmaster should send home men who did not work properly. Pathmasters should be obliged to make affidavit that the work had been properly done.

Mr. Magwood thought farmers had taxes enough to pay without having road taxes.

Mr. Kennedy was of opinion that the general levy might be smaller if road work was done by contract, as much more work could be done for the same money. He suggested that a salaried man be appointed in each ward to oversee the work.

Mr. Pentland, Reeve of Elton, said statute labor was a failure in his municipality. One of its drawbacks was that it so often left the roads in an unfinished condition.

Rev. Geo. Roddick said that he found there was a good deal of rivalry among pathmasters, which worked very well, and that those who were so much in favor of building roads by contract might alter their minds if they knew what the arrears of taxes amounted to.

Mr. Doran had not seen the time that he had nothing to do on his farm. He considered that it was losing money for a farmer to leave his work to do statute labor.

Mr. Vantassel was decidedly in favor of contract work; he thought that farmers could better afford the tax than to do the work. He spoke of the advantage of seeding down graded roads.

Mr. Passelwaite said that lots of the statute labor was done where it was not much wanted. He knew of roads that had been plowed up, and had been cropped by the pathmaster even since. He proposed that municipalities raise the money by debentures to build roads, and thought that by so doing and making a thorough job of them it would come cheaper in the end.

R. E. A. Leech pointed out that it was almost an impossibility to get statute labor honestly done, and that where roads were built by contract it would be more economical and make better roads.

Mr. Percival thought that the bulk of the work should be done on main roads leading to markets in such a way that no farmer would have too far to go before he got on a good road.

Mr. Sargent, Reeve of Daly, preferred paying a road tax himself, but found that the ratepayers in his municipality did not think that they were in a position to do so. He believed that the work could be done much better and cheaper by contract.

D. F. Wilson said that where roads were to be built by contract he thought that municipalities should employ an expert overseer to expend the money and inspect the work. A man might be a very good municipal officer, but a very poor road-maker.

Two resolutions were then proposed, one in favor of a road tax, the other for statute labor, which when put to the meeting the one in favor of the tax was carried.

An institute was organized at Russell on March 13th. E. A. Struthers, Manager of the Barnardo Farm, was elected President.

HARTNEY INSTITUTE.

A meeting was held at Hartney on 23rd of March to discuss the advisability of organizing an institute. About sixty of the leading farmers of the district assembled in the "Orange Hall," and listened with much interest to papers read by the following gentlemen:—

Mr. Bedford, of Experimental Farm, on "Grasses and Fodder Plants." Mr. G. H. Greig, of the ADVOCATE, on "Smut in Wheat, Its Growth, Effects and Prevention." Mr. R. E. A. Leech, on "The Advantage to be Derived from an Institute, and the Best Means of Conducting Same."

After a lively discussion on the various subjects touched upon, it was unanimously decided to petition the Local Government to form an Institute at Hartney, the petition to that effect being signed by upwards of thirty-four of those present.

Weeds.

BY J. HOYES PANTON, M. A., F. G. S.
ASCLEPIADACEÆ (Milkweed Family).

The plants in this family have a milky juice, which exudes from any portion broken or torn.

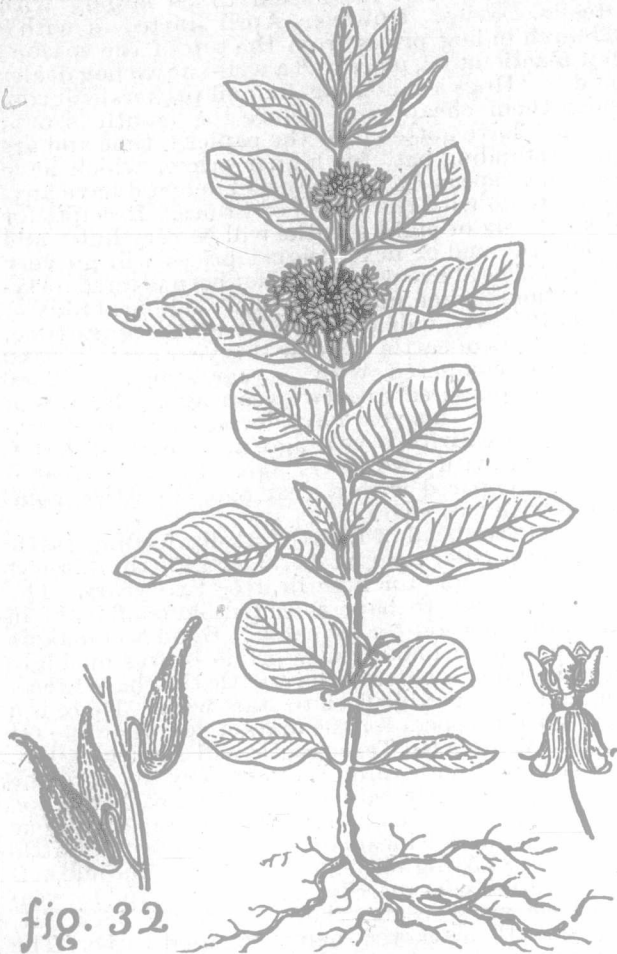


fig. 32

Asclepias Cornuti (Common Milkweed). Fig. 32.

This weed frequently grows in groups by the wayside; sometimes appears in fields and becomes quite difficult to overcome. The stem is 3 to 4 feet high, bears oval leaves 5 to 7 inches long, arranged in pairs; the purplish flowers are in clusters at the axis of the leaves, and from them arise very peculiar-looking pods, filled with seeds imbedded in a cotton-like substance. When any part of the plant is cut, a thick, milky juice passes out. If well established in a fertile soil, its long, deep perennial roots are difficult to kill. In such cases continual thorough cultivation becomes necessary.

A. tuberosa (Butterfly-weed).

This species is very attractive, and by some has been introduced into gardens. It is quite common along the railway south of Galt and in the Niagara district. The stem is erect, very leafy, branching at the summit; leaves somewhat linear, and with little or no stalk. The flowers are a bright orange, and the plant has a beautiful appearance when in full bloom. Though sometimes along the wayside and in the fields, yet it is not viewed as troublesome a weed as the former species.



fig. 33

PLANTAGINACEÆ (Plantain Family).

The leaves of plants in this group have usually well-defined veins.

Plantago major (Common Plantain).

This common plant, growing about the back doors and in the barnyards, can scarcely be considered a serious weed. It is readily known by its large, roundish leaves lying close to the ground, and with well-marked veins. About the time it flowers it sends up a stalk about eight inches high, along which the minute flowers are arranged in the form of a spike.

P. lanceolata (Rib-grass). Fig. 33.

In this the leaves are much longer and narrower; the flower spike short, thick and dense. The leaves are 3 to 5-ribbed. The seed of this plant is often sown in grass mixtures, and by some has been called sheep-grass; but escaping from the fields it has found its way to places where it is not desired. Though both these species are perennial, they are seldom troublesome where thorough cultivation is practised.

CHENOPODIACEÆ (Goose-foot Family).

Chenopodium album (Lambs' Quarters).

This very common weed around old dwellings and neglected places is well known by its leaves, on the under surface, presenting a mealy-like appearance. This annual produces a great many seeds, but seldom proves a nuisance except to the careless.



fig. 34

Blitum capitatum (Strawberry Blite).

Few seem to know this weed by name, though comparatively common. The stem is about a foot long, and the leaves somewhat triangular. When ripe, the fruit appears in clusters along the stem something like strawberries arranged along the axis. However, an examination soon shows very little resemblance to that berry. A reddish juice can be pressed out of the fruit; this has been used by the Indians for painting themselves and staining basket work. It is seldom that complaint is made against this plant.

AMARANTACEÆ (Amaranth Family).

Some very interesting and attractive plants are found in this order, such as cockscomb, irisine, prince's feather and globe amaranth, but we notice it for one large, unsightly coarse annual.

Amarantus retroflexus (Common Pigweed). Fig. 34.

This is the true pigweed, a name often improperly applied to lambs' quarters. This coarse plant grows 2 to 5 feet high and branches considerably; the greenish flowers are unattractive, appearing in the form of spikes crowded in a stiff panicle or dense clusters; the root presents a reddish appearance. This plant is so coarse that it is readily seen in a field, and should at once be pulled. It seldom finds its way where careful farming is observed, and can readily be put under by a little industry and care. It flourishes in rich spots, and sometimes has such a firm foothold that it tries one's strength to pull it up.

Arbor Day.

The Manitoba Government has this year proclaimed May 11th to be observed as Arbor Day. The official proclamation reads:—"Whereas it is provided by Section 13, of Chapter 2, of the Revised Statutes of Manitoba, being an act respecting 'The Department of Agriculture and Immigration,' that the Lieutenant-Governor-in-Council may in each year, by proclamation, appoint as a public holiday to be observed throughout the province a day to be known as Arbor Day, for the planting of forest and other trees,

"And by these presents we do urgently request all the inhabitants of our said province to set apart the hereinbefore mentioned day for the planting of forest and other trees, and we beg all municipal, religious and school corporations to assist in carrying out the objects for the attainment of which this holiday has been instituted."

The objects for which this day is intended have been almost lost sight of in the past, but the keen competition for our prize essay on "The reasons why Arbor Day should be observed at Manitoba and the Northwest public schools, with suggestions for the programme of the day," shows a great awakening of interest upon this very important subject. It affords us great pleasure to publish such excellent essays as the following on this subject.

The essayist to whom we awarded first prize omitted to mention two important points, viz.:—The fencing of the school grounds for protection from horses and cattle, and the advantage of having a strip of cultivated land around the schoolhouse to act as a fire guard.

One essayist makes the capital suggestion: "That Municipalities might offer a prize to the school best fulfilling the intentions of Arbor Day."

We would suggest that our Government, instead of reducing the school grant, should rather increase it, and then make it compulsory to fence school grounds. They could also encourage the proper observance of the day by supplying, free of charge, seeds of our hardy native trees.

FIRST PRIZE ESSAY.

Why Arbor Day Should be Observed at Manitoba and the Northwest Public Schools, with Suggestions for the Programme of the Day.

BY J. S. GRANT, OSLER, SASK.

Arbor Day is the name given to a holiday in connection with our public school system, specially dedicated to the planting of trees in school grounds and public parks. Where the observance of such a day first originated is difficult to decide, quite likely in some western prairie district, but it is safe to say that the custom is a beautiful one, and worthy of observance even in those portions of our Dominion more highly favored by nature in the growth of trees than the average prairie school district.

To the reader of your journal fresh from the vine-clad homes of the east, it would at first appear that the question "Why Arbor Day Should be Observed" was superfluous; that, in fact, there could be no two opinions as to the propriety of its observance, but a year or more of sojourn and travel in the country will be apt to disabuse him of such an idea. He will find homes, and many of them, all over the country, not lacking in any of the creature comforts of this life, and possessing in not a few cases some of its luxuries, but outside absolutely barren of either tree or shrub; and these homes, let it be kept in mind, not occupied by persons born and bred and all their lifetime accustomed to the treeless prairie, but by those, in most cases at least, who spent their childhood days among the orchards and groves of Eastern Canada, or the stately parks of "Old England."

It cannot be that this state of things arises from indifference to the beauties of nature, nor from ignorance of the beneficial effects which would follow from a more general distribution of trees, especially upon the climate of a prairie country, but more probably from the erroneous idea that "tree planting" cannot be made a success, or if it can the amount of success does not warrant the necessary labor. To dissipate such an idea from the minds of the people, especially in the rural districts, is the chief reason why Arbor Day should be observed. Like many other much needed reforms, this can probably best be brought about by the education of the rising generation. Let the children of our public schools once become imbued with the love of trees and flowers, and be encouraged to care for and protect them in their school grounds, and it will soon be found that they will not be satisfied without them around their homes; one improvement will follow another, until a "country home" will be synonymous with all that is bright, cheering and helpful in life, and thus will be, in a great measure, solved that difficult problem of modern times: "How to keep the youth of our country from drifting into city life". Much might be written about the elevating influences of trees, shrubs and flowers around the home, their effects upon the rainfall and general climate of the country, the immediate benefits to be derived from the growth of shelter belts of trees for stock, gardens and roads, and the more remote yet possible benefits in providing a future supply of timber for domestic uses, as well as for manufacturing purposes, but a discussion of these questions is unnecessary in a paper of this character. Argument is not what the

people need, but by example and encouragement show them that trees can be grown, and the results will be satisfactory.

How then can the observance of Arbor Day help in this grand work, or what is the best method of observing the day? In answering this question, it will be conceded by all parties familiar with the subject that it were better not to begin than to take such a course at the outset as will ensure certain failure. I have said that the primary object of the day is the planting of trees, but if, as will be the case in the majority of school districts, no preparation has been made in former years by the "breaking" of the virgin sod, it would be folly to set out trees this year. Experienced tree growers in Manitoba and the Northwest will agree that in this case at least "it is better to make haste slowly." The ground which is to be devoted to trees requires to be plowed or dug over, and thoroughly rotted and pulverized at least one year before planting—if cultivated for two years, all the better—and this year's exercises should therefore consist:—

I. In the breaking of a strip of ground several feet in width around the school property by one or more of the sturdy yeomen of the school district.

II. Short addresses to the children and their parents and friends assembled at the schoolhouse by the chairman and members of the board of trustees, and others who can be induced to assist, on the objects of Arbor Day and kindred subjects.

III. If time and circumstances permit, appropriate readings and recitations, or songs by the teacher and scholars. The children should also be advised and encouraged to procure and plant at their homes seeds of native trees and shrubs, in order that by next year a supply of young trees may be readily procured for planting the ground now broken. No doubt trees can be planted and successfully reared without the preparation here recommended, but the labor and care required are more than can reasonably be expected from teachers and scholars, upon whom will depend the ultimate success of any efforts in this direction. Where school grounds can be found that are in a fit condition to receive trees this year, no time should be lost in planting. Let the teachers and scholars interest the parents and ratepayers generally in the subject, and procure from banks of rivers and streams, or from some of the government experimental farms, young trees of native growth, such as the maple, ash, elm, etc.; and on Arbor Day plant these in such positions as to form when fully grown shelter breaks from the sweeping winds of the prairie. And it will no doubt be found worthy of trial to have each scholar personally assist at the planting of some particular tree, and afterwards, under the teacher's directions, make this tree the object of his or her special care. Subsequent years' exercises may be varied by the planting of evergreens and less hardy varieties of trees within the shelter thus provided.

Thus early in life will be inculcated that love of the useful and beautiful in nature which shall continue to grow until the homes of our country shall reflect in some measure the taste and culture of their inmates, and the passer-by shall be led "from dwelling upon thoughts of nature up to nature's God."

Why Arbor Day Should be Observed at Manitoba and the Northwest Public Schools, with Suggestions for the Programme of the Day.

BY D. F. WILSON, BRANDON.

Why should Arbor Day be observed at our public schools? Because it means money, comfort and pleasure to the farmers in years to come. It gives an opportunity of imparting to the farmers of the future and their wives a practical knowledge of arboriculture, a most important and much neglected branch of agriculture. That it is important no one that has lived in a prairie country will deny, and that it is neglected any one with their eyes open can see, for while comparatively few farmers make any pretence of planting trees, still fewer make a success of it, and it is common to see freshly planted trees that show an utter want of knowledge of the principles involved, and whose future shows that there was something radically wrong. The proper observance of Arbor Day at schools would be the very best means that could be employed to remedy this deplorable want of knowledge which is evinced by farmers with regard to tree planting and growing, for it would give the children a thorough and practical insight into the subject, which would begin to be felt almost immediately, for they would naturally be inclined to put their practical and new ideas into use at home, and these ideas would grow with their years, creating a strong tendency to improve our prairies both in value and appearance.

There is too often among farmers a lack of love for the beautiful, which causes them to forget that beauty has its money value. Now, where is the landscape that is beautiful without trees? Give the children a love for trees, and they have got something that will be of value to them. Then, again, trees make a home homelike, giving a farm a comfortable appearance, and not in looks only, for if planted in sufficient quantities it is an actual comfort, sheltering it from the winds, and shutting out the bleak and dreary winter aspect. What a contrast there is between the farm house nicely sheltered by natural bluff or thrifty plantation, and the same house standing on the top of a bare knoll with the stables on the falling ground behind. Which looks the most comfortable? Which looks the most like HOME?

Then there is the pleasure derived from growing trees. Many men have undertaken to grow some fruit or vegetable, simply because they had a special liking for it, but before it was raised they had found much more pleasure in growing it than they did afterwards in eating it. It is the same with tree growing, especially where there are a few difficulties to be overcome. Therefore, I think we may safely say that anything that tends to tree growing is a source of pleasure, comfort and profit.

In order to make Arbor Day a success, teachers should have a practical and scientific knowledge of arbor culture (I say scientific in order to make myself understood, for in my opinion science is nothing but thorough practice), so that they cannot only show their pupils how a tree should be planted, but also why it should be so done.

The trustees of rural schools should do all they possibly can to help the teacher by preparing the ground, etc., and encouraging the children. Some trustees may think it a waste of money to plow enough of the school grounds to do for trees, but this is a great mistake; a neat school house, surrounded by nice trees, will do much to make children take an interest in their school, and is money exceedingly well spent. If the outside of the usual acre is plowed, say twenty or twenty-five feet wide, it will give room for a hedge of ash-leaved maples, which may be grown by planting the seed in a row all round, leaving each young tree about two feet apart in the row. By not pruning them up this will form a nice hedge, useful both as a wind and snow break; there will then be room for two or three rows of trees inside the hedge. The children should, if possible, dig the trees they plant, and this can generally be managed; they can then be taught how this should be done, as well as the care of the roots between digging and planting.

Tree culture should not cease when Arbor Day is passed, but should be kept up throughout the year, for the after care is quite as important as planting the tree. A good plan would be to give each pupil a certain number of trees to look after, and create a friendly rivalry among them as to who would have the thriftiest trees. The cultivated ground between the trees might also be made use of for flower gardens.

If Arbor Day is to be made a success the teachers must go into the subject in earnest, for on them everything depends. A special knowledge of the subject is not enough. They must be able to teach the functions of the roots, leaves, etc. It is the knowledge of cause and effect that will make the children take an interest in arboriculture that they will never lose.

Arbor Day from a Nurseryman's Standpoint.

BY JOHN CALDWELL, VIRDEN NURSERIES, MAN.

Arbor Day is a good institution in any country, as it causes people to reflect on tree planting, and no doubt a great many determine on planting some on Arbor Day; whereas if there was no such day, there would probably in a good many cases be no planting done. Arbor Day properly observed at our schools would also serve an excellent purpose, in educating the growing generation in the most approved methods of tree planting. This matter of planting around school grounds is of great importance, especially in a country like this, and should not be neglected.

The only tree I would recommend in the meantime is the native Manitoba maple; and as the expense is the first and no doubt a very important factor, I will undertake to satisfy the people that the expense is a mere trifle, and as for making the trees grow, that is simply a sure thing when the work is anything like properly done. The size of the tree, then, is to be determined; the smaller the tree the surer it is to grow—that is an old established fact in Irish history, and certainly the smaller the tree the less will be the expense. In this case I will recommend one-year-old seedlings, one to two feet high. First-class seedlings can be delivered at any station in Manitoba at \$15.00 per 1,000, and any good working man can easily plant 1,000 seedlings in two days; \$20.00 is a good price to furnish and plant 1,000 maple seedlings. The only other expense is in preparing the ground and covering the ground with a heavy coating of manure after the trees are planted; this manure will, of course, enrich the ground and hold the moisture, besides keeping down the weeds, and the ground will always be loose and loamy. If this mulching is not done, then the ground must be kept in shape by hoeing and cultivating, but I consider the mulching is the cheapest and by far the best; one good heavy mulching would last for some years. The following is the number of trees to an acre:—

8 feet apart each way.....	680 trees.
6 " " " "	1210 "
5 " " " "	1742 "
4 " " " "	2723 "

As to preparing the ground, I will only say that the ground must be in first-class condition for planting these small trees. I am referring so far to country schools, and any good farmer knows how to put ground in condition.

Seedlings delivered from a nursery would have one long root with numerous fibres; one-third of the root should be cut off, and all the fibres should be cut off to within half an inch of the root. Pruning 1,000 seedlings is less than half a day's work.

The seedlings should be soaked in water a day or two before planting, and when planting carry them in a pail of water to keep them from drying. I would plant in rows anything from four to eight

feet apart; if trees were twelve or fifteen feet apart they would make prettier trees when they grow up, but they would not make a good break unless there were three or four rows on the outside, planted close, and trimmed low. In that case, they must have more trees and more ground.

My method of planting seedlings is very simple; stretch a line, and with an ordinary spade make a slit in the ground the full depth of the spade, and not more than two inches wide at the top, drop in your seedling a good inch deeper than it was in the nursery, then shove in your spade again a few inches back, and pry tight, and give an extra tramp, good and hard, with your foot; leave no holes. I consider it a very easy day's work to plant 500 seedlings. Seedlings should never require watering if well mulched, but weeds must be kept down, as weeds and trees can never do well on the same ground. So far I have referred to country schools only.

In cities and towns where they have less room, and probably more money, I would say plant good, strong Manitoba maples about one and a-half inches above the root. Nursery-grown trees are the best, as they have the best roots and have been more exposed to the sun. Maples from the river will do very well if the top is entirely cut off about seven feet from the ground, and get as good a root as possible; and water all large trees well when planting, and afterwards if the weather is dry. I also advocate deep planting where the ground is mellow and an open subsoil.

Turning to the country schools again, it would be very encouraging for the little boys to drop in the little trees, but let a man handle the spade, as the trees must be firmly planted.

Seedlings in five years should be ten feet high and can be left to branch low, and even trimmed low, to make almost a hedge, or can be trimmed up to make tall trees. When you want a tall tree, prune off all the low branches close to the trunk in the month of June, after growth has begun; but when trimming to keep your trees low, cut off from one-third to one-half of the last season's growth, and do this in the month of March or April, before growth begins. Spring planting is the best; I would never plant trees or bushes of any kind in the fall in Manitoba.

As there was lots of seed last fall, there will no doubt be large lots of seedlings offered for sale next fall; I expect to have 100,000 to dispose of next fall myself. And seedlings for spring planting should always be dug in the fall and buried entirely under ground, tops and roots, fully one foot; spread them well out and put no manure near the trees, but put manure on top of the ground where they are buried. There is lots of time to plant seedlings in the spring after seeding is done.

Now if your ground is ready you can have 1,000 healthy young seedlings planted for the small sum of twenty dollars. Those in authority should give this their most serious consideration. It would be money well spent, an ever-present object lesson for your boys. "A thing of beauty is a joy for ever."

Legal Questions and Answers,

Edward Burdett, St. John's, Winnipeg, asks:—I have a field of land in Kildonan, and at each corner adjoining is a house and premises, the owners keeping poultry and allowing them to run at large, much to my annoyance and loss, for they are continually doing me damage during the summer. As soon as the seed is sown they rove the land and scratch it out; during its growth they trample it down, and when ripe, or as soon as the grain forms again, take it. I want to compel the owners to keep their poultry up. Last year, after considerable damage was done, I gave notice in writing that poultry trespassing on my land would be shot; I shot several, leaving them on the ground untouched. Is this the proper mode and best way for the coming season? Your opinion will much oblige me.

Ans.—You have no right to shoot or destroy your neighbor's poultry. You may seize them while on your land and keep them, setting off the value of the chickens seized against the amount of loss and damage caused you, or you may sue your neighbor for damages.

George Wannacot asks:—If A holds a joint note made and signed by B, C, D; the note ran on three months after due; D then, in order to keep A quiet and content, gives A a note at the bank payable to A's order so many months after date, at so much per cent. per annum; the bank takes it; note is protested at bank and A is held liable for it. Before the note at the bank is due, C makes an assignment. Are B and D released by such joint notes, (A still holds joint notes), they never having been lifted. C gave his own personal note at bank. B is a married woman. Can she be held liable for her signature on joint note?

Ans.—B and D are not released on account of the assignment merely having been made by C. Whether there may not be other matters connected with the transaction which would release them does not appear clearly from your letter. There are several disconnected statements in the letter which we do not understand. Did A take D's note in payment and discharge of the joint note of B, C and D? What do you mean when you say C gave his own personal note in bank after saying that B, C and D gave a joint note? As to whether B, being a married woman, would be bound by the note depends on the nature of the transaction, and it would be necessary for us to have much fuller information on this point than is contained in your letter before saying whether she is liable or not.

The Farmer's Garden.

BY ROBERT BARCLAY, BALMORAL, MAN.

Peas.—There are many varieties of this famous and most delicious vegetable. Every seedsman has what may be called his catalogue specialty, which very often takes the eye of many intending purchasers, and leads them astray, as to what kind is most suitable for the climate, soil and seasons in their district. Now, what I want to say is this: Beware of adopting the advice contained in the many catalogues which are distributed all over, as there is not one in a hundred written with reference to this north-west country. After many years' trial of different kinds, I find Bliss' American Wonder beyond all comparison the best for either family or market purposes; it is far ahead of its much praised sister, Bliss' Everbearing; it is a surer and much heavier cropper, and really continues in bearing longer, carrying blossoms and pods right through the season until sharp frost sets in. It has many advantages over other sorts, being strong and thick in the stem, rarely, if ever, exceeding nine or ten inches in height, stools and branches out more than any other, matures, or is ready for the pot, under favorable weather, in six weeks from planting, and produces a fine sized, sweet, wrinkled pea which cannot be beat. The ground should be deeply tilled in the fall, and the best of well-rotted, short manure forked in; use no green or new dung, as it will invariably produce rust on the vines and ruin your crop, and will also encourage depredate insects. If you cannot get this done in the fall, top-dress your land and plow in the manure in the spring, harrow and rake the soil down finely. Sow the seed thinly, that is to say, two to three inches separate in rows one and a-half inches deep, and fifteen inches apart, and keep the Dutch hoe and rake at work between the drills, so as to cultivate and keep down the weeds until the plants meet each other. If the land is prepared in the fall, the first sowing should be done as soon as the thaw will admit of the drills being drawn, and successive ones every fortnight until first week in August; in this way I had magnificent peas in the end of last September, when prices were at their highest. If you must prepare the land in spring, get at it without delay, so soon as the frost leaves it sufficiently to get the plough in.

Kidney or Wax Beans.—The best soil for this class is undoubtedly a rich or loamy one, well cultivated and supplied with the oldest of good, short, stable manure, thoroughly dug in and well covered, as this plant suffers more easily from drought than many others. In sowing, cultivation, etc., apply the same treatment as for peas. I have been astonished in my travels to find so many people so totally ignorant as to how to make use of these beans in the green state, and, consequently, sowed their whole stock of seed at once, instead of in succession, and thereby having a continued supply of useful green pods throughout the season. For use, pull the beans when they are about two inches in length, cut in half-inch pieces, boil and pour the water off; then put in a good chunk of butter along with some pepper, stir these in thoroughly, and serve up one of the best vegetables known. Golden Wax is the best variety for using in the green, and White Marrowfat for ripening for winter use.

Salsify or Vegetable Oyster.—This is a much neglected article, I presume principally from the fact that its value or worth is little known. It is the best natural blood purifier and antidote there is for dyspepsia, and is very easily grown, if properly cared for, and well worth a place in every garden, even if it does take a little extra work. The land must be ploughed very deep and be of a rich and free nature, well manured, similar to that which produces good parsnips. Sow as early as possible in drills eighteen inches apart, and thin out your plants, leaving nine to ten inches between each. If the season is damp, apply plenty of wash or liquid manure. Keep well cultivated, and lift the roots whenever frost makes its appearance, as they are more susceptible of it than any other garden root. There are two or three different ways of cooking and serving up, but the easiest, simplest and best, in my opinion, is wash and scrape your roots clean, put them on with cold water and boil same as carrots, pour the water off and serve up with butter and milk sauce. See that you get new seed, as old will invariably give you horned roots.

Jerusalem Artichokes.—This is another vegetable which is much ignored through its value not being known, and also on account of many believing that it is only good for hogs. This is wherein they make a big mistake, as no one can have a finer or more nutritious dish. Clean your roots, boil them like potatoes, and serve them up with butter and milk sauce. No rich soil is required—in fact, you get your roots from the nurserymen and plant them in spring in the shadiest and poorest soiled corner of your garden; scrape out the larger bulbs for use during the season and what you are going to keep over winter, leaving the smaller roots in the ground to supply the following year's crop.

Tomatoes.—I would recommend farmers especially not to dabble with too many varieties, but simply go in for two good ones, one large size, viz., Ruby, which is the earliest, heaviest cropper and most easily grown, and one small, viz., Yellow Plum, which really has, as yet, no equal in this country. Sow in seed pans or boxes in light, sandy, loamy soil, without manure, in the end of March or beginning of April, and when the plants throw out their third leaf, remove them to other boxes or a hotbed made up with a richer compost; and, when all fear of frost has gone, put out your plants in a well prepared plot, thoroughly manured, in rows three feet apart, with two feet between each plant. Keep well cultivated through the season, and give a plentiful supply of liquid manure.

Practical Experience in Tree Culture.

BY A. P. STEVENSON, NELSON, MAN.

One of the most important subjects at the present time to the farmer on the prairies is "tree culture" for protection from winds and storms, and as the time is approaching for tree planting a few notes from my experience on the varieties likely to prove satisfactory might be in order, and also on those that have been tried and found unsuitable. We have nothing yet that will equal the Box Elder (Native Maple) for general planting on the prairies. In fact, whether planted on a sand bar, a river bottom, a door yard, the open prairie, or in a sheltered place, the result is the same—a fine, sturdy tree. I notice the Russian Poplars and Willows are coming much into favor in Minnesota, and what I have seen of them leads me to think they are the coming tree for shelter belts in Manitoba. For years I have been experimenting with trees from the east, but with varied success. Soft Maple, Tamarac and Mountain Ash, six inches high when planted, are now from six to nine feet high. Walnut and Butternut are not hardy for general planting, unless favorably situated. My largest is five feet high, but they are sheltered with Evergreens. Norway Maple, Hard Maple, Honey Locust, Black Locust, Hickory and Sycamore have proved failures.

Now, a few words on Evergreens. Many farmers consider the growing of a shelter belt of Evergreens almost impossible, or that it will take a lifetime to grow them from small plants to a sufficient size to be of any value, but this is a mistake.

I have Scotch Pine nine feet high from seed sown seven years ago. It is better to use nursery grown trees, as they are more exposed to the sun and wind, and will bear transplanting better and thrive better than the seedlings from the forest. Three per cent. of the latter is all I could ever get to grow.

The best size to get evergreens is from eighteen to twenty-four inches, these generally having been twice transplanted; they will cost more, but in the end they are the cheapest. On the other hand, if they are from seed beds, they will require careful handling; they should be planted in beds the first year, and shaded from the sun. Of the eight varieties of evergreens I have tried, the Scotch Pine and Balsam have made the most rapid growth; the latter keeps its dark, green color all winter. I have grown them for ten years, and they now stand sixteen feet high. Arbor Vitae in ten years shows a growth of six feet. Our native White Spruce has given the best satisfaction, whereas Norway Spruce, Austrian Spruce and Black and White Pine are not desirable, being slow growers and getting very dingy towards spring. I have now on trial Colorado Blue Spruce (*Picea pungens*), and will let you know results at some future time.

In conclusion I would say to my brother farmers, plant more trees, as they grow while you are sleeping. Don't say you have no time; you have all the time there is. Begin with Box Elder (Native Maple), then you can add some of the more tender sorts on the lee side. Visit the Dominion Experimental Farm. You will feel well repaid for a day spent there. You will be made welcome, and the courteous Superintendent will take pleasure in showing you his fine collection of forest trees and ornamental shrubs. The valuable object lessons you will see there will give you more information and encouragement in tree culture than you could possibly get in any other way.

Poultry Notes.

BY JOHN BEVERIDGE.

From actual experiment it is stated that the droppings from four large Brahma chickens for one night weighed in one case exactly one pound, and in another more than three-quarters, an average of nearly four ounces to each bird. By drying this was reduced to not quite one and one-half ounces. Other breeds make less, but allowing only one ounce per bird daily of dry manure, fifty fowls will make in their roosting house alone ten hundred pounds yearly of as good manure as can be purchased. Hence, fifty head of poultry will make more than enough manure for an acre of land, seven hundred pounds of guano being considered a good application for an acre, and poultry manure being even richer than guano in ammonia and fertilizing salts. No other stock will give an equal return in this way for the food consumed, and these figures should be carefully pondered by those who take little heed of this kind of manure.

Vegetables of any kinds, and especially onions, are relished by fowls of all ages. Onions chopped fine and placed in the soft food act as a stimulant and tonic. The tops are particularly good.

Injurious Insects.

BY JAMES FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA.

CLOTHES MOTHS.

Only too well-known to the housekeeper are the injuries to sleigh robes, furs, carpets and woollen garments by Clothes Moths, for there are very few who have not been sometimes victimised.

Clothes Moths, like all other insects, pass through four well-marked stages of existence. The moths begin to appear in April, and some specimens may be found in the moth state throughout the summer. Soon after the insects appear in the perfect state, they pair, and the females begin to lay their eggs. The food of the caterpillars which hatch from these eggs is entirely of an animal nature, as wool, hair, fur and feathers of all kinds. The whole of the injury done by these insects is while they are in the caterpillar state. When full grown, these latter are a little more than a quarter of an inch in length, with a yellowish head. Although small, their power to do harm is very great. The chrysalis stage lasts only a short time. The caterpillars from eggs laid early in spring become full-grown by autumn, but do not change to chrysalides until the following spring. The young caterpillars from eggs laid late in the spring, or during the summer, have not time to reach full growth before winter sets in. These pass the winter in a torpid state without eating, and finish their growth the following spring, so that caterpillars only half grown may sometimes be found in spring upon undisturbed garments or carpets. By far the larger proportion, however, emerge as moths about the end of April, or in the beginning of May.

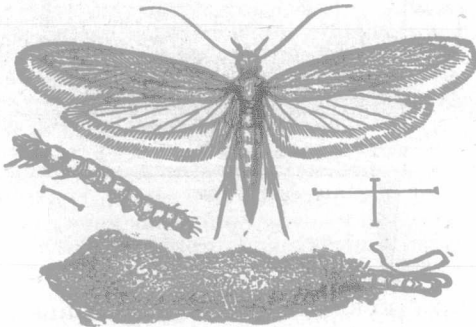


FIG. 1.

There are two kinds of Clothes Moths, the small caterpillars of which commonly attack clothes, furs, etc., in Canada, and neither of which is a native pest; both have been imported from Europe. The first of these (Fig. 1) is the commoner. It is a small creamy white moth, without spots, and when at rest the wings are held in a sloping position over the back. The caterpillar spins a white, silken path over or through the article attacked. The second kind is shown, much magnified, at Fig. 2. It is a dark gray moth, with a few darker spots on the wings; these latter lie flat over the back when the insect is at rest. The caterpillar from the very first lives inside a small muff-shaped case, which it carries about with it all the time, and which it constructs of fragments of the material it has been attacking.

REMEDIES.

It is important that the nature of these insects should be understood by all who wish to protect their property from their depredations. In the first place a commonly believed mistake may now be corrected. Clothes Moths, the caterpillars of which eat clothes, carpets, etc., do not fly into houses from out of doors, but breed inside the house, and the

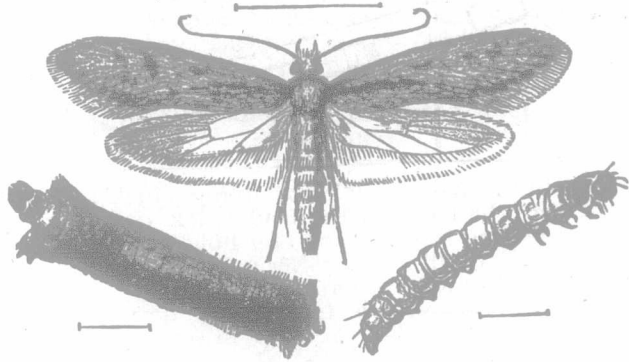


FIG. 2.

moths which fly into houses during summer evenings are perfectly harmless in this respect.

In the case of sleigh-robes, furs, etc., there is nothing better, as a remedy, than giving them a thorough beating and brushing, and then packing them away in spring in a tight box, chest or barrel before the moths appear. Woollen winter clothes and smaller articles may be folded neatly and wrapped in strong paper. Of course, if the edges are pasted together it is so much the better.

When carpets are found to be infested, the furniture should all be removed from the room, and the carpets well swept. The edges may then be sprinkled freely with benzine or gasoline. Both these liquids are dangerous, on account of their extreme inflammability. Great care must therefore be taken not to take a light into the room until some hours afterwards, or until the room has been thoroughly aired. In the case of upholstered furniture or carriage linings, these may be sprinkled freely with gasoline, which will destroy the insects in all stages and will not injure the cloth; the odour soon disappears

when the articles are left in the open air. Prof. Riley, the U. S. Entomologist, recommends for carriage linings sponging them with a very dilute solution of corrosive sublimate in alcohol made only just strong enough not to leave a white mark on a black feather. The extremely poisonous nature of this substance, however, demands that the greatest care should be exercised in its use.

When, from various causes, winter clothes and furs have not been packed away before the moths appear in spring, they should be well brushed and beaten out of doors, and packed away in such a way that they can be got at easily. They must be opened again about a month later, and examined to see if there are any traces of the insects. An easy way to make a tight box for packing away clothes for the summer is to take any common box and paper it inside and out with newspapers; when filled, fasten the lid on and paste paper over the cracks.

Camphor, pepper, cedar chips, naphthaline and other substances sold for the purpose, do not kill the insects when they have once attacked material, but have a certain deterrent effect in keeping away the moths when they are flying about in search of a suitable place to lay their eggs.

Poultry on the Farm.

BY IDA E. TILSON, WEST SALEM, WIS.

During twelve years of poultry culture I have twice bought a stock, three times hatched May or June broods, seven times got out my chicks in March and early April. I confess I prefer the last, but, considering my own exposure and the extra expense and time bestowed on early broods, with the fact that judicious feeding and forcing can make so much of chicks at any season, I doubt whether I shall again raise many as early, certainly not this backward spring, though two biddies are set, due the first week of April, just to keep my hand in practice. The breaths and bodies of a whole flock warm their house considerably, hence that is a more comfortable place in which to put early setters than a separate apartment would be. Late broods hatch anywhere. Biddy's social qualities have been developed along with her size and productivity. She is no longer an absolute "child of nature," and, I find, hankers less for quietness and retirement than some poulterers are still supposing. I introduce no strange, confusing boxes nor quarters, but let this civilized bird set just where she laid. Since nature must be recognized, I compromise between that and society by recommending setters such darkness and solitude as temporary nest-doors will secure. My usual nest-filling is sawdust, which shapes readily, cleans easily, and retains warmth finely. I have added hay or sod foundations, but my cluckers detected these new elements, and either fled affrighted, or, with desperate courage, scratched things to pieces in investigation. Sawdust alone gives good hatches, and I could not return to packing hay nests—worse for "humpiness" than a refractory "Saratoga" trunk. After the setting fever has a good grip on biddy, her nest-box gets clean contents, which, when thoroughly warmed again, receive one-half teaspoon of sulphur and from nine to thirteen eggs, according to coldness of season and size of sitter. I mark her eggs as our grandmothers did, with a pencil, not all over, closing pores, but sufficiently for distinguishing them, if necessary. All being made ready, biddy is not dumped on her nest like a senseless thing, but left to step inside; she likes to feel she has done something herself. But I always select tame birds, willing to be handled and that think just as I do, so we can agree and not perplex each other. The only bacteria that biddy fears are visible without a microscope, and about the size of lice. Do not risk—better still, do not own, an infested clucker. I can always find enough which seem perfectly free, but "favor is deceitful and beauty is vain," so I dust them all the same, with Persian insect powder or chamomile when set, when done, and a few times between, looking for red mites on top of head, and for large, grey specimens around throat and rear. Cold, greasy ointments I am afraid of, and have never needed. The above powder, known also as pyrethrum, is absolutely harmless for everything but parasites. What a shame to let a hen be eaten alive while doing her duty. It reminds one of those unpleasant cannibal islands. For early mothers choose plump, hearty, but not unwieldy hens. Setting is not a light employment for leisure hours, but a steady job, and requires stamina and endurance. Biddy can hardly be dynamo, heater, engineer, night watchman and mother all at once without generous and solid supplies, corn being chief, to which I often add bread crumbs, cheese rinds, egg-shells, and a very little lean, cooked meat, especially if a setter's appetite flags, or she seems "shivery" on coming to the air. Puddings and relaxing foods are entirely tabooed. Every morning in warm weather, twice a day in cold weather, I take off my setters and carry them into a little eating room. When satisfied with food, they are released and make their own way back, after such exercise and pleasure excursions as they see fit. My stated times and regularity of taking them off soon induce such methodical habits in these cluckers that, after a few days, they never come out otherwise, and I can dispense with all watching, or be absent from home for hours, because a well-trained setter virtually becomes like Tennyson's brook—
"Men may come and men may go,
But she goes on forever."
A steady heat for several successive hours is re-

quired to start the feeble embryo into real life, so a sitter's first absence and check to this continuous heat is critical, and should be brief. Sometimes on her uncovered eggs I lay my woollen mittens, warm from my hands.

"Anything well begun
Is already half done."

Later, in all reasonable weather, biddy should take thorough airings for her own health, and because eggs too closely covered seem fairly cooked, and hatch no better than when there are too many, with always some chilled eggs around the edges of nest.

Of 208 chicks cooped by me one year, 202 reached maturity; another season 198 did out of 205, and other nearly as good results might be mentioned. I never see cooked eggs recommended for little chicks without wishing to say "Raw, or boiled at least twenty minutes." What is commonly called a "hard-boiled" egg—hard, indeed, for any digestion—has its albumen turned to leather. Keep on boiling, and that leather itself will slowly disintegrate and become more digestible. This covers the whole ground of dispute between those who say, "Feed little chicks entirely on eggs," and those who reply, "Never, unless you wish them to die." This annual "egg controversy" opened in a March poultry journal by one writer directing hard-boiled egg fed first thing; and another replying, it must not be done right away. According to my experience they might save such discussion, because chicks till three or four days old, at least my chicks, do not like cooked egg. My early staple is bread and milk, not sloppy, which is safe beyond criticism. Oatmeal, just moistened, and "Dutch cheese" come next; wheat as soon as can be swallowed; boiled eggs perhaps once a day, chopped shells and all, mixed with bread crumbs and potatoes; occasionally a regular baked custard, or a raw egg beaten, thickened with crumbs. Gravel and bonemeal mixed are constant companions, meal puddings are gradually worked in, and chopped onions or a little lean, cooked meat, shredded fine, are treats. A properly raised chick both eats to live and lives to eat.

Horse Breeders' Lien Act.

This very important act, fathered by Dr. Rutherford, M. P. P., passed at the last session of the Local Government of Manitoba, should prove a great benefit to stallion owners throughout that Province, by giving them power to collect for the services of their horses. But it should also prove of still greater benefit to farmers using travelling stallions, as many fraudulent pedigrees are now given to mongrel horses, and without a complete set of the various stud books it is impossible for farmers to detect these from the genuine. The certificate granted by the Department of Agriculture under the new act will, however, be proof that the pedigree is duly recorded in an authorized stud book. The act provides for the registration of registered pedigree stallions, domiciled in the province, with the Department of Agriculture and Immigration. The fee for such registration is \$5, and the department will furnish each owner so doing a certificate of such registration, which must be inserted in every bill, poster or advertisement issued by owner of such stallion to entitle him to the benefit of the statute.

The 4th clause of the act provides for the filing of a statutory declaration with the county clerk, setting forth service and particulars.

The 5th and 6th and 7th clauses contain the benefits of the act and read:

5. The owner of such stallion, upon filing such affidavit and complying with the provisions of this act, shall have a lien to the amount of said service fee and costs as hereinafter provided upon the colt or filly, the offspring of any such stallion from the service in respect of which the said affidavit is filed, which lien shall take and have priority over any and all writs of execution, chattel mortgages, bills of sale, liens, claims and encumbrances whatsoever.

6. If payment of the service is not made before the first day of January in the year following the year in which the colt or filly is born, the owner of said stallion or his duly authorized agent may, at any time before the first day of May following, take possession of the colt or filly upon which he has such lien as aforesaid, wherever the same may be found, and may proceed to sell the same by public auction after giving the person in whose possession the said colt or filly was when taken ten days notice in writing of such intention to sell, which notice may be effectually given to such person by delivering the same to him personally, or by posting the notice up on the door of such person's last place of residence in Manitoba.

7. The proceeds of such sale shall be applied first in payment of reasonable expenses of the taking of possession, giving of notice and conduct of sale, not in any case exceeding \$10, next in payment of the said service fee, and the balance shall be paid by the owner of the stallion to the person from whose possession such colt or filly was taken on demand.

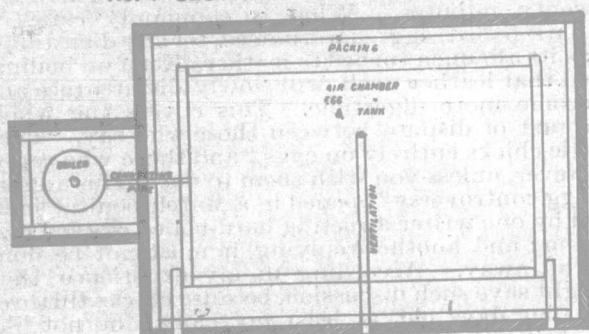
Directions for Making an Incubator.

BY R. W. CASWELL.

As promised in a former letter, I send you plans of Peerless Incubator and directions for operation, which I hope will be of use to your many subscribers. I have used one the same for some years, and it has given good results.

TO MAKE THE incubator, get one hundred feet of six-inch tongued and grooved ceiling, and two boards sixteen inches wide, twelve feet long—all the material should be three-quarter-inch, clear and perfectly dry. In all the following measurements I have allowed for three-quarter material, unless where otherwise mentioned.

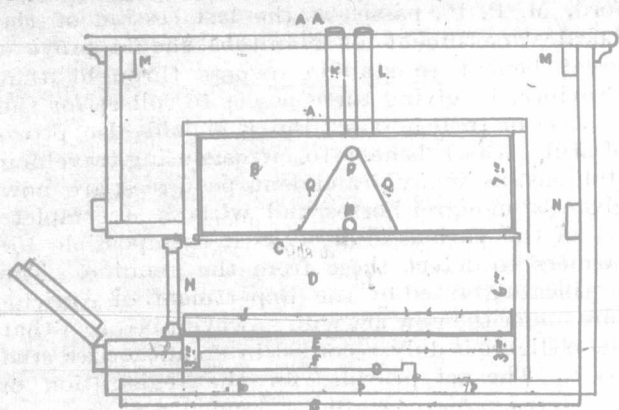
No. 1—SECTIONAL VIEW FROM TOP.



OUTER CASE.

Take sixteen-inch board, and make the bottom $42\frac{1}{2} \times 29\frac{1}{2}$ inches, glue the joint; to strengthen it nail three cleats on the lower side, one four inches from each end and one across the centre. Make a frame of three-inch strips for the top (M, Fig. 2) same size as the bottom. Cut the ceiling for sides 22 inches long, stand the bottom and frame on end, and nail on the siding. Put on the ends first and then the back, leaving the front until you get the inner case made and in position. Put a two-inch strip across each end and back (N, Fig. 2) nine inches from the bottom.

No. 2—SECTIONAL VIEW FROM END.

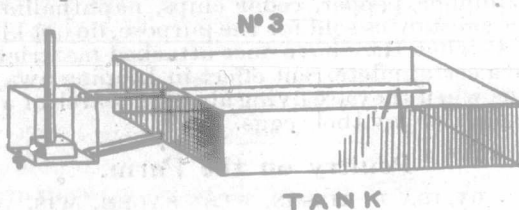


- A Inner Case.
- B Tank.
- C Egg Chamber.
- D Air Chamber.
- E Glass Door.
- F Drawer.
- G Air Pipe.
- H Frame Around Centre.
- I Discharge Pipe from Heater.
- J Return Pipe.
- K Outer case.
- L Cleats for Drawer.
- M Slats on bottom.
- N Outer Door.
- O Filling Pipe.
- P Frame Around Top.
- Q Ventilator.
- R Braces to Discharge Pipe. (See Fig. 2.)

Next, make the inner case $34 \times 20\frac{1}{2}$ inches and 16 inches high inside; on one side, three inches from the bottom, leave an opening $5\frac{1}{2}$ inches wide and full length for the drawer, and nail a cleat across each end even with lower side of opening for drawer to rest on, and nine inches from the floor nail a cleat across each end, and at equal distances apart put in four half-inch iron rods. Put them half an inch into the sides, and support the front ends with a wire around them, and fasten up to inside of case with screws. Make the door frame $4\frac{1}{2}$ inches deep, $6\frac{1}{2}$ inches high and $35\frac{1}{2}$ inches long inside (refer to Figs. 1 and 2); the ends lap over side of inner case. Now put in position on floor of outer case, four inches from front and three and a-half inches from back and ends; nail through the bottom into it. Put in the ventilator, and put on the front of outer case, putting the ends of siding against the door frame. Put in the packing below the door before putting on the short pieces. Put $\frac{1}{2}$ inch casing on door frame. (See Fig. 2.)

Next make the heater box. Cut a board for the bottom $11\frac{1}{2} \times 10\frac{1}{2}$ inches, and in the centre cut a hole $5\frac{1}{2}$ inches in diameter, and make a frame for three sides. For the top cut the siding 11 inches long, and nail on three sides, leave one $10\frac{1}{2}$ -inch side to nail against the end of incubator, and on the lower side tack a sheet of tin the full size of box, first cutting a five-inch hole below the heater, and put an inch collar around the hole to fit up against the bottom of heater; this prevents the heat from the lamp striking the wood. Now cut a piece $1\frac{1}{2}$ inches wide out of centre of outer and inner cases for the pipes connecting the heater and tank. Put the tank in position and fasten on the heater box so that heater tank will rest on the bottom, nail through the end of incubator, or use four iron cleats to fasten it on. After the tank is in position, fit a piece in the end of incubator above the pipes. Cover the inner case, using ceiling, and screw it down. Pack all around and on top of inner case with chopped hay or thoroughly dry saw-dust—the former is best, as it is hard to get the saw-dust dry enough; if the least wet or green it will cause

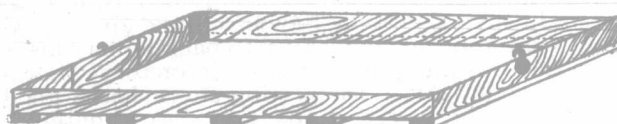
moisture. Put the packing in as solid as possible, also pack around the heater tank, first putting an inch or so of mortar around the pipe from the lamp. Put on your top, which is tongue and groove, extend it one and a-half ($1\frac{1}{2}$) inches all around, and put a cornice of narrow moulding. Make the top with two battens same as batton door, putting the battens inside, and put it on with screws. They can be removed if desirable. In putting on the ceiling use wire nails, and clinch those through top frame and strips around centre. For the stand use four turned or plain legs 18 inches long, two boards 44 inches long, and 6 inches wide, and two boards $29\frac{1}{2}$ inches long and 6 inches wide. Cut a gain $\frac{1}{2}$ an inch deep, and 6 inches long on two sides of the legs, and screw on the boards. The stand is same size as incubator. Fasten the stand to the incubator by four hooks, one at each corner. By having the legs on separate stand they can easily be removed,



and incubator taken through a door. The table for lamp is a plain board same size as heater box, and is hinged to end of stand; the other end is held by long wire hook fastened to heater box and staple in board. Nail two cleats across the board to keep it from slipping and keep the lamp in position. Hang the board so that your lamp chimney will be three-quarters of an inch from top of cup in bottom of heater. Make the outer door $7\frac{1}{2} \times 36\frac{1}{2}$; use one batton $6\frac{1}{2} \times 35\frac{1}{2}$, which will fit neatly into the frame. The front of the door will extend over the batton half an inch all around.

Hang with two small butts on lower side, and put two spring knobs at the top. The glass door is a simple two-inch sash with rabbit on each side for glass, with one inch dead air space. Clean the glass before putting it in the sash, and hold the door in position with two small spring knobs, one at each end; make a hole in the frame for the bolt to go into. This double glass door keeps the outer air from striking into the egg chamber, while you examine the thermometers. Make two drawers $33\frac{1}{2}$ inches long, 21 inches wide outside, and one inch deep inside; use $\frac{3}{4}$ -inch material for the ends, and $\frac{1}{2}$ -inch for the sides. Nail the sides on the ends, and glue a three-cornered block in each corner; over this frame stretch and tack very thin cotton, and over this wire mosquito netting, and then nail on five strips $1\frac{1}{2}$ inches wide, as in Fig. No. 4. Put a small

No. 4.



DRAWER

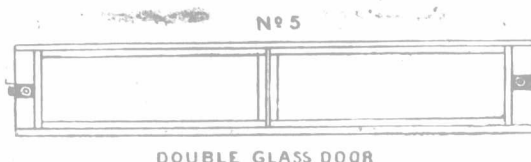
hook and staple on each end to hook the two drawers together while turning them. Sink the hooks so that they will not interfere with drawer sliding out or in. While stretching the cotton and netting support the sides with temporary braces inside. Divide the drawer in three equal parts lengthwise by two movable strips; cut a V-shaped gain in the end pieces of drawer to slide the strips in. The advantage of this strip is, if you don't wish to fill the drawer you can put in the strips and keep the eggs from rolling while being turned, also to use after you have tested the eggs and taken out the bad ones.

TANK (TINSMITH'S PART).

Get tinsmith to make it same as Fig. 3, or can make a round heater instead of square. Tank is $6\frac{1}{2}$ inches deep, $33\frac{1}{2}$ inches long, and $20\frac{1}{2}$ inches wide; heater 6 inches square, and $6\frac{1}{2}$ inches deep. The connecting pipes are 1 inch in diameter, lower one $7\frac{1}{2}$ inches long, and upper one 32 inches. The tube to carry off smoke from the lamp is $\frac{1}{2}$ inch in diameter and 12 inches long. The tank and heater when connected are 7 inches apart; the upper or discharge pipe enters the heater close to the top, and enters the tank 1 inch below the top, so that the heater is 1 inch lower than the tank; the lower pipe enters both heater and tank close to the bottom, and is on a slope. There is a cup set up into bottom of heater, 4 inches in diameter and $1\frac{1}{2}$ inches deep; this is to allow heat to strike above where the cool water enters the heater, and out of the centre of this cup and through the top of heater is the smoke pipe. In the bottom of heater put a small water cock, to empty the tank when required. And to fill

No. 5.

SECTIONAL VIEW SHOWING GLASS ON BOTH SIDES



DOUBLE GLASS DOOR

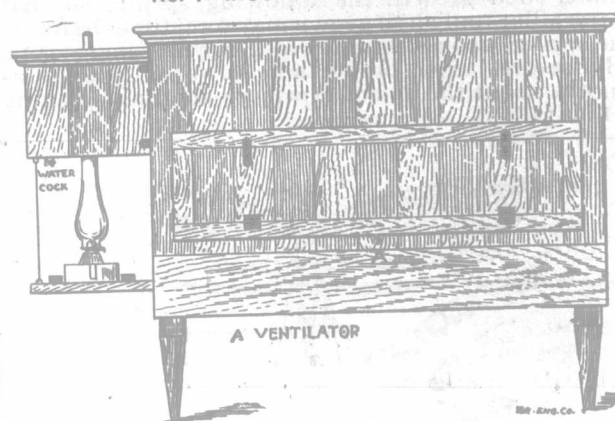
the tank put in two pipes $\frac{1}{2}$ inch in diameter, 7 inches long. (See K and L, Fig. 2.) One is to put funnel in to fill the tank, and the other to allow the air to escape. Fit a tin cap over each pipe. Brace the long or discharge pipe by soldering two doubled pieces of tin 6 inches from the end, and to the bottom of the tank; spread the lower ends 6 inches. (See Fig. 2.) The ventilator pipe is 1 inch in diameter, and 18 inches long, with an elbow on inner end. (See Fig. 2.)

The lamp is also tin, 6 inches in diameter, 2 inches deep, and neck $1\frac{1}{2}$ inches high, so that the burner will be away from the oil; to avoid all danger of heating, use a large burner. All the tinsmith's work should be galvanized iron or heavy roofing tin, folded joints and soldered, and thoroughly tested with hot water before being put in the incubator.

Get two good tested thermometers or two of the common kind, and slip out the plate on which the glass is, and test it by placing the bulb on a hen's body under the wing. Put two wire legs 3 inches long on the upper end, the bottom of plate will act for third leg.

Oil and varnish or paint the outside, and you will have a first-class machine. This incubator will hold from 175 to 200 eggs. If any person wishes to make an incubator for smaller number of eggs reduce the length and width, but not the depth, or for larger number of eggs increase the size. This incubator being my own plan, there is no risk in making them, as there is no patent on them. They can be built for about \$15.

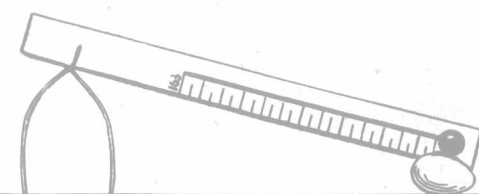
No. 7—INCUBATOR COMPLETE.



DIRECTIONS FOR OPERATION OF PEERLESS INCUBATOR.

Fill the tank about a week before you wish to put in the eggs, heat it up and run at 103 degrees; you will then have packing, etc., thoroughly heated, and the machine steadied down to regular heat, and give you a good idea of how to work it. Before you put in the eggs get the heat up to 110 or 115; the eggs will cool it down to about proper temperature. Keep the eggs in a warm room for a few hours, so that they will be warmed a little, to avoid sudden change. Run it at 103 degrees during the hatch—never allow it to get above 108; with careful attention this incubator will not vary three degrees. It should be set in a room on the north side of the house, so that the sun will not strike into the room where it is; a good dry cellar is the best place for an incubator. If you find the heat falling turn up the wick, or if heat raises turn it down, but don't expect the heat in egg chamber to change quickly—that is impossible, there being such a large quantity of water to regulate; as the heat rises slowly it will also fall slowly. Place a thermometer near each end, resting the bulb against an egg which has a living

No. 8—STYLE OF THERMOMETER.



chick in it. An egg with a living chick is much warmer than one with dead chick or unfertile. When testing the thermometer hold it on the hen's body until it will not register any higher, and run the incubator at this point.

For moisture, on the second day take two sponges the size of an egg, wet in warm water and put them in two small tin dishes half an inch deep and two inches in diameter, and place in the drawer near each end, and on the 15th day put in two more, and on the 18th day put in the air chamber below the drawer a flat pan one inch deep, 8 by 12 inches, with half an inch of water; lukewarm. Turn the eggs at regular hours twice every day, say at 7 a.m. and 7 p.m. Take the drawer with the eggs out and place on top of the incubator, put your spare drawer over it, fasten them together with the hooks on ends and turn them over, remove the empty drawer and replace the eggs in incubator; always close the outer door while turning the eggs to avoid loss of heat. With careful attention you will soon get thoroughly acquainted with the work. It takes experience to become proficient in any business. If there is anything in above which is not understood, I will be pleased to answer if enquiry is accompanied with a stamped envelope.

So varied are the requirements of a horse-trainer that a volume could be written on the subject, but of all his virtues none is more conspicuous by its absence than is a want of patience.

Why the Dairy Farmer Should Feed Well.

1st.—Because the cow takes about two-thirds of all she eats to keep herself decently alive, so that only one-third remains for production and profit. On scant feeding a cow may continue to elaborate milk, but she will do so at the expense of her own body. Net result: Starved cow, starved dairyman.

2nd.—In order that the young she is to rear, and which is a constant and heavy drain upon her system for three-fourths of the year, shall be properly nourished and have a fair start in life.

3rd.—Because it is an established fact, as every breeder knows, that a properly fed calf means a better cow. Prof. Roberts found, in experimenting, that grain-fed milking two-year-olds and three-year-olds developed into better animals than their stable mates receiving no grain.

4th.—Because milk is not a miraculous product any more than wheat or an egg. Some cows will do better with their food than others, no doubt, but the truth remains that the cow must receive a liberal share of proper food out of which to elaborate milk. Something cannot come from nothing. She must receive the raw material out of which to convert the fat, casein, sugar and other elements of milk, or the process will come to an end. Because some experimenter did not find a higher fat per cent. in the milk after increasing the grain ration, no reader of the *ADVOCATE* is likely to run away with the foolish notion that a straw stack and brewer's grain ration will properly fill the dairy cow's bill of fare. For many reasons it certainly will not.

5th.—Because the cow is like a good savings bank—she will return what she receives with a handsome interest, besides supporting herself, also meanwhile enriching the farmer's fields, which the bank will not do. It is no uncommon thing for cows (nor are they confined to any one breed) to add from 100 to 200 per cent. to the value of the food consumed in their milk product.

6th.—Because it will lengthen her milking period, and, consequently, the time of profit making. Milking for only 6 or 7 months is a bad habit into which careless dairymen have let their cows fall.

7th.—Because it will improve her milking powers the following season. This was strikingly proven by the authorities of Cornell Experiment Station staff in comparing herds of cows fed grain in addition to pasture. The two herds were evenly selected and had not previously been grain-fed on pasture. The first season the grain-fed lot gave 27 per cent. more milk and gained 53 lbs. in weight each more than the other herd. The following season it was found that the lot that had been grain-fed yielded over 16 per cent. more milk than the others.

8th.—Because it will promote a larger flow of milk and a consequent greater product of butter, cheese and by-products (skim-milk, whey, etc.) for feeding.

9th.—Because (and now we are on much-debated ground) while in some experimental feeding tests increasing the meal in rations fed cows has not been followed, at least in a limited period of time, by an increased fat per cent. in the milk, in other cases it has, which indicates that there are problems in cow feeding not yet fully understood by experimenters. If the conditions were not different (for instance, foods not judiciously chosen or used, or some difference in the cows,) why did the butterfat increase in one case and not in another? In one experiment which we have in mind, the cows had been previously under good feeding, and were, perhaps, up to what is sometimes styled their "normal capacity," which a short feeding test could hardly be expected to vary. But how many farm herds are doing their best? The latest new data along this line is furnished by the Vermont Experiment Station, where it was found, in testing the waste products of corn ("cream gluten meal," "sugar meal" and "corn germ feed") in comparison with a standard ration of bran and corn meal, that the former produced more milk in eleven cases out of seventeen. They produced a richer milk (increased butterfat percentage) in fourteen cases out of seventeen, and a larger total product of butterfat in fourteen cases out of seventeen. Prof. Cooke adds a word of caution regarding the use of these waste corn products, especially the sugar meal and cream gluten meal, which are rich concentrated foods like cottonseed meal. Three or four pounds per day of sugar meal per cow is as much as it is safe to give, while with cream gluten meal the limit of two pounds per day per cow should not be exceeded. In one creamery herd, of which we have knowledge, adding cut-sheaf oats to a ration of straw, clover hay and corn silage reduced the quantity of milk to make a pound of butter from 18 pounds to 15½. (Cows were well on in lactation, and separator was used.) When the sheaf oats were dropped the old and lower average was resumed. In our own experience we have been struck with the prompt effect of cottonseed meal in limited quantities on both the texture and color of butter. Wm. Warfield, the veteran Shorthorn breeder, after 50 years experience handling cattle, writes in his treatise on breeding as follows:—

"That one cow can be made to give as rich milk as another may not be possible; but, by proper food, a cow may be made to give richer milk than when fed on improper food."

Prof. E. W. Stewart, a thoroughly practical authority, in his standard work on feeding ani-

mals, cites numerous instances—several being actually conducted by himself with both heifers and cows—in which by a steady course of special feeding a gradual but sure improvement was effected, both in quantity and quality. Since most farmers will begin the work of development with their present herds (securing, from time to time, all the advantage possible from the infusion of pure blood,) they should, under no circumstances, neglect generous feeding. Rightly done they are sure to effect an improvement that will become a fixed characteristic, and last as long as the cow's constitutional vigor holds out.

10th.—Because the cow whose dairy quality has been improved and fixed as described will transmit, as a rule, this desirable trait to her offspring. In trotting horse lore a "developed" sire or dam is one that has had sufficient handling in harness to show his or her best speed, and it is a well recognized fact, that a "developed" horse is far more likely to beget speed than if he were not so trained. This is equally true of the dam. Prof. Stewart mentions the case of heifer calves raised from two cows before he had developed them, which proved to be very ordinary milkers, but heifer calves raised after development proved to be excellent milkers, there being no gain in the latter case by the use of a better sire.

11th.—Because the universal experience of successful dairymen demonstrates that good feeding pays, and is the only sort that does pay. In short, of no one can it be more truthfully said than of the dairyman:—"The liberal man deviseth liberal things, and by liberal things he shall stand."

The Economical Production of Butter.

BY JAS. W. ROBERTSON, DAIRY COMMISSIONER.

There is nothing sordid in economy. The economical production of anything is the result of the application of the best skill to its manufacture. Men sometimes sneer at economy, because they think it has an element of meanness in it. I know men so mean that they will clasp both hands over two cents, and grip them so hard and continuously that their fingers will be too numb to scatter the seed in springtime to get a good crop for harvest. There must first be a giving out, a liberal sowing, before there can be an abundant harvest for reaping with joy. It is economical to sow bountifully when the seed and the soil are good.

Now, in the production of butter it is always economical to recognize that economy takes cognizance of a man's environment. We can grow oranges in Canada; we have an orange tree bearing oranges in Ottawa, but it is in a conservatory. We cannot grow oranges economically in this climate. Many men try to go on doing something, regardless of the natural conditions that they find around them. Now, we have in Canada the conditions for an economical production of butter. We have, first of all, a fertile soil—a soil rich in all the elements of plant food. We have a soil which gives the largest crops of forage plants in the world, with conditions to support all animal life in robust health. We have a capable people needing occupation—needing employment. Why should a man, living in Canada, want to go elsewhere to get more room to spread himself on a great big farm? The money to-day is being made on small farms by men who farm well, and not by men who spread themselves over great areas and farm poorly. We have markets calling out for fine butter all the time; and making butter will enable farmers to keep their land in good condition, and give them and their families profitable employment. It is economy for the governments, for the people, to do all they can to extend the economical production of butter.

It pays to concentrate the products of the soil, and sell the refined products that carry the highest value with the least exhaustion of fertility. It is a fact that in one ton of hay you will sell 85 times more from the soil than you will in one ton of fine butter, and you will get for the hay probably \$10 and for the butter \$450.

Then, in the economical production of butter, it will always pay a farmer to remember that butter is merely a kind of food whereby a man obtains energy for work. If I move my arm I rub off some of the material of my muscles—the friction has worn some off. I need something in my food to repair the waste of tissues in my body; besides, I need a supply of energy that will make it possible for me to originate and continue motions and perform the functions of living. There is nothing in fuel that will repair the waste of the cylinder of an engine; but without the fuel you could not get the motion. What does that mean? You get all energy in all food and fuel from the old sun. He streams his rays down on the earth and on and into the plants, which the soil carries. He rolls his strength up into plants, as I might wind my strength into the spring of my watch. A plant may then become food and fuel. It is economical practice on the part of the farmer to select for his fields the plants which can serve him best in that capacity. The sun can store more of his energy during a single season's growth into the corn plant than into any other plant that grows easily in Canada. A cornstalk furnishes to the cows more energy than any other plant. Then you get this energy transmuted into butter, and you have "materialized sunshine"—energy to supply force

for your work. There is economy in that method of getting the sun to serve you by means of cornstalks, cows and butter. For this reason I think that every man who helps to make a farmer have increased faith in the value of cornstalks does a service to his country. The wealth of the Western States has come practically from two sources—from the sun and from the minerals; from the sun through the cornstalks, which in various forms of derivative diet, has furnished the energy to dig up the minerals. You need not try to "bamboozle" yourselves into thinking that wealth comes into existence without somebody's effort.

Then, in the production of excellent butter, the farmer needs to have good cows. I have a great deal of respect for a good cow. I have a good deal more respect for some of the cows in my stable than I have for some men. If you will treat a cow properly, she will give back an equivalent for what she gets. She is therefore honest, and will pay for her way through life. I will hunt with a microscope in the careers of some men, to see what they have given to the world of valuable service, and cannot find it. A cow sometimes does get more than she gives. I would not spare that cow. Put her on the block; get your money out of her in that way. You think of cows as boarders, kept for the profit of the man who keeps the boarding house. Did you ever think of a man keeping a boarding house, running on the general satisfaction plan, saying that if he does not get enough from one boarder to pay for his keep, he will get it from the others? No! he expects to make a profit on each one of them. The farmer should act in that way towards the cows. There is advantage from watching the cows and selecting the best of them. It is not so very hard to do, and most cows are capable of paying for their board in full, if they are given a fair chance. But if they are brought up the wrong way, they are sure to go astray—just like boys.

Some people have a preference for a large cow. To my mind, if I wanted a cow to consume more food than she will give a return for, I would like an immense animal. If I wanted her to pay for her board, I would just as soon have a small one. I believe I would rather have a small cow than a large one, if she will give the same quantity and value in her milk. Then there is a notion that the bigger the cow, the better the quality of her milk. It is not so. I have faith in the quality of goods done up in small packages. I want to tell you what selection has done. The Hon. Thos. Ballantyne—a man who has done more to advance the dairying interests of Western Ontario than any single individual I know—spoke lately in my hearing, and he stated that one cow in his herd last year gave 12,000 pounds of milk; another gave 11,000 pounds in the season. They furnished milk for cheesemaking during the summer and for butter through the winter. It is possible for a farmer, by judicious selection and feeding, to enlarge the capacity of the cows in his herd. Mr. George Allan, who lives near Ottawa, is an excellent farmer. He had four cows in 1888, which gave only 78 pounds of butter each. He began to grow cornstalks, and feed these with a little bran, and in 1889 they gave 131 pounds each; and in 1890 his cows gave him 204½ pounds of butter each. See the enlargement of capacity, and therefore the economical production. It is possible to enlarge the capacity of the cow, and thus reduce the cost of production. That belongs to economy, and the wise man is economical always, because to be otherwise is to waste; and waste is worse than folly.

(TO BE CONTINUED.)

Dairy Question.

Would you advise perforated metal tops on deep milk cans, which are set in a well? Will the cow flavor have any injurious effect on the butter? There is a pump in the well and plenty of water. Will it be better to cool the milk before placing in the well?
A SUBSCRIBER.

ANSWERED BY PROF. DEAN, O. A. C., GUELPH.

Do not set the milk in the well at all. The risk of injuring the water by spilling milk or cream is too great. It will be far better to pump the water into a tank or barrel and set the milk cans in it there. This water should be changed at least twice where ice is not used. It is almost necessary to use ice to get good results with deep pails. The milk should be cooled to 45° F. before skimming, as there will be great loss of fat or butter in the skim milk. I would prefer covers with a perforated top, or the submerged can, such as the Cooley, which allows the animal odors to escape into the water. If there is neither of these, then the lid should be left off for half an hour after setting. The flavor of the butter will be improved by allowing these stable odors to escape.

Glenboro Institute.

A regular meeting of this Institute was held on March 24th. The President, Mr. Steel, in the chair, called upon Mr. Geo. H. Greig, of the *ADVOCATE*, who read a paper on "Better Farming Methods," which was attentively listened to, and evoked considerable discussion, in which the following took part:—Messrs. Steel, Duncan, Obey, Dale and Atkinson. And after further business had been attended to the meeting adjourned till April 6th.

A Dairy Question.

BY S. P. BROWN.

There is a question relative to the dairy which is attracting not a little attention, and one which, I think, is closely allied to the one, "Can we feed fat into milk?" and this it is as I have seen it: "Why does a given quantity of my cream yield from one to two and sometimes even three pounds less butter one time than at another?"

I have had such experience several times this winter, and I think I have found out one or two causes for it. We use a hand-power separator altogether, so the cream is even of more uniform density than it is liable to be by a skimming process. This fact caused me to make very close observations in all my work to find the cause of trouble. I was satisfied that the wanting butter must be in the buttermilk, though for want of time I did not test it. I had tested enough to know the reason why cows gaining in the flow of milk, as on improved feed or flush pasture, would put more fat into a given quantity of cream each successive churning till a maximum is reached. On the other hand, when they are falling off in the flow of milk, from any cause whatever, for a length of time together, the pounds of butter per gallon of cream will proportionately fall off.

I account for this from the fact that such milk is harder to separate from the cream than that from flush feed, and, while in the skimming process more cream is left in the milk, the separator takes all the cream out, but puts more milk with it than with that from flush milk. Now this, it appears to me, accounts for the idea many have that they can feed fat into milk.

They have two facts which confirm the idea, viz., that their cows are gaining in milk yield, and that they got more butter from the same bulk of cream, but they lack the one essential to show the true percentage, namely, the percentage test.

Now, to answer the question I started out with, as I have concluded it to be answered, the cause lies in the management of the cream—too high a stage of acidity is developed. During the very cold weather in the past winter I set the cream, forty-eight hours before I expected to churn, where and so it would ripen slowly, and in that time it would attain a great density; but sometimes it would hardly get thick in that time, then would wait till it just began to thicken and then churn. I found every time that this occurred I got more butter; and now I manage it so as to churn just as it begins to thicken, or before rather than after it has become livery, with better results.

Micro-Organisms in Health.

Some very startling facts have lately been discovered with regard to the part played by micro-organisms in plants and animals in health and disease. New thoughts, new ideas, lead to experiment, and sometimes the results are disappointing; on the other hand, it is never the expected that happens in nature. Within the past year a decided advance has been made in investigating the question, as to whether the inexhaustible store of nitrogen in the air could be utilized by plants, and, if so, by what process this nitrogen was made available as plant food.

For many years experiments in micro-organisms have shown that some particular kinds of plants have the power to acquire and fix in the soil, by means of these organisms, the store of nitrogen from the atmosphere (the root tubercles of most of the leguminous crops, pea family more especially); and that there are a great number of different organisms which accomplish the work for different kinds of plants was well known. Thus, if we wish to produce tubercles on the roots of lupines, we must grow the plants in soil which contains the lupine bacteria or micro-organism, for a rootlet requires at the spot where it touches the soil a most minute quantity of food, but it is necessary to its functions and its very existence that this minimum be found exactly at this spot.

Already it has been shown in a few trials that an increase in the yield of leguminous crops can be caused by spreading small quantities of soil from fields where legumes have previously been grown over ground where another crop of the same kind of legumes was to be grown.

The bacteria or micro-organism in one soil were thus transmitted or infected to another, to aid in supplying the new crop with nitrogen from the air.

In inoculation of the soil with these bacteria we seem likely to have another means of increasing the growth of crops. These results have been obtained by the investigations of the bacteriologists in searching out the micro-organisms of disease and methods of prevention. In attempting to find a specific organism they have stumbled on another quite unexpectedly, and likely to be of as much importance to the agriculturist as to the physician.

A number of the diseases of plants have also been traced to minute organisms or fungi; new species have been discovered, and the life history of many formerly known have been traced out. These

diseases are soft rot, black rot, stem rot, white rot, dry rot, potato scurf, leaf blight, leaf mould, finger and toe of turnips. These diseases and the fungi which caused them have been fully investigated, methods of prevention and cure suggested.

Clover rust was found to invade only a second crop, and known under the generic term of clover sickness. It was found that while an early crop is not likely to suffer, when the second crop was used as a fertilizer, the fields should be carefully watched, and the crop plowed under if rust appears ever so slight.

Experiments have been made in treating large quantities of wheat for stinking smut. The seed to be treated was immersed in hot water, at a temperature of 131° F. The object to be attained is to thoroughly wet and bring every grain into contact with the hot water. The details are unimportant. The loose smut of oats has been treated in this way with success, and it not only destroys the smut, but also gives a greater yield than would be expected from merely removing and replacing the smutted wheat with sound seeds. The remarkable circumstances about all these organisms is that they are unable to withstand extremes of heat or prolonged cold. There is, however, some difficulty in accounting for the mode of operation, as in many diseases of animals we see exactly the same process as transplanting the mould for propagating the growth of leguminous seeds. Of all the contagious diseases to which animals are liable tuberculosis is most widespread; even reptiles are known to be subject, whilst it is common among the birds. There is, perhaps, no animal that so commonly falls a victim as the milch cow. From recent investigations, and an intimate knowledge of animals of the farm, we are desirous of again and again warning our authorities of the importance of this matter—to point out the danger of using unboiled cow's milk—one of the most favorite and nutritious articles of diet consumed by the public, although it is to be devoutly wished that the recent experiments to discover a general method of obtaining a curative substance, which has been done in some other of the malignant diseases, will be successful.

Dr. Behring, of Koch's Institute, Berlin, has discovered a principle by some experiments that the blood serum of an animal protected against a certain infectious disease possesses a curative power against this very disease in other animals. Thus, when an animal is rendered immune, "that is to say, when the animal has once had an attack of a contagious disease, he is proof against a second attack"; a quantity of the blood of the immune animal exerts a curative influence, not preventive, on another animal which has been inoculated with, or already suffers from, a contagious disease, so that we may hear very shortly that a method has been discovered of treating tuberculosis on the same lines.

The study of micro-organism seems to point in the direction of cause and cure of almost every known phase of animal and vegetable disease. When we study the system of life, we are instantly brought face to the problem: How very dependent one form is upon the other; that parasites and parasitic forms of life are essentially the manifestations of animal and vegetable organism; the birth, growth, reproduction, decay and death are only the stages.

Veterinary Questions.

ANSWERED BY W. A. DUNBAR, V. S., WINNIPEG.

I have lost two pigs out of a litter with the same symptoms; they first appeared short of breath, then ran round in a circle squealing, and died in about half an hour. The sow is in fair condition; little pigs three weeks old, and in very good condition. Would bleeding do them any good, and if so where is the proper place to bleed them?

THOS. GOSNEY, Miami.

The trouble is evidently in connection with the digestive organs, and is probably caused by improper food, such as frozen wheat, etc. Give to small pig two tablespoonfuls of castor oil and one teaspoonful of laudanum. Bleeding is unnecessary.

Please give some simple remedies, if there are any, for the cure of foot and mouth disease; something that can be procured fifty miles from a drug store. Is there any means of preventing the disease from spreading in a herd? SUBSCRIBER.

The animals and their surroundings should be kept clean. The litter should be light and dry, and changed at least twice a day. Among the various lotions recommended to relieve irritation in the mouth, the following is the most simple and effective:—Borax and alum, of each one ounce; water three pints. This solution should be poured into the mouth from a bottle twice a day, and about half a pint used each time. The feet should be kept clean by washing gently once or twice a day with water containing two ounces of alum and one ounce of carbolic acid to the quart.

I found eight large worms like the one that I have sent you, and also a number of others about the size of a darning needle, in the small intestines of a pig which weighed 168 pounds. Would you let me know through your valuable paper the name of these worms, what harm they do, and also what is best remedy to use? Yours truly,

THOS. FISHER, Riverside, Assa.

The specimen you have sent in is an intestinal worm (lumbricus). This kind of worm is frequently found in the small intestines of various animals, but unless they are numerous they are not considered very injurious to health. For full grown swine, half a teaspoonful of sulphate of iron (pulverized), put in food morning and evening for a week or ten days, will be found a simple and effective remedy. For younger animals give a proportionately smaller dose.

A four-year-old mare got her hind leg cut on a road scraper last summer, and not having much knowledge on the treatment of such cases I tried to do as everyone told me, and now the mare is worse than at first; leg is swollen to twice the natural size, with a large lump of raw flesh, like the half of a goose egg, and every time she lifts her leg the middle of this lump (a piece about an inch in diameter) pulls in. She is very lame just now, though sometimes she can run as though nothing was the matter with her; have tried several different treatments, and two V. S.'s have failed to cure her; am now using Butter of Antimony. Can you tell me how to cure it?

JOHN KILPATRICK, Killarney, Man.

You do not mention what part of your mare's leg is injured, but I think it must be the back part, just above the fetlock, and "the piece that pulls in" is probably the end of a tendon; if this is so, the case is somewhat serious, and should receive the attention of a good veterinary surgeon. If you are not within reach of a qualified man, you may try the following treatment:—Apply flaxseed meal or bran poultice to the part for forty-eight hours, changing the poultice twice a day, and then dust on to the raw part once a day a powder composed of equal parts of iodiform and boracic acid. Remove scab as soon as it becomes loose, and apply powder to the raw surface. The leg will remain enlarged, but after the sore is healed a course of blistering would probably reduce it to some extent.

Please answer the following questions through the ADVOCATE: Is there any way of detecting tuberculosis or lumpy jaw (which I understand is the same thing) besides the lump on the jaw, and is a lump on the jaw always an indication of it? Is there not danger to human life and health from using the flesh, milk or butter of such diseased animals? Is it safe to breed from a bull affected with this disease? Is there any law to compel a man to destroy animals so diseased?

"SANDY," Suthwyn, Man.

Tuberculosis and "lumpy jaw" (actinomycosis) are different diseases, produced by widely different causes. Tuberculosis is an infectious disease of cattle, and of many other animals, including man, and is developed from a germ called *bacillus tuberculosis*. This disease is more or less prevalent among cattle, especially in milch cows, in almost every civilized country, and is at the present time the subject of scientific investigation and research by the medical and veterinary professions in Europe and America. The governments of several countries, including that of our own Dominion, are also becoming aroused to action, and are taking the initiatory steps to stay the ravages of this scourge of man and beast. The first noticeable symptom of this disease, when the lungs are involved, is a low, short cough. As the disease advances the cough becomes longer, hoarser and very annoying to the animal. The disease is frequently in progress for a considerable length of time before the animal fails much in condition, but sooner or later the flesh begins to disappear, and continues to do so until (if the animal is allowed to live) nothing will apparently remain except the bony frame and hide. The flesh and milk of tuberculous animals are unfit for human food, being dangerous to life unless boiled or otherwise well cooked. Animals suffering from this disease should not be allowed to propagate their species.

Actinomycosis ("lumpy jaw") is caused by a vegetable fungus (actinomycosis) and appears as hard tumors on the upper or lower jaw and other parts of the head and face. Although this disease is chiefly localized in the region of the head and face, it is occasionally observed on other external parts of the body. The tongue is, in some countries, frequently the seat of actinomycosis, and the lungs and other internal organs are sometimes involved. Unlike tuberculosis, this disease has been proven by competent and careful investigators not to be infectious nor very contagious. The question as to where and how animals take this disease has not yet been satisfactorily decided, but it is generally believed by interested observers that the fungus enters the system through the food. According to the latest reports of European and American scientists, the flesh of animals suffering from actinomycosis is fit food for man or beast, providing it has not been in connection with the diseased part, and the animal was in good condition and giving no signs of constitutional disturbance. It is also stated in the reports mentioned that the iodide of potassium, in from one to two drachm doses twice a day for a week or longer, is a reliable remedy for this hitherto supposed almost incurable disease. For information regarding the disposal of animals suffering from infectious or contagious diseases, inquire of the Department of Agriculture, Statistics and Health, Winnipeg.

MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES:

The poultry and egg industry has grown suddenly to be one of the most important in our Dominion, and there is fortune and success in it for any woman who will take it up with enough of patience and taste to develop it, for like every other industry it has to be perfected by slow degrees; but it has this advantage over others, that there is a ready sale for all produced. Do not hope to gain fortune and success all at once, for you must gain experience as you go on. Poultry can never be made remunerative as they are kept by the average farmer's wife now. Like all farm stock, they require to be petted and familiarized with the human beings about, and there is a vast difference in the productive properties of hens so petted to those that fly like crazy things when approached. To accomplish this familiarizing process, they must be housed in a warm room, fed and watered twice per day, their setting watched and the chicks taken care of. In fact, the care of poultry is as important as the care of stock if you intend they shall be profitable. The Plymouth Rocks are the hardiest of the large breeds; good layers, steady setters and careful mothers, besides dressing about six pounds apiece for market.

Supposing your stock now consists of fifty half-breeds or common barnyard fowls, procure six dozen of Plymouth Rock eggs from a dealer as you require them, and put them under the steadiest setters. You should have from this amount of eggs between forty and fifty pullets, and if hatched in May will give you eggs from November until they in turn begin to hatch for themselves. The cost of this outlay will be more than covered by the sale of the old stock in the autumn. It is a popular opinion that hens do not thrive when shut up. On the contrary they do not thrive when they are not shut up, picking their living amongst the live stock, roosting on the rafters of the barn, and often without food or water for days together. As the chicks come out, take possession of them. Coop the old mother and keep her there until the chickens are strong enough to follow her; house them every night in the coop, and cover with an old piece of carpet; feed regularly on curds, meal and sweet milk or boiled potatoes. Keep this up for three weeks, or until the pin feathers appear. This may appear to be very troublesome, but you cannot make a success of it otherwise. The fowl should have grain and plenty of fresh water or milk. In another letter, when your chickens are full grown, I shall tell you how to manage your fowls in cold weather. Do not be afraid of the sound of your "industry"; they may laugh who win, and success will attend you if you go to work determined to make a success of it. MINNIE MAY.

Our Irish Letter.

DEAR CANADIAN SISTERS AND BROTHERS:

I hope that by this time you have begun to look out for my letters. This will be altogether about the wonderfully loyal demonstration which was held on Saturday evening last in the Leinster Hall, which was built to accommodate 1,500 persons, and which was densely packed, so much so that the window stools and all the passages were crowded. I had the honor of receiving a platform ticket, and was immediately behind the speakers, so could comfortably take the notes which I now have the pleasure of sending you. The Earl of Erne was chairman; Mr. Ellison McCartney, M. P., and Judge (Lord) Morris were one on either side. (Lord Morris, though a staunch Conservative, is a Roman Catholic.) Mr. Caldbeck, Rev. Canon O'Conner, and the Rev. Duncan Craig were amongst the speakers. There were so many as thirty clergymen of different denominations on the platform, several of whom I did not know, but one I was much amused at—a Rev. Clarke. When he wished to emphasize, he first would stamp one foot and declare "we shall not have Home Rule"; then stamp the other and inform us we must not have Home Rule. He need not have striven so to impress me at least. I quite agreed; he was too funny. Hundreds of men in the body of the hall had sticks and orange flyers, only waved when some speech pleased them particularly. I liked Mr. McCartney's speech best of all. When he spoke of our birthright possibly about to be sold for a mess of Mid-Lothian pottage, he was greeted with such cheers and such wavings of flags as Dublin has seldom heard of before. He is a polished gentleman, as well as a fluent speaker—two gifts which do not always hunt in couples. Then Lord Erne spoke and told us of you, you, you Canadian brothers having come to the front with practical offers of men and money—two excellent backers for most needs. You were given cheer after cheer. Lord Erne told us also of the great pleasure it had given him during the last seven years, whenever he found himself wanted in any capacity where his presence or his purse, or both together, could be made use of for the loyal cause. I was able to take down his speech, but I fear I dare not trespass too much on either the editor's space or patience. He also told us that we were met together to protest against the most iniquitous Bill which had ever been laid before the House—one which must (if passed) "bring ruin on our land, and prove equally disastrous to the British Empire." It was hard to expect us to keep a calm heart and cool head in the face of these wrongs, but we must try to remember that we were members of a great "religious institution whose

principles are based on God's Word." We must trust in Him, knowing that "He is our refuge and strength—a very present help in time of trouble." We seek no ascendancy, but are resolute to maintain the civil and religious liberty won for us by our ancestors, for the benefit of our Roman Catholic countrymen as well as for ourselves. He was very pleased to see before him many faces of his Roman Catholic countrymen—faces that he knew well—and to know that at his side was the great Lord Morris, a Roman Catholic, a judge, and a member of the House of Lords, who "agreed with him" that loss of conscience and loss of friends would be a far greater calamity than loss of land; and who could doubt but that if Home Rule were established it must bring home ruin and home riot in its wake, and leave us at the mercy of the most intolerent priesthood the world had ever known. It had been suggested, he said, that every man who purposed attending that meeting should do so with his Bible in his hand, and with one hand clasping it and the other upraised to Heaven, should ask God to continue to us the priceless heritage of a free and open Bible in our land, for Jesus Christ's sake. Amen.

The Rev. Duncan Craig then told us of a member of the Bonaparte family once giving him his opinion, which was that Home Rule for Ireland meant "hell"; for England, "suicide." He believed there had been a proposal made to do away with our dear old Union Jack, and substitute a flag instead on which was to be portrayed a hyena, with the numbers underneath, 1663. I hope my Canadian friends will know what this means; I am ashamed to say I do not. (I think this gives me an opportunity which I've wanted, to tell them that I ask neither for advice or assistance in any form when writing my letters, so that when they are dull or illiterate, or anything that is disagreeable, only my own small self is to be scolded.) I always do my business, whatever it may be, to the best of my ability; neither man or woman could do more.

Mr. Craig also told us that a new Herald was spoken of as coming to this new parliament in College Green, and he protested against our milk-and-water resolutions in connection with these contemplated changes, but would now ask Brother Caldbeck to say how we were to meet them, which Mr. Caldbeck did by saying that we in person, led by an "Erne" and an "Enniskillen," must decide upon meeting this rebel parliament at the Boyne, and the 100,000 men who were able and willing to come towards Dublin must join and come together and take the key of the new House of Parliament and the new hyenic flag and throw them both into the Liffey, then march to Clontarf, their bands playing God save the Queen, and wait for their opponents there. The dear old Queen's ears should have been very cold just then; the roof rang with cheers for her three times three. He told us also that we must not accept one clause of the Bill, or two clauses of the Bill, but were to protest against it purely and simply altogether.

Rev. McGregor believed that the Bill was intended to sell up Presbyterianism, but he refused to be sold, or allow his people to be sold, and wound up by sending you Canadian men this message: "That he and his, we and ours, trusted and believed we could 'Hold the Fort' against all comers," but that should we find we were over-rating our strength, we would one and all look to you Canadian brothers for the support you have so pluckily offered us." (You were cheered then, I tell you.)

Mr. Ellison McCartney then came to the front (in every sense of the word) and delivered a message from the Loyalists of Leinster-Munster, and need I say Ulster, which thanked us for the spontaneous and enthusiastic burst of loyalty we had shown in organizing these magnificent meetings over Ireland; warned us that we were face to face with hard facts (I mentally added hard knocks, too), but that they firmly believed we were able to cope with them. We had all been looking for this Bill for six years. Now that it had come, what did we read and see? That it required of us a complete surrender of ourselves and abandonment of the loyalty of our country. He believed there was no half-way house between the Imperial Parliament being everything or nothing. It was for us loyal men and women to say which we would have. He had no doubt that if the Loyalists of Ireland were obliged to hold their own over these issues, they would be able to give a good account of themselves; but that was an extreme issue which we should all think of with stilled hearts and spirits bowed to the "Throne of Grace," praying that such an hour might never come on this subject. He or they should not bind themselves to give or hold to any personal opinion, but consent to be guided by their imperial grand master, the Duke of Leinster, at the same time remembering what a leader, an "Enniskillen," had said in years gone by: "Let us not wait as though expecting this danger, let us go to meet it." They must be prepared to raise their banner with the old Derry motto on it, "No Surrender." There was tremendous cheering then, and he wound up with three times three.

Colonel Rowley ended the meeting by quoting the God-fearing old Emperor of Germany's famous words, "We fear none but God"; at the same time he said, "We must for ever love and honor our Queen yet." Love, honor and fear the God (who has left her with us so long) first and most. When he ended there was a perfect torrent of cheers, Kentish fire, and waving of loyal banners. The band then played God bless the Prince of Wales, and, after it, for the last time, God save the Queen. Hundreds of voices joined in, and when finished the immense

concourse separated without one rough sound or word. For some hours I could see from my window that the streets were thronged, the electric light made everything and everybody so plainly to be seen, but there was no disturbance whatever. I could hear an occasional "Boo" for Gladstone, "Boo" for Jim Healy, and "Boo" for Morley, but it appeared to be only fun. There was not a shadow of a quarrel to be seen or heard, and now goodbye. I am, your Irish friend,

S. M. STUDDERT KENNEDY,
Blackrock, Co. Dublin.

March 16th, 1893.

Home-Made Dainties

WHICH WILL CERTAINLY PLEASE THE CHILDREN.
The recipes given below have all been tried many times and found most satisfactory.

DELICIOUS CARAMELS.

One and one-half pounds of white sugar, one cake, or half a pound of chocolate, a cupful of cream, a quarter-pound of butter, a teaspoonful of flavoring. The mixture will boil up and dent on the surface when nearly done. A good test is to take a little out and rub with the back of a spoon, to see if it will crumble, when it should be taken off. Mark off in squares before it is entirely cold.

FRUIT AND NUT CANDY.

Half a pint of citron, half a pint of raisins, half a pound of figs, a quarter-pound of shelled almonds, a pint of peanuts (before they are hulled), two pounds of sugar. Moisten with a little vinegar. Add a large spoonful of butter and cook the butter and sugar until it is almost hard, but not brittle. Beat it up well with the spoon and put in the mixed fruit and nuts; of course, after having prepared these by stoning the raisins, cutting up the figs and citron, blanching the almonds and hulling the peanuts. Any other kind of nuts may be used, if wished. Pour into a wet cloth and roll it up like a pudding, slicing off the candy in pieces after it is cold. (This is also known as Mrs. Mary Stuart Smith's Pudding Candy.)

DARK AND LIGHT CANDY.

Half a pound of chocolate, two pounds of white sugar, one tablespoonful of butter, one teaspoonful of cream, one teaspoonful of vanilla. Stir this all the while it is cooking. This will be brown. Then butter a flat dish and put a layer on it, let it harden a little, and add a layer of white candy, made as follows: Three cupfuls of white sugar and one of cream, flavored with orange or lemon, and boiled for twenty minutes. Do not stir this very much. After the white layer hardens a little, put another of the brown. Mark off into squares or long pieces, and cut so as to show to advantage the alternating stripes of color. Instead of the brown, one can color the first with poke-berry jelly or other coloring that will give a red tint, and if vanilla is not liked, pineapple will make a nice contrast to the flavor of the white candy.

MARROONS GLACES.

One-half pound of mixed nuts—almonds, pecans and English walnuts. Divide the English walnuts and pecans in half. Two cupfuls of white sugar are put in a stewpan with one cup of water, or enough to cover it well. It would be advisable to use a stewpan with a lip, so that it will pour easily, and a handle for the protection of the hands. Do not stir with a spoon. In fact, do not touch it with a spoon, except now and then to dip out a little to see when it is done. Drop a little into very cold water; if done, it will form into crinkly little wires, which will sound hard and clear when struck against the side of the bowl. It ought to be cooked twenty minutes. After it is done, pour in drops—the size of a silver quarter of a dollar—on a marble slab, and press into each drop one almond, or one-half of an English walnut, or pecan. Two persons can make this candy far better than one, as the nut must be put in as soon as a drop is poured.

COCOANUT CANDY.

Four cupfuls of white sugar, one cupful of the milk of the cocoanut only in case it is perfectly good; otherwise do not use it. One cocoanut, grated—do not use the desiccated. Cook the sugar, either with the milk, if good, or if not, with water, a little less than candy that has to be pulled. Try by dropping into cold water to see if it is done. Take it off the fire, pour in the cocoanut, stir until thoroughly mixed, pour into a dish, and when cold enough, cut into squares.

CHOCOLATE DROPS.

Dissolve one cake of chocolate in a bowl set in hot water. Boil two cupfuls of white sugar and one cupful of new milk twenty minutes. Season with one teaspoonful of vanilla. Empty this into a dish, and beat until it is a good consistency to make into balls. Lay the balls on buttered paper, and after they are quite hard, dip one by one into the melted chocolate. Use a fork in dipping, and replace the balls on the buttered paper. One can also use nuts with these balls, taking half of an English walnut to a ball. Children take especial delight in nut candy, but it is rather rich, so it might be very well to make both kinds.

To keep the teeth clean is part of your duty towards your neighbor, and they should be brushed every morning and night with harmless tooth powder or soap and water.

To relieve a sore throat dip a band of flannel in whiskey, cover with black pepper, fold together to keep the pepper inside, and apply. Immediate relief is afforded.

UNCLE TOM'S DEPARTMENT.

The Fishing Party.

Wunst we went a-fishin'—me
An' my Pa an' Ma—all three,
When they was a picnic, way
Out to Hanch's Woods, one day.

An' there was a crick out there,
Where the fishes is, an' where
Little boys 't ain't big an' strong
Better have their folks along.

My Pa he 'st fished an' fished
An' my Ma she said she wished
Me an' her was home; an' Pa
Pa said he wished so worse 'n Ma.

Pa said ef you talk, er say
Anythin', er sneeze, er play,
Hain't no fish, alive er dead,
Ever go to bite, he said.

Purt' nigh dark in town when we
Got back home; and Ma, says she,
Now she'll have a fish for shore!
An' she buyed one at the store.

Nen, at supper, Pa he won't
Eat no fish, an' says he don't
Like em. An' he pounded me
When I choked!—Ma, didn't he?

—JAMES WHITCOMB RILEY.

A Well-Mannered Man.

A well-mannered man is a very lovable object, for the fact of his being well-mannered speaks of the possession of estimable qualities of mind and heart, as the great principle of good manners is goodness of heart; like many other habits, good manners are trained in childhood, and where this education has been neglected, it is often difficult to establish them in early life. A constant regard for others, unselfishness, humility, and refinement of thought, will go far towards making a well-mannered person. No man is natural, he is conceited or awkward, and nothing but association with, and close observation of well behaved people will give him the requisite polish.

Let school taught pride dissemble all it can.
These little-things are great to little man.

In conversation, how easy to distinguish the gentleman; polite attention is given to all that is addressed to him, and his replies are courteous and kindly, and his manner is so natural—nothing put on. His teeth, hair, hands and ears are attended to in his bath or bedroom, and never give him a thought afterwards; even twisting his moustache is not indulged in. When he calls upon a lady he does not stay too long, and when he rises to take leave he goes at once and does not keep her standing listening to his talk, of which perhaps she has had too much already; neither does he offer her his gloved hand, be his gloves ever so clean and fresh. There is much in the manners of to-day that is sincere and heartfelt, compared with the past, when, all was coarse and brutal; even the lowest oaths were sanctioned in every day life.

"How sweet and gracious even in common speech"
"Is that fine sense which men call courtesy"
"Wholesome as the air and genial as the light,
"Welcome in every clime as breath of flowers—
"It transmutes aliens into trusting friends,
"And gives its owner passport round the globe."

Modern Table Manners and Methods.

The use of knife, fork, spoon and fingers undergoes considerable modification from time to time, and singularly enough, as it would seem, more articles are now allowed to be handled at table than formerly for many years. Among these we may name bread, olives, cheese, radishes, celery, asparagus, berries served with the stems, and most fruits, while it is no violation of polite usage to take cubes of sugar with the fingers. Generally, however, what is considered the proper usage will be indicated by the hostess in the utensils supplied with the various articles, and when none are furnished it may be accepted as an indication that the fingers are expected to do duty. The knife is to be used only for cutting, for spreading butter and the like; the spoon conveys to the mouth fluids and semi-fluids only—everything else is relegated to the fork.—*Good Housekeeping.*

Our Library Table.

Current Topics, Chicago; \$1.00 per annum.—This periodical is in its infancy, but if success depends upon well selected reading matter it will surely attain it.

The Lake, Toronto.—There is already a career of usefulness ahead of our Canadian Monthly, if it keeps on improving as it has done.

Free Press Home Journal, Winnipeg, Manitoba.—This lively sheet furnishes fun and fiction for many an idle hour.

The Humanitarian, New York; \$1.00 per annum.—All the reading matter in this number shows careful preparation. The opening article upon "Pauperism" is well worthy of perusal.

Worthington's Illustrated Magazine comes to hand with a generous supply of good things for the entertainment of its rapidly growing circle of readers. The April number of this vigorous young magazine is the best that has yet been published, its table of contents showing great diversity of material and a most excellent list of contributors. The interest and value of its leading articles, the exceptional literary quality of its stories, poems, and Department matter, are admirably supplemented by the fine press work and artistic illustrations which make this number as attractive as it is readable.

Boys and Gardens.

By all means, let the boy have a garden and let him have a considerable plot of ground, where he can raise flowers, and also edible vegetables. Nothing will ever taste so good to him as his own lettuce and beets and radishes.

Don't imagine for a moment, however, that your boy, unless he be a genius, will know how to take care of these plants of his. No matter how much he loves them, he will require a good many weary hours of careful teaching and training before he is able to do efficiently even his small duty by his garden-patch. The trouble is that boys love so many things. If they loved their gardens only, or their lessons only, or ball-playing only, or stamp-collecting only; but it is with them as with the perplexed lover—"how happy could they be with either were t'other dear charmer away!" It is a good deal more trouble to see that the boy keeps his garden well than it would be to keep it yourself; but it is a good deal of trouble to bring up a boy right anyhow, and that is something that a mother might as well understand at the outset. Those who try to do it by easy means generally rue it with anguish of soul in the end.

"I never knew a boy who was fond of a garden," said a wise man who had brought up many boys, "to go far astray. There seems to be something about working in the soil and loving its products that does the boys good morally as well as physically." And honest Jan Ridd says, "The more a man can fling his arms around Nature's neck, the more he can lie upon her bosom like an infant, the more that man shall earn the trust and love of his fellow men." Again, he says, "There is nothing better fitted to take hot tempers out of us than to go gardening boldly in the spring of the year." And every one who has tried this can testify that it is true.

A certain little boy, who left a garden at home to take a trip with some friends, wrote home to his mother, "I am having a splendid time, but I wish every morning that I was sitting on my little green cricket in the back yard, watching my plants grow." This little boy always thought that some time, if he watched closely enough, he should see a flower open, but, beyond a few four-o'clocks, he has never witnessed this ever-recurring but magically secret phenomenon.

If possible, supply your own table with your boy's produce at ruling market rates, having it well understood beforehand how the money will be expended. Praise whenever you consistently can; offer prizes for the best fruits, flowers and vegetables, if you have several boys at work; and in every way treat the enterprise with consideration and respect. Many a boy who has put his best efforts into his garden loses heart when he hears it sneered at or made light of. "Your garden? Oh, dear! I never thought of that! What does that amount to?"

It cannot be too early impressed upon a boy that whatever he does should be done well. Therefore make his garden seem as important as you can without dwelling unduly upon it; and remember that the physical and moral effects of the garden are not all. The information that a boy gets from it concerning varieties of seed and soil may be invaluable to him later on.—[Harper's Bazaar.

Keeping Up Appearances.

How many a roof, transparent to the mind's eye, discloses anxious fathers and harried mothers, sacrificing everything to keep up appearances. The underclothing may be patched and insufficient, but it is covered by stylish gowns. Slipshod, ragged and unkempt at home, when abroad one would suppose them to live luxuriously. Scrimping on the necessities of life, eating crusts, shivering over a handful of coals, piecing out whatever is needed by makeshifts, such are destitute of refinement as of comfort.

This course of action should not be confounded with that forethought and thrift which hoards remnants and looks decent and trim on what would be impossible for a wasteful person. It is merely a pretension and obtrusive assumption. They believe "we live amid surfaces, and the true art of life is to skate on them well." They have not grown to the understanding that the object of existence is the culture of soul and body, and that the condition of the latter depends upon the former.—[Hester W. Pool in *Good Housekeeping.*

A Hint from 1742 for 1893.

At this time, when so much is being said against the hoop-skirts and crinoline, it is interesting to know that at the first performance of Handel's oratorio of *The Messiah*, given at Dublin, Ireland, April 13, 1742, so great was the anxiety of the people to obtain seats that "the ladies of rank in the capital agreed for the time being to go without hoops, so that an additional number of people could be admitted in the audience."—[Boston Evening Transcript.

Keep thou the door of thy lips.
If fat should catch fire in the oven throw a spoonful of salt over, or ashes will do as well.

A kind heart is a fountain of gladness, making everything in its vicinity to freshen into smiles.

A sure cure for diarrhoea is a teaspoon of dry arrowroot swallowed every hour until a cure is effected.

It is a great misfortune to have a fretful disposition: it takes the fragrance out of one's life. The habit of fretting is one that grows rapidly, unless it is sternly repressed.

Puzzles.

1—SQUARE WORD.

"You've sought for me nigh on a year,
But here I am at last.
I bring with me both hail and rain,
"A level surface" cast.

I've brought along "a bird" of prey,
"Inactive" though when slain,
I'll sing to music with "a slow,
A smooth and gliding strain."

EDITH FAIRBROTHER.

2—RIDDLE.

A cheery face is mine,
A first-rate housewife you divine;
When grimy, you despair
To find neatness anywhere.
But dirty or tidy I can sing
A song of home, a happy thing.
I love the five, the more it glows
The merrier my singing goes.
A misty crown I wear
As oft renewed as lost in air;
In sickness and sharp grief
They fly to me for quick relief;
In days of health my contents pour
Freely and often o'er and o'er.
I only beg one single rule
Keep me, like a toper, full.

AMOS HOWKINS.

3—CHARADE.

My FIRST is a hero, who gave his word,
And for Wallace and Scotland drew his sword;
A useful metal my SECOND is found,
To obtain it men have to work underground.
My THIRD is what the mariner dreads,
As upon his vessel's deck he treads.
My WHOLE is what we all must need,
When upon the back of a fiery steed.
Come answer this puzzle, cousins dear,
And cause old Uncle Tom's heart to cheer.

ADA SMITHSON.

To Lily Day:

Well truly now, dear cousin,
I could not away remain,
For puzzling is such a TOTAL
That I must come again.
I'm LAST you could do without me,
For my puzzles haven't much sense,
And my FIRST for leaving you awhile
Was not the lack of "pence."
I found I could not write at all,
For want of brain and time,
But getting some of the latter to-day,
I composed this simple rhyme;
And now my letter I must close,
It's time to go to bed,
I will not this time say "good-bye,"
But *Au Revoir* instead.

CHARLIE S. EDWARDS.

5—CURTAILMENTS.

Chief High Lord of the Admiralty,
King and Ruler of the Navy;
Three in one, and one in three,
H. R. H. King Fairbrother, thus do we address thee.

Oh! thou gracious one, I thank thee
For the honor thou hast WHOLE me,
For the title thou hast given me,
For the office thou hast booked me.

When! Oh! when thou great and mighty,
On bended knee can I thank thee,
Hear thy kingly voice thus say unto me,
Arise, Sir Knight of ADVOCATE canoe!

Oh! thou royal highness, grand and sublime,
When shall I SECOND my robes of state,
LAST the honors of my office,
Book young Devilt as a middy of might.

HENRY REEVE.

6—ANAGRAM.

An anagram has been called for
By our cousin Ed. Fairbrother,
So though his own are all so good,
I'll try and send another.
'Tis scarcely fair to use my name
Till the cousins of it tire,
Pray let it drop a little while
Ere you justly rouse their ire;
And cousin Ed., just go ahead,
As you have ever tried;
The pride you'll be of a mother some day,
Or rather of a bride.

ADA ARMAND.

5—CHARADE.

To Ada Smithson:

Welcome, TOTAL, and welcome
To your splendid puzzles too,
That the former owner of your FIRST
Was cleverer, can't be true.
For LAST of brevity I will now
End my rhyming here,
Hoping that in our "souvenir"
Your portrait will appear.

ADA ARMAND.

Answers to March 15th Puzzles.

1—Know, now. 2—Without. 3—Something.

4—	B A S BALLACE SLIPON APART CORNER ENTERER R E	5—	D HIP HOVEL DIVIDED PEDATE LETHE DEER
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Names of Those Who Have Sent Correct Answers to March 15th Puzzles.

Henry Reeve, Ada Smithson, A. R. Borrowman, Addison and Oliver Snider, I. Irvine Devilt, Thos. W. Banks, Willie Hunter, A. Malcolm, Matthew A. Robertson, Lily Day, Edith Fair Brother, Maggie W. Scott, Peter Scott, Jessie Nelson, George English, Mary Morrison.

DUCK AND HERRING.

At Swindon, Wiltshire, some years ago, a Mr. Duck eloped with a Miss Herring, which gave the inspiration for this stanza:

Oft has a heron took flight with an eel,
Or a trout by a bit of good luck;
But I never could bring my mind to feel
That a Herring would bolt with a Duck.
—All the Year Round.

STOCK GOSSIP.

Henry Meiklejohn, of Wapella, writes us of the success he has had in dehorning his entire herd of 23 head of cattle in the middle of December last.

While in Southern Manitoba recently, in the vicinity of Clearwater, the opportunity was afforded us of a visit to "Restronguet Short-horn Stock Farm," where are kept by Messrs. Joseph Lawrence & Sons about 85 head of this excellent breed, and a number of fine Improved Yorkshire Swine.

Mr. A. J. Moore, of Miami, has bought from Mr. Martin, Hope Farm, the imported Clydesdale stallion "McNab's Heir" (1890), and will travel him in the Morden and Miami districts this season.

NEW ADVERTISEMENTS.

- Barbed Wire—J. H. Ashdown, Winnipeg, Man. Guns, &c.—The Hingston Smith Arms Co., Winnipeg. Livery, Feed and Sale Stables—A. White, Winnipeg.

4 STALLIONS 4 FOR SALE.

Imported "Baron II. of Drumlandrick." Weight, 1,800 lbs. Imported "Norseman." Weight, 2,000 lbs. Coach Horse, "Yorkshire Lad." Weight, 1,450 lbs. Roadster, "Electric." Weight, 1,100 lbs.

The above will be sold cheap. All have proved themselves sure foal getters. Good workers and drivers always on hand.

TROTTER STOCK FOR SALE

Bred by "Quay," "Bird," "Harrowgate," "Fairy Gift," "Balaklava," "Nutbreaker," "Corbin's Bashaw" and "Bourbonnais," and from dams sired by "Princeps," "Dictator," "Egmont" and "Happy Medium."

FOR SALE

The young Thoroughbred Clydesdale Stallion HONEST JOCK, Registered No. 1719. Foaled May 23, 1890. Honest Jock is a beautiful dapple bay horse, 16 hands high, with fine style and unexcelled action and finish.

RED RIVER VOLUNTEER. Golden bay, foaled on the 10th day of July, 1887, 16 hands high; large, open gaited; fine head and neck; best of legs and feet, and promises good speed.

FOR SALE

- 1 Clydesdale Stallion, Imp., No. 1516 (544) No. 1518. 1 Mare, Imp., No. 1441 (In Foal.) 1 Heavy Draught Stallion, Imp., No. 849. 1 Mare "No. 779 (In Foal.) 20 Grade Clydesdale Mares, in Foal to Imp. Sire. A Herd of 9 Head of Shorthorn Durham Cattle.

FOR SALE 4 Choice Stallions.

- "GROVE SLASHER"—Shire. "WILD BOY"—Clydesdale. "LANSDOWN"—Blood. "ADVANCEMENT"—Cleveland Bay.

All the above are registered, and will be sold right. For pedigrees and particulars address—T. W. PARADINE, 31-2-y-m BINSARTH, MAN.

For Sale!

T. E. KELLY'S STABLE, BRANDON —IMPORTED— Clydesdale & Shire Stallions

Both Six Years Old and Sound. Sure Getters. —ALSO SOME GOOD— Working Horses & Mares WILL SELL CHEAP.

For particulars apply to FRANK RUSSELL, BRANDON, MAN. 41-d-m

PURE-BRED PERCHERONS

SUPERIOR YOUNG STALLIONS NOW FOR SALE! ALSO A CHOICE LOT OF JERSEY CATTLE, Registered in A. J. C. C. Correspondence Solicited. Quality and prices right. 30-2-y-m W. H. CARPENTER, Winona, Ont.

"ROSEDALE" STOCK FARM, MANITOU, R. D. FOLEY, Proprietor, BREEDER OF Clydesdale Horses, Shorthorn Cattle, &c. Banner Oats for sale. 35-2-y-m Correspondence solicited.

"BIRTLESIDE" FARM. Maj.-Gen. H. C. WILKINSON, C.B., Prop'r. WM. DRUMMOND, Manager. Pedigreed Imported Clydesdales, Shorthorn Cattle, and Registered Shropshire Downs. Young animals from the above stock for sale. One and a-half miles from Birtle Station, on the M. & N. W. 30-4-y-m Correspondence solicited.

DR. BARNARDO'S Industrial Farm, GENERAL LIVE STOCK BREEDERS. Shropshire Sheep and Berkshire Pigs for Sale. E. A. STRUTHERS Manager. RUSSELL, MANITOBA. 30-2-y-m REGISTERED JERSEY BULL FOR SALE THREE YEARS OLD, PRIZE-WINNER. PRICE REASONABLE. DAVID MCARTHUR, 162 Bannatine St., 44-a-m Winnipeg.

AYRSHIRES & BERKSHIRES FOR SALE. I have a fine lot of Cows and Heifers in calf, also several good Bulls now ready for service. My cattle are richly bred, being descended from such famous families as GUZTAS, ORANGE BLOSSOMS and PERFECTIONS. All the females tested are good milkers. 30-2-y-m

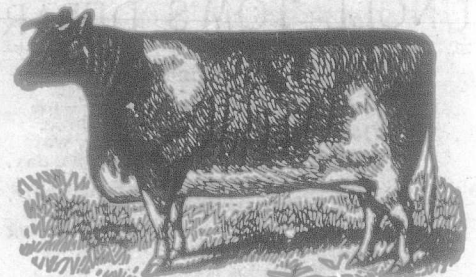
MY BERKSHIRES are good in quality and FINELY BRED. WRITE for PRICES and particulars, or come and see my stock. G. C. WELD, Box 211, WINNIPEG, MAN. 30-2-f-m

MAPLE GROVE STOCK FARM. The celebrated Holstein Bull Tempest's Captain Columbus 17430, recently advertised in ADVOCATE, is now offered to the highest bidder over \$100. Was two years old on 15th of July last. First prize winner at both exhibitions in Winnipeg; weight fully 1800 lbs., handsome in appearance, gentle as a cow, well broken to handle, sure calf getter. Bids received up till 1st June; must be sold. A chance for some one to get a well-bred, splendidly developed bull at a very low price. Reason for sale, to avoid inbreeding. 44-y-m Apply to W. J. YOUNG, Emerson.

FOR SALE. The Fine, Roan Shorthorn Bull ECLIPSE No. 10223, Calved October 19th, 1886. Address—Geo. Rankin, 37-1-f-m HAMIOTA, MAN. RESTRONGUET STOCK FARM

For sale—Six young Bulls; all extra good ones; got by Mara Duke 11990. Our herd took fifty-one prizes in 1892 at Pilot Mound, Clearwater and Cartwright shows, and first and second herd prize at each place. We are now booking for spring delivery young Yorkshire Pigs, at \$6 each, from twelve registered sows. Terms for cattle to suit purchasers. JOSEPH LAWRENCE & SONS, Clearwater, Man. 43-a-m

ADVERTISE IN THE ADVOCATE



PIONEER HERD OF SHORTHORNS WALTER LYNCH, Prop., Westbourne, Man. Fifteen first and one second herd prizes in sixteen years. A choice lot of young bulls for sale. 29-2-y-m

R. J. PHIN, Shorthorn - Breeder. A few choice young Bulls for sale. MOOSOMIN, 23-2-y-m ASSINIBOIA

JOHN OUGHTEN, Willow Brook Stock Farm Crystal City, Man. BREEDER OF Pure-bred Shropshire Sheep, Yorkshire Sheep, York-shire, Ohio Improved Chester Whites. Fresh importations just arrived, eighty Ewes and Rams. Also Eroms Park and White Wyandotte Fowls. Thirty Pedigreed Ram Lambs for sale. Clydesdale Stallions for sale. 24-2-y-m

Breeder and importer of High Class Poultry. STOCK FOR SALE. H. W. DAYTON, Virden. 30-2-y-m

J. A. S. MACMILLAN, Box 183, Brandon, Man., IMPORTER AND BREEDER OF PURE-BRED SHROPSHIRE SHEEP. My stock of Breeding Ewes consists of two hundred selected from the best flocks in England. The pen of Shearing Ewes that won the champion prize over all England were out of a flock of forty that I bought from Mrs. Barr, of Odstone Hall. My Rams are by the same sire as the Champion Ram, and out of ewes sisters of the dam of the Champion. I have spared neither time nor money to put together the best flock of sheep I could buy in England, and for size, quality of wool and uniformity of character, cannot be surpassed. Ram Lambs and Ewes for sale at moderate prices. 33-4-y-m

IMPROVED LARGE YORKSHIRES SPRING LITTERS For sale, from imported Boar. Prices away down Correspondence solicited. RIBOUT & PERCIVAL, Selkirk, Man. 31-2-y-m

EXHIBITION GAMES. BLACK-BREASTED RED AND INDIAN GAMES that won first and special premiums at the Winnipeg Industrial Exhibition on 1891 and 1892. Eggs carefully packed at \$2.00 per setting. Old young prize-winning stock for sale. Also a few pair of superior Boming Pigeons, bred from the best imported Belgium stock. Satisfaction guaranteed. 30-2-y-m J. LEMON, Winnipeg, Man.

SEND YOUR POULTRY, ETC., TO— C. L. CHARRETT, AND GET PROMPT RETURNS. 37-1-f-m No. 304 Main Street, WINNIPEG.

H. A. CHADWICK, St. James, Man. Light and Dark Brahmas, Buff and Partridge Cochins, Barred Plymouth Rocks, Black Langshan, Black Spanish, Pit Game, Guinea Fowls and Black African Bantams. Silver Grey Dorkings and Pekin Ducks. A few Fowls for sale of each variety. I won 14 first prizes out of 16 entries in 1891, and 10 firsts, 7 seconds and 1 third in 1892, at Winnipeg Industrial Exhibition. Send stamp for catalogue and price list. 34-2-y-m

NOTICES.

O. W. Paris writes us that, "Having read Mrs. Jones' book, 'Dairying for Profit,' I think every farmer who has any cows should send and get a copy. They will never regret it, and so cheaply to be had."

A very neat catalogue has just been received from Thos. Reid, Winnipeg, breeder of thoroughbred poultry. The catalogue illustrates all the different breeds kept by Mr. Reid, viz., Light Brahma, White Wyandottes, B. B. Red Game, Golden Wyandottes and Black Minorcas, and gives the prices of eggs per setting. See his advt. and send for catalogue.

We have just received a copy of the Minnesota Farmers' Institutes' "Annual No. 5." It is a very comprehensive report, of some 350 pages, and is nicely illustrated with photo-engravings of their instructors and views of Institute Hall, besides many illustrations of the subjects touched upon. It embraces eight departments, namely, Bee, Dairy, Farm, Forestry, Horticultural, Poultry, Sheep, Veterinary and Miscellaneous. 20,000 copies have been issued, and it cannot but prove of great benefit to the farmers of Minnesota.

The extensive merchant tailoring business formerly carried on by the firm of N. N. Cole & Co., Winnipeg, will in future be conducted under the style of Cole, Emory & Co. While retaining all the experienced members of the old firm, additional experience and ability have been added in the persons of Mr. A. D. Emory, so well and favorably known as a traveller for the house, and Mr. H. P. Saunders, who has for five years been cutter in the establishment, and who has had extensive experience in this department in England, United States and Canada. The numerous customers who have done business with them in the past may therefore rest assured that their orders will be more promptly attended to in the future than heretofore, and that the work will be most satisfactory in every particular, each department, from the purchasing of material to the completion of the manufacture, being under the eye of proficient members of the firm, who have had many years of experience in their respective branches. Their stock of goods is complete. One of the firm is now making a trip through the Western towns, where all who desire may frequently have the opportunity of ordering direct any style of suit they wish, and be properly measured by a practical man.

PURE SOAP.
The Wanser Pure Soap Company, Hamilton, Ont., are manufacturers of pure soaps for laundry and bath use. All the oils and materials used are absolutely pure, sweet and healthful. No cheap adulterations to add weight are used. We have tested the goods offered by this firm and find them very superior.

THE WORTMAN & WARD SPADE HARROW.
Among the many useful things manufactured by The Wortman & Ward Manufacturing Co. London, Ontario, is the Wortman & Ward Spade Harrow; this implement does its work in a very thorough manner. Among all the devices for tining the land few, if any, equal this implement, and certainly none surpass it. At the price at which it is sold every good farmer should own and use one.

GREASE-HEEL OR SCRATCHES.
Physic your horse well with Dick's Blood Purifier; feed on soft, cooling food. Keep him clean, and dry and he will recover in time. Washing with castile soap and warm water will be useful if the legs are carefully but gently rubbed after each washing. Do not use bandages. What is most desirable is to keep his skin dry and his blood thoroughly cooled. It may take some time to get rid of the fever and impurities in the blood that have caused the trouble, but Dick's Blood Purifier will accomplish it if used as directed.

CALIFORNIA HEARD FROM.
A remedy which can be used instead of the firing iron is one of inestimable benefit to the horsemen of the country. Actual cautery or firing, no matter how skillfully the operation may be performed, will leave a blemish, and in many cases affects the sale and deteriorates the price of the horse. In this respect Gombault's Caustic Balsam is invaluable, and is a preparation used and endorsed by the best veterinarians. It is also a cure for ailments of the muscles, glands, tendons and skins of horses and cattle, and will be found exceedingly useful to the human being as a relief for rheumatism, sprains, etc. Every owner of a horse should have on hand a supply of this great veterinary preparation. The American agents are the Lawrence-Williams Co., Toronto, Ont. *Breeders and Sp., May 30, 1891.*

LUCK IN SEEDS.
"I didn't have very good luck with my seeds last year," a farmer was heard to say. This gives rise to the question: How many poor crops can be attributed to "luck" in the selection of seeds? Buying seeds is an important factor in farming, and should receive the careful judgment and consideration of the farmer. It is almost always impossible to distinguish the good from the bad in seeds by sight, and the only infallible guide for the planter is the reliability of the seedsman. D. M. Ferry & Co. of Windsor, Ont., have for many years been the leading seed house of this country, and their reliability is unquestioned. They issue a book annually which contains a complete digest of the very latest gardening knowledge by the best authorities. The 1893 edition is handsomely illustrated and contains information about the selection and planting of seeds which will prove of the greatest value to every one planting a garden or farm. It is mailed free to any one making application to the firm's address.

A DEHORNING DEVICE.
S. S. Kimball, 577 Craig street, Montreal, P.Q., offers for sale in this issue Dr. W. H. Leavitt's Dehorning Clipper. This instrument is made in three sizes—one small, to be used when operating on calves, the other larger, suitable for cutting the horns of young cattle or milch cows, the third size will cut off any horn that grows on a bovine, large or small. These instruments are made of the best steel, and do the work quicker and better than a saw; does not crush the bone, but leaves it smooth; and the wound in just the right condition to heal quickly. This device is recommended by the highest authorities, including Prof. J. P. Roberts, of Cornell University, N.Y. We advise our readers to write Mr. Kimball for full particulars and pamphlets, which give directions for the use of this tool, and also tell how to dehorn and how to place the animal so as to operate in the easiest and best way.

ANNUAL SHOW OF FAT CATTLE

Under the auspices of the Mountain E. D. Agricultural Society No. 2, at
PILOT MOUND, ON MAY 3rd, 1893.
I. F. MUTCH, President. F. STEDMAN, Secy.-Treas.
SEE LARGE POSTERS 44-a-m

EGGS FOR HATCHING \$2 Per SETTING.

From Golden, Silver, Black and White Wyandottes, Barred and White P. Rocks, L. Brahmans, Black Cochins, Langshans, Black Hamburgs, and M. B. Turkeys (Turkeys headed by an imported Tom, weighing 35 lbs.) At Provincial Exhibition, 1891 and 1892, my birds won sixteen 1st, eight 2nd and eight 3rd prizes. Last year my Wyandottes beat several imported prize-winners. I have added to my stock some of the best birds to be had, and have mated them so they will produce stock that cannot be beaten. My Wyandottes and Rocks are also great winter layers. From thirty Wyandottes and Rocks I sold upwards of 40 dozen eggs laid during the month of January. For first-class setting of fertile eggs, write to S. LING, Proprietor "Fort Rouge Poultry Yards," Winnipeg. 30-2-y-m

Bronze Turkeys, Pekin Ducks, Silver Laced and White Wyandottes, Barred P. Rocks
My yards are full of prize winners from Provincial Exhibition and Chicago and Buffalo shows. First and second prize Bronze Turkeys at Provincial. Eleven prize winners in Wyandotte and Plymouth Rock yards. No culls kept or sold at any price. Wyandottes and Rocks are best adapted to Manitoba climate. Very hardy, quick to mature, large, delicious table fowls, and great winter layers. My Pekin ducks weigh ten pounds. Ducks to match. Eggs now ready, and guaranteed to arrive safely and to be fertile.
42-d-m M. MAW, Main Street North, Winnipeg.

JOHN E. SMITH. SPECIAL NOTICE!

J. E. SMITH, Beresford Stock Farm, has now stock emporium, TWELVE SHORTHORN BULLS, TWO GALLOWAY BULLS, TWO HERFORD BULLS, a number of SHORTHORN COWS and HEIFERS, THREE CLYDESDALE STALLIONS (rising three years old); also CLYDESDALE MARES and FILLIES. All stock first-class and all registered. Can be seen at any time in Brandon, having just completed a large sale barn for the convenience of parties visiting the city. As heretofore, a large stock will be kept at the Beresford Farm and the products will be on exhibition in Brandon. Prices and terms easy. Write or wire
42-b-m

J. E. SMITH, Box 274, Brandon P. O., Man.
P. S.—A number of improved Farms for Sale or to Rent.

BRANDON PUMP WORKS

I. M. RIESBERRY, Prop.
We make the Best in Manitoba or the Territories. We use Iron Cylinder, Porcelain and Polished Iron. We have had Eleven Years Experience in the Country. We have the Most Complete Facilities in the Dominion for the Manufacture of Wood Pumps. We have over 3,000 now in use.
We are better prepared than ever for supplying the trade. All correspondence will receive prompt attention.
P. O. Box 315. FACTORY: BRANDON, MAN. 42-b-m

THE ENGLISH SALTS: ASHTON'S & HIGGIN'S "EUREKA"

—ARE THE—
Only Safe Salts for the Dairy,
According to the opinion of a large majority of commission merchants in the United States and Canada.
Use no Other. For Sale by Grocers Generally.

JOSEPH WARD & CO., Montreal, 44-a-m Canadian Agents for Ashton's Salt.
THOS. LEEMING & CO., Montreal, Canadian Agents for Higgin's Eureka.

SEND FOR GUN CATALOGUE
HINGSTON SMITH ARMS CO. WINNIPEG

W. W. GREEN & GUNS, WINCHESTER RIFLES, MARLIN RIFLES, CRICKET, LAWN TENNIS, POLO, BASE BALL, and all Field and Forest supplies.
Catalogue on Application.
THE HINGSTON SMITH ARMS CO., WINNIPEG. (Mention this paper.) 44-f-m

R. R. KEITH, AUCTIONEER, Cor. William and Market Sts., Winnipeg, LIVE STOCK SALESMAN.
Sales conducted in city or country. Register kept of stock for private sale. Prompt settlements. Satisfaction guaranteed. Correspondence solicited. 32-2-y-m

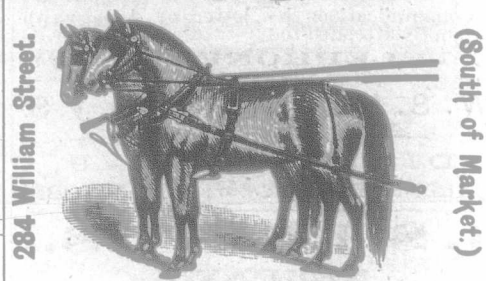
W. G. WILLIAMS, BUTCHER, Always want FAT STOCK, POULTRY, And all kinds of FARM PRODUCTS In my line. BEST PRICES IN CASH 44-y-m

INCUBATORS.

How to make a successful incubator that has taken numerous prizes, including two firsts at Winnipeg Exhibition. Full instructions with diagrams, 25 cents.

COLLIER & HUGH, 827 Main St., 40-2-y-m Winnipeg.

WRIGHT & CO. Winnipeg, Man.



IF YOU REQUIRE FARM HARNESS
Or anything in our line, call and examine our goods, or write for what you want. We do not intend to be beaten in quality of goods or prices. Bottom prices for cash. 44-y-m

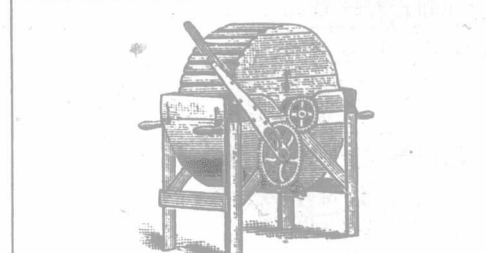
Count from letter "A" as No. 1, and these figures will give you a motto. It will pay you to think it over.
PEIRCE'S HARNESS MANUFACTORY
278 James St., Winnipeg.
Cheapest House in Manitoba. 39-y-m

LOOK AT THIS OFFER.

Teas at Wholesale Prices:
Black Teas from 25c. to 50c. per lb.
Japan Teas from 25c. to 45c. per lb.
Choice Indian and Ceylon, 30c., 40c., 45c., and 50c. per lb.
Our whole attention is given to the tea business, therefore can give best values obtainable.
FREIGHT PAID on all orders of 25 lbs. Send for free sample and test for yourself.

J. E. ACTON, 33-y-m 220 McDermot-St., WINNIPEG.

MANITOBA WASHER.



WINNIPEG, Aug. 10th, 1892.
DEAR MR. McCROSSAN:
It gives me pleasure to say that your Washer gives great satisfaction and does our work in about one-third of the time generally used.
Sincerely yours,
JOHN SEMMENS,
President Manitoba Methodist Conference.

In order to give our entire attention to the manufacture and sale of our Manitoba Washing Machines, we wish to sell the Dry Goods business. For particulars, apply at our store, 566 Main Street. In the meantime we will commence a CHEAP, CLEARING SALE, and promise real bargains. The stock never was better assorted than now, and no cheaper goods in the Dominion. Dress Goods, all kinds, Millinery, the newest Parasols, Hosiery, Gloves, Flannellettes, Prints, etc., etc.
Come straight to McCROSSAN & CO., 44-a-om 566 Main Street.

W. G. FONSECA, 705 Main Street, WINNIPEG, - MANITOBA,
Will furnish, in large or small quantities, to parties building, the celebrated

Mica Roofing.
Cheaper than shingles; more durable than tin; water and fire proof; not affected by heat or cold, and quickly put on, making it the most economical roofing known.
Enquiries regarding it promptly answered. 30-2-y-m

CANADIAN PACIFIC RY.
THE FAVORITE-LINE.
 Quickest and best route to all points
East, West & South.
 The only line carrying passengers to the east and west without change of cars, and reaching all the important cities of the American Continent, and with direct steamship connection to

EUROPE, CHINA and JAPAN.
 Unequaled advantages for booking passengers to the Old Country.

TO YOKOHAMA AND HONG KONG:
 Empress China leaves Vancouver - March 6
 Empress India " " " " " " April 3
 And about every four weeks thereafter.

For full information apply to Wm. McLeod, City Passenger Agent, 471 Main street; J. S. Carter, Depot Ticket Agent, or to
Robert Kerr,
 General Passenger Agent.

PRINTING!

Stock Catalogues, : : Thirty-
 Horse Bills, : : : five hands
 Letterheads, : : busy at this
 Business : work. Write for
 Cards, estimates for good
 Etc. work.

R. D. RICHARDSON,
 Cor. opposite Post Office, WINNIPEG.
 42-f-m

M. CONWAY,
 AUCTIONEER

Pure-Bred & Other Stock
 (Twenty years' experience), announces to the breeders in Manitoba and the Northwest that he proposes holding

REGULAR SALES

If you have pure-bred or other stock for sale, communicate with me at
262 Portage Avenue, - Winnipeg.

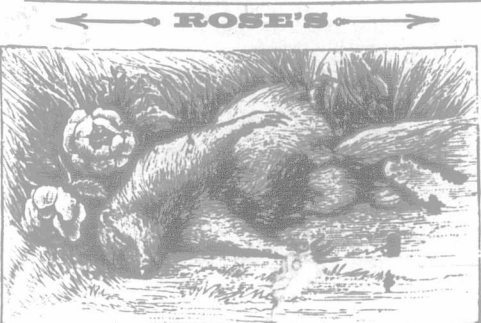
P.S.—Write for dates of country sales.
 33-2-y-m

THERE'S NOTHING NEW UNDER THE SUN
 SAID SOLOMON,

but that was before Dame Fashion ruled the world, and men and women kept pace with the civilizing forces of the age in the matter of dress.

Spring is Now Here,
 and the thousands of patterns of the choicest imported fabrics shown by Geo. Clements, the Winnipeg Tailor, simply testify to their harmony with the civilization of the day.

GEO. CLEMENTS,
 MERCHANT TAILOR,
 480 Main Street, Winnipeg, Man.
 44-f-m



GOPHER KILLER
 took Diploma at Brands, w. 1890. Endorsed by all who use it. **KILFOYLE, 16, 11, 19,** collected \$7.00 bounty after using three bottles says he killed **times as many.** This is one of a number of letters we have. **ROSE & CO., Rosser, Brandon.** Sent by mail, 50c. 42-d-m

ARE YOU BUILDING?

If so, economy in fuel, comfort, convenience and fire protection are important considerations. The McRobie Soot Door Ventilator and Check Draft is approved of by architects and recommended by contractors as the most useful combination for the purpose in the market.

It should be in every building. For full particulars, prices, etc., see your local merchant, or address
CAPT. W. O. McROBIE,
 44 Dagmar St., Winnipeg, Man.

ELECTRICITY IS LIFE
 HEALTH, WEALTH.
 Electric Appliances for all parts of the body. Cures Rheumatism, Dyspepsia, Sore Eyes, Sciatica, Lumbago, Kidney trouble, Weak Lungs, Neuralgia, Catarrh, Headache, Asthma, Bronchitis, Chronic Colds, etc.
 General Agent,
R. B. THOMPSON,
 Winnipeg.
 37-y-m

EMPLOYMENT.

SITUATIONS
 secured for the unemployed at

TREHERNE'S : EMPLOYMENT BUREAU.
 All who require male or female help will find it advantageous to correspond with this agency.
GEORGE A. TREHERNE,
 P. O. Box 71. OFFICE:—9th Street, BRANDON, MAN.
 39-p-m

GOING TO THE STAR DYE WORKS
 9th Street, BRANDON, - MAN.

Gents' suits neatly cleaned, dyed and repaired; also ladies' dresses, shawls, cloaks, etc. Satisfaction guaranteed. Prices moderate. Goods by express promptly attended to. If no agent in your town, write us direct. We want a reliable party in every locality as agent. Correspond with us. **CRITTENDEN & CO.,** Box 128, BRANDON, MAN. 43-y-m

FARMERS,
 Now is your chance to see
The World's Fair
 FOR NOTHING.

FLEMING & SONS,
 Chemists, - Brandon,
 are giving as a premium to the individual killing the greatest number of gophers with Fleming's Gopher Poison a Free Ticket to the World's Fair.

If your dealer does not keep it in stock send 50c. for one bottle or \$2.50 for six bottles, and we will send, post-paid, the quantity ordered and full particulars of the competition.
 Address **FLEMING & SONS,** Brandon, P. O. Box 7. 30-y-m

W. H. SHILLINGLAW,
ARCHITECT.
 Plans & Specifications Prepared for all kinds of buildings.
Schools and Churches a Specialty.
Brandon, 41-f-m Man.

\$2.00
 per acre will buy a few farms within six miles of the great

W-H-E-A-T
 shipping town of
PORTAGE LA PRAIRIE
 Other choice properties in town and vicinity cheap and on easy terms. Correspond with **W. RICHARDSON,** Real Estate, Loan and Collecting Agency, Saskt. Ave., Portage la Prairie, P.O. Box 753. 42-y-om

FREE GRANT LAND
 near Gainsboro, Carnduff, Oxbow, Estevan.
 Having resided for ten years in the Souris district, and being thoroughly acquainted therewith as a practical farmer, I am in a position to locate farms for parties who wish to take up homesteads, and will furnish full instructions of how they may be obtained and save all travelling expenses. Improved and unimproved farms also for sale.—**J. W. Connell, Carnduff, Man.** 41-y-om

CRADLE CHURN



B. R. HAMILTON & CO., Patentees & Sole Proprietors.
 31-2-y-m NEEPAWA, MAN.

PILES Radically Cured.

W. E. BESSEY, M.D., C.M.,
 200 JARVIS STREET, TORONTO.
 SPECIALTY.—Orificial Surgery, Piles & Rectal Diseases, Stomach and Intestinal Disorders, Chronic and Nervous Diseases, Genito-Urinary Affections, and Diseases of Women. Private Hospital, with trained nurses. 329-y-om

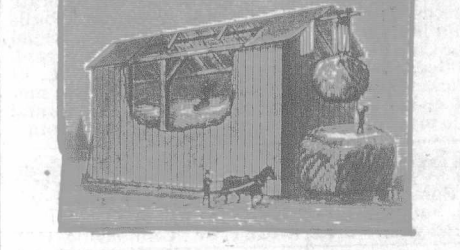
ESTABLISHED 1860.
KIRKPATRICK & COOKSON,
 Commission Merchants, - Montreal.
 GRAIN, FLOUR, BUTTER, ETC.
 Advances made on Consignments to British or Continental Markets. 30-2-y-m

"EASTLAKE" STEEL SHINGLES.

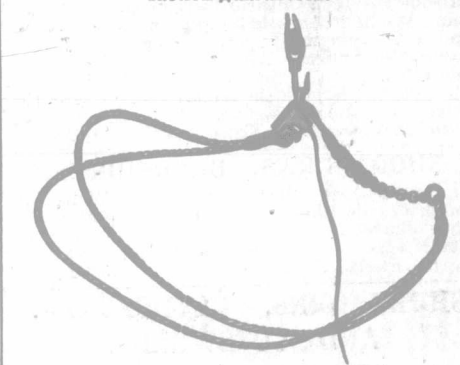
METALLIC ROOFING Co.,
Toronto.
 Send for Catalogue. 33-2-y-m

BUCHANAN'S
 (Malleable Improved)
PITCHING MACHINE

For unloading hay and all kinds of loose grain.



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



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

RESPONSIBLE AGENTS WANTED
 Circulars, Prices and Terms on application to **M. T. BUCHANAN,** Ingersoll. 331-c-om

POWELL'S PAT'D MILK AERATOR
 AND CAN best in America. Send for circular. **H. POWELL, Belleville, Ont.** 330-2-d-om

ADVERTISE
 —IN THE—
FARMER'S ADVOCATE
 AND HOME MAGAZINE.

STOCK GOSSIP.

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

A WORD TO BREEDERS AND STOCKMEN.
 Most farmers know too well the trouble and loss caused by insects upon cattle, horses, sheep, pigs, etc. Now a good sheep and cattle wash should possess two seemingly opposite qualities: it should be at once poisonous and non-poisonous. No sheep and cattle wash is worth the name, unless it is rapidly fatal to all parasitic life infesting cattle, sheep, etc., and at the same time harmless to the animal itself, to its skin, and to its wool. "Little's Sheep and Cattle Wash" fulfils these peculiar conditions. Although it quickly destroys ticks, red lice, maggots, and is an unfailing remedy for scab, we guarantee it to contain, so far as regards man and the higher animals, *nothing whatever of a poisonous nature.* It will neither injure the animal being treated, nor the man engaged in the operation. The disadvantages of most specifics now offered for sale in different styles are the poisonous characters, and the necessity of heating or boiling the preparations. It is before all other washes or dips in the simplicity of its preparation. It mixes at once with cold water, and a single trial will prove that on coming into contact with the water the whole is changed into a milk-white dip, which is distinctly not the case with any other material.

As a sheep dip, "Little's Sheep and Cattle Wash" is now extensively used in all the great wool growing countries of the world, and is rapidly superseding all other preparations. In Australia it is the recognized dip, and in New Zealand it is used in the government dipping stations, and highly recommended by principal sheep inspectors. In the United States also, it has a very large sale, especially in California. In our Dominion it is now being used very largely by our provincial stockmen, as testified to by the following testimonials; in fact, no farmer or breeder can afford to be without this preparation.

Prof. Shaw, Ontario Agricultural College, Guelph, writes:—"We have used a considerable quantity of 'Little's Sheep and Cattle Wash,' and find it answers the purpose very well for which it is designed, namely, drives lice, ticks, etc., from all classes of live stock."

H. Cargill & Son, Cargill, Ont. say:—"We have used 'Little's Sheep and Cattle Wash' for three years, and have found it quite satisfactory in every respect. Keeps the cattle clean and free from lice; in fact, we would not care to do without it."

Jno. Y. Ormsby, V.S., "Isaleigh Grange Farm," Danville, Que., gives the following testimony:—"I have now been using 'Little's Sheep and Cattle Wash' for some four years, and I can truthfully say that it is by far the best preparation I have ever used for destroying lice on horses, cattle and hogs, or any other animals. Its special advantages in my eyes are that, while it is not only sure but sudden death to all kinds of external parasites, it is also clean and easy to use, and so cheap, when we consider how long a tin will last, that no farmer, not to speak of stock breeder, should ever be without it." Robert Wightman, Druggist, Owen Sound, Ont., sole agent for the Dominion.

See John Miller's advertisement of young bulls for sale in this issue. He writes that he thinks they are the best lot that he ever offered to purchasers.

Messrs. John Miller & Sons, Brougham, Ont., report that their crops of lambs and calves are the best they have had for years. Mr. Robert Miller is now in England selecting Shropshires, and perhaps specimens of some other breeds of sheep. He intends to bring a large number with him when he returns, which will be early in the summer.

Archibald McLean passed through Winnipeg the other day on his way to Moosomin, with a car load of heavy draught mares and a Clyde stallion, Auchenloch (1833) C. C. S. B., which he had purchased from T. W. Evans, Yelverton, Ont. This is a remarkably well-bred horse and is of great individual merit, and will be a great acquisition to the heavy horse interests of the district to which he is going.

Mr. J. C. Snell, Edmonton, Ont., writes us that the demand for Berkshire pigs is steadily increasing, and from a wider territory, his recent shipments covering several of the Southern and Western States and the Provinces of Ontario, Quebec and Manitoba, and the stock sent out has invariably given satisfaction and led to further orders. Jerseys are also in active demand, and a number of sales have been made since last report, including that of the young bull Lord Kircaldie, and two fine heifers to Mr. John Duke, of Hartell, Parry Sound.

We wish to draw the attention of our readers to the generous prizes offered at the World's Fair by the proprietors of the Gopher Sheep Dip. The prizes consist of sixteen handsome silver cups, and will be awarded as follows:—

\$30.00 silver cup for rams winning the sweepstake premiums in each of the following classes; Cotswold; Leicester; Lincoln; Southdown; Shropshire; Oxford; Hampshire.

\$30.00 silver cup for ewes winning the sweepstake premiums in each of the following classes; Merino (a); Merino (b); Dohne Merino.

\$100.00 silver cup for winner of the sweepstake premium in the fat stock exhibit.

\$100.00 silver cup for best pen of 5 range ewes bred on range by exhibitor west of the Mississippi river. No limit as to breed or age. Best carcass and fleece combined to rule. In other respects official regulations to govern.

\$100.00 silver cup for best fleece of range wool grown by exhibitor west of the Mississippi river. Official judges to decide and official regulations to govern.

R. H. Harding, Thorndale, Ont., writes:—"I have just received from quarantine a pair of Todd's Improved Chesters, which are promising producers of the desired bacon hog. I here give a few of my recent sales:—Two Dorset ewes and one ram to Ed. Vance, Emerson, Man.; Chester boar and sow to E. Vance; sow in farrow to W. J. Quinn, Crumlin, Ont.; boar to M. J. McKenzie, Crumlin, Ont.; boar to F. L. Seaton, Lakeside, Ont. The three last-named pigs are closely related to the sweepstake sow at Guelph Fat Stock Show, and will no doubt still keep up the reputation of this popular breed of swine."

STOCK GOSSIP. A fat stock show will be held at Pilot Mound, May 3rd. Write F. Stedman, Pilot Mound, for full particulars. See advertisement in other columns.

BLEMISHED ANIMALS. It is really surprising how many good animals are badly blemished through elips or strains. In most cases only a slight lameness exists at first, and if Dick's Liniment were at once applied this would be cured, but even when lumps have formed they can be removed with Dick's Blisters. It cures Curbs, Spavins, Ringbones and like blemishes.

The Southdown Sheep Breeders' Association have arranged to hold at Chichester, England, on June 26th and 27th, 1893, a Show and Sale of Southdown Sheep, for registered sheep only. Valuable prizes will be offered to induce the best sheep to be sent, including one of 25 guineas by the President of the Association, for the best pen of 10 Shearling Ewes, that have not been shown before. All Rams sold singly. Ewes in pairs or fives. Home and foreign buyers and breeders are asked to support the establishment of this Sale with their patronage, for those who attend will be able to make a selection from all the best registered flocks. A second sale will be held on August 10th, 1893. All enquiries and communications in reference to either of the above sales to be addressed to W. W. Chapman, Secretary to Southdown Sheep Breeders' Association, 27 Baker Street, London, W., who will execute commissions.

CO-OPERATION IS PROVING :-: A SUCCESS. We expect every Farmer to write for our list of Prices and co-operate with us -WE ARE THE ONLY-

Farmers' Co-Operative Store IN CANADA, and as a proof of our success we now, Pay Freight on all Orders of \$10 and over, as far East as KINGSTON, West as SAARNIA, and North as BRACEBRIDGE; outside of which limit we allow a discount of 3% in lieu of Freight.

Our Trade is increasing very rapidly. We have just opened a large consignment of

BOOTS AND SHOES for Our Spring and Summer Trade, and they are excellent value.

OUR HARNESS Deserves your attention, and our GROCERY DEPARTMENT IS FIRST-CLASS.

Purchase your Supplies direct from your own house. GRANGE WHOLESALE SUPPLY CO., LTD., R. Y. MANNING, 35 Colborne St., 332-2-om Manager. Toronto.

Hackneys and Clydesdales The choicest stud of Hackneys and Clydesdales will be found at the stables of R. BEITH & CO., Bowmanville, including the 1st prize and sweepstakes Hackney stallion, Ottawa, and 1st prize winner in Aged Class, Jubilee Chief. The Stud also includes a number of prize-winning Clydesdale horses and mares.



R. BEITH & CO., Bowmanville. 330-1-om

D. & O. SORBY, GUELPH, ONTARIO, BREEDERS AND IMPORTERS OF FASHIONABLY BRED CLYDESDALES We always have on hand a large number of imported and home-bred Clydesdales (male & female) of good breeding & quality, which we will sell at honest prices. Our specialties are good & well-bred horses and square dealing. Come and see us or write for particulars. 314-2-y-om

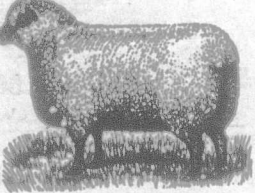
FOR SALE Imp. CLYDESDALE Stallion, by McCammon. HUGH THOMSON, Drawer D, St. Marys. 328-2-b-om

SHIRE HORSES.—A grand young imp. stallion for sale at a low figure. IMPROVED YORKSHIRES.—Young stock of all ages at farmers' prices. WHITE HOLLAND and BRONZE TURKEYS.—Orders booked for young birds for fall delivery. Correspondence solicited. Prices on application. 318-2-y-om WM. MULLEN, Hillsburg, Ont.

SHAMROCK AVENUE CLYDESDALES. The choicest collection of young Clydesdale Stallions, fit for service the coming season, to be found in Canada; good breeding and high-class quality considered; prize winners, and sons of prize winners, including the first prize three-year-old and second prize two-year-old (imported) class, and winner of gold medal as best Dominion-bred Clydesdale stallion any age at Ottawa last year. Prices reasonable. THOS. GOOD, Richmond P.O., Ont. Stittsville Station, C. P. R. 329-d-om

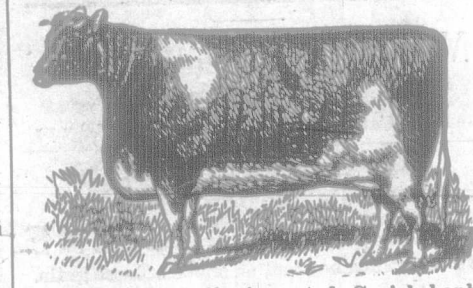
SCOTCH-BRED SHORTHORN BULLS Scotch-Bred Heifers, Imported Shropshire Rams, Imported Ewes, Home-bred Rams, Home-bred Ewes. FOR SALE!

In any number. All of very best quality, and at the lowest prices. We want 500 recorded rams for ranches. Correspondence Solicited. John Miller & Sons Brougham, Ont. Claremont Station, C. P. R., 22 miles east of Toronto. 306-2-y



MAPLE SHADE Stock Farm. I now offer superior young SHORTHORN BULLS at reasonable prices. For full particulars address, JOHN DRYDEN, 314-2-y-om Brooklyn, Ont.

New Importation! ARTHUR JOHNSTON, Greenwood, Ont. Reports his recently imported Cruikshank-bred safely at home, seven young bulls and six females, all of which will be sold at moderate prices. I have also exceedingly good young bulls and heifers of my own breeding for sale. Send for Catalogue. Greenwood P. O. and Telegraph Office, Claremont Station on the C. P. R., or Pickering Station on the G. T. R. Parties met at either station on shortest notice. Come and see my cattle. 323-2-y-om



Shorthorns & Berkshires. Some good, thrifty young stock of both sexes on hand for sale. Write for prices. 321-2-y-om JNO. RACEY, Jr., Lennoxville, P.Q.

Shorthorns, Coach Horses and Berkshires. Our herd is headed by Daisy Chief—13674=, he by the famous Indian Chief—11108=, and was highly successful in the various Western Ontario fairs of the past season. We have for sale 3 young bulls, 6 heifers, and a Cleveland Bay mare and gelding, at reasonable figures. Also registered Berkshires and a few extra choice Cleveland Bay mares, the get of Disraeli, Dalesman, etc. Write for prices, or come and see us. A. J. C. SHAW, Camden View Farm, Thamesville. 318-2-y-om

SHORTHORNS, BERKSHIRES, Plymouth Rocks, Bronze Turkeys. Write me for prices on the above. I have one of the finest show cows in Ontario for sale. Waterloo-Booth strain. H. OHISHOLM, Montrose Farm, Paris, Ont. 321-2-y-om

SHORTHORNS, CLYDESDALES AND COTSWOLDS.



I have now on hand FOR SALE an extra good lot of TRULY BRED SHORTHORNS, CLYDESDALES, AND COTSWOLDS. Among my COWS, HEIFERS, and young BULLS are some fine show animals. The CLYDESDALES are of equal quality. MY PRICES are low and TERMS liberal. Visitors welcome. Correspondence solicited. DAVID BIRRELL, Telegraph and Post Office—GREENWOOD, ONT. 324-2-om

SHORTHORN CATTLE—A few good, useful young bulls for sale. PLYMOUTH ROCK FOWLS—Pilgrim strain; choice cockerels and pullets at moderate prices. Also registered Berkshires. W. T. WARD, Birchton Farm, Birchton P. O., P. Q. 321-2-y-om

Bow Park Herd OF PURE-BRED SHORTHORNS

Have always on hand and for Sale young Bulls and Females, which we offer at reasonable prices. ADDRESS—JOHN HOPE, Manager, 303-2-y Bow Park, Brantford, Ont.

SHORTHORN BULLS FOR SALE.

One two-year-old, got by Vice-Consul (Imp.) =4132=; four fourteen months, got by Wimples Heir =14529=. Write for prices and pedigrees. Any person coming to see them will be met at station, if they let me know when to meet them. JOHN MILLER, MARKHAM, ONTARIO. 331-b-om

I have for sale six females, ages from eight months to two years, color red and rich roan. Also three bull calves of extra merit. Also some young cows. All choice animals from choice imported stock at reasonable prices. D. ALEXANDER, 330-y-om BRIDGEN, Ont.

SCOTCH-BRED SHORTHORNS FOR SALE 6 Choice Young Bulls

And the Imported Cruikshank Bull ABERDEEN HERO, Their sire. Also some nice Young Heifers, From one year old up. Prices to suit times. 322-2-y-om SHORE BROS., White Oak.

If you want a well-bred Shorthorn Bull for use on Grade Cows, or a Heifer to start a herd with, at a price that your pocket can stand, write me. I can suit you. G. G. DAVIS, Woodlands Terrace Farm, Freeman P.O., Ont. 318-2-y-om

Scotch Shorthorns! Imported Prince Royal and cows bred by S. Campbell, Kinnellar, and James Bruce, of Burnside, together with their descendants by imp. bulls. Seventy head to choose from; also Cotswold sheep. Farm close to station. J. & G. Taylor, Rockwood, Ont. 317-2-y-om

SHORTHORN HEIFERS A few extra good ones for sale, "Matchless" and "Minas," by Imp. General Booth (54353), that noted sire of prize-winners. Prices right, terms reasonable. Apply to W. J. BIGGINS, Elmhurst Farm, Clinton, Ont. 319-2-y-om

DEEP MILKING SHORTHORNS. WM. GRAINGER, Lonsdaleboro', Ontario, offers for sale, a yearling bull, and a three-year-old heifer in calf, of the best milking strain of Shorthorns in Canada; both registered and good colors; dams made 30 lbs. of butter in seven days on grass. COME AND SEE THEM. THEY ARE GOOD ONES. 319-2-y-om

THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS. SMITH BROS., Credit Valley Stock Farm, CHURCHVILLE, PEEL COUNTY, ONT., (24 miles west of Toronto).



This is the place to get stock of best quality at reasonable prices. We have seventy-five head, including prize-takers; best strains, cows and heifers, with large milk and butter records; young bulls of superior quality. Send for catalogue. 316-2-y-om

FOR SALE A very choice yearling Holstein Bull, a great grandson of Netherland Prince on the sire's side, and a grandson of Johanna Tensen on the dam's side. This is a very fine individual, and his breeding is first-class. Write, or come and see him. R. S. STEVENSON, BROCKHOLM STOCK FARM, ANCASTER P. O. 319-2-y-om

Holstein-Friesians OF THE CHOICEST MILKING STRAINS. Extra individuals of both sexes for sale. J. W. JOHNSON, 318-2-y-om SYLVAN, P. O.

Holstein-Friesians. Owing to an important change in business, our herd will be reduced one-half. Stock the choicest. Breeding the highest, and prices the lowest. All young stock bred from Silver Medal and First Prize-winning stock. Send for our new catalogue. New Dundee P.O., Ontario. A. C. HULLMAN & CO. 318-2-y-om

Holstein-Friesians. I have several choice young Bulls of the Aaggie and Barrington strains, which I will sell cheap to quick purchasers. Also several choice Cows and Heifers, of Bonnie Queen and Aaggie breeding, will be sold at greatly reduced prices, if taken soon. Write for prices and breeding. H. BOLLERT, Cassel, Ont. 318-2-y-om

HOLSTEIN-FRIESIAN -- STOCK. We have on hand now more than 40 head of this great dairy breed of cattle selected for practical dairy purposes. We keep only the best butter and milk strains, and none but pure-bred, pedigreed animals. We offer for sale at moderate prices choice young stock, male or female. E. M. S. & C. S. MOTT, The Gore Farm, Box 95, Norwich, Ont. 318-2-y-om

FOR SALE Twenty-two head Jerseys and Grade Jerseys; Bull, Nabob John Bull II. [29243]; also year-old Bull, fawn color, eligible. S. J. LYONS, Lot 12, Con. 11, Tp. of Esquesing, 332-a-om NORVAL P. O.

INGLEDALE FARM, WINONA, ONT. JONATHAN CARPENTER offers for sale at very reasonable figures a number of very fashionably bred Jerseys, bulls and heifers, of all ages; also standard bred colts and fillies from such sires as Gen. Stanton, sire of thirteen in the 30 list, and Almont Wilkes, trial in 2-16. "Good individuals with gilt-edged pedigrees." Come and see them. 319-2-y-om

JERSEYHURST FARM, MARKHAM, ONT. ROBT. REESOR, importer and breeder of A. J. C. C. Jerseys of the choicest breeding, with the St. Heiler bull Otalie 17219 at the head of the herd. Stock of all ages on hand and for 320-2-y-om

GLEN ROUGE JERSEYS! WM. ROLPH, Glen Rouge Farm, Markham, Ont., offers for sale Jerseys of all ages from his famous herd. The world-renowned St. Lambert blood a specialty. Also registered Clydesdale Horses. 321-2-y-om

HEREFORDS FOR SALE. Five extra fine Registered Hereford Bulls, from nine to eighteen months old. Intending purchasers should see them. Inspection of herd invited. F. A. FLEMING, Weston Co. York, Ont. Farm half a mile from C. P. R. and G. T. R. Stations, three miles from Toronto Junction. 331-f-om

HEREFORDS, STANDARD-BREDS AND YORKSHIRES.—Headquarters for the famous Tushingham blood. Tushingham (19450) sold for \$5,000. Also standard bred colts and fillies and pedigreed Yorkshires. 321-2-y-om J. W. N. VERNON, Waterville, P.Q.

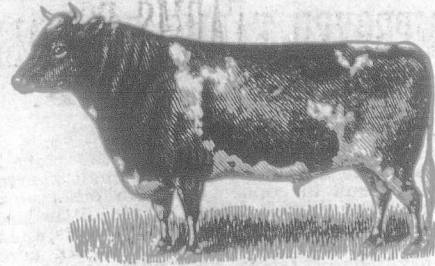
Ingleside :-: Herefords. Herd headed by the Medal Bull of Canada, Young Tushingham 2nd (32398). All stock registered and from prize-winners, combining the desirable blood of HORACE ANXIETY THE GROVE 3rd BRADWARDINE. Choice young stock of the above strains for sale at reasonable prices.

IMPORTED CLYDESDALES. Prince of Wales and Darnley strains. Saddle horses and stylish drivers for sale. Station, two miles, G.T.R. H. D. SMITH, Ingleside Farm, COMPTON, Que. 321-2-y-om Herefords, Leifers, Imp. Yorkshires and and-Chinas.

First-class young stock for sale at moderate prices. DAN REED, The Spruces, GLANFORD P.O., ONT. 318-2-y-om

SHORTHORN CALVES FOR SALE. Three reds, sired by son of the noted Farm, F of (Imp.) Tottills, who All grand calves and good Berks just fit to wean. Price reasonable. R. RIVERS & SON, Inghill Farm, Walkerton. 334-y-om

DOMINION PRIZE HERD OF AYRSHIRES



We have the oldest established, largest and best herd of Ayrshires in Canada. Choice young stock for sale at liberal prices. Satisfaction guaranteed. JAMES DRUMMOND & SONS, Petite Cote, Montreal, P.Q. 332-2-y-om

THE MAPLE CLIFF STOCK FARM.

For Sale—A grand four-year-old Ayrshire Bull, winner of 2nd prize at Montreal last fall. Bronze Turkey eggs, \$4 for 11 eggs. R. REID & CO., Hintonburg, Ont. One mile from Ottawa. 324-2-y-om

PRIZE-WINNING AYRSHIRES FOR SALE



GURTA 4th (1181) Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors welcome. Address: THOMAS GUY, Sydenham Farm, Oshawa, Ont. 314-2-y

Prize-Winning AYRSHIRES FOR SALE.

I have at present one of the largest and best herds in Ontario, which has been very successful in the prize ring. They are deep milkers and of a large size. Bulls, cows and heifers for sale always on hand. JAS. MCGORMICK & SON, ROCKTON, ONT. 323-2-y-om

DORSET HORN AND SHROPSHIRE SHEEP, Jersey and Holstein Cattle, SHETLAND PONIES, CHESTER PIGS.

ALL THOROUGHBRED. JOSEPH STRATFORD, Q. T. R., Brantford, Ont. 335-2-y-om

MAPLE GROVE FARM.

Cotswold and Leicester Sheep, also Improved Large Yorkshire Swine, are my specialties. C. W. NEVILLE, NEWBURG, ONT. 322-2-y-om

IMPORTED SHROPSHIRE

My stock was selected by myself, and consists of Shearling Ewes and Ewe Lambs from the leading flocks of England, and of the highest quality and breeding. Stock of all ages for sale. C. W. GURNEY, Paris, - Ontario. 327-y-om

1881—SHROPSHIRE—1881

My flock is one of the oldest in Canada, my first importation being made in 1881. My present stock of ewes were imported direct from the flocks of Bradburne Bros. and H. Parker. Write for prices. JAS. COOPER, KIPPEN, ONT. 319-2-y-om

THE GLEN STOCK FARM.

Clydesdales, Shropshires and Berkshires. Choice young registered stock for sale. Telephone office, Innerkip. Farm 1/2 mile from Innerkip Station on C.P.R., and 6 miles from Woodstock, G.T.R. WHITESIDE BROS., Innerkip, Oxford Co., Ont. 316-2-y-om

SHROPSHIRE, CLYDESDALES AND POLLED-ANGUS CATTLE.

Two imp. stallions, one yearling bull and eighty choice Shropshires rams and ewes of all ages. Prices reasonable. Write quick. All registered. JAS. McFARLANE & SON, 319-2-y-om CLINTON, ONT. G.T.R. Station 1/2 mile.

EUROPEAN ADVERTISEMENTS.

Shropshires, Shorthorns, Shire Horses, Yorkshires The Ruyton-11-Towns flock always winning at R. A. S. E. and other shows. Last win:—The Champion Cup at the Royal Liverpool, Manchester and North Lancashire Show for the best ram, all ages and all breeds. Shorthorns:—Winning at R. A. S. E., etc., etc. Herd established over 50 years. Yorkshire Pigs of good pedigrees. Easy distance from Liverpool. Meet trains at Baschurch, G. W. R., by appointment. Address: Telegrams: RICHARD BROWN, Ruyton-11-Towns, Shropshire, Eng. 322-2-y-om

LINCOLN SHEEP

I always have for inspection and sale a large flock of pure Lincoln Long wool Sheep, including many prize-winners, having taken 80 prizes the last two years at the Royal and other shows, for both rams and ewes; also the first for the best collection of Lincoln fleeces of wool at the Royal Windsor show last year, which proves the character of this flock, which is most famous for their great size and 120 years' good breeding. Also breeder of White Yorkshire Pigs. Address: HENRY DUDDING, Ryby Grove, Gt. Grimsby, Lincolnshire, Eng. 319-2-y-om

BLAIRTUMMOCK CLYDESDALES.

Prof. McCall invites inspection of his Stud of Clydesdales by American and Canadian buyers. Among the many good ones bred at Blairtummock may be mentioned Col. Holloway's renowned Cedric, acknowledged the greatest breeding horse in America. Address: PROF. MCCALL, The Veterinary College, Glasgow, Scotland. 317-2-y-om

CLYDESDALES & AYRSHIRES

WALTER PARK, Halton, Bishopton, Scotland, the breeder of the world-renowned "Lord Erskine," has always for sale a choice lot of Clydesdale Colts and Fillies; also pure-bred Ayrshires of the best milking strains. Visitors welcome. 317-2-y-om

THE HOME OF SPRINGHILL DARNLEY.

Clydesdale dealers when in Scotland should not fail to visit Messrs. R. & J. Findlay's Stud, Breeders and owners, amongst others, of the famous H.A.S. winner, Chrystal 5387. Address: Springhill, Baillieston, Glasgow. 317-2-y-om

THE HOME OF SIR EVERARD

Wm. Taylor, Park Mains, Paisley, Scotland, calls the attention of American and Canadian buyers to the fact that his stud of Clydesdales and Hackneys is one of the best in Scotland. Inspection solicited. No trouble to show horses. 317-2-y-om

CLYDESDALES AND AYRSHIRES.

Parties visiting Scotland to purchase the above should call on the undersigned, who always has a choice selection bred from the best strains of blood. ROBT. WILSON, Manswraes, Bridge o' Weir, Renfrewshire, Scotland. 317-2-y-om

W. G. BUTCHER,

The Chestnuts, Nedingworth, Hunts, England, offers for sale a grand selection of HACKNEY and SHIRE-BRED COLTS and FILLIES of the choicest breeding, and good individually. All registered. Visitors welcome. Station: St. Ives, Hunts. 317-2-y-om

LARGEST SHEEP EXPORTER.

1272 Pedigreed Sheep, including many winners of all breeds, landed at Quebec without loss, July 26th, 1892, by E. GOODWIN PREECE, Live Stock Exporter, Shrewsbury, Eng., who has thorough personal knowledge of all the best British flocks, herds and studs, great experience in shipping and the privilege of obtaining choicest specimens of any breed for show or breeding. American buyers supplied with selected stock at lowest rates. Those visiting England conducted to inspect the leading studs, to compare merits and prices before buying, also assisted in selecting and shipping FREE OF CHARGE. (5% commission paid by seller.) Flock-book certificates and all documents supplied, as required by U. S. Government. Highest references from leading Canadian and American importers supplied 1889, 1890, 1891, 1892. All buyers should communicate. Information free. 318-2-y-om

SHROPSHIRE.

Having reduced my herd of cattle by recent sales, I intend visiting Great Britain in the spring to make an importation of sheep. To make more room I offer within the reach of all 23 shearling ewes and a few rams of the very best breeding at a great reduction. Short-horns will still be bred and for sale at "Greenhouse Farm" of the very best Scotch type and quality. Write or come and see them. W. B. COCKBURN, ABERFOYLE, ONT. 320-2-y-om

SHROPSHIRE and SHORTHORN for sale at reasonable prices.

A choice lot of ram lambs and yearlings sired by my imp. Thomas ram from imp. and home-bred bulls, also 5 young bulls, from 6 to 18 months old. W. G. PETTIT, Freeman P.O., Ont., Burlington Stn., G.T.R. 318-2-y-om

Having reduced my flock by recent sales I intend visiting Great Britain early in the spring to bring out my annual importation, when I shall endeavor to select the best, size and quality combined



W. S. HAWKSHAW, Glanworth Post Office. 326-y-om

To Stockmen & Breeders.

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

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

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

Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to ROBERT WICHTMAN, DRUGGIST, OWEN SOUND, Ont. Sole Agent for the Dominion. 330-2-y-om

THE MARKHAM HERD, LOCUST HILL, ONT.

(Farm one mile from Locust Hill St., C.P.R.) Registered Improved Large Yorkshire, Berkshire and Suffolk Pigs. Stock selected from the best herds in Canada. Am booking orders for Spring Pigs.—LEVI PIKE, Locust Hill, Ont. 328-y-om

IMPROVED PEDIGREED LARGE YORKSHIRES

I am booking orders for spring pigs from imp. and home-bred sows at reasonable prices. J. H. S. BARBOUR, King P. O., Ont. 318-2-y-om

FIRST SWEEPSTAKES HERD — OF — IMPROVED: YORKSHIRES IN CANADA,

selected from the well-known herds of the Earl of Ellesmere, Prescott Union, and C. E. Duckering, England, by James Main, who is considered one of the best judges of pigs in America; also one imported sow and several other Canadian-bred sows and boars of the well-known herds of Sanders Spencer and F. Walker-Jones, England. REGISTERED SOWS AND-BOARS MATED NOT AKIN.

JOSEPH FEATHERSTONE, PINE GROVE FARM, STREETSVILLE.

J. M. HURLEY & SON Offer for sale pedigreed Improved Large Yorkshire Pigs of both sexes. Herd founded in 1887. Due attention to make our pigs advertise us. Belleville, - Ont. 321-2-y-om

FARMERS, READ THIS

We will pay extra for fat pigs bred from Tamworth and Improved Yorkshire boars, as they are worth more money to us. We have imported a large stock of these pigs, and have on hand a choice selection of imported and home-bred boars and sows. Write us for prices, which are as low as they can be made, this being a business entirely of a secondary consideration with us, our first object being to supply the trade with an A 1 article in bacon, and we are satisfied that these are the breeds that pay both the feeder and the packer. Send in your orders quick and get a good in-pig sow, or a boar to use on grade sows. JAS. L. GRANT & CO. Ingersoll, - Ont. 320-2-y-om

ISRAEL CRESSMAN, New Dundee, Ont.

Breeder of Large English Berkshires. Young Hogs always on hand; got by imported stock. 328-y-om

ADVERTISE IN ADVOCATE

J. C. SNELL, Edmonton, Ontario.



Most of our best sows now have fine litters of young pigs sired by first-class imported boars. Three imported boars were used, so we can supply pairs and trios not akin. We have a few young sows in farrow to come due in April and May. Also young boars of fall litters now fit for service, and young sows of same age not akin. We are now booking orders for spring pigs. Jersey Cows, Heifers and Calves for sale at reasonable prices. Stock shipped to order. Satisfaction guaranteed. Write for prices. 322-y-om

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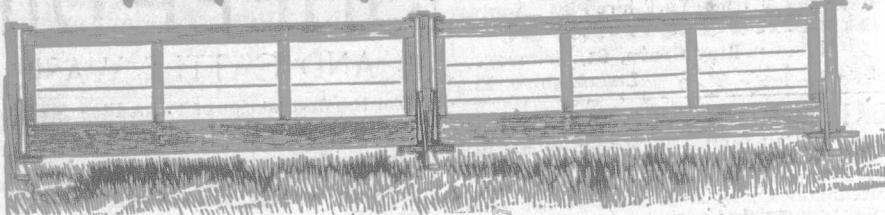
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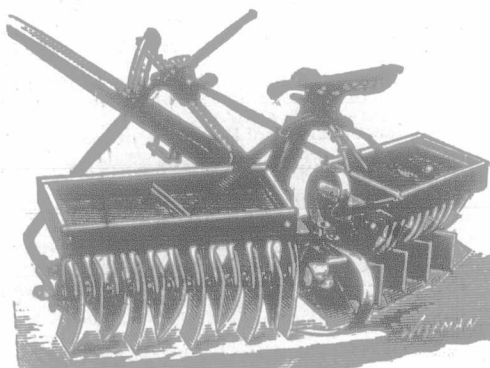
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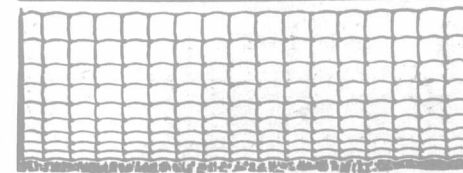


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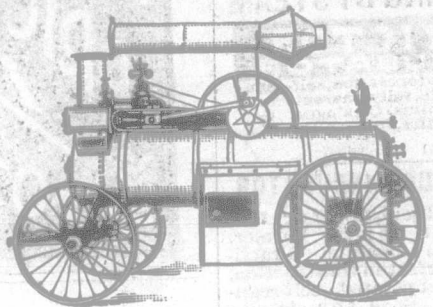
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